



CITY OF CAPE TOWN
ISIXEKO SASEKAPA
STAD KAAPSTAD

Making progress possible. Together.

MEMORANDUM OF AGREEMENT

FOR THE

**APPOINTMENT OF SPECIALIST CONTRACTORS TO OPERATE AND
MAINTAIN LANDFILL GAS EXTRACTION AND POWER GENERATION
SYSTEMS AT CITY LANDFILLS AND TO PROVIDE CARBON
ADVISORY SERVICES FOR CARBON PROJECTS IN THE CITY OF
CAPE TOWN**

MADE AND ENTERED INTO BETWEEN

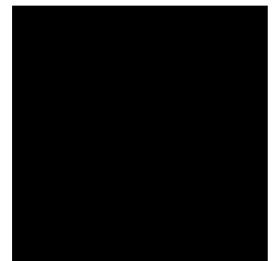
CITY OF CAPE TOWN METROPOLITAN MUNICIPALITY

And

ENERGY SYSTEMS (PTY) LTD

REG. NO. [REDACTED]

CONTRACT NO: 108C/2022/23



PREAMBLE

WHEREAS Term Tender 108C/2022/23 was awarded to **ENERGY SYSTEMS (PTY) LTD** on 6 February 2023 in line with resolution **SCMB 10/02/23**, for the APPOINTMENT OF SPECIALIST CONTRACTORS TO OPERATE AND MAINTAIN LANDFILL GAS EXTRACTION AND POWER GENERATION SYSTEMS AT CITY LANDFILLS AND TO PROVIDE CARBON ADVISORY SERVICES FOR CARBON PROJECTS IN THE CITY OF CAPE TOWN, from date of commencement for a period of 60 months, subject to the conclusion of a Section 33 of the MFMA process.

AND WHEREAS it is recorded that this Contract will be governed by the provisions of General Conditions of Contract for the Supply of Goods and Services, Revised July 2010 ("GCC"), read with the Special Conditions of Contract ("SCC") annexed hereto marked "Part 2".

NOW THEREFORE THE PARTIES AGREE AS FOLLOWS:

1. PARTIES

The Parties to this Contract are:

- 1.1. **The City of Cape Town**, a metropolitan municipality, established in terms of the Local Government: Municipal Structures Act, 117 of 1998 read with the Province of the Western Cape: Provincial Gazette 5588 dated 22 September 2000, as amended ("**the Employer**"), herein represented by the **Executive Director: Urban Waste Management** duly authorised hereto;
- 1.2. **ENERGY SYSTEMS (PTY) LTD** a private company registered in terms of the laws of the Republic of South Africa with registration no: [REDACTED] with its principal place of business situated at [REDACTED] (the "**Contractor**"), herein represented by its duly authorised representative, [REDACTED] in his capacity as [REDACTED]

each a "**Party**" and together the "**Parties**".

2. INTERPRETATION

- 2.1. In the event of any conflict between the provisions of this Contract, the GCC and any Parts attached hereto, or any other document incorporated by reference to this Contract, save to the extent expressly stated to the contrary, such conflict will

be resolved by giving precedence to such different parts of this Contract in the following order of precedence:

- 2.1.1. first, the terms and conditions of the SCC;
- 2.1.2. second, the terms and conditions of the GCC;
- 2.1.3. third, Parts and Annexures to this Contract; and
- 2.1.4. fourth, any other documents incorporated by reference.

- 2.2 The provisions of this Contract supersede and replace the provisions of any previous agreement entered into between the Parties relating to the same subject matter.

3. APPOINTMENT AND DURATION

- 3.1. The Employer hereby appoints the Contractor to perform the Scope of Work to the Employer from date of commencement.
- 3.2. Unless terminated earlier in accordance with the provisions as set out in the GCC or any other provision in terms of this Contract, this Contract shall commence on date of commencement for a period of 60 months.

4. MUTUAL GOOD FAITH / CO-OPERATION

- 4.1. The Parties represent and undertake to do all such things, perform all such acts and take all steps to procure the doing of all such things and the performance of all such acts, as may be necessary or incidental to give effect to the execution of this Contract.
- 4.2. The Parties shall at all times during the continuance of this Contract observe the principles of good faith towards one another in the performance of their obligations in terms of this Contract.

5. OBLIGATIONS OF THE EMPLOYER

- 5.1. The Employer undertakes to perform its obligations in accordance with the Contract, including but not limited to the Scope of Work (**Part C3: Scope of Work**), subject to the satisfactory fulfilment of the obligations by the Contractor as set out in this Contract.

- 5.2. The Employer shall monitor and evaluate the Contractor's performance in respect of the Scope of Work.

6. OBLIGATIONS OF THE CONTRACTOR

- 6.1. The Supplier hereby agrees and undertakes to perform the Services to the Employer as set out in Scope of Work (**PART 4: SPECIFICATIONS**).
- 6.2. The Supplier will perform the Works as expeditiously as possible and furthermore agrees and undertakes to perform the services in accordance with the operational requirements of the Employer.
- 6.3. The Supplier will ensure that the Works will be of a satisfactory quality and fit for purpose.
- 6.4. The Supplier shall, ensure that its employees, agents, representatives, sub-contractors and suppliers comply with this Contract and all applicable Laws in the execution of the Works.
- 6.5. The Supplier will not conduct any activity of whatsoever nature which may be detrimental to the Employer's reputation and goodwill.

7. PRICING DATA

- 7.1. The Contract Price for the Works shall be as set out in the Pricing Data annexed marked "**PART 5: PRICE SCHEDULE**".
- 7.2. The Supplier shall not be entitled to any other consideration for the rendering of the Works other than as provided for in this Contract.

PART 1: AGREEMENT -FORM OF OFFER AND ACCEPTANCE

TENDER NO: 108C/2022/23

(4) FORM OF OFFER AND ACCEPTANCE

TENDER 108C/2022/23: APPOINTMENT OF SPECIALIST CONTRACTORS TO OPERATE AND MAINTAIN LANDFILL GAS EXTRACTION AND POWER GENERATION SYSTEMS AT CITY LANDFILLS AND TO PROVIDE CARBON ADVISORY SERVICES FOR CARBON PROJECTS IN THE CITY OF CAPE TOWN

OFFER: (TO BE FILLED IN BY TENDERER):

Required Details (Please provide applicable details in full):

Name of Tendering Entity* ("the tenderer")	ENERGY Systems SA (PTY) Ltd
Trading as (if different from above)	ENERGY Systems SA (PTY) Ltd

AND WHO IS represented herein by: (full names of signatory)

duly authorised to act on behalf of the tenderer in his capacity as: (title/ designation)

HEREBY AGREES THAT by signing the *Form of Offer and Acceptance*, the tenderer:

1. confirms that it has examined the documents listed in the Index (including Schedules and Annexures) and has accepted all the Conditions of Tender;
2. confirms that it has received and incorporated any and all notices issued to tenderers issued by the CCT;
3. confirms that it has satisfied itself as to the correctness and validity of the tender offer; that the price(s) and rate(s) offered cover all the goods and/or services specified in the tender documents; that the price(s) and rate(s) cover all its obligations and accepts that any mistakes regarding price(s), rate(s) and calculations will be at its own risk;
4. offers to supply all or any of the goods and/or render all or any of the services described in the tender document to the CCT in accordance with the:
 - 4.1 terms and conditions stipulated in this tender document;
 - 4.2 specifications stipulated in this tender document; and
 - 4.3 at the prices as set out in the Price Schedule.
5. accepts full responsibility for the proper execution and fulfilment of all obligations and conditions devolving on it in terms of the Contract.

Signature

Print name(s):

On behalf of the tenderer (duly authorised)

ENERGY Systems SA (PTY) Ltd

Date:

FORM OF OFFER AND ACCEPTANCE (continued)
ACCEPTANCE (TO BE FILLED IN BY THE CITY OF CAPE TOWN)

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 supplier the amount due in accordance with the conditions of contract. 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:

- Clause 1 to 7, and the sub-clauses, cited in pages 1 to 4 above;
- Part 2: Special Conditions to Contract
- Part 3: General Conditions of Contract
- Part 4: Specifications
- Part 5: Price Schedule
- Part 6: Occupational Health and Safety
- Part 7: Supporting Schedules

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 as 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 after receiving a completed copy of this agreement, including the schedule of deviations (if any), contact the employer to arrange the delivery of any securities, bonds, guarantees, proof of insurance and any other documents to be provided in terms of the conditions of contract identified in the special contract conditions. 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 parties have signed the table below and confirms receipt from the employer of one fully completed original copy of this agreement, including the schedule of deviations (if any). The tenderer (now supplier) shall within five working days of the agreement coming into effect notify the employer in writing of any reason why he cannot accept the contents of this agreement as a complete and accurate memorandum thereof, failing which the agreement presented to the contractor shall constitute the binding contract between the parties.

The Parties	Employer	Supplier
Business Name	CITY OF CAPE TOWN	ENERGY SYSTEMS (PTY) LTD
Business Registration	N/A	
Tax number (VAT)		
Physical Address	Tower Block, Civic Centre, 12 Hertzog Boulevard Cape Town 8001	
Accepted contract sum including tax	R68 450 557-60	
Accepted contract duration	From date of commencement for a period of 60 months	From date of commencement for a period of 60 months
Signed – who by signature hereto warrants authority		
Name of signatory		
Signed: Date	18-12-2023	
Signed: Location		
Signed: Witness		
Name of Witness		

FORM OF OFFER AND ACCEPTANCE (continued)**(TO BE FILLED IN BY THE CITY OF CAPE TOWN)****Schedule of Deviations****Notes:**

1. The extent of deviations from the tender documents issued by the CCT before the tender closing date is limited to those permitted in terms of the conditions of tender.
2. A tenderer's covering letter shall not be included in the final contract document. Should any matter in such letter, which constitutes a deviation as aforesaid, become the subject of agreements reached during the process of offer and acceptance, the outcome of such agreement shall be recorded here.
3. Any other matter arising from the process of offer and acceptance either as a confirmation, clarification or change to the tender documents and which it is agreed by the Parties becomes an obligation of the contract shall also be recorded here.
4. Any change or addition to the tender documents arising from the above agreements and recorded here, shall also be incorporated into the final draft of the Contract.

1 Subject NONE

Details

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2 Subject

Details

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3 Subject

Details

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4 Subject

Details

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By the duly authorised representatives signing this agreement, the CCT and the tenderer agree to and accept the foregoing schedule of deviations as the only deviations from and amendments to this tender document 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 CCT 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.

PART 2: SPECIAL CONDITIONS OF CONTRACT

The following Special Conditions of Contract, referring to the National Treasury – Conditions of Contract (revised July 2010), are applicable to this Contract:

1. Definitions

Delete Clause 1.15 and substitute with the following

- 1.15 The word 'Goods' is to be replaced everywhere it occurs in the GCC with the phrase 'Goods and / or Services' which means all of the equipment, machinery, materials, services; products; consumables, etc. that the supplier is required to deliver to the purchaser under the contract. This definition shall also be applicable, as the context requires, anywhere where the words "supplies" and "services" occurs in the GCC.

Delete Clause 1.19 and substitute with the following

- 1.19 The word 'Order' is to be replaced everywhere it occurs in the GCC with the words 'Purchase Order' which means the official purchase order authorised and released on the purchaser's SAP System

Delete Clause 1.21 and substitute with the following:

- 1.21 'Purchaser' means the **City of Cape Town**. The address of the Purchaser is **12 Hertzog Boulevard, Cape Town, 8001**.

Add the following after Clause 1.25:

- 1.26 'Supplier' means any provider of goods and / or services with whom the contract is concluded
- 1.27 "Intellectual Property" means any and all intellectual property rights of any nature anywhere in the world whether registered, registerable or otherwise, including patents, trademarks, registered designs and domain names, applications for any of the foregoing, trade or business names, copyright and rights in the nature of copyright, design rights, rights in databases, know-how, trade secrets and any other intellectual property rights which subsist in computer software, computer programs, websites, documents, information, techniques, business methods, drawings, logos, instruction manuals, lists and procedures and particulars of customers, marketing methods and procedures and advertising literature, including the "look and feel" of any websites.

3. General Obligations

Delete Clause 3.2 in its entirety and replace with the following clauses.

- 3.2 The parties will be liable to each other arising out of or in connection with any breach of the obligations detailed or implied in this contract, subject to clause 28.
- 3.3 All parties in a joint venture or consortium shall be jointly and severally liable to the purchaser in terms of this contract and shall carry individually the minimum levels of insurance stated in the contract, if any.
- 3.4 The parties shall comply with all laws, regulations and bylaws of local or other authorities having jurisdiction regarding the delivery of the goods and give all notices and pay all charges required by such authorities.
- 3.4.1 The parties agree that this contract shall also be subject to the CCT's Supply Chain Management Policy ('SCM Policy') that was applicable on the date the bid was advertised, **save that if the Employer adopts a new SCM Policy which contemplates that any clause therein would apply to the contract emanating from this tender, such clause shall also be applicable to that contract.** Please refer to this document contained on the CCT's website.
- 3.4.2 Abuse of the supply chain management system is not permitted and may result in cancellation of the contract, restriction of the supplier, and/or the exercise by the City of any other remedies available to it as described in the SCM Policy.
- 3.5 The **supplier** shall:

- 3.5.1 Arrange for the documents listed below to be provided to the Purchaser prior to the issuing of the order:
- a) Proof of Insurance (Refer to Clause 11) or Insurance Broker's Warrantee.
 - b) Letter of good standing from the Compensation Commissioner, or a licensed compensation insurer (Refer to Clause 11)
 - c) Initial delivery programme
 - d) Other requirements as detailed in the tender documents
- 3.5.2 Only when notified of the acceptance of the bid by the issuing of the order, the supplier shall commence with and carry out the delivery of the goods in accordance with the contract, to the satisfaction, of the purchaser
- 3.5.3 Provide all of the necessary materials, labour, plant and equipment required for the delivery of the goods including any temporary services that may be required
- 3.5.4 Insure his workmen and employees against death or injury arising out of the delivery of the goods
- 3.5.5 Be continuously represented during the delivery of the goods by a competent representative duly authorised to execute instructions;
- 3.5.6 In the event of a loss resulting in a claim against the insurance policies stated in clause 11, pay the first amount (excess) as required by the insurance policy;
- 3.5.7 Comply with all written instructions from the purchaser subject to clause 18
- 3.5.8 Complete and deliver the goods within the period stated in clause 10; or any extensions thereof in terms of clause 21;
- 3.5.9 Make good at his own expense all incomplete and defective goods during the warranty period;
- 3.5.10 Pay to the purchaser any penalty for delay as due on demand by the purchaser. The supplier hereby consents to such amounts being deducted from any payment to the supplier;
- 3.5.11 Comply with the provisions of the OHS Act & all relevant regulations;
- 3.5.12 Comply with all laws relating to wages and conditions generally governing the employment of labour in the Cape Town area and any applicable Bargaining Council agreements;
- 3.5.13 Deliver the goods in accordance with the contract and with all reasonable care, diligence and skill in accordance with generally accepted professional techniques and standards.
- 3.6 The purchaser shall:**
- 3.6.1 Issue orders for the goods required under this Contract. No liability for payment will ensue for any work done if an official purchase order has not been issued to the supplier.
- 3.6.2 Make payment to the **supplier** for the goods as set out herein.
- 3.6.3 Take possession of the goods upon delivery by the supplier.
- 3.6.4 Regularly inspect the goods to establish that it is being delivered in compliance with the contract.
- 3.6.5 Give any instructions and/or explanations and/or variations to the supplier including any relevant advice to assist the supplier to understand the contract documents.
- 3.6.6 Grant or refuse any extension of time requested by the supplier to the period stated in clause 10.
- 3.6.7 Inspect the goods to determine if, in the opinion of the purchaser, it has been delivered in compliance with the contract, alternatively in such a state that it can be properly used for the purpose for which it was intended.
- 3.6.8 Brief the supplier and issue all documents, information, etc. in accordance with the contract.

5. Use of contract documents and information; inspection, copyright, confidentiality, etc.

Add the following after clause 5.4:

- 5.5 Copyright of all documents prepared by the supplier in accordance with the relevant provisions of the copyright Act (Act 98 of 1978) relating to contract shall be vested in the purchaser. Where copyright is vested in the supplier, the purchaser shall be entitled to use the documents or copy them only for the purposes for which they are intended in regard to the contract and need not obtain the supplier's permission to copy for such use. Where copyright is vested in the purchaser, the supplier shall not be liable in any way for the use of any of the information other than as originally intended for the contract and the purchaser hereby indemnifies the supplier against any claim which may be made against him by any party arising from the use of such documentation for other purposes.

The ownership of data and factual information collected by the supplier and paid for by the purchaser shall, after payment, vest with the purchaser

- 5.6 Publicity and publication
The supplier shall not release public or media statements or publish material related to the services or contract within two (2) years of completion of the services without the written approval of the purchaser, which approval shall not be unreasonably withheld.

- 5.7 Confidentiality
Both parties shall keep all information obtained by them in the context of the contract confidential and shall not divulge it without the written approval of the other party.

5.8 Intellectual Property

- 5.8.1 The supplier acknowledges that it shall not acquire any right, title or interest in or to the Intellectual Property of the Employer.

- 5.8.2 The supplier hereby assigns to the Employer, all Intellectual Property created, developed or otherwise brought into existence by it for the purposes of the contract, unless the Parties expressly agree otherwise in writing.

- 5.8.3 The supplier shall, and warrants that it shall:

- 5.8.3.1 not be entitled to use the Employer's Intellectual Property for any purpose other than as contemplated in this contract;

- 5.8.3.2 not modify, add to, change or alter the Employer's Intellectual Property, or any information or data related thereto, nor may the supplier produce any product as a result of, including and/or arising from any such information, data and Intellectual Property, and in the event that it does produce any such product, the product shall be, and be deemed in law to be, owned by the Employer;

- 5.8.3.3 not apply for or obtain registration of any domain name, trademark or design which is similar to any Intellectual Property of the Employer;

- 5.8.3.4 comply with all reasonable directions or instructions given to it by the Employer in relation to the form and manner of use of the Employer Intellectual Property, including without limitation, any brand guidelines which the Employer may provide to the supplier from time to time;

- 5.8.3.5 procure that its employees, directors, members and contractors comply strictly with the provisions of clauses 5.8.3.1 to 5.8.3.3 above; unless the Employer expressly agrees thereto in writing after obtaining due internal authority.

- 5.8.4 The supplier represents and warrants to the Employer that, in providing goods, services or both, as the case may be, for the duration of the contract, it will not infringe or make unauthorised use of the Intellectual Property rights of any third party and hereby indemnifies the Employer from any claims, liability, loss, damages, costs, and expenses arising from the infringement or unauthorised use by the supplier of any third party's Intellectual Property rights.

- 5.8.5 In the event that the contract is cancelled, terminated, ended or is declared void, any and all of the Employer's Intellectual Property, and any and all information and data related thereto, shall be immediately handed over to the Employer by the supplier and no copies thereof shall be retained by the supplier unless the Employer expressly and in writing, after obtaining due internal authority, agrees

otherwise.

7. Performance Security

Delete clause 7.1 and replace with the following:

Not Applicable. Tenderers must disregard **Form of Guarantee / Performance Security** and are not required to complete same.

8. Inspections, tests and analyses

Delete Clause 8.2 and substitute with the following:

- 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 inspection, the premises of the bidder or contractor shall be open, at all reasonable hours, for inspection by a representative of the purchaser or an organisation acting on behalf of the purchaser.

10. Delivery and documents

Delete clauses 10.1 and 10.2 and replace with the following:

- 10.1 Delivery of the goods shall be made by the supplier in accordance with the terms specified in the contract. The time for delivery of the goods shall be the date as stated on the order. Orders for the supply and delivery of goods may be raised up until the expiry of a framework agreement bid, provided that the goods can be delivered within 30 days of expiry of the framework contract. All orders, other than for the supply and delivery of goods, must be completed prior to the expiry of the contract period.
- 10.2 The purchaser shall determine, in its sole discretion, whether the goods have been delivered in compliance with the contract, alternatively in such a state that it can be properly used for the purpose for which it was intended. When the purchaser determines that the goods have been satisfactorily delivered, the purchaser must issue an appropriate certification, or written approval, to that effect. Invoicing may only occur, and must be dated, on or after the date of acceptance of the goods.

11. Insurance

Add the following after clause 11.1:

- 11.2 Without limiting the obligations of the supplier in terms of this contract, the supplier shall effect and maintain the following additional insurances:
- a) Public liability insurances, in the name of the supplier, covering the supplier and the purchaser against liability for the death of or injury to any person, or loss of or damage to any property, arising out of or in the course of this Contract, in an amount not less than **R20 million** for any single claim;
 - b) Motor Vehicle Liability Insurance, in respect of all vehicles owned and / or leased by the supplier, comprising (as a minimum) "Balance of Third Party" Risks including Passenger Liability Indemnity;
 - c) Registration / insurance in terms of the Compensation for Occupational Injuries and Disease Act, Act 130 of 1993. This can either take the form of a certified copy of a valid Letter of Good Standing issued by the Compensation Commissioner, or proof of insurance with a licenced compensation insurer, from either the bidder's broker or the insurance company itself (see **Proof of Insurance / Insurance Broker's Warranty** section in document for a pro forma version);
 - d) Professional indemnity insurance providing cover in an amount of not less than **R5-million** in respect of each and every claim during the contract period.

In the event of under insurance or the insurer's repudiation of any claim for whatever reason, the CCT will retain its right of recourse against the supplier.

- 11.3 The supplier shall be obliged to furnish the CCT with proof of such insurance as the CCT may require from time to time for the duration of this Contract. Evidence that the insurances have been effected in terms of this clause, shall be either in the form of an insurance broker's warranty worded precisely as

per the pro forma version contained in the **Proof of Insurance / Insurance Broker's Warranty** section of the document or copies of the insurance policies.

15. Warranty

Add to Clause 15.2:

15.2 This warranty for this contract shall remain valid for **six (6) months** after the goods have been delivered.

16. Payment

Delete Clause 16.1 in its entirety and replace with the following:

16.1 A monthly payment cycle will be the norm. All invoices which are dated on or before the 20th of a particular month will typically be paid between the 23rd and 26th of the following month. The supplier may submit a fully motivated application regarding more frequent payment to the Employer's Director; Expenditure for consideration. Requests for more frequent payments will be considered at the sole discretion of the Employer and is not a right in terms of this contract.

Delete Clause 16.2 in its entirety and replace with the following:

16.2 The supplier shall furnish the purchaser's Accounts Payable Department with an original tax invoice, clearly showing the amount due in respect of each and every claim for payment.

Add the following after clause 16.4

16.5 Notwithstanding any amount stated on the order, the supplier shall only be entitled to payment for goods actually delivered in terms of the Project Specification and Drawings, or any variations in accordance with clause 18. Any contingency sum included shall be for the sole use, and at the discretion, of the purchaser.

The CCT is not liable for payment of any invoice that pre-dates the date of delivery of the goods.

16.6 The purchaser will only make advanced payments to the supplier in strict compliance with the terms and details as contained on **Proforma Advanced Payment Guarantee** and only once the authenticity of such guarantee has been verified by the City's Treasury Department.

17. Prices

Add the following after clause 17.1

17.2 If as a result of an award of a contract beyond the original tender validity period, the contract execution will be completed beyond a period of twelve (12) months from the expiry of the original tender validity period, then the contract may be subject to contract price adjustment for that period beyond such twelve (12) months. An appropriate contract price adjustment formula will be determined by the Director: Supply Chain Management if such was not included in the bid documents.

17.3 If as a result of any extension of time granted the contract execution will be completed beyond a period of twelve (12) months from the expiry of the original tender validity period, then contract price adjustment may apply to that period beyond such twelve (12) months. An appropriate contract price adjustment formula will be determined by the Director: Supply Chain Management if such was not included in the bid documents.

17.4 The prices for the goods delivered and services performed shall be subject to contract price adjustment and the following conditions will be applicable:

17.4.1 The contract price adjustment shall be applied as specified in **Schedule 8: Contract Price Adjustment**.

17.5 If price adjustment for variations in the cost of plant and materials imported from outside of South Africa is provided for in the contract, such adjustment shall be based on the information contained on the schedule titled **"Price Basis for Imported Resources"** and as below. For the purposes of this clause the Rand value of imported Plant and Materials inserted on the schedule titled **"Price Basis for Imported Resources"** (column (F)) shall be the value in foreign currency (column (A)) converted to

South African Rand (column (C)), by using the closing spot selling rate quoted by CCT's main banker, NEDBANK, on the Base Date (seven calendar days before tender closing date) rounded to the second decimal place (column(B)), to which shall be added any Customs Surcharge and Customs Duty applicable at that date (columns (D) and (E)).

17.5.1 Adjustment for variations in rates of exchange:

- (a) The value in foreign currency inserted in column (A) shall be subject to clause (h) below when recalculating the Rand value.
- (b) The rate of exchange inserted in column (B) shall be the closing spot selling rate quoted by Council's main banker, NEDBANK, on the Base Date, rounded to the second decimal place, subject to sub-paragraph (c) below.
- (c) If the rate of exchange inserted by the Tenderer differs from the NEDBANK rate referred to above, then the NEDBANK rate shall apply and the Rand value in columns (C) and (F) shall be recalculated accordingly without altering the price in the Price Schedule for the relevant items.
- (d) If a tender from a supplier or sub-contractor provides for variations in rates of exchange, the Supplier may **only** claim for variations in rates of exchange if he binds the supplier or sub-contractor to the same provision to take out forward cover as described in sub-paragraph (e) below.
- (e) The Supplier (or sub-contractor) shall within five working days from the date of placing a firm order on an overseas supplier, cover or recover forward by way of a contract with a bank which is an authorised foreign exchange dealer, the foreign exchange component of the cost of any imported Plant and Materials inserted by the Tenderer on the scheduled titled "**Price Basis for Imported Resources**".
- (f) When the Supplier (or sub-contractor) so obtains forward cover, the Supplier shall immediately notify the CCT of the rate obtained and furnish the CCT with a copy of the foreign exchange contract note.
- (g) Based on the evidence provided in sub-paragraph (f) above, the value in Rand inserted in column (C) of on the schedule titled "**Price Basis for Imported Resources**" shall be recalculated using the forward cover rate obtained, and any increase or decrease in the Rand value defined in this clause shall be adjusted accordingly, subject to sub-paragraph (h) below.
- (h) The adjustments shall be calculated upon the value in foreign currency in the Supplier's (or sub-contractor's) **forward cover contract**, provided that, should this value exceed the value in foreign currency inserted in column (A) of on the schedule titled "**Price Basis for Imported Resources**", then the value in column (A) shall be used.

17.5.2 Adjustment for variations in customs surcharge and customs duty

- (a) Any increase or decrease in the Rand value between the amounts of Customs Surcharge and Customs Duty inserted in on the schedule titled "**Price Basis for Imported Resources**" and those amounts actually paid to the Customs and Excise Authorities, which are due to changes in the percentage rates applicable or to the foreign exchange rate used by the authorities, shall be adjusted accordingly.
- (b) The Tenderer shall state the Customs Duty Tariff Reference applicable to each item and the Supplier shall advise the CCT's Agent of any changes which occur.

17.5.3 Adjustment for variation in labour and material Costs

If the prices for imported Plant and Materials are not fixed, the Supplier shall in his Tender specify the formula for calculating Contract Price Adjustments normally used in the country of manufacture and the indices and relative proportions of labour and material on which his Tender prices are based. Evidence of the indices applicable shall be provided with each claim. The indices applicable 42 days before contractual dispatch date from the factory will be used for the purposes of Contract Price Adjustment.

Failure to specify a formula in the Tender shall mean that the prices are fixed or shall be deemed to be fixed.

18. Contract Amendments

Delete the heading of clause 18 and replace with the following:

18. Contract Amendments and Variations

Add the following to clause 18.1:

Variations means changes to the goods, extension of the duration or expansion of the value of the contract that the purchaser issues to the supplier as instructions in writing, subject to prior approval by the purchaser's delegated authority. Should the supplier deliver any goods not described in a written instruction from the purchaser, such work will not become due and payable until amended order has been issued by the purchaser.

20. Subcontracts

Add the following after clause 20.1:

- 20.2 The supplier shall be liable for the acts, defaults and negligence of any subcontractor, his agents or employees as fully as if they were the acts, defaults or negligence of the supplier.
- 20.3 Any appointment of a subcontractor shall not amount to a contract between the CCT and the subcontractor, or a responsibility or liability on the part of the CCT to the subcontractor and shall not relieve the supplier from any liability or obligation under the contract.

21. Delays in the supplier's performance

Delete Clause 21.2 in its entirety and replace with the following:

- 21.2 If at any time during the performance of the contract the supplier or its sub-contractors should encounter conditions beyond their reasonable control which impede the timely delivery of the goods, the supplier shall notify the purchaser in writing, within 7 Days of first having become aware of these conditions, of the facts of the delay, its cause(s) and its probable duration. As soon as practicable after receipt of the supplier's notice, the purchaser shall evaluate the situation, and may at his discretion extend the time for delivery.

Where additional time is granted, the purchaser shall also determine whether or not the supplier is entitled to payment for additional costs in respect thereof. The principle to be applied in this regard is that where the purchaser or any of its agents are responsible for the delay, reasonable costs shall be paid. In respect of delays that were beyond the reasonable control of both the supplier and the purchaser, additional time only (no costs) will be granted.

The purchaser shall notify the supplier in writing of his decision(s) in the above regard.

- 21.3 No provision in a contract shall be deemed to prohibit the obtaining of goods from a national department, provincial department, or a local authority.

22. Penalties

Delete clause 22.1 and replace with the following:

- 22.1. Subject to **GCC Clause 25**, if the supplier fails to deliver any or all of the goods and services within the period(s) specified in the contract, the purchaser shall, without prejudice to its other remedies under the contract, deduct from the contract price, as a penalty, sums as stated herein until actual delivery or performance is achieved.

The penalty for this contract shall be applicable when the supplier cannot meet the required performance thresholds for any of the components of the landfill gas extraction and electricity generation systems (where this is installed and operational). The performance figures, in percentage (%), will be calculated in terms of the stipulated formula and measured against the performance criteria (%) and the defined terms as set out in **Clause 51**:

- 22.1.1. The landfill gas extraction system and the beneficiation system comprises of the wellfield and auxiliary equipment, the flare, the emergency generator, the ITC monitoring, measurement and data storage equipment, the LFG engines, the electrical generator, the switching and protection

equipment, the cables or the control equipment at any of the operational landfill gas project sites.

- 22.1.2. If any of the components of the extraction system or the beneficiation system at any of the operational landfill gas project sites is available for less than the percentage of the Available Time in a month, as defined in **Clause 51**, the submitted monthly invoice total, inclusive of VAT, will be reduced by 10% before an approval of payment by the City.
- 22.1.3. If the reduction in Available Time of any of the equipment persists for longer than 10%, but not more than 20% of the calculated Available Time in a month, the penalty will increase to 20%.
- 22.1.4. If the reduction in Available Time of any of the equipment persists for longer than 20%, but not more than 30% of the calculated Available Time in a month, the penalty will increase to 30%.
- 22.1.5. If the reduction in Available Time of any of the equipment persists for longer than 30% of the calculated Available Time in a month, the City reserves the right to withhold all payments until the problems have been rectified.
- 22.1.6. If the sub-standard performance of project infrastructure, or the supplier's inaction persists for more than two months without remedial action, the City will initiate the termination of the contract, subject to the conclusion of processes preceding a termination, as defined in this contract, and exercise its option to appoint a new contractor.
- 22.1.7. In addition, for operations and maintenance-related issues regarding the non-response to make equipment operational within the specified time as set out in **Clause 41** of the specification, a fixed rate of R5 000-00 per day will be applicable, adjusted according to the Contract Price Adjustment conditions, as determined in this contract. This amount will also be offset against the value of next invoice.
- 22.1.8. Should the supplier fail to produce the agreed deliverables or correct faults or emissions, the City reserves the right to withhold any payment until satisfactory completion of the deliverable(s). Failure to rectify causes and to produce the deliverables will result in the withholding of payment and a possible claim for damages.
- 22.2. The purchaser shall, without prejudice to its other remedies under the contract, deduct from the contract price, financial penalties as contained on the **Preference Schedule** relating to breaches of the conditions upon which preference points were awarded.

23. Termination for default

Delete the heading of clause 23 and replace with the following:

23. Termination

Add the following to the end of clause 23.1:

if the supplier fails to remedy the breach in terms of such notice

Add the following after clause 23.7:

- 23.8 In addition to the grounds for termination due to default by the supplier, the contract may also be terminated:
- 23.8.1 Upon the death of the supplier who was a Sole Proprietor, or a sole member of a Close Corporation, in which case the contract will terminate forthwith.
- 23.8.2 The parties by mutual agreement terminate the contract.
- 23.8.3 If an Order has been issued incorrectly, or to the incorrect recipient, the resulting contract may be terminated by the purchaser by written notice
- 23.8.4 If a material irregularity vitiates the procurement process leading to the conclusion of the contract, rendering the procurement process and the conclusion of the resulting contract unfair, inequitable, non-transparent, uncompetitive or not cost-effective, provided the City Manager follows the processes as described in the purchaser's SCM Policy.
- 23.8.5 After providing notice to the supplier, if the implementation of the contract may result in reputational risk or harm to the City as a result of (inter alia):
 - 23.8.5.1 reports of poor governance and/or unethical behaviour;
 - 23.8.5.2 association with known family of notorious individuals;

- 23.8.5.3 poor performance issues, known to the Employer;
- 23.8.5.4 negative social media reports; or
- 23.8.5.5 adverse assurance (e.g. due diligence) report outcomes.

23.9 If the contract is terminated in terms of clause 23.8, all obligations that were due and enforceable prior to the date of the termination must be performed by the relevant party.

26. Termination for Insolvency

Delete clause 26.1 and replace with the following:

- 26.1 The purchaser may make either of the following elections to ensure its rights are protected and any negative impact on service delivery is mitigated:
 - 26.1.1 accept a supplier proposal (via the liquidator) to render delivery utilising the appropriate contractual mechanisms; or
 - 26.1.2 terminate the contract, as the liquidator proposed supplier is deemed unacceptable to the purchaser, at any time by giving written notice to the supplier (via the liquidator).
- 26.2 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.

27. Settlement of Disputes

Amend clause 27.1 as follows:

- 27.1 If any dispute or difference of any kind whatsoever, with the exception of termination in terms of clause 23.1(c), arises between the purchaser and the supplier in connection with or arising out of the contract, the parties shall make every effort to resolve such dispute or difference amicably, by mutual consultation.

Delete Clause 27.2 in its entirety and replace with the following:

- 27.2 Should the parties fail to resolve any dispute by way of mutual consultation, either party shall be entitled to refer the matter for mediation before an independent and impartial person whose identity shall be agreed to between the Parties within fourteen (14) days, failing which the referring party will be entitled to approach the Chairperson of the Cape Bar for a recommendation of a mediator experienced in the subject matter of the dispute, to act as the mediator. Such referral shall be done by either party giving written notice to the other of its intention to commence with mediation. No mediation may be commenced unless such notice is given to the other party.

Irrespective whether the mediation resolves the dispute, the parties shall bear their own costs concerning the mediation and share the costs of the mediator and related costs equally.

The mediator shall agree the procedures, representation and dates for the mediation process with the parties. The mediator may meet the parties together or individually to enable a settlement.

Where the parties reach settlement of the dispute or any part thereof, the mediator shall record such agreement and on signing thereof by the parties the agreement shall be final and binding.

Save for reference to any portion of any settlement or decision which has been agreed to be final and binding on the parties, no reference shall be made by or on behalf of either party in any subsequent court proceedings, to any outcome of an amicable settlement by mutual consultation, or the fact that any particular evidence was given, or to any submission, statement or admission made in the course of amicable settlement by mutual consultation or mediation.

28. Limitation of Liability

Delete clause 28.1 (b) and replace with the following:

- (b) the aggregate liability of the supplier to the purchaser, whether under the contract, in tort or otherwise, shall not exceed the sums insured in terms of clause 11 in respect of insurable events, or where no such amounts are stated, to an amount equal to twice the contract price,

provided that this limitation shall not apply to the cost of repairing or replacing defective equipment.

Add the following after clause 28.1:

28.2 Without detracting from, and in addition to, any of the other indemnities in this contract, the supplier shall be solely liable for and hereby indemnifies and holds harmless the purchaser against all claims, charges, damages, costs, actions, liability, demands and/or proceedings and expense in connection with:

- a) personal injury or loss of life to any individual;
- b) loss of or damage to property;

arising from, out of, or in connection with the performance by the supplier in terms of this Contract, save to the extent caused by the gross negligence or wilful misconduct of the purchaser.

28.3 The supplier and/or its employees, agents, concessionaires, suppliers, sub-contractors or customers shall not have any claim of any nature against the purchaser for any loss, damage, injury or death which any of them may directly or indirectly suffer, whether or not such loss, damages, injury or death is caused through negligence of the purchaser or its agents or employees.

28.4 Notwithstanding anything to the contrary contained in this Contract, under no circumstances whatsoever, including as a result of its negligent (including grossly negligent) acts or omissions or those of its servants, agents or contractors or other persons for whom in law it may be liable, shall any party or its servants (in whose favour this constitutes a *stipulatio alteri*) be liable for any indirect, extrinsic, special, penal, punitive, exemplary or consequential loss or damage of any kind whatsoever, whether or not the loss was actually foreseen or reasonably foreseeable, sustained by the other party, its directors and/or servants, including but not limited to any loss of profits, loss of operation time, corruption or loss of information and/or loss of contracts.

28.5 Each party agrees to waive all claims against the other insofar as the aggregate of compensation which might otherwise be payable exceeds the aforesaid maximum amounts payable.

31. Notices

Delete clauses 31.1 and 31.2 and replace with the following:

31.1 Any notice, request, consent, approvals or other communications made between the Parties pursuant to the Contract shall be in writing and forwarded to the addresses specified in the contract and may be given as set out hereunder and shall be deemed to have been received when:

- a) hand delivered – on the working day of delivery.
- b) sent by registered mail – five (5) working days after mailing.
- c) sent by email or telefax – one (1) working day after transmission.

32. Taxes and Duties

Delete the final sentence of 32.3 and replace with the following:

In this regard, it is the responsibility of the supplier to submit documentary evidence in the form of a valid Tax Clearance Certificate issued by SARS to the CCT at the Supplier Management Unit located within the Supplier Management / Registration Office, 2nd Floor (Concourse Level), Civic Centre, 12 Hertzog Boulevard, Cape Town (Tel 021 400 9242/3/4/5).

Add the following after clause 32.3:

32.4 The VAT registration number of the City of Cape Town is [REDACTED]

Add the following Clause after Clause 34:

35. Reporting Obligations.

35.1 The supplier shall complete, sign and submit with each delivery note, all the documents as required in the Specifications. Any failure in this regard may result in a delay in the processing of any payments.

36. Protection of personal information

- 36.1 The Supplier acknowledges that, for the purposes of this agreement, they may come into contact with or have access to personal information and other information that may be classified or deemed as private or confidential and for which Purchaser is responsible in terms of Protection of Personal Information Act ("POPIA"). Such personal information may also be deemed or considered as private and confidential as it relates to POPIA.
- 36.2 The Supplier agrees that they will at all times comply with POPIA and Purchaser's Privacy Notice, and that it shall only collect, use and process personal information it comes into contact with pursuant to this agreement in a lawful manner, and only to the extent required to execute the services, or to provide the goods and to perform their obligations in terms of the service level agreement.
- 36.3 The Supplier agrees that it shall put in place, and at all times maintain, appropriate physical, technological and contractual security measures to ensure the protection and confidentiality of the personal information that it, or its employees, its contractors or other authorised individuals comes into contact in relation to the service level agreement.
- 36.4 The supplier agrees that it shall notify the Purchaser immediately where there are reasonable grounds to believe that the personal information of a data subject has been accessed or acquired by any unauthorised person.
- 36.5 Unless so required by law, the Supplier agrees that it shall treat the personal information as confidential and further not disclose any personal information as defined in POPIA to any third party without the prior written consent of the Purchaser.
- 36.6 The Supplier hereby indemnifies and holds the Purchaser harmless against all claims, losses, damages and costs of whatsoever nature suffered by the Purchaser arising from or in relation to the Supplier's (and/or its employees', agents' and sub-contractors') non-compliance with applicable data protection laws and/or other legislation.

SPECIAL CONDITIONS OF CONTRACT (SCC) SUPPLEMENTARY TO AND MUST BE READ WITH THE CORRESPONDING PROVISIONS OF THE GENERAL CONDITIONS OF CONTRACT (GCC), RELEVANT TO THE PROVISION OF SERVICES, ISSUED BY THE NATIONAL TREASURY.

WHENEVER THERE IS A CONFLICT BETWEEN THE SCC AND THE GCC, THE PROVISIONS OF THE SCC SHALL PREVAIL.

37. Award Subject to Section 33 of the MFMA

The award to the supplier is in its entirety subject to the condition that approval be granted by Council in terms of Section 33 of the MFMA based on the processes and criteria set out in that section. Should such approval be declined by Council the award will be of no force and effect and the City shall be entitled to cancel the tender or to renegotiate its terms and conditions with the supplier as per the directions of Council.

38. Contracting period and responsibility**38.1. Contract Period**

The contract period may not exceed sixty (60) months from the date of commencement of contract, or as determined by the Council resolution in terms of Section 33.

38.2. Responsibility of the Supplier's Project Manager

The Project Manager will take responsibility for managing inputs and deliverables by other consultants or sub-contractors, as well as the production of reports and other outputs, and the collation, content and submission of invoices.

38.3. Combining Skills and Expertise: Partnership/ JV/ Consortium

If a team made of different companies tenders, a suitable agreement e.g. for Joint Venture, Partnership, Consortium, etc. that describes roles, responsibilities and deliverables of individual members to such an agreement, must be signed by all parties, and must be attached as part of the returnable schedules and documents, which are to be returned with all other bid documents.

38.4. Loss of Skills and Expertise to execute contract in terms the Service Level Agreement

If a team member, who is part of the original bid, is no longer available to render services, such a

team member must be replaced under the same provisions as per the original tender conditions. If this is not possible, the City reserves the right to cancel the contract with prejudice.

39. Project Initiation and Contract Period

- 39.1. The contract will commence on the date of signature of the service level agreement between the parties, and will endure for a period of five years, or as resolved by the Council.
- 39.2. Signature of the service level agreement will only proceed after the Section 33 resolution of Council confirming the award of the BAC and the contractual terms and conditions negotiated.
- 39.3. Within two weeks of the date of commencement of contract, the supplier must provide a draft execution plan and activity, delivery and payment schedules for approval by the City's project manager.

40. Local Presence in Cape Town for on-site work, afterhours and emergency response

The continuous nature of the services for optimising, operating, repairing and maintaining the infrastructure and equipment that the supplier is responsible for, requires the supplier to have staff that reside in Cape Town to be able to give effect to the contract.

41. After-hours and emergency response

- 41.1. The services for optimising, operating, repairing and maintaining production, monitoring and measuring equipment, as well as responding to emergencies on site within specified timeframes. These are as set out in the Specification **PART A**. Due to the continuous nature of these services, a supplier must have staff that reside in Cape Town to be able to give effect to the contract.
- 41.2. The supplier will be responsible for any emergency and after-hours response related to the availability of the LFG collection and flaring system, the generator system, auxiliary equipment and the ITC system used for the project.
- 41.3. The supplier must liaise with the City's landfill manager to resolve any problem that has resulted from the alarm call, via cell phone. If the problem cannot be resolved remotely via cell phone, the City's landfill manager may instruct the supplier to go to site and attend to the technical problem.
- 41.4. The supplier must arrive at the facility within four (4) hours of the emergency notification. Emergency response must be provided on a twenty-four (24) hour / seven (7) day per week basis.
- 41.5. The supplier must provide the emergency contact numbers of two (2) responsible parties to the City's Project Manager.
- 41.6. The City's Project Manager shall maintain the two (2) contact numbers on the existing GSM TeleAlarm remote access system and the supplier shall monitor all alarm calls from the flare station.
- 41.7. In the event of an alarm call out, the supplier must contact the City's landfill manager by cell phone within one (1) hour during normal working hours, Monday to Fridays between 08:00 and 17:00.
- 41.8. For alarm calls received outside of normal working hours, the supplier shall contact the City's landfill manager no later than 09:30 of the next business day.

42. Adherence to Carbon Registry and PoA requirements

All services must be provided in accordance with the CDM, in particular adhering to the PoA's Project Design Documents (PDDs), as applicable, or another carbon registry's requirements in terms of the City's decision regarding the listing of credits.

43. Adherence to CME Operating Manual

In the performance of all services in terms of this tender, the supplier must adhere to the CME Operating Manual of the City, as amended from time to time.

44. Routine Maintenance Work

All routine maintenance work or repairs undertaken in required by **Part A** of the specification must conform both to manufacturer's recommendation and to the CDM (or equivalent standard) rules (or other relevant carbon registry's rules as applicable), so as to ensure that the issuance of CERs is not compromised.

45. Third Party LFG Projects applying to join the City's LFG PoA

If third party developers of carbon projects involving landfill apply to join the City's Programme of Activities

for LFG beneficiation projects the supplier must:

- 45.1. Assist the City in negotiations for inclusion of the relevant third party project/s under the PoA, and establish an independent contractual relationship with such parties in alignment with the City's approved Inclusion Agreement, ensuring that the third party participant accepts liability for all costs incurred in respect of its project, and if required in the Inclusion Agreement, for the payment to the City of a PoA participation fee and a royalty on CERs earned.
- 45.2. Render such services pertaining to the inclusion of third party projects according to the terms and conditions of the specific inclusion agreement for inclusion of the relevant project/s under the PoA, as negotiated and entered into between the City and the third party project owner.
- 45.3. Administer third party projects included under the PoA in the same manner that the City's projects are administered.
- 45.4. Levy charges in respect of services rendered to third party project/s at rates no greater than those levied to the City.

46. Changes in Carbon Registry: Impact on applicable prices for related services tendered

The City has the right to retire its CERs from the CDM registry to another carbon registry, e.g. the SA COAS. In the event of the City electing to join a carbon registry other than the CDM, the applicable pricing of that registry will apply for all activities determined by that registry, and must be charged accordingly.

47. Data Management

- 47.1. Project data will be made available to the City upon request.
- 47.2. The City owns the project data without condition or prejudice.

48. Ad hoc Services

In respect of services as are necessary to be delivered by independent, competent consultants accredited by the CDM (e.g. for validation and verification services) to obtain issuance of CERs for trading purposes, including but not necessarily limited to project validation and ER verification and registration with the CDM per its requirements of the CDM, or a replacement mechanism for the CDM to be finalised by a Conference of the Parties.

49. Phasing and Commissioning of LFG and Generation Infrastructure

- 49.1. All LFG projects or parts of project infrastructure that have not been commissioned at the inception of this contract, will need to be phased in until commissioning of infrastructure has been completed and handed over to the supplier for execution of work in terms of this contract.
- 49.2. The supplier must work closely with the contractor responsible for capital works to expand the wellfields (as and when required).
- 49.3. The supplier will be required to interact on design changes or wellfield expansions.
- 49.4. Three months before the expiry of this contract, the supplier will prepare all documents for handing over of operations, maintenance, repair and carbon advisory services to the next supplier.
- 49.5. The supplier will be required to work with the next supplier until the contract expires.

50. City's Right to Withdraw from Parts of Contract

The City is entitled to withdraw from either **Part A** or **Part B** of the contract, or components thereof, in the event of changes in the international or domestic carbon markets and platforms rendering all or part of the project/s underpinning the contract unfeasible or unnecessary, or if a carbon project becomes non-viable. In the event of such withdrawal the supplier will be entitled to remuneration for all work done up to the date of such a withdrawal, but it will not be entitled to further claims or damages, direct or consequential, arising therefrom.

- 50.1. **Delays with infrastructure implementation:** Any delay caused by the implementation and commissioning of the City's LFG project infrastructure will not entitle the supplier to claim reimbursement for technical or carbon services not rendered.
- 50.2. **Non-viability of LFG projects:** Should the emissions of LFG from City LFG projects decline to an extent that affects the viability of services as per the specifications if some or all of the infrastructure is shut to prevent fruitless expenditure, the City reserves the right to instruct the contractor accordingly. The supplier shall have no claims of any nature after payment of the last invoice amounts for work rendered before the City's instruction to stop work on such a project.

- 50.3. **Carbon emissions protocol expiry:** Should the CDM or any other carbon emissions protocol expires for whatever reason, the work related to the registration of carbon emission data will be terminated. The supplier shall have no claims of any nature after payment of the last invoice amounts for work rendered for such work before the City's instruction to stop work on these activities.

51. Performance

It is the City's expectation that with the maintenance as prescribed in this specification that the performance of all systems be maintained for optimal operations to reduce landfill gas emissions, to extract and beneficiate the extracted LFG:

- 51.1. The percentage availability will be calculated by using the following formula and conditions

Percentage Availability (%) =	$\frac{\text{Available Time in a month (hours)}}{(\text{Total Time in a month} - \text{time caused by uncontrollable factors}) (\text{hours})}$
=	$\frac{\text{Total Time in a month} - (\text{time needed for scheduled maintenance} + \text{time caused by uncontrollable factors})}{(\text{Total Time in a month} - \text{time caused by uncontrollable factors})}$
Where:	
(i) The time needed for scheduled maintenance includes time for expected, planned or preventative maintenance, and	
(j) Time caused by uncontrollable factors that could include load shedding, vandalism, shipping delays, etc.	

- 51.2. Any other time resulting in downtime that could have reasonably been averted by scheduled equipment operation, repairs or maintenance, will be deducted from the Available Time to calculate the Actual Available Time, which will be used to determine if a penalty will be deducted from the contractor's monthly invoice or payment certificate.
- 51.3. The performance thresholds for the different systems is the Percentage Availability indicated in the following table:

System	Relevant Components	Required % Availability
Wellfield system	The wells, manifolds, pipes and ancillary equipment.	90%
Flare system	Flare.	98%
Flare system	Emergency generator	100%
ITC/ Data systems	Data measurement/ monitoring, data capture, data storage and back up equipment	98%
Electricity generation	Landfill gas internal combustion engines.	95%
Electricity generation	Electricity generator, transformer, cables, switching, protection ancillary equipment necessary for generating electricity from LFG.	95%

52. Safety, Health and Environmental Measures

- 52.1. The supplier must develop a Health, Safety and Environmental Plan that must include Standard Operating Procedures, Emergency and Evacuation procedures and environmental protection measures.
- 52.2. Staff must be trained to ensure safety and minimise potential impacts while working on site.
- 52.3. The supplier must consider all hazards and risks and will be responsible for the health and safety of its staff.

53. Project reporting requirements

- 53.1. Reporting must be based on milestones and deliverables as per the schedule agreed to between the supplier and the City.
- 53.2. Monthly performance feedback reports must be provided, which must include the following detail:
 - progress against the delivery schedule, for purposes of monitoring the outputs and payments therefor;
 - unusual events impacting upon data generation or recording;
 - events and activities requiring attention or consideration;
 - system performance;
 - LFG infrastructure equipment performance, and other applicable carbon project equipment performance;
 - carbon monitoring;
 - carbon reporting;
 - electricity generation;
 - diesel consumption for standby generators;
 - invoicing, cash flow and budget status.
- 53.3. Routine reports per project site using templates included in the tender to record emissions, flare, electricity generation and generator fuel consumption data.
- 53.4. Ad hoc reporting is required as and when unplanned or ad hoc events or incidents occur. This includes, but is not limited to reports for health, safety and environmental impact incidents, and equipment failure.
- 53.5. The supplier must complete applicable schedules and reports pertaining to administrative matters, as required by, and at frequencies specified in the tender.
- 53.6. The supplier must provide an annual performance report to summarise events, major issues arising, responses to maintain the integrity of the contract, carbon data summary per month, also depicted graphically, and the registration of CERs, with concluding comments and recommendations.
- 53.7. When CME services are rendered for third party projects, the supplier must report to the CME and to the UNFCCC or the relevant carbon platform management entity if the City has decided to use a platform other than the CDM. This requirement is over and above any reporting requirements in terms of the contract between the supplier and the third party project owner.
- 53.8. The supplier must provide reports required by the City's internal or external auditors, upon demand.
- 53.9. A final report will be required at the closing out of the contract.

54. Payment

- 54.1. Claims in terms of invoices submitted for work will be subject to a principle of "pay-on-performance".
- 54.2. Payment will be made according to the Payment Schedule linked to milestones and deliverables, which must be agreed to within 14-days of commencing the contract.
- 54.3. All LFG projects or parts of project infrastructure that have not been commissioned at the inception of this contract until such time as the phasing in and commissioning of infrastructure has been completed and handed over to the supplier for execution of work in terms of this contract.
- 54.4. If the City exercises its right to unilaterally to discontinue the need for any portion of applicable services due to a LFG project no longer being viable, payment will be made up to the date the City has formally communicated such a decision and date to the supplier, and the remainder of that portion will not be subject to invoicing or payment.
- 54.5. Payment for all services provided by the supplier will be in the form of a monthly certificate based on the approved pricing schedule for services, and will be denoted in South African Rand (ZAR).
- 54.6. Imported items and services per Provisional Sums (Psum) must be invoiced in South African Rand (ZAR) for which no further adjustment will be applicable.
- 54.7. In order for any work to be done through a provisional sum, the following process must be followed:
 - a) Three quotes must be submitted timeously prior to the commencement of works. The sourcing of quotes must be in line with the City's Supply Chain Management policies. If a quote is received from a sole provider, adequate documentation must be supplied to prove the validity and sole supplier status.
 - b) Approval must be received from the City's project manager on which quote is acceptable to proceed.
 - c) The supplier is permitted to include a 2.5% handling fee commission on items paid this way.

55. Appointment of Contractors or Subcontractors

Where contractors or subcontractors are not identifiable at the time of tendering and have to be appointed subsequent to the signing of this contract, e.g. as the Designated Operational Entity (DOE) to perform validation and verification services, the supplier must:

- 55.1. Check the minimum legislative and policy requirements of the City and National Treasury to provide goods and services to the City and supply the City with proof of compliance prior to their appointment;
- 55.2. Ensure that the entity meets the minimum requirements to be able to provide service required by the tender;
- 55.3. Provide quotations to the City's project manager for approval to proceed with the sub-contracting arrangement, which must be confirmed in writing by the City's project manager;
- 55.4. Enter into a contract with the contracting parties; and
- 55.5. Supply a copy of the contract signed by all parties to the City's project manager.

56. Liability to pay Subcontractors

- 56.1. Notwithstanding the contents of any subcontracting agreements, the supplier is liable for the management and administration of approved subcontracted work, as well as the deliverables.
- 56.2. The supplier is furthermore liable for the payment of all charges of subcontractors and hereby indemnifies the City in respect of payment of such charges.

57. Failure or Cancellation of Entity Contracts or Subcontracts

In the event of any party to an entity formed for the purposes to effect work for this contract, or a subcontractor defaulting on its obligations, or in the event of a contract being cancelled by the supplier's Project Manager for any reason including insolvency of a party to a contract, the supplier must as soon as practicably possible replace the skills on the following basis:

- 57.1. The supplier must ensure that all data is transferred to the City within 3 working days of this contract being terminated.
- 57.2. If an entity contract is terminated, the principle of "like-for-like-or-better" will apply regarding the replacement partner and the relevant professional or technical skill to fulfil the terms and conditions of tender and of this contract.
- 57.3. The supplier must communicate the credentials of the newly proposed contractor in the same format and adhering to the same content requirements as for the appointment of original subcontractors to the City.
- 57.4. The appointment of the new contractor will become effective upon approval and acceptance in writing by the City's project manager.

58. Failure to produce deliverables

Failure by the supplier to produce agreed deliverables will entitle the City to withhold payment until such deliverables are produced, to invoke penalties as defined in the tender and to claim damages.

59. Provision of Data to City Auditors

The supplier is obliged to supply any data in its possession emanating from its work in terms of this tender to the internal or external auditors of the City upon a written request from the City's project manager.

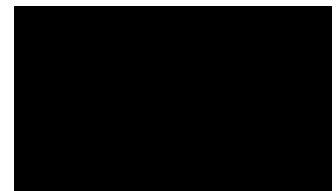
60. Final Terms and Conditions of Contract

These special conditions of contract may be varied or supplemented by further terms and conditions emanating from negotiations between the parties subsequent to the award, to be contained in a service level agreement to be entered into.

61. Review Clause

- 61.1. This Agreement is valid from **date of commencement for a period of 60 months**. This Agreement shall be reviewed once every three years; however, in lieu of a review during any period specified, the current Agreement will remain in effect. The purchaser reserves the right to reduce or increase the scope of works according to the dictates of the budget, to terminate this contract, and/or to review and terminate this contract as is contemplated in Section 116(1)(b)(iii) of the Local Government: Municipal Finance Management Act 56 of 2003, without adjustment to the agreed rates, sums or fees and without payment of any penalty or surcharge in this regard. The supplier shall however be entitled to pro-rata payment for all services carried out in terms of any adjustment to the Scope of Work or, in the case of termination, payment for good delivered.

- 61.2. As required by section 116(2)(b) of the Local Government: Municipal Financial Management Act 56 of 2003, the City shall monitor the performance of the contractor/supplier on at least a monthly basis, and the supplier agrees to provide the City with its full cooperation in this regard.



PART 3: GENERAL CONDITIONS OF CONTRACT

(National Treasury - General Conditions of Contract (revised July 2010))

TABLE OF CLAUSES

1. Definitions
2. Application
3. General
4. Standards
5. Use of contract documents and information; inspection
6. Patent rights
7. Performance security
8. Inspections, tests and analysis
9. Packing
10. Delivery and documents
11. Insurance
12. Transportation
13. Incidental services
14. Spare parts
15. Warranty
16. Payment
17. Prices
18. Contract amendments
19. Assignment
20. Subcontracts
21. Delays in the supplier's performance
22. Penalties
23. Termination for default
24. Dumping and countervailing duties
25. Force majeure
26. Termination for insolvency
27. Settlement of disputes
28. Limitation of liability
29. Governing language
30. Applicable law
31. Notices
32. Taxes and duties
33. National Industrial Participation Programme (NIPP)
34. Prohibition of restrictive practices

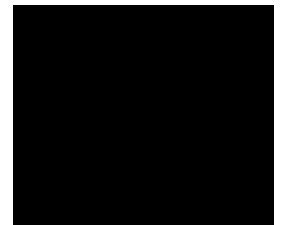
1. Definitions

1. The following terms shall be interpreted as indicated:

- 1.1 'Closing time' means the date and hour specified in the bidding documents for the receipt of bids.
- 1.2 'Contract' means the written agreement entered into between the purchaser and the supplier, as recorded in the contract form signed by the parties, including all attachments and appendices thereto and all documents incorporated by reference therein.
- 1.3 'Contract price' means the price payable to the supplier under the contract for the full and proper performance of his or her contractual obligations.
- 1.4 'Corrupt practice' means the offering, giving, receiving, or soliciting of anything of value to influence the action of a public official in the procurement process or in contract execution.
- 1.5 'Countervailing duties' are imposed in cases in which an enterprise abroad is subsidised by its government and encouraged to market its products internationally.
- 1.6 'Country of origin' means the place where the goods were mined, grown or produced or from which the services are supplied. Goods are produced when, through manufacturing, processing or substantial and major assembly of components, a commercially recognised new product results that is substantially different in basic characteristics or in purpose or utility from its components.

- 1.7 'Day' means calendar day.
- 1.8 'Delivery' means delivery in compliance with the conditions of the contract or order.
- 1.9 'Delivery ex stock' means immediate delivery directly from stock actually on hand.
- 1.10 'Delivery into consignee's store or to his site' means delivered and unloaded in the specified store or depot or on the specified site in compliance with the conditions of the contract or order, the supplier bearing all risks and charges involved until the supplies are so delivered and a valid receipt is obtained.
- 1.11 'Dumping' occurs when a private enterprise abroad markets its goods on its own initiative in the RSA at lower prices than that of the country of origin, and which action has the potential to harm the local industries in the RSA.
- 1.12 'Force majeure' means an event beyond the control of the supplier, not involving the supplier's fault or negligence, and not foreseeable. Such events may include, but are not restricted to, acts of the purchaser in its sovereign capacity, wars or revolutions, fires, floods, epidemics, quarantine restrictions and freight embargoes.
- 1.13 'Fraudulent practice' means a misrepresentation of facts in order to influence a procurement process or the execution of a contract to the detriment of any bidder, and includes collusive practice among bidders (prior to or after bid submission) designed to establish bid prices at artificial, non-competitive levels and to deprive the bidder of the benefits of free and open competition.
- 1.14 'GCC' means the General Conditions of Contract.
- 1.15 'Goods' means all of the equipment, machinery, and/or other materials that the supplier is required to supply to the purchaser under the contract.
- 1.16 'Imported content' means that portion of the bidding price represented by the cost of components, parts or materials which have been or are still to be imported (whether by the supplier or his subcontractors) and which costs are inclusive of the costs abroad, plus freight and other direct importation costs such as landing costs, dock dues, import duty, sales duty or other similar tax or duty at the South African place of entry as well as transportation and handling charges to the factory in the Republic where the supplies covered by the bid will be manufactured.
- 1.17 'Local content' means that portion of the bidding price which is not included in the imported content, provided that local manufacture does take place.
- 1.18 'Manufacture' means the production of products in a factory using labour, materials, components and machinery, and includes other, related value-adding activities.
- 1.19 'Order' means an official written order issued for the supply of goods or works or the rendering of a service.
- 1.20 'Project site', where applicable, means the place indicated in bidding documents.
- 1.21 'Purchaser' means the organisation purchasing the goods.
- 1.22 'Republic' means the Republic of South Africa.
- 1.23 'SCC' means the Special Conditions of Contract.
- 1.24 'Services' means those functional services ancillary to the supply of the goods, such as transportation and any other incidental services, such as installation, commissioning, provision of technical assistance, training, catering, gardening, security, maintenance, and other such obligations of the supplier covered under the contract.
- 1.25 'Written' or 'in writing' means handwritten in ink or any form of electronic or mechanical writing.

2. Application



- 2.1 These general conditions are applicable to all bids, contracts and orders, including bids for functional and professional services, sales, hiring, letting and the granting or acquiring of rights, but excluding immovable property, unless otherwise indicated in the bidding documents.
- 2.2 Where applicable, special conditions of contract are also laid down to cover specific supplies, services or works.
- 2.3 Where such special conditions of contract are in conflict with these general conditions, the special conditions shall apply.

3. General

- 3.1 Unless otherwise indicated in the bidding documents, the purchaser shall not be liable for any expense incurred in the preparation and submission of a bid. Where applicable, a non-refundable fee for documents may be charged.
- 3.2 With certain exceptions, invitations to bid are only published in the Government Tender Bulletin. The Government Tender Bulletin may be obtained directly from the Government Printer, Private Bag X85, Pretoria 0001, or accessed electronically from www.treasury.gov.za.

4. Standards

- 4.1 The goods supplied shall conform to the standards mentioned in the bidding documents and specifications.

5. Use of contract documents and information; inspection.

- 5.1 The supplier shall not, without the purchaser's prior written consent, disclose the contract, or any provision thereof, or any specification, plan, drawing, pattern, sample, or information furnished by or on behalf of the purchaser in connection therewith, to any person other than a person employed by the supplier in the performance of the contract. Disclosure to any such employed person shall be made in confidence and shall extend only as far as may be necessary for the purposes of such performance.
- 5.2 The supplier shall not, without the purchaser's prior written consent, make use of any document or information mentioned in GCC clause 5.1, except for purposes of performing the contract.
- 5.3 Any document, other than the contract itself, mentioned in GCC clause 5.1 shall remain the property of the purchaser and shall be returned (all copies) to the purchaser on completion of the supplier's performance under the contract if so required by the purchaser.
- 5.4 The supplier shall permit the purchaser to inspect the supplier's records relating to the performance of the supplier and to have them audited by auditors appointed by the purchaser, if so required by the purchaser.

6. Patent rights

- 6.1 The supplier shall indemnify the purchaser against all third-party claims of infringement of patent, trademark, or industrial design rights arising from the use of the goods or any part thereof by the purchaser.

7. Performance Security

- 7.1 Within 30 (thirty) days of receipt of the notification of contract award, the successful bidder shall furnish to the purchaser the performance security of the amount specified in the SCC.
- 7.2 The proceeds of the performance security shall be payable to the purchaser as compensation for any loss resulting from the supplier's failure to complete his obligations under the contract.
- 7.2 The performance security shall be denominated in the currency of the contract or in a freely convertible currency acceptable to the purchaser, and shall be in one of the following forms:
 - a) a bank guarantee or an irrevocable letter of credit issued by a reputable bank located in the purchaser's country or abroad, acceptable to the purchaser, in the form provided in the bidding

- documents or another form acceptable to the purchaser; or
- b) a cashier's or certified cheque.

7.4 The performance security will be discharged by the purchaser and returned to the supplier not later than 30 (thirty) days following the date of completion of the supplier's performance obligations under the contract, including any warranty obligations, unless otherwise specified in the SCC.

8. Inspections, tests and analyses

- 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 inspection, the premises of the bidder or contractor shall be open, at all reasonable hours, for inspection by a representative of the Department or an organisation acting on behalf of the Department.
- 8.3 If there are no inspection requirements indicated in the bidding documents and no mention of such is made in the contract, but during the contract period it is decided that inspections shall be carried out, the purchaser shall itself make the necessary arrangements, including payment arrangements with the testing authority concerned.
- 8.4 If the inspections, tests and analyses referred to in clauses 8.2 and 8.3 show the supplies to be in accordance with the contract requirements, the cost of the inspections, tests and analyses shall be defrayed by the purchaser.
- 8.5 Where the supplies or services referred to in clauses 8.2 and 8.3 do not comply with the contract requirements, irrespective of whether such supplies or services are accepted or not, the cost in connection with these inspections, tests or analyses shall be defrayed by the supplier.
- 8.6 Supplies and services which are referred to in clauses 8.2 and 8.3 and which do not comply with the contract requirements may be rejected.
- 8.7 Any contract supplies may on or after delivery be inspected, tested or analysed and may be rejected if found not to comply with the requirements of the contract. Such rejected supplies shall be held at the cost and risk of the supplier, who shall, when called upon, remove them immediately at his own cost and forthwith substitute them with supplies which do comply with the requirements of the contract. Failing such removal, the rejected supplies shall be returned at the suppliers cost and risk. Should the supplier fail to provide the substitute supplies forthwith, the purchaser may, without giving the supplier further opportunity to substitute the rejected supplies, purchase such supplies as may be necessary at the expense of the supplier.
- 8.8 The provisions of clauses 8.4 to 8.7 shall not prejudice the right of the purchaser to cancel the contract on account of a breach of the conditions thereof, or to act in terms of Clause 23 of the GCC.

9. Packing

- 9.1 The supplier shall provide such packing of the goods as is required to prevent their damage or deterioration during transit to their final destination, as indicated in the contract. 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.
- 9.2 The packing, marking, and documentation within and outside the packages shall comply strictly with such special requirements as shall be expressly provided for in the contract, including additional requirements, if any, specified in the SCC, and in any subsequent instructions ordered by the purchaser.

10. Delivery and documents

- 10.1 Delivery of the goods shall be made by the supplier in accordance with the terms specified in the contract. The details of shipping and/or other documents to be furnished by the supplier are specified in the SCC.

10.2 Documents to be submitted by the supplier are specified in the SCC.

11. Insurance

11.1 The goods supplied under the contract shall be fully insured, in a freely convertible currency, against loss or damage incidental to manufacture or acquisition, transportation, storage and delivery in the manner specified in the SCC.

12. Transportation

12.1 Should a price other than an all-inclusive delivered price be required, this shall be specified in the SCC.

13. Incidental Services

13.1 The supplier may be required to provide any or all of the following services, including additional services (if any) specified in the SCC:

- (a) performance or supervision of on-site assembly, and/or commissioning of the supplied goods;
- (b) furnishing of tools required for the assembly and/or maintenance of the supplied goods;
- (c) furnishing of a detailed operations and maintenance manual for each appropriate unit of the supplied goods;
- (d) 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
- (e) training of the purchaser's personnel, at the supplier's plant and/or on-site, in assembly, start-up, operation, maintenance, and/or repair of the supplied goods.

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.

14. Spare parts

14.1 As specified in the SCC, the supplier 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:

- (a) 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
- (b) in the event of termination of production of the spare parts:
 - (i) Advance notification to the purchaser of the pending termination, in sufficient time to permit the purchaser to procure needed requirements; and
 - (ii) following such termination, furnishing at no cost to the purchaser, the blueprints, drawings, and specifications of the spare parts, if requested.

15. Warranty

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. The supplier 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.

15.2 This warranty shall remain valid for 12 (twelve) 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, or for 18 (eighteen) months after the date of shipment from the port or place of loading in the source country, whichever period concludes earlier, unless specified otherwise in the SCC.

15.3 The purchaser shall notify the supplier promptly, in writing, of any claims arising under this warranty.

15.4 Upon receipt of such notice, the supplier shall, within the period specified in the SCC and with all reasonable speed, repair or replace the defective goods or parts thereof, without costs to the purchaser.

- 15.5 If the supplier, having been notified, fails to remedy the defect(s) within the period specified in the SCC, 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.

16. Payment

- 16.1 The method and conditions of payment to be made to the supplier under this contract shall be specified in the SCC.
- 16.2 The supplier shall furnish the purchaser with an invoice accompanied by a copy of the delivery note and upon fulfilment of any other obligations stipulated in the contract.
- 16.3 Payments shall be made promptly by the purchaser, but in no case later than 30 (thirty) days after submission of an invoice or claim by the supplier.
- 16.4 Payment will be made in Rand unless otherwise stipulated in the SCC.

17. Prices

- 17.1 Prices charged by the supplier for goods delivered and services performed under the contract shall not vary from the prices tendered by the supplier in his bid, with the exception of any price adjustments authorized in the SCC or in the purchaser's request for bid validity extension, as the case may be.

18. Contract Amendments

- 18.1 No variation in or modification of the terms of the contract shall be made except by written amendment signed by the parties concerned.

19. Assignment

- 19.1 The supplier shall not assign, in whole or in part, its obligations to perform under the contract, except with the purchaser's prior written consent.

20. Subcontracts

- 20.1 The supplier shall notify the purchaser in writing of all subcontracts awarded under this contract if not already specified in the bid. Such notification, in the original bid or later, shall not relieve the supplier from any liability or obligation under the contract.

21. Delays in the supplier's performance

- 21.1 Delivery of the goods and performance of services shall be made by the supplier in accordance with the time schedule prescribed by the purchaser in the contract.
- 21.2 If at any time during the 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 purchaser 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 purchaser shall evaluate the situation and may at his or her 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.
- 21.3 No provision in a contract shall be deemed to prohibit the obtaining of supplies or services from a national department, provincial department, or a local authority.
- 21.4 The right is reserved to procure, outside of the contract, small quantities of supplies; or to have minor essential services executed if an emergency arises, or 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.
- 21.5 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 21.2 without the application of penalties.

- 21.6 Upon any delay beyond the delivery period in the case of a supplies contract, the purchaser 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.

22. Penalties

- 22.1 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 purchaser 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, using the current prime interest rate, calculated for each day of the delay until actual delivery or performance. The purchaser may also consider termination of the contract pursuant to GCC Clause 23.

23. Termination for default

- 23.1 The purchaser, without prejudice to any other remedy for breach of contract, by written notice of default sent to the supplier, may terminate this contract in whole or in part:

- (a) if the supplier fails to deliver any or all of the goods within the period(s) specified in the contract, or within any extension thereof granted by the purchaser pursuant to GCC Clause 21.2;
- (b) if the supplier fails to perform any other obligation(s) under the contract; or
- (c) if the supplier, in the judgment of the purchaser, has engaged in corrupt or fraudulent practices in competing for or in executing the contract.

- 23.2 In the event the purchaser terminates the contract in whole or in part, the purchaser may procure, upon such terms and in such manner as it deems appropriate, goods, works or services similar to those undelivered, and the supplier shall be liable to the purchaser for any excess costs for such similar goods, works or services. However, the supplier shall continue performance of the contract to the extent not terminated.

- 23.3 Where the purchaser terminates the contract in whole or in part, the purchaser may decide to impose a restriction penalty on the supplier by prohibiting such supplier from doing business with the public sector for a period not exceeding 10 years.

- 23.4 If a purchaser intends imposing a restriction on a supplier or any person associated with the supplier, the supplier will be allowed a time period of not more than 14 (fourteen) days to provide reasons why the envisaged restriction should not be imposed. Should the supplier fail to respond within the stipulated 14 (fourteen) days the purchaser may regard the intended penalty as not objected against and may impose it on the supplier.

- 23.5 Any restriction imposed on any person by the Accounting Officer/Authority will, at the discretion of the Accounting Officer/Authority, also be applicable to any other enterprise or any partner, manager, director or other person who wholly or partly exercises or exercised or may exercise control over the enterprise of the first-mentioned person, and with which enterprise or person the first-mentioned person is or was, in the opinion of the Accounting Officer/Authority, actively associated.

- 23.6 If a restriction is imposed, the purchaser must, within 5 (five) working days of such imposition, furnish the National Treasury with the following information:

- (i) the name and address of the supplier and/or person restricted by the purchaser;
- (ii) the date of commencement of the restriction;
- (iii) the period of restriction; and
- (iv) the reasons for the restriction.

These details will be loaded in the National Treasury's central database of suppliers or persons prohibited from doing business with the public sector.

- 23.7 If a court of law convicts a person of an offence as contemplated in sections 12 or 13 of the Prevention and Combating of Corrupt Activities Act, Act 12 of 2004, the court may also rule that such person's name be endorsed on the Register for Tender Defaulters. When a person's name has been endorsed on the Register, the person will be prohibited from doing business with the public sector for a period

of not less than five years and not more than 10 years. The National Treasury is empowered to determine the period of restriction, and each case will be dealt with on its own merits. According to section 32 of the Act the Register must be open to the public. The Register can be perused on the National Treasury website.

24. Anti-dumping and countervailing duties and rights

24.1 When, after the date of bid, provisional payments are required, or anti-dumping or countervailing duties are imposed, or the amount of a provisional payment or anti-dumping or countervailing right is increased in respect of any dumped or subsidised import, the State is not liable for any amount so required or imposed, or for the amount of any such increase. When, after the said date, such a provisional payment is no longer required or any such anti-dumping or countervailing right is abolished, or where the amount of such provisional payment or any such right is reduced, any such favourable difference shall, on demand, be paid forthwith by the contractor to the State, or the State may deduct such amounts from moneys (if any) which may otherwise be due to the contractor in regard to supplies or services which he or she delivered or rendered, or is to deliver or render in terms of the contract or any other contract or any other amount which may be due to him or her.

25. Force majeure

25.1 Notwithstanding the provisions of GCC Clauses 22 and 23, the supplier shall not be liable for forfeiture of its performance security, damages, or termination for default if, and to the extent that, his delay in performance or other failure to perform his obligations under the contract is the result of an event of force majeure.

25.2 If a force majeure situation arises, the supplier shall notify the purchaser promptly, in writing, of such condition and the cause thereof. Unless otherwise directed by the purchaser in writing, the supplier shall continue to perform its obligations under the contract as far as is reasonably practical, and shall seek all reasonable alternative means for performance not prevented by the force majeure event.

26. Termination for insolvency

26.1 The purchaser 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.

27. Settlement of Disputes

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 such dispute or difference amicably, by mutual consultation.

27.2 If, after 30 (thirty) 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.

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.

27.4 Mediation proceedings shall be conducted in accordance with the rules of procedure specified in the SCC.

27.5 Notwithstanding any reference to mediation and/or court proceedings herein,
 (a) the parties shall continue to perform their respective obligations under the contract unless they otherwise agree; and
 (b) the purchaser shall pay the supplier any monies due to the supplier.

28. Limitation of Liability

28.1 Except in cases of criminal negligence or wilful misconduct, and in the case of infringement pursuant to Clause 6:

(a) the supplier shall not be liable to the purchaser, whether in contract, tort, or otherwise, for any indirect or consequential loss or damage, loss of use, loss of production, or loss of profits or

interest costs, provided that this exclusion shall not apply to any obligation of the supplier to pay penalties and/or damages to the purchaser; and

- (b) the aggregate liability of the supplier to the purchaser, whether under the contract, in tort or otherwise, shall not exceed the total contract price, provided that this limitation shall not apply to the cost of repairing or replacing defective equipment.

29. Governing language

29.1 The contract shall 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.

30. Applicable Law

30.1 The contract shall be interpreted in accordance with South African laws, unless otherwise specified in the SCC.

31. Notices

31.1 Every written acceptance of a bid shall be posted to the supplier concerned by registered or certified mail, and any other notice to him shall be posted by ordinary mail, to the address furnished in his bid or to the address notified later by him in writing; and such posting shall be deemed to be proper service of such notice.

31.2 The time mentioned in the contract documents for performing any act after such aforesaid notice has been given, shall be reckoned from the date of posting of such notice.

32. Taxes and Duties

32.1 A foreign supplier shall be entirely responsible for all taxes, stamp duties, licence fees, and other such levies imposed outside the purchaser's country.

32.2 A local supplier shall be entirely responsible for all taxes, duties, licence fees, etc., incurred until delivery of the contracted goods to the purchaser.

32.3 No contract shall be concluded with any bidder whose tax matters are not in order. Prior to the award of a bid the Department must be in possession of a tax clearance certificate submitted by the bidder. This certificate must be an original issued by the South African Revenue Services.

33. National Industrial Participation (NIP) Programme

33.1 The NIP Programme administered by the Department of Trade and Industry shall be applicable to all contracts that are subject to the NIP obligation.

34 Prohibition of Restrictive practices

34.1 In terms of section 4 (1) (b) (iii) of the Competition Act, Act 89 of 1998, as amended, an agreement between or concerted practice by firms, or a decision by an association of firms, is prohibited if it is between parties in a horizontal relationship and if a bidder(s) is/are or a contractor(s) was/were involved in collusive bidding (or bid rigging).

34.2 If a bidder(s) or contractor(s), based on reasonable grounds or evidence obtained by the purchaser, has/have engaged in the restrictive practice referred to above, the purchaser may refer the matter to the Competition Commission for investigation and possible imposition of administrative penalties as contemplated in the Competition Act, Act 89 of 1998.

34.3 If a bidder(s) or contractor(s) has/have been found guilty by the Competition Commission of the restrictive practice referred to above, the purchaser may, in addition and without prejudice to any other remedy provided for, invalidate the bid(s) for such item(s) offered, and/or terminate the contract in whole or part, and/or restrict the bidder(s) or contractor(s) from conducting business with the public sector for a period not exceeding 10 (ten) years and/or claim damages from the bidder(s) or contractor(s) concerned.

PART 4: SPECIFICATIONS

The Integrated Development Plan (IDP), policies and strategies of the City of Cape Town Metropolitan Municipality (City) require the City to pursue climate change mitigation through reduction of greenhouse gas (GHG) emissions from City activities and infrastructure. The City is committed to the fulfilment of this imperative, which is aligned to national government's international climate change commitments. Specific carbon management expertise and experience is required to provide specialised services to give effect to the implementation of Clean Development Mechanism (CDM) projects in terms of the Kyoto Protocol of the United Nations Framework Convention Climate Change (UNFCCC), and more recently the interim Article 6.4 mechanism of the Paris Agreement, as well as carbon mitigation and beneficiation projects conducted under other mechanisms. **Annexure V** contains a list of all acronyms and abbreviations with definitions applicable to this tender.

The City registered a Programme of Activities (PoA) in terms of the CDM for landfill gas (LFG) extraction at its landfill sites. For details of the PoA and the Component Project Activities (CPAs), see "*City of Cape Town Landfill Gas Extraction and Utilisation Programme*" (UNFCCC PoA no. 10004) https://cdm.unfccc.int/ProgrammeOfActivities/poa_db/DE6NVSPRWHCJ178ZMBYL39FKIU40AX/view. The national border of the Republic of South Africa is the PoA's project boundary. This makes it possible for third party-owned or operated LFG projects to join the City's PoA in terms of an Inclusion Agreement that determines terms and conditions, as well as cost payable to the City.

Three of the City's three landfills, Coastal Park (CPLFS, CPA01), Bellville South (BSLFS, CPA-02) and Vissershok (VHLFS, CPA-03) have been registered as Component Project Activities (CPAs) under the PoA. Two applications for the inclusion of third party landfills in the City's PoA have been received and are being considered, pending the finalisation of agreements. Carbon emissions measurement, monitoring and reporting is well under way, and the first Emission Reductions certificates (CERs, or carbon credits) for the City are in the process of being issued.

The City is currently operating LFG (biogas) extraction, monitoring flaring at two of its landfills, and electricity generation infrastructure at CPLFS, with a third installation pending at VHLFS. The BSLFS project will not include electricity generation. It should be noted that separate tenders are used for the design, procurement, and installation and commissioning of the capital infrastructure at these projects.

The City may develop carbon mitigation projects other than the extraction and beneficiation of LFG. These are likely to be linked to its operations and may for example involve wastewater treatment, organic waste treatment through anaerobic digestion, etc. This means other types of CDM projects besides LFG beneficiation may need advice on methodology, and services to perform additionality and feasibility assessments to determine eligibility for registration as CDM projects, developing documentation for registration purposes. Further, services such as contracting validation and verification services to generate and register data for the issuance of certified emission reductions under the CDM or other types of carbon credit instruments (generally referred to as emission reduction certificates, or CERs) will be required.

It is possible that in the future the City may wish to retire its CERs earned in the CDM or another international carbon registry, and register these on the South African Carbon Offset Administration System (COAS) or a similar system operated by the DMRE for the offsetting of CERs against its carbon tax liability or selling these to companies with carbon tax liabilities.

13.2 OBJECTIVES

The main objective of this tender is to appoint a contractor who will be responsible for the operation, repairs and maintenance of LFG extraction, flare compound, data and beneficiation infrastructure to optimise the gas extraction to enable issuance of carbon credits, as well as the support services needed for power generation using LFG. In addition, the monitoring, accumulation, storage and management of carbon emissions data as well as assuming responsibility for the reporting to the UNFCCC as the Coordinating and Managing Entity (CME) on behalf of the City is also included. This team must be able to perform work in terms of the indicative specifications set out below.

13.3 SPECIFICATIONS: AMBIT OF SERVICES REQUIRED

OVERVIEW: The scope of works comprises the following:

- **PART A** encompasses the LFG operation and maintenance of the wellfield and flare compound, mechanical and electrical support for power generation, and information and communications technology (ICT) support, technical monitoring, reporting and training. The technical scope is for the operation, repair, maintenance and monitoring of the LFG collection and flaring systems, the electro-mechanical services needed for power generation via internal combustion engines (ICE) that are modified to operate on LFG for the purposes of benefitting from carbon mitigation, beneficiation per the CDM or similar requirements, such as those specified in the South African Carbon Offset Regulations (COAS), and the ICT infrastructure needed to provide the emissions reduction information that will eventually provide a revenue stream or an opportunity to offset tax liabilities.
- **PART B** encompasses reporting and advisory services, including fulfilling the CME roles on behalf of the City, and evaluating and advising on new projects and changes to the carbon market. It further includes the monthly emissions reductions calculations and reporting to the City.

The carbon advisory scope involves providing knowledge and expertise with the Clean Development Mechanism (CDM), and similar carbon mechanisms and/or standards gained through extensive experience with carbon mitigation projects, especially LFG. This must assist the City in fulfilling its Coordinating/Management Entity (CME) obligations arising from the registered LFG PoA in order to generate carbon credits, to include third party LFG projects applying to join the PoA, to advise on potential carbon projects in relation to the City's operations that may be contemplated for registration on suitable carbon platforms, and to assess the eligibility of non-LFG projects for the City for registration purposes.

It furthermore requires providing knowledge and expertise with regard to the South African carbon tax regime and standards, and the possibility of utilising CERs earned on the LFG and other projects to meet carbon mitigation targets and possibly offset the City's future carbon tax liability, and to advise on the monetization of carbon credits.

- **PART C** involves the services to project manage/ coordinate, administer and manage the efforts of resources, and to report on various aspects to meet deadlines, achieve milestones and produce the deliverables in terms of the tender. This also includes maintain the data integrity by providing means for the carbon data monitoring, storage, disaster recovery.

13.3.1 PART A: SPECIFICATIONS FOR THE PROVISION OF TECHNICAL SERVICES FOR THE OPERATION AND MAINTENANCE OF VARIOUS LANDFILL GAS EXTRACTION AND ELECTRICITY GENERATION SYSTEMS OF THE PoA.

INTRODUCTION

The first of the City's landfill gas collection and flaring systems was installed in 2017 and commissioned in January 2018. Electricity generation is the primary beneficiation method for the City's LFG projects. The City has followed a procurement method where the design, construction and commissioning of LFG extraction and beneficiation systems are procured separately. The continuous expansion of the wellfield is also conducted in a separate tender. It is envisioned that the successful tenderer under this contract will work closely with the contractor responsible for capital works to expand the wellfield (as and when required).

The City's LFG projects being operated or commissioned at present are:

- CPA01 (Coastal Park CPLFS project) – already registered with the project design document indicating beneficiation of the LFG for electricity generation to be used to off-set City energy requirements;
- CPA02 (Bellville South BSLFS project) – already registered to beneficiate LFG for electricity generation to be used to off-set City energy requirements.
- CPA03 (Vissershok VHLFS) – which will be included as a carbon mitigation project with LFG beneficiation via electricity generation. If the inclusion and registration process has not started or is incomplete, the tenderer must provide these services;

The "As-built" drawings of the LFG systems at the Coastal Park, Bellville and Vissershok landfills are referenced in this tender document in **Annexure II**, and must be downloaded from the web portal. The systems necessary for the extraction, flaring, beneficiation and data capture must be available for

optimal utilisation to optimise the destruction of greenhouse emission. The available time must be calculated as the total time less the time for planned, preventative or scheduled maintenance time, less the time during which uncontrolled events disrupt operations or influence the integrity of the different components of systems, such as load shedding, vandalism, etc. The calculation of percentage is in terms of the net time available, divided by the total time. The different performance criteria for the four main systems are:

No.	System	Availability %
1	LFG extraction infrastructure	100%
2	Flare	98%
3	ITC system, including measuring instruments, data logging and communication equipment, data storage and back up equipment:	98%
4	Gas engine:	95%
5	Electrical generator, switching and protection equipment:	95%
6	Emergency generator	100%

The tenderer shall be responsible for the operation, repairs and maintenance of the landfill gas collection and flaring system; the data collection instrumentation, as well as the electricity generator sets at City LFG project once these are implemented, in accordance with all applicable permits, regulations, and the Norms and Standards of landfill gas projects (National Environmental Management Act: National standards for the extraction, flaring or recovery of landfill gas (dffe.gov.za)), and operations manuals. The Operational Manuals are supplied in **Annexure III** of this tender. The tenderer will also be responsible for the same regarding the ICT equipment, which will be used to collect, store and back up emissions and all related data that will be used for the issuance of CERs on site and off site. All services must be provided in accordance with CDM or other carbon registry requirements, in particular adhering to the PoA's Project Design Documents (PDDs). The PDDs for the PoA and all CPAs are supplied in **Annexure V** of this tender.

Attention must be given to spares availability and supply to ensure functionality of the landfill gas extraction system. The essential spares list is provided as **Annexure IV**.

SPECIFICATIONS: AMBIT OF SERVICES REQUIRED

The scope of the services for the LFG project under **PART A** of this contract includes the following items of work at City landfills gas project (existing works at current CPAs). Work must also include the maintenance of the expanded well fields, noting that some existing wells may not be accessible due to operational activities on a landfill. The continuous installation for expansion of a wellfield by another contractor is specifically excluded. The specifications detailed below are not exhaustive and work must be completed in line with the O&M manuals for each site. The tenderer must refer to these manuals for detailed requirements.

PART A's scope for the Technical Services encompassing operations and maintenance comprises:

1. Maintaining the integrity of the LFG extraction and beneficiation infrastructure, including any applicable auxiliary equipment through repairs and scheduled maintenance;
2. Operating and optimising the installed LFG extraction wellfields, flaring, and electricity generation infrastructure, including the routine calibration of equipment (e.g. thermocouples, flow meters, etc.);
3. Maintaining the integrity of Information and Communications Technology (ICT) systems and equipment per CDM requirements, and calibrating the necessary equipment for data capturing;
4. Attending to after-hours and emergency response. Some activities need a speedy response and corrective action that will require a local presence in Cape Town and the ability to perform first stage response and repairs within a reasonable time after equipment or systems have failed.
5. Updating technical documentation, providing routine reporting and deliverables in terms of the tender's objectives.
6. Routine training of staff, including City staff.

CPA-01 Coastal Park landfill gas extraction system (CPLFS) comprises the following:

- Forty-nine (49) vertical gas wells ranging in depths from 20m to 30m, connected to a main collector pipe running on the east side of the site. Each wellhead has a sampling point and cut-off valve. The wellheads are protected within chambers with lockable lids. However, some wells have been and will be covered with waste as landfilling progresses.
- Two sets of six (6) horizontal gas wells connected to manifold chambers in which each line has a

sampling point and cut-off valve.

- A number of condensate traps for the removal of condensate either by gravity back into the landfill or pumped back to landfill.
- The main collector line is a HDPE pipe ranging from 250mm diameter up to 500mm diameter at the flaring compound.
- The gas flaring system includes an external flare, and a container in which all equipment for collecting the gas (blowers) and for the monitoring and analyses of the system is provided.
- The generation system is being planned for commissioning in October 2022.

CPA-02 Bellville South landfill gas extraction system (BSLFS) comprises the following:

- Sixty-seven (67) vertical gas wells ranging in depths from 15m to 25m, connected to a ring main collector pipe, with an additional forty (40) installed recently. Each wellhead has a sampling point and cut-off valve. The wellheads are buried and protected within chambers that are covered by concrete slabs.
- Eight (8) horizontal gas wells connected to the ring main and each line has a sampling point and cut-off valve.
- A number of condensate traps for the removal of condensate either by gravity back into the landfill or pumped back to landfill.
- The ring main collector line is a HDPE pipe ranging from 315mm diameter up to 500mm diameter at the flaring compound. The main goes under the adjacent railway line to the Bellville Transfer Station.
- The flaring system comprises a container with equipment for collecting the gas (blowers) and for monitoring and analysing the system and an external flare that are located in the transfer station adjacent to the landfill.
- An electricity generation system is not being planned for this site.

CPA-03 Vissershok landfill gas extraction system (VHLFS)

- One-hundred and sixty-two (162) vertical wells ranging in depths from 20m to 30m, connected to a main collector pipe as indicated on the As-built drawings. Each wellhead has a sampling point and cut-off valve. The wellheads are protected within chambers with lockable lids.
- Twenty-two (22) horizontal gas wells connected to manifold chambers in which each line has a sampling point and cut-off valve.
- A number of condensate traps for the removal of condensate either by gravity back into the landfill or pumped back to landfill.
- The main collector line is a HDPE pipe ranging from 250mm diameter up to 500mm diameter at the flaring compound.
- The flaring system comprises an external flare and a container with equipment for collecting the gas (blowers) and for monitoring and analysing the system.
- The generator system is being planned for commissioning after 2023/2024, subject to a final tender award, delivery and commissioning of equipment.

13.3.1.1 Specification A.1 – LFG Operation, Maintenance and Repairs

The use of any trade names relate to equipment already installed and which must be maintained, repaired or replaced accordingly.

For the wellfield and landfill gas conveyance system at each landfill site, all monitoring and operation MUST be logged using the manual log sheets as attached in Annexure V.

- Normal operating activities associated with the wellfield and conveyance piping includes:
 - The collection field shall be monitored and balanced **twice per week** or more frequently as necessary throughout the contract period;
 - Inspecting the landfill surface for indications that gas venting or air intrusion is taking place;
 - Monitoring wellfields and conveyance piping for any needed adjustments and maintenance;
 - Ensuring the proper calibration of monitoring instrumentation;
 - Keeping thorough and accurate records and logs and scheduling appropriate maintenance services;
- Maintenance of gas well installation comprising the wellfield and gas conveyance piping;
- Other maintenance activities associated with the wellfield and conveyance systems include:
 - Repairing or replacing system components (e.g., wellheads, condensate traps, valves, pipe fittings, pumps etc.);
 - Tightening of bolts and clamps;
 - Reinstalling probes where applicable;
 - Re-grading piping where subsidence has taken place;
 - Correcting condensate blockages;

- Removing sludge or particulate from the condensate Knock-out Pots (KOPs) and ensuring that the water seal is operating correctly (KOP Type 2).

Blower facilities (containerised):

Operation and maintenance of a blower facility requires at a minimum the following types of activities at regular intervals in accordance with the facility Operation and Maintenance Manual (**Annexure II**):

- Checking the pressures and temperatures associated with blower suction;
- Checking for unusual blower vibration or temperature variations (weekly);
- Periodically draining condensate from the blower housing;
- Running standby blowers;
- Observing level of lubricants, and taking corrective action as necessary;
- Greasing appropriate equipment parts;
- Checking the position and condition of valves;
- Determining and recording the quality and temperature of the LFG gas;
- Monitoring instrument air operation;
- Monitoring overall system operations.

Flare system:

Operation and maintenance of a flare system requires at a minimum the following types of activities at regular intervals in accordance with the facility's Operation and Maintenance Manual (**Annexure III**) and the CPA-DD for each site:

- Checking the alarm or annunciator panel for any system malfunctions;
- Observing that the flare temperature is in the proper operating range;
- Inspecting the firing condition of the flare (secondary air dampers and flame);
- Checking the valve position at the flare inlet (for proper flare adjustment);
- Ensuring the flame arrester is properly functioning (differential pressure);
- Observing facility flow;
- Maintaining the igniter and pilot fuel systems;
- Removing any condensate from the flare;
- Inspecting high temperature shutdown/switch annually;
- Inspecting condensate equipment corrosion and other maintenance needs;
- Completing a visual and audible check of overall system operations.

13.3.1.2 Specification A.2 – Gas Engines and Electricity Generator Operation & Maintenance

Operation and maintenance of electricity generator set (engine, generator and auxiliary equipment):

Once the generator sets have been commissioned, the tenderer will take responsibility for the operation, repairs, and the routine and daily maintenance of the electricity generator set comprising the electrical protection and control system, the electrical reticulation up to the meter at the grid connection substation, the transformer system, the generator and the internal combustion engine. The extent of the obligations will depend on defects and liability period and the OEM requirements regarding the warranty period, as well as the CDM protocols to determine the system performance for the reporting of emissions, which is required for the registration of the carbon credits.

It will also include measuring and reporting of electricity that is generated, as well as fossil fuel consumption of auxiliary (emergency) generators for reporting in order to comply with the CDM protocols) without compromising the carbon credits to be registered. A suitable form will be drawn up with the aid of the carbon advisor if not available when the tender is advertised.

This specification and the description title of gas engines shall cover the installations below:

Description	Type	Nominal Output/ Capacity	Engine hrs
Engine 1: Coastal Park	GE Jenbacher 320 GS	1 067kW	0
Engine 2: Coastal Park	GE Jenbacher 320 GS	1 067kW	0

Engine 3: Vissershok	GE Jenbacher 320 GS	1 067kW	
Engine 4: Vissershok	GE Jenbacher 312 GS	635kW	0
Engine 5: Vissershok	GE Jenbacher 312 GS	635kW	0
Chiller Unit (Compressor hrs)			0
Heat Exchanger			
Gas treatment systems (if installed)			

This particular specification covers the Operation and Maintenance (O&M) of the Jenbacher (JGC) gas powered engines and electricity generation systems at the Coastal Park and Vissershok landfills. The regulatory and statutory requirements for the O&M of the gas powered engines and electricity generation systems are included in the tender as (Annexure II). Responsibility shall start at the gas supply valve on the engine container and end where the electricity supply cabling from the engines enters the City's (or Eskom) Electrical Substation.

The heat exchanger and chiller unit located on the incoming landfill gas pipeline at the flare compound is also covered under this specification. The general upkeep and maintenance of the generation areas, control buildings, lighting, lightning protection installations, earthing system, toilets and fencing is included under this specification.

The scope of work to be undertaken by the supplier is as follows:

- Provide a minimum of one GE Jenbacher trained operator for the Coastal Park and Vissershok Gas to Electricity Generation plant for 8 hours of each calendar day to monitor the engine and ancillary systems in terms of the manufacturers' specifications and to document this. Such an operator /s must be dedicated to the site. Vissershok will be phased in during the contract, and resources must be allocated accordingly
- Outside of the normal working hours and on receiving an alarm, there shall be a response within 24 hours and a report with 36 hours to the Employer. This response shall attend to alarms or other emergencies and is to be included in the rates tendered. The provision of the operator includes training, supervision, vehicle and all the normal tools needed.
- Provide all required documentation including certificates, training details, checking, maintenance, calibration, attendance at breakdowns and monitoring shall be provided with a minimum of a monthly report to the City.
- Monitor all equipment (primarily the Jenbacher gas engines and their electricity generators in strict accordance with the manufacturer's specifications TA 1100-0111 Technical Instruction (primarily following the Jenbacher gas manuals included in the Annexures and Daily Check Sheet). A written report on the operation shall be provided monthly and verbal reports will be done on a day-to-day basis as needed. The monthly report shall include operating hours, detail all breakdowns and time lost, spares fitted, an inventory of spares in stock, oil changes and consumption, safety reporting and any other detail that may be required by the Employer.
- Carry out all oil changes and top ups, including provision of the oil, all labour and consumable associated with the change. The acceptance of the oil (in bulk or drums), weekly sampling and testing in terms of Jenbacher Technical Instruction TA 1000-0099C or as needed, decanting into existing tanks, monitoring and reporting on levels and supply needs and the operation and maintenance of the complete oil reticulation system shall be included. Oil usage, both from the changes needed and consumption shall be monitored and reported to the City. The supplier will ensure the safe disposal of the oil and provide the City with a safe disposal certificate for record keeping.
- The engine O&M operator is to establish a liaison with the manufacturer and local agents. This includes assistance with fault finding on the engines and dealing with any warranty claims.
- Provide a trained operator and calibration of the analyser for regular exhaust emission testing will be included. The operator shall have adequate Jenbacher access authority codes to make the adjustments required to bring the engine setting within factory specifications.
- Provide, or have available all small tools such as a differential pressure gauge, vacuum cleaner, pressure cleaner, grinder, and compressor at own cost.
- Labour, tools and rigging to lift the engine, remove the generator, open the rear cover of the engine and replace the engine oil pump idler gear bearing and/or the engine to generator coupling is required to be provided as needed.

Electrical Equipment

- Regular cleaning, and check and service all electrical equipment on an annual basis.
- Arrange for engine synchronising breakers to be checked and serviced annually.

- Clean out generator windings at mini services, grease the generator only when required and check the engine to generator coupling.

Engine "De-Cokes"

This refers to the periodic (every 3 to 4 months or as indicated engine LEANOX or similar alarms), removal of combustion deposits from the piston crowns and replacement of cylinder heads with a spare set.

Operations to be allowed for include draining the water then removing the cylinder heads, cleaning the piston crowns then removing the turbocharger housings to clean and check tolerances. The cylinder heads should be prepared as a spare by removing the valves, removing all deposits before re-seating the valves and checking valve stem protrusions.

Replace cylinder heads with a previously cleaned spare set with all new gaskets, set tappet clearances and attend to water leaks as necessary.

General Work

The tenderer must:

- Provide and maintain all necessary equipment and tools to conduct services. All equipment used by the tenderer shall be in serviceable condition and maintained in accordance with manufacturer's specifications.
- Provide and use a Landtec GEM 2000 or Landtec GEM 5000 Gas Analyser or equivalent. GEM or equivalent instruments used by the tenderer shall be maintained in good working order and calibrated in accordance with the manufacturer's specifications. The tenderer shall maintain and provide the Landtec Annual Service certification for all Landtec instruments used. In the case of equivalent equipment being utilised – the tenderer shall maintain and provide a similar annual service certification endorsed by the equipment manufacturer.

Below is a typical list of the primarily labour related to general work etc. that shall be undertaken (but is not limited to this list). The spare parts and lubricant will be provided by the contractor in term of the OEM manual or as experience requires, unless indicated otherwise.

- Keep daily record sheets operating data log – record engine hours etc. as per Jenbacher requirements and including a daily estimate of oil consumption, Exhaust Gas Temperatures etc.
- Engine mini services every 500 operating hours – attend to spark plugs, candles, clean cooling radiators, check battery terminals, change oil filters if needed, grease throttle linkages, check valve tappets, clean engine and container. Item to be included in 1.2 of the Bill
- Repair and/or replace radiator fans as needed.
- Repair and/or replace ventilation louvers as needed. Check daily.
- Repair and/or replace induction fans as needed
- Clean cabinet filters weekly.
- Check container positive pressure daily, action if not maintained.
- Service the turbocharger oil rundown motor as needed.
- Clean, pressure test and repair intercoolers
- Clean spark plugs (by ultrasonic or media blasting methods as approved), set gaps and test.
- Clean spark plug candles.
- Clear cable ducts and pump out of stormwater as needed.
- Check all smoke and gas alarms every 6 months minimum.
- Clean and maintain the ablution block.
- Fault find and replace cards etc. as needed in the engine electronic systems.
- Engine turbochargers: remove (including all rigging needed), or open as practical. Inspect, clean, service and/or transport to agents at each decoke, or as needed once verified and confirmed.
- Keep a spares inventory of new and used spares.
- Ignition cabling; check, fault find, replace as needed.
- Check, clean weekly and/or replace air intake filters as needed.
- Check valve protrusions regularly or as directed.
- Renew scarpers rings, gaskets and cylinder head bolts as needed.
- Re-build water pumps as needed.
- Check engine damper for leaks.
- Fault find, replace or repair starter motors and batteries as needed.
- Change Exhaust Gas Temperature probes as required.
- Troubleshoot and change flywheel and camshaft sensors as needed.
- Check and replace exhaust compensators as required.
- Monitor negative sump pressures at least weekly; adjust as needed, replace filters as needed.
- Undertake scheduled intermediate services (± 4000 operating hours nominal) as required.

- Undertake scheduled intermediate services ($\pm 8\,000$ operating hours nominal) as required.
- Undertake scheduled 20 000 hour service (rebuild).
- Check exhaust gas emissions with a trained operator on the equipment provided; adjust engine parameters as needed to within Jenbacher settings or standards.
- Strip, clean and recondition cylinder heads excluding work required to be done by an engineering works (skimming, new valve guide installation etc.).
- Supply of all general and special tooling and rigging equipment.

Chiller and heat exchanger

The chiller requires some day-to-day operation, weekly inspection, maintenance as needed and cleaning, all in accordance with the manufacturer's manual (**Annexure II**). This includes daily cleaning of the radiator fins and servicing every 6 months.

The heat exchanger requires the opening up of inspection ports and cleaning using a high-pressure hot water cleaner. The cleaning is required to be undertaken when differential pressures are such as gas flow is inhibited. This shall generally be determined by the party responsible for the gas extraction.

Hazardous and Liquid Waste

- The supplier must supply and maintain mobile toilets on site, which includes disposal of organic waste according to the City's waste management by-law.
- The supplier must provide adequate and approved facilities for the storage and recycling of used oil and contaminated hydrocarbons. Such facilities must be designed and sited with the intention of preventing pollution of the surrounding area and environment.
- Used oil shall be safely disposed at an approved facility by the supplier. The supplier must supply a safe disposal certificates once the oil has been disposed of.
- All chemical spills must be contained and cleaned up by the supplier or professional pollution control personnel.
- No hazardous materials must be disposed of in the veld or anywhere other than at a registered landfill for hazardous material. Hazardous waste must be stored in containers with tight lids that must be sealed and must be disposed at an appropriately permitted hazardous waste disposal site. Such containers must not be used for purposes other than those originally designed for.
- The supplier must maintain a hazardous material register.
- The supplier must retain all disposal certificates in accordance with the City's Integrated Waste Management Policy.

After-hours and Emergency Response: Operations and Repairs

The tenderer must provide the resources for any emergency and after-hours response, repairs and reporting related to the incident and the availability of the plant and equipment in terms of the criteria specified in PART A. This must include the commensurate quantity of security resource(s) including non-lethal protection measures.

An emergency response is one that has occurred outside of normal business hours and payment must be limited to address equipment failure. Spares must be included for (1) the flare system, (2) electricity generation system and (3) the data measurement system within the limits of the provisional sums in the Pricing Schedules.

The tenderer will be responsible for any emergency and after-hours response related to the availability of the LFG collection and flaring system, the standby generator system, the ITC system, and where applicable, the electricity generator system. The tenderer must arrive at the facility within four (4) hours of the emergency notification. Emergency response must be provided on a twenty-four (24) hour / seven (7) day per week basis.

The tenderer must provide the emergency contact numbers of two (2) responsible parties to the City's Project Manager. The City's Project Manager shall maintain the two (2) contact numbers on the exiting GSM TeleAlarm remote access system and the tenderer shall monitor all alarm calls from the flare station. In the event of an alarm call out, the tenderer must contact the City's landfill manager by cell phone within one (1) hour during normal working hours, Monday to Fridays between 08:00 and 17:00. For alarm calls received outside of normal working hours, the tenderer shall contact the City's landfill manager no later than 09:30 of the next business day.

Maintenance and repairs of LFG Information and Communications Technology equipment

The bid must include the technical operation, monitoring, repairs and maintenance of the ICT equipment and system on-site at the project sites. The provision for the replacement ICT Infrastructure and systems comprising the electronic measurement, capturing, recording, management, storage, backup and security of data in terms of CDM protocols must be reflected in the tenderer's bid. The existing and future equipment and software must be suitable to capture, monitor and extract data, and must be

compatible with equipment already installed and supplied, and must comply with the City's policies and standards for ICT hardware and software.

The tenderer will be responsible for the integrity, status and measuring accuracy of gas, diesel and electricity generation monitoring and measuring equipment, and ICT equipment. This service must include routine calibration of probes and instruments according to CDM or other relevant carbon registry requirements, in order to ensure carbon credits are optimised.

Technical Documentation, Reporting Deliverables

The tenderer must document all routine operation and maintenance, non-routine operation and maintenance, minor repairs, monitoring, and emergency response on report forms that will conform to the minimum requirements to support claiming carbon credits and electricity generation. Forms must be developed by the tenderers at commencement of the contract if forms are not already available.

KEY PARAMETERS TO BE MONITORED AND MEASURED - All monitoring and operation MUST be logged using the manual log sheets as attached in Annexure I, or as developed according to CDM protocols and standards remain compliant in order to register data for claiming CERs.

Wellfield:

At each wellhead and collection pipe in the valve chamber, the tenderer shall measure/observe and record the following:

- Measurement person's name;
- Time and date measurements taken;
- Carbon dioxide concentration (as a basis for well adjustment);
- Oxygen concentration (as a basis for well adjustment);
- Methane concentration (as a basis for well adjustment);
- Balance gas (nitrogen) concentration (as a basis for well adjustment);
- Ambient temperature;
- Wellhead vacuum before and after adjustment (to calculate and determine flow);
- Wellhead adjustment valve position (to note the degree it is open or closed).

Key process parameters to be measured for the blower facility using gauges, etc. Include:

- Measurement person's name;
- Time and date measurements taken;
- Inlet temperature;
- Inlet vacuum;
- Inlet separator differential pressure;
- Ambient temperature;
- Blower suction pressure;
- Blower discharge pressure;
- Blower discharge temperature.

Key process parameters to be measured in the flare system include:

- Measurement person's name;
- Time and date measurements taken;
- Flare operating temperature;
- Air flow into the flare;
- Flame arrester (differential pressure);
- Flare inlet (pressure);
- Emergency Response.

Key process parameters to be measured in the electricity generation system are set out below:

- Measurement person's name;
- Time and date measurements taken;
- All meter readings for current (A), voltage (V or kV) and energy use (kWh);
- Engine operating parameters;
- System outages with reasons;
- Remedial action to correct outages and time restart (as applicable for a generation system outage).

The tenderer must complete and sign the forms, which must be submitted on the day of the inspection and must be filed on site in the landfill office. Copies of all forms will be transmitted to the City's Project Manager via the SharePoint site, or such mechanisms as may be agreed to from time to time.

The tenderer must also provide a monthly project report with a narrative summarising events and issues, with the monthly data that has been collected, project performance and LFG operations and maintenance activities that were conducted. The report must contain data for key parameters, with analyses recommendations and actions to summarise:

- wellfield data to include range of temperatures recorded;
- problems encountered and modifications or repairs made during the month's wellfield monitoring event;
- the data collected for methane and flow trends;
- any changes to the collection system operations and monitoring program;
- flare station data that includes the range of flow, temperature, oxygen, and methane quality;
- a summary of weekly flare operations and maintenance activities, any problems encountered and modifications or repairs made during the month;
- a table listing monthly flare shutdowns and duration of any shutdowns;
- engine operations and maintenance with key performance data;
- electricity generator operations and maintenance with key performance data;
- electricity protection and switching system performance;
- spares issues affecting operation and performance of systems.

The tenderer must submit the monthly project report together with the associated payment certificate (or invoice) to the City's Project Manager three days before the monthly Project Meeting.

Other major problems shall be communicated to the City's Project Manager in writing within two (2) hours of being discovered or after a system notification. The tenderer must proceed with corrective actions pending a discussion with and receiving written approval by the City's Project Manager.

The tenderer shall refer to the Piping and Instrumentation Diagram (P&ID) drawings of the extraction and flaring system and the Operation and Maintenance manual. The tenderer must:

- maintain a log of all repairs performed and actions taken in maintaining and operating the landfill gas collection and flaring system.
- provide and maintain all necessary equipment and tools to conduct services. All equipment used by the tenderer shall be in serviceable condition and maintained in accordance with manufacturer's specifications.
- provide and use a Landtec GEM 2000 or Landtec GEM 5000 Gas Analyser or equivalent. GEM or equivalent instruments used by the tenderer shall be maintained in good working order and calibrated in accordance with the manufacturer's specifications. The tenderer shall maintain and provide the Landtec Annual Service certification for all Landtec instruments used. In the case of equivalent equipment being utilised – the tenderer shall maintain and provide a similar annual service certification endorsed by the equipment manufacturer.

Routine Training

The tenderer must conduct annual refresher training for up to five of the City's staff involved in the PoA and LFG systems operation. Training must include topics such as safety, monitoring, flare functions, settings and repairs, engine functions and settings and instrumentation. The tenderer must provide certificates of training completion.

In addition, ad hoc training and information session must be conducted every two years during the contract period.

13.3.2 PART B: CME, CARBON DATA MANAGEMENT AND CARBON ADVISORY SERVICES

PART B generally serves to provide services on behalf of the City as the CME for the existing LFG projects aimed at emission reduction and processes, or to investigate the feasibility of new projects, and to provide carbon advisory services. The City's registered PoA also allows third party LFG projects within the borders of SA to join the PoA, which may require services if such projects are included in the PoA, but which will be for the account of the third party.

Tenderers must provide services in terms of the CDM (and it's the successor to the interim Article 6.4 mechanism), and possibly in terms of other mechanisms that are recognised in the COAS for the registration and administration of other carbon emissions projects (non-LFG projects) for the City.

The carbon specialist is responsible for the administration and compilation of project emissions and related data and the relevant monitoring reports and any other documentation required to obtain issuance of emission reductions for future trading purposes. The carbon specialist will attend meetings

as and when required with the operation and maintenance contractor/s and the City.

13.3.2.1 Validation, verification and registration of new LFG projects by the City (as and when required)

This requires performing work and providing Coordinating/Managing Entity (CME) services on behalf of the City, as determined by the CDM PoA protocol, or in relation to similar function in protocols of other carbon schemes which may apply. The services must include ensuring the validation of LFG projects still to be included in the PoA, and the management and the verification of data reflecting greenhouse gas destruction to generate and obtain issuance of ERs for future trading or offset purposes. This will include the development of the PDDs and associated monitoring reports for verification. The carbon specialist will appoint the DOE (with approval from the City project manager) and manage and oversee the validation and/or verification process. The service will also include the transfer of the project from one standard to another and the management of all required processes.

If required, the carbon specialist will attend to changes to the PDD, CPA-DDs and related documentation if a methodology change is required, or if required during the verification process to ensure that emissions data will be valid and can be registered.

These services must be executed in accordance with the City's CME Operations Manual provided with this tender.

13.3.2.2 Inclusion and the addition of third party CPAs to City's LFG PoA

The ambit of the services could be expanded beyond City's LFG projects, by the inclusion of projects of external or third parties that may apply to join the City's LFG PoA. Such services are required if third party LFG projects apply to join the City's PoA, which may occur subject to the terms and conditions contained in the City's Inclusion Agreement being agreed upon. The tenderer must perform the roles of the CME on the City's behalf in all respects regarding routine assessment, monitoring and reporting of such 3rd party projects.

A third party will be required to employ the tenderer via a separate agreement that does not include the City. In other words, compensation will be directly payable to the tenderer by the 3rd party for all services rendered to evaluate, validate and include a project, for the monitoring, data capture and storage, and reporting of emission reductions achieved, as well as the verification and corrective actions necessary for the issuance of ERs. A third party project developer carries its own costs, therefore no pricing is to be submitted for these services.

The conclusion of contracts with third parties will be the prerogative of the City, but the successful tenderer must assist the City with the negotiations for inclusion of such projects and the conclusion of the terms contract with the external project owners or developers. Applicable contractual terms will include full liability on the part of external parties for all costs associated with the management of their projects, and may include the levying of a fee by the City for participation in the PoA. Upon inclusion of the external project/s the management thereof will be subject to the same processes as the City's projects.

Contracts with external parties must be undertaken in terms of the City's Inclusion Agreement, for which the draft provisions and conditions have already been structured, but which may be tailored for a specific project. Costs incurred on behalf of third parties will be recovered from the third parties by the successful tenderer, which will include an annual royalty fee that will be payable to the City.

13.3.2.3 Evaluation and Registration of non-LFG Projects for the City

The City may in future consider the registration of carbon mitigation projects related to its operations other than the LFG type of projects, under the CDM or a similar mechanism. The scope may include other new City emission reduction projects to be considered by the City besides LFG. This may entail the evaluation and registration of new CDM projects or PoAs, or carbon mitigation projects registered in other registries, for which a proposal and the indicative pricing for typical projects have to be provided.

This will necessitate the full range of services as outlined above by the team from the inception phase, advising on applicable methodology, performing an eligibility assessment, developing documentation for registration of individual or PoA projects, sub-contracting the validation services of independent auditors, completing and submitting the registration application, and then providing the range of services similar to those of the City's LFG projects, including sub-contracting of the verification services of

independent auditors in order to obtain issuance of ERs.

For example, wastewater treatment and/or organic waste treatment through anaerobic digestion, etc. may be considered.

13.3.2.4 Ad-hoc carbon advisory

This comprises services to provide the City with regular updates on changes occurring in the carbon protocols and the markets, and a carbon trading advisory service, to advise on the timing and selling of ERs. The formulation of Emissions Reduction Purchase Agreements (ERPAs) may be required. This service also comprises the updating of all CME documentation (when required) including the CME Operations Manual, and the Inclusion Agreement.

It is envisaged that carbon advisory service, or advice on the management of carbon emissions will be necessary on an ad hoc ("as-and-when required") basis. The City, however, reserves the right to not utilise these aspects of work in its sole discretion.

Advice will also be required concerning the timing of monitoring, verification and trading processes, including the terms and conditions of emission reduction purchase agreements to be concluded between the City and purchasers. This service will be provided in terms of the City's current Carbon Advisory and Information Report that embodies the City's carbon strategy for landfill gas, which was developed to conform with local government legislation and City's financial policies. Considering the volatility and uncertainty in the carbon markets, the tenderer may need to amend this advisory document in consultation with the City to optimise the results.

Tenderers must note that the City is mindful of the developments regarding the continuation of the CDM, and is not necessarily committed to seeking issuance of its LFG or other carbon credits within the CDM process, neither to the trading thereof using any particular platform or registry. Future emission reduction projects may be established and traded in any suitable format and registry, including a local South African Standard, should the City decide to join such Standard. The project has been successfully registered on the South African Carbon Offset Administration System (COAS) as determined in the applicable South African Income Tax legislation regarding carbon tax and carbon offsets. The carbon specialist must have experience to advise accordingly in terms of the applicable South African Income Tax legislation regarding carbon tax and carbon offsets.

13.3.3 PART C: PROJECT MANAGEMENT, COORDINATION AND ADMINISTRATIVE SERVICES

13.3.3.1 Key roles and responsibilities of the Supplier's Project Manager

The supplier's project manager will be the key point of contact with the Employer and will report to the City's project manager. When required the project manager will attend meetings and may include other staff as required.

S/he will be responsible for the provision of all resources to execute the project, management of activities and the health, safety and well-being of project staff, coordination between project staff and landfill staff, and engaging with suppliers for spares, lubricants, etc. required for the maintenance, repairs and operation of project infrastructure. This will also include the calibration of measuring equipment necessary for measuring key parameters that are required to register carbon credits.

The supplier's project manager will ensure coordination with other contractors of the Employer who will be providing services related to the landfill gas projects that are not included in the scope of work of the tender. This role will specifically include interacting with the capital works project manager or the agent contracted by the City regarding future designs for the expansion of wellfields to optimise the infrastructure, as well as providing input on the snag list at the commissioning stage during the handover of completed capital works prior to being operated and maintained. The responsibility will include ensuring all drawings and equipment manuals, as applicable, are received for use during the operation and maintenance.

13.3.3.2 Data monitoring, collection, storage and data reporting

The supplier's project manager will ensure that all facilities equipment regarding the integrity of data are available at the start of the project, and remain sound working order to ensure the project data is not compromised. The project manager will ensure the services are provided from the generation stage of raw data, through the calculation for reporting purposes, until the data is stored and backed up for

disaster recovery purposes.

The data from the flare and electricity generation must be downloaded weekly and a detailed calculation of the emission reductions provided to the project manager in the monthly report. The data must also be communicated electronically to the City's project manager on a routine basis.

The data services encompass the routine intermediate storage, backup and the reporting of data in compliance with the CDM or similar protocols, to monitor and record project performance and electricity generation. Electricity generation sets have been installed and capture diesel usage for the generators that will ensure the integrity of the City's project data. Off-site storage capability and retrieval systems, as well as further risk management measures pertaining to disaster recovery applicable in the event of a systems failure, must be included and must be available at the start of the contract.

13.3.3.3 Data management at end of project

The supplier's project manager will ensure that all raw and processed project data, and all reports are made available to the City at the end of the project. This must be uploaded before the last day of the project to a SharePoint site, which the City's project manager will make available for the project.

13.3.4 MANAGEMENT OF OCCUPATIONAL HEALTH AND SAFETY, AND ENVIRONMENTAL ASPECTS

In addition to the statutory requirements of the Occupational Health and Safety Act and various related statutes, Regulations, Norms and Standards that are applicable to the scope of work, the supplier should note the flammable, explosive and asphyxiative nature of landfill gas resulting from the decomposition of waste. Landfill gas migrates through ground and the supplier shall take all necessary precautions to ensure the safety of his/her personnel and all third parties from the dangers of landfill gas. Landfill gas is particularly dangerous in enclosed spaces (manholes etc.).

The supplier's personnel shall not enter the operational areas and contact with refuse and leachate should be kept to a minimum. No scavenging of refuse is allowed. Workmen are to be provided with the appropriate safety clothing and equipment. In the vicinity of the landfill body, and in particular, within any excavations, flammable and poisonous "landfill gas" may be present. The flammable constituent of the gas is methane.

Special care and precautions must be taken where men may work with their heads below the general surface and in excavation. The lighting of fires is strictly prohibited, due to the possible presence of landfill gas, and smoking on site will also be prohibited. The use of naked flames must only take place under safe conditions. Smoking shall only be allowed in designated safe areas.

The supplier's attention is also drawn to the possible hazards to health of waste and contaminated water, and adequate health and safety precautions shall be taken. The supplier shall make all Sub-Contractors, visitors, third parties and agents aware of the hazards of landfill gas on the site, and shall ensure that they take the necessary precautions. The supplier shall take adequate Health and Safety precautions when working in and adjacent to waste. The wastes placed in the in-filled areas are reported to have been predominantly municipal wastes (domestic, commercial, industrial and inert). However, the supplier should also make provision for the fact that any landfill may contain small quantities of hazardous substances other than those permitted under a site licence. No guarantee can be given that small quantities of other substances, including hazardous industrial waste, have not been concealed within other wastes and disposed without knowledge of the site operator.

The supplier is to appoint a responsible person to comply with the Occupational Health & Safety Act, Act 85 of 1993 General Machinery Regulation 2(1) – Supervision of Machinery Appointment. The supplier is to allow for all of the above in the rates tendered.

It is a requirement of this contract that the supplier shall provide a safe and healthy working environment and to direct all his activities in such a manner that his employees and any other persons, who may be directly affected by his activities, are not exposed to hazards to their health and safety. To this end the supplier shall assume full responsibility to conform to all the provisions of the Occupational Health and Safety Act (Act No. 85 of 1993, as amended, and all Regulations promulgated by the Department of Labour.

For the purpose of this tender, the supplier is required to confirm his status as a "mandatory" and an employer in his own right for the execution of the contract by entering into an agreement with the Employer in terms of Section 37(2) of the Occupational Health and Safety Act.

The supplier is advised in his own interest to make a careful study of the OHS Act and all of its Regulations, as well as the COIDA Act, as ignorance of and non-conformance by the supplier or its employees and subcontractors with these Acts and the Regulations will be the responsibility of the supplier.

The following health and safety aspects are highlighted over and above any others that may be encountered in a working environment involving numerous hazards and risks that require the contractor's Mandatory (who is appointed by the contractor in terms of S.37(2) of the OHS Act, No. 85 of 1993, amended) to adhere to any measures required by the City and in terms of a plan that must be drafted for the management of the contractor's staff. The plan must include Standard Operating and Safety Procedures that include Lock-out and Start-up procedures, for which staff will have to be trained to ensure safety while working. The most relevant are denoted below, but does not exclude the supplier from developing others as required.

1. The landfill gas (LFG) extraction and beneficiation infrastructure is situated on a working landfill that present multiple (except for landfills already closed where some hazards are reduced).
2. This means heavy earthmoving machinery and equipment is in use, and heavy vehicles move and discharge waste at the landfill during daylight hours that causes noise and dust.
3. The waste pile is to be considered unstable, especially at the working face.
4. Waste pile stability issues could also occur at the edges of a landfill due to erosion.
5. Waste by its very nature is hazardous to health and requires proper personal protection when on a landfill. This exposure will require screening, testing and inoculation measures as stipulated in the relevant regulations.
6. The nature of the project involves the extraction of LFG comprising at least one flammable, explosive gas, namely methane.
7. Wellfields are established across a landfill, with extraction infrastructure and valve chambers that could sometimes be considered enclosed spaces.
8. A flare running at high temperatures is part of the beneficiation and safety equipment involving the LFG.
9. The generation of electricity from the LFG encompasses internal combustion gas engines using the LFG as a fuel, which drive electrical generators, which feed medium voltage transformers, and involves switchgear and protection equipment.
10. The handling of lubricants and other hydrocarbon products could involve spillage and measures that will prevent impact on groundwater, and if spilled, will require clean-up and remediation.
11. After-hours work will be required on the landfill or in the flare and generator compounds where lighting levels will have to be enhanced.

13.4 TRADE NAMES OR PROPRIETARY PRODUCTS

Bid specifications may not make any reference to any particular trade mark, name, patent, design, type, specific origin or producer, unless there is no other sufficiently precise or intelligible way of describing the characteristics of the work, in which case such reference must be accompanied by the words "or equivalent".

TENDERERS MUST NOTE THAT WHEREVER THIS DOCUMENT REFERS TO ANY PARTICULAR TRADE MARK, NAME, PATENT, DESIGN, TYPE, SPECIFIC ORIGIN OR PRODUCER, SUCH REFERENCE SHALL BE DEEMED TO BE ACCOMPANIED BY THE WORDS 'OR EQUIVALENT'

13.5 FORMS FOR CONTRACT ADMINISTRATION

The supplier shall complete, sign and submit with each invoice, the following:

- a) B-BBEE Sub-Contract Expenditure Report (**Annex 4**).
- b) Joint Venture Expenditure Report (**Annex 5**).

The Monthly Project Labour Report must include details of all labour (including that of sub-contractors) that are South African citizens earning less than R350.00 per day, as adjusted from time to time (excluding any benefits), who are employed on a temporary or contract basis on this contract in the month in question.

In addition to the Monthly Project Labour Report the Supplier shall simultaneously furnish the CCT's Agent with copies of the employment contracts entered into with such labour, together with certified copies of identification documents, proof of attendance in the form of attendance register or timesheets as well as evidence of payments to such labour in the form of copies of payslips or payroll runs. If the worker is paid in cash or by cheque, this information must be recorded on the envelope and the worker must acknowledge receipt of payment by signing for it and proof of such acknowledgement shall be furnished to the CCT's Agent.

The Monthly Project Labour Reports shall be completed and submitted in accordance with the instructions therein.

The **B-BBEE Sub-Contract Expenditure Report** is required for monitoring the supplier's compliance with the sub-contracting conditions of the Preference Schedule.

The Joint Venture Expenditure Report is required for monitoring the joint venture/consortium/partnership's compliance with the percentage contributions of the partners as tendered, where the joint venture/consortium/partnership has been awarded preference points in respect of its consolidated B-BBEE scorecard.

ANNEXURE I: EMISSIONS DATA MONITORING AND REPORTING DOCUMENTS**Wellfield Monitoring Data Form**

Wellfield Monitoring Data: [LANDFILL NAME]

Date: _____

Name of Technician: _____

Well ID/ KOP ID	Date & Time	CH4 (%)	CO2 (%)	O2 (%)	Balance (%)	Static Press. (in mbar)	Temp (°C)	Flow (Nm3/hr)	Comments

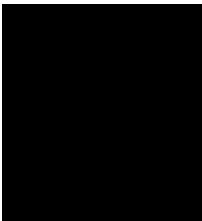
Total Number of Wells	
Total Number of Well Readings	
Total Number of Readings NOT Collected	

Number of Wells with Methane <50%	
Number of Wells with Methane >52%	
Number of Wells with Oxygen > 1%	
Number of Wells with Temp > 50°C	

Well ID/ KOP ID	Date & Time	Pump Cycle Counter	Previous Cycle Counter	Volume Pumped

Well ID/ KOP ID	Date & Time	Pump Cycle Counter	Previous Cycle Counter	Volume Pumped

Reason for Not Collecting Well Data



Daily GEM Calibration Log

DATE: _____
SITE: _____
TECHNICIAN: _____
GEM S/N: _____
GEM TYPE: _____
ARRIVAL TIME: _____
DEPARTURE TIME: _____

Calibration No. 1

TIME: _____ TEMP: _____
LOT #: 50% CH₄/35%/CO₂/Balance Gas: _____
LOT #: 4% O₂/Balance Gas: _____

Calibration No. 2

TIME: _____ TEMP: _____
LOT #: 50% CH₄/35%/CO₂/Balance Gas: _____
LOT #: 4% O₂/Balance Gas: _____

Calibration No. 3

TIME: _____ TEMP: _____
LOT #: 50% CH₄/35%/CO₂/Balance Gas: _____
LOT #: 4% O₂/Balance Gas: _____

Well ID	Maintenance Problem	Problem Repaired?			Parts Needed?		Parts Needed?
		No	Yes	Date	No	Yes	



FLARE COMPOUND CHECKLIST							
Landfill Site				Date			
Technician							
GAS DELIVERY UNIT							
GDU STATUS		On Arrival:					
		On Departure:					
CONTROL PANEL DISPLAY/ANALYSER READINGS	Blower Power Setting (%)		FLOW (m³/h):		GAS TEMPERATURE (°C)		
	CH₄ (%)		CO₂ (%)		O₂ (%)		
	CO (ppm)		H₂ (ppm)		EXHAUST GAS H₂ (ppm):		
	Delivery Pressure(mB)		Flare Temperature(°C)		EXHAUST GAS O₂ (%)		
	Condensate In Analyser panel					ATMOSPHERIC PRESSURE (mB)	
PORTABLE ANALYSER READINGS	Suction Pressure (mB)		CH₄ (%)		CO₂ (%)		
	O₂ (%)		BALANCE (%)		ATMOSPHERIC PRESSURE (mB)		
GAUGES	Gas Temperature (°C)		GAS PRESSURE (mB)				
GENERATOR SET, ELECTRICITY CONSUMPTION & COMPRESSOR							
GENERATOR SET	OIL LEVEL		COOLANT LEVEL		FUEL LEVEL		
	OPERATING HOURS (h)		EXTERNAL DIESEL TANK COUNTER		IMPORTED ELECTRICITY (kWh)		
COMPRESSOR	RUNNING HOURS (h)		LOAD HOURS (h)		WATER TRAP		
ELECTRIC FENCE AND SECURITY							
Flare Condition		Alarm Workin g		Test Alarm		Gate Working	
NOTES							

ANNEXURE II: AS-BUILT DRAWINGS FOR CITY LFG PROJECT INFRASTRUCTURE AT THREE LANDFILLS

Tender documents that are downloaded from the City's Procurement web portal include the PDF documents for the different landfills.

Tenderers must download all available as-built drawings for:

1. Coastal Park landfill gas project.
2. Bellville South landfill gas project.
3. Vissershok landfill gas project.

ANNEXURE III: OPERATIONS MANUALS FOR LFG PROJECTS

Tender documents that are downloaded from the City's Procurement web portal include the PDF documents for the operations manuals.

Tenderers must download all available Operations Manuals.

1. Coastal Park landfill gas project.
2. Bellville South landfill gas project.
3. Vissershok landfill gas project.

ANNEXURE IV: ESSENTIAL SPARES LIST FOR LFG PROJECTS

EMERGENCY SPARES LIST (Jenbacher 320 Engine)

Part No.	Description	Quantity for a single engine
Ignition and Elastic Parts for Electric Components		
1233808	Spark plug set P7N1 4pcs	5
462203	Spark plug set P3 V3N1 4pcs	5
1241162	Spark plug set 4pcs P3V3I	5
223383	Sealing ring 29.x.1.CU	20
1200399	Ignition coil C-Coil	10
1250649	Connector BR3 Spark Plug Connector O-Coil	10
100639	Sealing ring 12.2 x 1.5 CU	20
1200170	Monitoring KLS98S	2
Oil		
225125	Filter cartridge Oil	10
235027	Filter cartridge Type2+3 Oil	5
Suction Line (Control Linkage - Throttle Valve - Actuator - Intercooler - Bypass-Line)		
101885	Tensioning nut M10 ST	1
525430	Rod	1
525429	Rod	1
476854	Handle 100 x 25 x 13 ST	1
449408	Link M10L	1
449407	Link M10	1
101820	Nut Hexagonal nut M10.ST	2
101815	Nut Hexagonal nut M10.ST	2
100458	Screw Hexagonal head screw M10 x.x45 ST	2
100207	Cylinder screw	4
101879	Nut Hexagonal nut Prevailing torque type M10 ST	2
100192	Cylinder screw M6 x 35 ST	1
101714	Nut Hexagonal nut Prevailing torque type M6 ST	1
101931	Disc Washer 21 x 10.5 x 2 ST	4
Intercooler		
225142	Gasket 644 x 221 x 1	3
100418	Screw Hexagonal head screw M8 x.x 25 ST	23
100057	Spring washer 15 x 8.4 x 0.8 ST	24
628759	Screw Hexagonal head bolt M8 x 50 ST	24
512537	Locking washer x.x ST	24
225142	Gasket 644 x 221 x 1	3
100418	Screw Hexagonal head screw M8 x.x 25 ST	23
100419	Screw Hexagonal head screw M8 x.x 30 ST	1

Part No.	Description	Quantity for a single engine
100057	Spring washer. 15 x 8.4 x 0.8 ST	24
114911	Screw Hexagonal head bolt M8 x 45	23
628759	Screw Hexagonal head bolt M8 x 50 ST	1
512537	Locking washer. x.x ST	24
100012	O-ring 15 x 3 rubber	4
Crank case ventilation – Carburettor		
9010789	Oil mist separator	1
223635	Fabric Plastic	1.5
Water Pump		
1246712	Water Pump	1
Turbocharger sealing set		
7001954	Exhaust sealing	1
302310	Hexagonal head screw	4
302307	Nut Hexagonal nut M16 SST	4
128466	Nut Hexagonal nut M10 SST	12
267849	Gasket x 258 x 2	1
101815	Nut Hexagonal nut M10.ST	12
102144	Spring washer. 21.x.10.5.x.1.FST	12
268630	Gasket	1
100501	Screw. Hexagonal head screw M16 x.x 55 ST	4
101875	Nut Hexagonal nut Prevailing torque type M16 ST	4
114926	Screw. Hexagonal head bolt M10 x 60 ST	4
101872	Nut Hexagonal nut Prevailing torque type M10 ST	4
126737	Gasket 159 x 159.x	1
102131	O-ring 120 x 6 rubber	1
361236	Hexagonal head screw	2
174461	O-ring	1
376511	O-ring	1
Various Engine Parts		
Cylinder Head		
9016986	Cylinder head Type3 D	4
100093	Gasket. X 45.5 x 4.5	6
100092	Sealing	10
449902	Cylinder pin	5
100947	Gasket 108 x 84 x 2	20
315270	Cylinder screw M12 x 55 ST	2
102145	Spring washer	2
100875	Gasket 78 x 42 x 2	5
101052	Stud bolt M10 x 65 ST	4

Part No.	Description	Quantity for a single engine
101815	Nut Hexagonal nut M10 ST	4
320983	Gasket 113 x 74 x 1.3	25
100473	Screw Hexagonal head screw M12 x 35 ST	2
100548	Gasket 184 x 154 x 1	20
110966	Spring washer	4
100048	Screw Hexagonal head bolt M8x 60 ST	2
100247	Screw Hexagonal head bolt M8 x 90 ST	2
448657	Cylinder head gasket Type3 x 169.9 x 5	10
Power unit		
Piston Epsilon=12,5		
1238073	Piston	1
375592	Piston pin 55 x 112 ST	1
100145	Locking ring 55 x 2 ST	1
102312	Cylinder liner Type3 135 x 170 x 320.3	2
448651	Scraper ring Type2+3 134.7 x 17.4 ST	1
337459	Scraper ring Type2+3 134.7 x 17.4 ST	1
Piston Epsilon=11,8		
1222210	Piston Type3 E11.8 AL	1
100145	Piston pin 55 x 112 ST	1
102312	Locking ring 55 x 2 ST	2
448651	Cylinder liner Type3 135 x 170 x 320.3	1
337459	Scraper ring Type2+3 134.7 x 17.4 ST	1
Piston Epsilon=11,2		
375596	Piston Type3 E11.2 AL	1
100145	Piston pin 55 x 112 ST	1
102312	Locking ring 55 x 2 ST	2
448651	Cylinder liner Type3 135 x 170 x 320.3	1
337459	Scraper ring Type2+3 134.7 x 17.4 ST	1
Bearings		
1231307	Connecting rod bearing Type2+3 100 x 107 x 38.7	1
Starter		
1238548	Starter	1
Relays, Fuse, Bus		
Set of fuses		
117789	D-fuse plug	3
117788	D-fuse plug 10,0 01	3
117785	D-fuse plug 06,0 01	3
110630	G-fuse plug	3

Part No.	Description	Quantity for a single engine
478341	G-fuse plug	3
401055	G-fuse plug	3
Set of relays		
363865	Relay 1-pole 1W 24V	3
1244516	Relay 3 Contacts 24V 10A	3
1244517	Relay Electric Relay 4 Contacts 24V 7A	3
1246274	Relay 2 Contacts 24V 8A	3
1229373	Relay NAIS CB1-D-24V 1U 24	3
Set of IO cards		
1201686	Digital Input DI9371	1
1201695	B&R Digital output 12 outputs	1
1201697	B&R Analog input 4 inputs	1
1201698	Analog input	1
1201699	B&R Analog input 4 inputs	1
1201684	Interface	1
1201683	Interface Supply powerbus/X2X bus	1
MMU Synch		
1211730	Transducer X20CM0985-1 MMU	1
436420	Transducer X20CM0985 MMU	1
Sensor		
550401	Thermocouple M12 x 90 800	6
415442	Transducer	1
1212469	Thermometer	2
285283	Transducer	1
285283	Transducer	1
607323	Temperature sensor	1
Plant		
Air filter		
464424	Bag filter Type3 890 x 592 x 292	1
523275	Bag filter Type3 610 x 456 x 17	2
Pre-lubrication		
235027	Filter cartridge Type2+3 Oil	2
Water pipes		
101790	Gasket	10
240789	Gasket	10
1219677	Filter cartridge Type3 Gas DN50	4

Part No.	Description	Quantity for a single engine
382208	Filter cartridge	4
103143	Gasket	5
227853	Gasket	4
201602	Gasket set	4
267793	Gasket set	4
Oil pipes		
106946	Metal hose	2
104215	Metal hose	1
104214	Metal hose	1
104206	Metal hose DN10 x 500	1
632852	Metal hose DN6 x 1000	1
100924	Straight screw connection	5
221149	Elbow fitting	1
107162	Double nipple	1
100897	Straight screw connection	2
100952	Elbow fitting	1
101204	Straight screw connection	1
100953	Elbow fitting	1
101205	Straight screw connection	1
100957	Elbow fitting	1
100926	Straight screw connection	1
Heater hose		
635776	Metal hose	1
659127	Metal hose DN25 x 1100	1
106757	Elbow fitting	2
107162	Double nipple	1
110493	Straight screw connection	1
Safety valve		
102795	Safety valve	1
117276	Elbow fitting	1
Actuators		
415397	Servomotor Type3 24V	1
516231	Throttle valve	1
646925	Servomotor Actuator 6V	1
342543	Transmitter Position	2
114530	Hose Hose 6 x 14	2
Pick up		
502886	Transmitter Pulse M12 x 1 x 60	1

Part No.	Description	Quantity for a single engine
343789	Holder 62 x 35 x 5	1
200673	Transmitter	1
Expansion Vessel		
106946	Metal hose	1
101208	Straight screw connection	1

EMERGENCY SPARES LIST (Jenbacher 312 Engine)

Part No.	Description	Quantity for single engine
Ignition and Elastic Parts for Electric Components		
1233808	Spark plug set P7N1 4pcs	3
462203	Spark plug set P3 V3N1 4pcs	3
1241162	Spark plug set 4pcs P3V3i	3
223383	Sealing ring 29.x.1.CU	6
1200399	Ignition coil C-Coil	6
1250653	Connector BR3 Spark Plug Connector C-Coil 40kV	6
100639	Sealing ring 12.2 x 1.5 CU	12
1200170	Monitoring KLS98S	2
Oil		
225125	Filter cartridge Oil	10
235027	Filter cartridge Type2+3 Oil	5
Suction Line (Control Linkage - Throttle Valve - Actuator - Intercooler - Bypass-Line)		
101885	Tensioning nut M10 ST	1
525430	Rod	1
525429	Rod	1
476854	Handle 100 x 25 x 13 ST	1
449408	Link M10L	1
449407	Link M10	1
101820	Nut Hexagonal nut M10.ST	2
101815	Nut Hexagonal nut M10.ST	2
100458	Screw Hexagonal head screw M10 x.x45 ST	2
100207	Cylinder screw	4
101879	Nut Hexagonal nut Prevailing torque type M10 ST	2
100192	Cylinder screw M6 x 35 ST	1
101714	Nut Hexagonal nut Prevailing torque type M6 ST	1
101931	Disc Washer 21 x 10.5 x 2 ST	4
Intercooler		
225142	Gasket 644 x 221 x 1	3
100418	Screw Hexagonal head screw M8 x.x 25 ST	23
100419	Screw Hexagonal head screw M8 x.x 30 ST	1
100057	Spring washer 15 x 8.4 x 0.8 ST	24
628759	Screw Hexagonal head bolt M8 x 50 ST	24
512537	Locking washer. x.x ST	24
483347	Gasket 272 x 218 x 1.5	1
483348	Gasket 272 x 218 x 1.5	1
115242	Cylinder screw M10 x 45 ST	24
115239	Cylinder screw	4

Part No.	Description	Quantity for single engine
483348	Gasket 272 x 218 x 1.5	2
115242	Cylinder screw M10 x 45 ST	20
115239	Cylinder screw	8
100012	O-ring 15 x 3 rubber	4
Crank case ventilation - Carburettor		
9010789	Blow by filter	1
223635	Fabric	1.5
Water Pump		
1246711	Water Pump	1
402916	Circulation pump CR45-1-1 DN80 PN10,380/415.50,3	1
Turbocharger sealing set		
186957	Gasket 154 x 154 x 1.3	1
655355	Hexagonal head screw M16 x 55 SST	4
9021318	Cylinder screw M16 x 55 SST	4
302307	Nut Hexagonal nut M16 SST	4
115144	Stud bolt M10 x 40 SST	8
128466	Nut Hexagonal nut M10 SST	8
101044	Stud bolt	4
101815	Nut Hexagonal nut M10 ST	8
102162	Disc. Spring washer Conical spring washer 23 x 10,5 x 2,5 ST	8
112225	Gasket x.210.x.2	1
101384	Cylinder screw	4
186736	Gasket x 120 x 2	1
100459	Screw Hexagonal head screw M10 x x 50 ST	3
101872	Nut Hexagonal nut Prevailing torque type M10 ST	3
100456	Screw Hexagonal head screw M10 x x 40 ST	1
101872	Nut Hexagonal nut Prevailing torque type M10 ST	1
186526	Gasket 146 x 146 x	1
105861	O-ring 107.3 x 5.3 rubber	1
100414	Screw Hexagonal head screw M8 x 20 ST	2
126731	Gasket 64 x 38.x.	1
100414	Screw Hexagonal head screw M8 x 20 ST	2
321861	Gasket 78 x 37 x 2	1
312103	Cylinder screw M16.x.95 ST	2
139977	Washer 28 x 16.5.x.5.ST	2
376482	O-ring 27.2 x 3.rubber	2
100495	Screw Hexagonal head screw M16 x 40 ST	2
185948	Gasket 176 x 40 x 2	1

Part No.	Description	Quantity for single engine
Various Engine Parts		
Cylinder Head - Version		
9016986	Cylinder head Type3 D	4
100093	Gasket. X 45.5 x 4.5	20
100092	Sealing	10
449902	Cylinder pin	5
100947	Gasket 108 x 84 x 2	20
315270	Cylinder screw M12 x 55 ST	2
102145	Spring washer	2
100875	Gasket 78 x 42 x 2	5
101052	Stud bolt M10 x 65 ST	4
101815	Nut Hexagonal nut M10 ST	4
320983	Gasket 113 x 74 x 1.3	25
100473	Screw Hexagonal head screw M12 x 35 ST	2
100548	Gasket 184 x 154 x 1	12
110966	Spring washer	4
100048	Screw Hexagonal head bolt M8x 60 ST	2
100247	Screw Hexagonal head bolt M8 x 90 ST	2
448657	Cylinder head gasket Type3 x 169.9 x 5	10
Power unit		
Piston Epsilon=12,5		
1238073	Piston	1
100145	Piston pin 55 x 112 ST	1
102312	Locking ring 55 x 2 ST	2
448651	Cylinder liner Type3 135 x 170 x 320.3	1
337459	Scraper ring Type2+3 134.7 x 17.4 ST	1
Piston Epsilon=11,8		
1222210	Piston Type3 E11.8 AL	1
100145	Piston pin 55 x 112 ST	1
102312	Locking ring 55 x 2 ST	2
448651	Cylinder liner Type3 135 x 170 x 320.3	1
337459	Scraper ring Type2+3 134.7 x 17.4 ST	1
Piston Epsilon=16		
394530	Piston Type3 E16 AL	1
100145	Piston pin 55 x 112 ST	1
102312	Locking ring 55 x 2 ST	2
448651	Cylinder liner Type3 135 x 170 x 320.3	1
337459	Scraper ring Type2+3 134.7 x 17.4 ST	1

Part No.	Description	Quantity for single engine
Piston Epsilon=11,2		
375596	Piston Type3 E11 2 AL	1
100145	Piston pin 55 x 112 ST	1
102312	Locking ring 55 x 2 ST	2
448651	Cylinder liner Type3 135 x.170 x 320.3	1
337459	Scraper ring Type2+3 134.7 x 17.4 ST	1
Bearings		
1231307	Connecting rod bearing Type2+3 100 x 107 x 38.7	1
1215565	Connecting rod bearing 100 x 107 x 38.45	1
Starter		
1238548	Starter	1
Relays, Fuse, Bus		
Set of fuses		
117789	D-fuse plug	3
117788	D-fuse plug 10,0 01	3
117785	D-fuse plug 06,0 01	3
110630	G-fuse plug	3
478341	G-fuse plug	3
401055	G-fuse plug	3
Set of relays		
363865	Relay 1-pole 1W 24V	3
1244516	Relay 3 Contacts 24V 10A	3
1244517	Relay Electric Relay 4 Contacts 24V 7A	3
1246274	Relay 2 Contacts 24V 8A	3
1229373	Relay NAIS CB1-D-24V 1U 24	3
Set of IO cards		
1201686	Digital input DI9371	1
1201695	B&R Digital output 12 outputs	1
1201697	B&R Analog input 4 inputs	1
1201698	Analog input	1
1201699	B&R Analog input 4 inputs	1
1201684	Interface	1
1201683	Interface Supply powerbus/X2X bus	1
MMU Synch		
1211730	Transducer X20CM0985-1 MMU	1
436420	Transducer X20CM0985 MMU	1

Part No.	Description	Quantity for single engine
Sensor		
550401	Thermocouple M12 x 90 800	6
415442	Transducer	1
1212469	Thermometer	2
285283	Transducer	1
285283	Transducer	1
607323	Temperature sensor	1
Plant		
Air filter		
464424	Bag filter Type3 890 x 592 x 292	1
523275	Bag filter Type3 610 x 456 x 17	2
Pre-lubrication		
235027	Filter cartridge Type2+3 Oil	2
Water pipes		
101790	Gasket	10
240789	Gasket	10
1219674	Filter cartridge Type3 Gas DN50	4
1219675	Filter cartridge Type2+3 DN80	4
201602	Gasket set	4
222725	Sealing ring DN80 x	4
103143	Gasket	5
227853	Gasket	4
Oil pipes		
106946	Metal hose	2
104215	Metal hose	1
104214	Metal hose	1
104206	Metal hose DN10 x 500	1
632852	Metal hose DN6 x 1000	1
100924	Straight screw connection	5
221149	Elbow fitting	1
107162	Double nipple	1
100897	Straight screw connection	2
100952	Elbow fitting	1
101204	Straight screw connection	1
100953	Elbow fitting	1
101205	Straight screw connection	1
100957	Elbow fitting	1
100926	Straight screw connection	1

Part No.	Description	Quantity for single engine
Heater hose		
635776	Metal hose	1
659127	Metal hose DN25 x 1100	1
632847	Conduit Metal hose JN043011	1
106757	Elbow fitting	2
117267	Elbow fitting	1
107162	Double nipple	1
110493	Straight screw connection	1
Safety valve		
436833	Safety valve 1 1/4" 3.5	1
117276	Elbow fitting	1
Actuators		
415397	Servomotor Type3 24V	1
516231	Throttle valve	1
646925	Servomotor Actuator 6V	1
342543	Transmitter Position	2
114530	Hose Hose 6 x 14	2
Pick up		
502886	Transmitter Pulse M12 x 1 x 60	1
343789	Holder 62 x 35 x 5	1
200673	Transmitter	1
Expansion Vessel		
106946	Metal hose	1
101208	Straight screw connection	1

CRITICAL SPARES LIST FOR THE FLARE

P&I	No	Description	Recommended Critical Parts
PIC	1115, 6140, 8160	Pressure sensor - Endress and Hauser	1
PI	1120, 2130, 3120, 3220	Manometer 1/4"	1
TI	1130, 3190	Temperature indication	1
P	3140, 3240	Grease Cartridge to Gas pump unit	2
PM	3140, 3240	Grease Cartridge to gas pump motor	2
	3140, 3240	Grease gun	2
X		Transmission belts to Continental gas pump	
	3140, 3240	P1000A	2
	3140, 3240	SM230A	2
PI	6110	Manometer 1/4"	2
PV	6110	Fitting set 1/4" for Manometer	2
PSH	8130	Pressure switch	2
VM	8120	Filter cage to VK200 incl. O-Ring	2
KM	8170	Motor to air flap incl. Potentiometer	2
RSAL	8180	UV Sensor	2
TICAH	8190	Thermocouple "S" ceramic sheath	2
TIR	8195	Thermocouple "N" ceramic sheath	2
VM	8230	Magnetic valve	2
IT	8270	Ignition transformer	2
A	8290	Ignition electrodes	2
F	1422, 1412	Filter Inserts to filter gas analyser GFK15R10	2/month
	8290	Connectors to the electrodes	2
141	5M1	Measuring gas pump to Gas-Analyser	2
141	5M1	Membrane for measuring gas pump	2
141	2C4	Fine Filter inserts	2/month
141	2C6	Water stop filter	2
141	5Y1, 5Y2	Valve 230V VA	2
141	5M2	Condensate pump	2
141	5M2	Spare pipe for condensate pump	2
141	4M1	Filter for fan and air outlet	2/month
141	8H1	Signal lamp Inlet 24VDC	1
X	3140, 3240	Screw AHC M4 - 8 Inox	12
X	3140, 3240	Screw FHC M5 - 45	6
X	3140, 3240	Grease Slinger	4
X	3140, 3240	Spacer Bearing/Housing Bearing	4
X	3140, 3240	Bearing Ball 6410 C3	4
X	3140, 3240	Washer MB 10	4
X	3140, 3240	Nut KM 10	4
X	X 3140, 3240	Felt Joint Diameter 46 x 46 x 6	2
X	3140, 3240	Retainer Carbon Ring	2
X	3140, 3240	Adapter Carbon Ring	2
X	3140, 3240	Carbon Ring	4

P&I	No	Description	Recommended Critical Parts
X	3140, 3240	Graphite Ring	4
X	3140, 3240	O-Ring Diameter 134.5 x 3	4
X	3140, 3240	Set Collard V-Ring	4
X	3140, 3240	V-Ring VA 60	4

ANNEXURE V: PROJECT DESIGN DOCUMENTS FOR LFG PROJECTS

Tender documents that are downloaded from the City's Procurement web portal include the PDF documents for the PDD and CPA-DDs for the different landfill gas projects.

Tenderers must download all available documents for.

1. The Programme of Activities (PDD).
2. Coastal Park landfill gas project (CPA-DD).
3. Bellville South landfill gas project (CPA-DD).
4. Vissershok landfill gas project (CPA-DD).

ANNEXURE VI: DEFINITION OF KEY TERMS, ACRONYMS AND ABBREVIATIONS USED IN THE TENDER

ACRONYM, TERM OR ABBREVIATION	DEFINITION
A6.4	Article 6.4 of the Paris Agreement that replaces the CDM, which formally ended on 31 Dec 2020. A6.4 frames the interim approach to and rules applicable to climate change mitigation projects that aim to reduce the climate change impacts of harmful emissions.
B-BBEE	Broad-Based Black Economic Empowerment in relation to the PPPFA.
BSLFS	Belville South Landfill Site
CDM	Clean Development Mechanism, defined in Article 12 of the Kyoto Protocol, allows a country with an emission-reduction or emission-limitation commitment under the Protocol (Annex B Party) to implement an emission-reduction project in developing countries. Such projects can earn saleable CERs. The CDM has been replaced as an interim measure by A6.4 until a global agreement will lead to a replacement climate mitigation mechanism.
CER	Certified Emission Reduction (ER, or CER) certificates or carbon credits. One CER is equivalent to one tonne of CO _{2e} , which can be counted towards meeting Kyoto targets (UNFCCC definition)
City	City of Cape Town Metropolitan Municipality.
CME	Coordinating and Managing Entity, as defined and required in terms of CDM-EB65-A32-PROC project cycle procedure document, being a company, government agency or other organisation in charge of managing a Programme of Activities under the CDM.
CO₂	Carbon dioxide (chemical composition of 1 atom of carbon and two atoms of oxygen).
CO_{2e}	Carbon dioxide equivalency is a quantity that describes, for a given mixture and amount of greenhouse gas, the amount of CO ₂ that would have the same global warming potential (GWP), when measured over a specified timescale (generally, 100 years). Carbon dioxide equivalency thus reflects the time-integrated radiative forcing of a quantity of emissions or rate of greenhouse gas emission - a flow into the atmosphere - rather than the instantaneous value of the radiative forcing of the stock (concentration) of greenhouse gases in the atmosphere described by CO _{2e} (Wikipedia definition).
COAS	Carbon Offset Administration Scheme, as contemplated in the Carbon Offset Regulations of the Carbon Tax legislation of South Africa, which is administered by the National Treasury.
CPA	Component Project Activity in terms of the CDM. Also used to describe Contract Price Adjustment in the tender.
CPA-DD	Component Project Activity Design Document.
CPI	Consumer Price Index, as defined by Statistics SA on a monthly basis.

ACRONYM, TERM OR ABBREVIATION	DEFINITION
CPLFS	Coastal Park Landfill Site.
DFFE	Department of Fisheries, Forestry and Environment.
DMRE	Department of Mineral Resources and Energy.
DNA	Designated National Authority (which is part of the DMRE).
DOE	A Designated Operational Entity is an independent auditor accredited by the CDM Executive Board of the UNFCCC to validate project proposals or verify whether implemented projects have achieved planned greenhouse gas emission reductions.
EB	Executive Board of the CDM of the UNFCCC.
ER	Emission Reduction.
GHG	Greenhouse Gas, which causes climate change. GHGs warm the Earth by absorbing energy and slowing the rate at which the energy escapes into space; they act like a blanket insulating the Earth. Different GHGs can have different effects on the Earth's warming. Two key ways in which these gases differ from each other are their ability to absorb energy (their "radiative efficiency"), and how long they stay in the atmosphere (also known as their "lifetime"). (Source - US EPA: Understanding Global Warming Potentials Greenhouse Gas (GHG) Emissions US EPA)
GWP	The Global Warming Potential (GWP) was developed to allow comparisons of the global warming impacts of different gases. Specifically, it is a measure of how much energy the emissions of 1 ton of a gas will absorb over a given period of time, relative to the emissions of 1 ton of carbon dioxide (CO ₂). The larger the GWP, the more that a given gas warms the Earth compared to CO ₂ over that time period. The time period usually used for GWPs is 100 years. GWPs provide a common unit of measure, which allows analysts to add up emissions estimates of different gases (e.g., to compile a national GHG inventory), and allows policymakers to compare emissions reduction opportunities across sectors and gases. (Source - US EPA: Understanding Global Warming Potentials Greenhouse Gas (GHG) Emissions US EPA)
ICE	Internal combustion engine
IDP	Integrated Development Plan of the City of Cape Town.
ICT	Information and communications technology.
JV	Joint Venture.
LFG	Landfill Gas.
LFGC&F	Landfill gas collection and flaring system.
MFMA	Local Government: Municipal Finance Management Act (Act 56 of 2003), read together with the Municipal Supply Chain Management Regulations, 2017.
MSA	Local Government: Municipal Systems Act (Act 32 of 2000).

ACRONYM, TERM OR ABBREVIATION	DEFINITION
NDP	National Development Plan.
OEM	Original Equipment Manufacturer
PDD	Project Design Document, as submitted to the CDM for registration as a CDM project.
PoA	Programme of Activities, as defined under the CDM, which allows for the inclusion of own and 3 rd party projects, depending on the definition of the project boundary.
PPPFA	Preferential Procurement Policy Framework Act, Act No. 5 of 2000, read together with the PPPFA Regulations, 2017.
RE	Renewable Energy.
RLFS	Regional Landfill Site.
SA	South Africa.
SANAS	South African National Accreditation System
SCM	supply chain management.
SCM Policy	Means the latest SCM Policy approved by the Council of the City of Cape Town.
UNFCCC	United Nations Framework Convention on Climate Change.
VHLFS	Vissershok Landfill Site.
WBS	Work Breakdown Schedule, which shows the detail of activities, estimated timing, milestones, deliverables and resources to complete the project.

PART 5: PRICE SCHEDULE

Bid specifications may not make any reference to any particular trade mark, name, patent, design, type, specific origin or producer, unless there is no other sufficiently precise or intelligible way of describing the characteristics of the work, in which case such reference must be accompanied by the words "or equivalent".

TENDERERS MUST NOTE THAT WHEREVER THIS DOCUMENT REFERS TO ANY PARTICULAR TRADE MARK, NAME, PATENT, DESIGN, TYPE, SPECIFIC ORIGIN OR PRODUCER, SUCH REFERENCE SHALL BE DEEMED TO BE ACCOMPANIED BY THE WORDS 'OR EQUIVALENT'

Pricing Instructions:

- 5.1 State the rates and prices in Rand unless instructed otherwise in the tender conditions.
- 5.2 Include in the rates, prices, and the tendered total of the prices (if any) all duties, taxes (except Value Added Tax (VAT)), and other levies payable by the successful tenderer, such duties, taxes and levies being those applicable 14 days before the closing time stated in the General Tender Information.
- 5.3 All prices tendered must include all expenses, disbursements and costs (e.g. transport, accommodation etc.) that may be required for the execution of the tenderer's obligations in terms of the Contract, and shall cover the cost of all general risks, liabilities and obligations set forth or implied in the Contract as well as overhead charges and profit (in the event that the tender is successful). All prices tendered will be final and binding.
- 5.4 All prices shall be tendered in accordance with the units specified in this schedule.
- 5.5 Where a value is given in the Quantity column, a Rate and Price (the product of the Quantity and Rate) is required to be inserted in the relevant columns.
- 5.6 The successful tenderer is required to perform all tasks listed against each item. The tenderer must therefore tender prices/rates on all items as per the section in the Price Schedule. **An item against which no rate is/are entered, or if anything other than a rate or a nil rate (for example, a zero, a dash or the word "included" or abbreviations thereof) is entered against an item, it will also be regarded as a nil rate having been entered against that item, i.e. that there is no charge for that item. The Tenderer may be requested to clarify nil rates, or items regarded as having nil rates; and the Employer may also perform a risk analysis with regard to the reasonableness of such rates.**
- 5.7 Provide fixed rates and prices for the duration of the contract that are not subject to adjustment except as otherwise provided for in clause 17 of the Conditions of Contract and as amplified in the Special Conditions of Contract.
- 5.8 It is important to refer to the applicable Pricing Instructions specific to each of the Pricing Schedules, which are all returnable schedules.
- 5.9 All items that are part of Provisional Sums (shown as Psum in pricing schedules), and which are imported, must be stated in South African Rand (ZAR) in terms of the rate of exchange at the time of submission as stipulated.
- 5.9 Information derived for the Pricing Schedules must be detailed in a Microsoft Excel financial model (returnable on two sets of memory sticks).
 - The financial model must detail all macro, micro and general assumptions of the financial model used for the pricing of the bid.
 - The details in the bid must clearly reflect the division of work per resource according to the type and seniority of the resources to show the time estimated per resource. The financial model must be accompanied by a thorough and detailed explanation of the assumptions informing calculations, workings of the model and its operation.
 - The financial model should have inputs, workings and output sections. The Pricing Schedules

should represent the outputs (answers of calculations):

- All formulas and work sheets must be shown in the spreadsheet.
- No hard coding must be used.

1.1 PRICING SCHEDULES

PRICING SCHEDULE 1: PROFESSIONAL SERVICE RATES FOR PROJECT

RATES FOR PROFESSIONAL SERVICES	ZAR/ hour, excl. 15% VAT
Project Manager	R 1 450 /hour
Well-field technician	R 413 /hour
ICE diesel mechanic/ technician	R 880 /hour
Electrical artisan/ technician	R 950 /hour
ICT technician	R 850 /hour
Senior carbon consultant	R 2126 /hour

NOTE:

1. These rates must be all inclusive.
2. Rates to be used are for local resources.
3. All rates to exclude VAT.
4. Rates are valid from date of commencement of tender, and will be subject to CPA, as stipulated in Schedule 8, and as provided for in clause 177 of the City's SCM Policy in the event of a delayed award.

PRICING SCHEDULE A: PROFESSIONAL SERVICES – OPERATION, REPAIR AND MAINTENANCE OF LFG EXTRACTION, FLARE AND ELECTRICITY GENERATION SYSTEMS

PART	DESCRIPTION	Unit		Quantity	Rate (ZAR)	TOTALS (Quantity x Rate) (ZAR)
PART A1	Wellfield and flare operations and maintenance					
A1.1	Wellfield and flare operations and maintenance including all routine checks, supervision, labour, equipment, consumables, as per specifications in the project description including any additional expansions.	Rate per month	Coastal Park	60	R 28 115.00	R 1 686 900.00
			Bellville	60	R 28 115.00	R 1 686 900.00
			Visser'shok	60	R 28 115.00	R 1 686 900.00
A1.2	Allowance for supervision and labour costs for repairs resulting from an emergency callout.	Rate per hour	Coastal Park	120	R 1 864.00	R 223 680.00
			Bellville	120	R 1 864.00	R 223 680.00
			Visser'shok	120	R 1 864.00	R 223 680.00
A1.3	Allowance to pay the existing operations contractor for ten days hand over on the operation and maintenance of the wellfield to newly appointed contractors for all three sites.	Sum	Coastal Park	1	R 10 000.00	R 10 000.00
			Bellville			R 10 000.00
			Visser'shok			R 10 000.00
A1.4	Allowance for the handover of newly completed sections of the wellfield from a construction contractor to ensure system functionality including the attendance and provision of advisory input to complete the snag list items	Rate per site	Coastal Park	5	R 31 688.00	R 158 440.00
			Bellville	5	R 31 688.00	R 158 440.00
			Visser'shok	5	R 31 688.00	R 158 440.00
A1.5	Health and safety requirements as per specification.	Rate per month	Coastal Park	60	R 5 800.00	R 348 000.00
			Bellville	60	R 5 800.00	R 348 000.00
			Visser'shok	60	R 5 800.00	R 348 000.00

PART	DESCRIPTION	Unit		Quantity	Rate (ZAR)	TOTALS (Quantity x Rate) (ZAR)
A1.6	Rate for all testing for all environmental compliance requirements as per relevant legislation as and when required.	Rate	Coastal Park	1	R 5 800.00	R 5 800.00
			Bellville	1	R 5 800.00	R 5 800.00
			Vissershok	1	R 5 800.00	R 5 800.00
A1.7	Construction works to repair and maintain existing infrastructure.	P _{Sum}			R 1 000 000.00	R 1 000 000.00
A1.8	Extra overhead charges linked to item 1.7.	%	R1 000 000	2.5%	R 25 000.00	R 25 000.00
A1.9	Provision of spares for flare compound as per spares lists as per the validated PDD and ACM 0001 monitoring methodology for CDM projects.	P _{Sum}			R 2 500 000.00	R 2 500 000.00
A1.10	Extra overhead charges linked to item 1.9	%	R2 500 000	2.5%	R 62 500	R 62 500.00
A1.11	Routine training (as and when required).	Rate per hour		30	R 1 450.00	R 43 500.00
A1.12	Ad hoc training and information session conducted every two years during the contract period.	Rate		1	R 12 325.00	R 12 325.00
TOTAL A1						R 10 941 785.00

TENDER NO:108C/2022/23

PART	DESCRIPTION	Unit	Quantity	Rate (ZAR)	TOTALS (Quantity x Rate) (ZAR)
PART A.2	Operation and maintenance of gas engines, generator and sub-systems				
A2.1	Operations and Maintenance of gas engines, including all supervision, labour, equipment, spares, consumables, as per specifications in the project description.	Rate per month	60	R 29 949.00	R 1 796 940.00
			60	R 29 949.00	R 1 796 940.00
A2.2	Routine checks as per manufacture specifications on the gas engines, regardless of number of engines, including all supervision, labour, equipment, consumables, as per OEM specification.	Rate per month	60	R 29 949.00	R 1 796 940.00
			60	R 29 949.00	R 1 796 940.00
A2.3	Carry out de-cokes on individual engines inclusive of all labour and consumables.	Rate per engine	26	R 17 895.00	R 465 270.00
			11	R 17 895.00	R 196 845.00
A2.4	Carry out scheduled intermediate Services @ 4 000 Operational Hours.	Rate per engine	4	R 17 895.00	R 71 580.00
			1	R 17 895.00	R 17 895.00
A2.5	Carry out scheduled intermediate Services @ 8 000 Operational Hours.	Rate per item per engine	2	R 17 895.00	R 35 790.00
			1	R 17 895.00	R 17 895.00
A2.6a	Carry out scheduled intermediate Services @ 12 000 Operational Hours.	Rate per engine	2	R 20 760.00	R 41 520.00
			1	R 20 760.00	R 20 760.00

PART	DESCRIPTION	Unit	Quantity	Rate (ZAR)	TOTALS (Quantity x Rate) (ZAR)
PART A.2	Operation and maintenance of gas engines, generator and sub-systems				
A2.6b	Carry out 20 000 Operational Hours "re builds" on individual engines.	Rate per engine	1	R 41 810.00	R 41 810.00
			0	R 41 810.00	R 0.00
A2.7	Operations and Maintenance of Chiller Unit and Heat Exchanger.	Rate per month	60	R 3 524.00	R 211 440.00
			60	R 3 524.00	R 211 440.00
A2.8	Operations and Maintenance of all Electrical Equipment.	Rate per month	60	R 3 524.00	R 211 440.00
			60	R 3 524.00	R 211 440.00
A2.9	Oil Analysis per Engine and tested by an Independent / SANAS approved Laboratory including oil changes.	Rate per week	520	R 282.00	R 146 640.00
			780	R 282.00	R 219 960.00
A2.10	Supply and maintenance of oil spill kits.	Rate per site	10	R 2 250.00	R 146 640.00
			10	R 2 250.00	R 219 960.00
A2.11	Allowance for supervision and labour costs for repairs resulting from an emergency callout.	Rate per hour	120	R 881.00	R 105 720.00
			120	R 950.00	R 114 000.00
A2.12		Rate per day	10	R 12 325.00	R 123 250.00

PART	DESCRIPTION	Unit	Quantity	Rate (ZAR)	TOTALS (Quantity x Rate) (ZAR)
PART A.2	Operation and maintenance of gas engines, generator and sub-systems				
	Allowance to pay the existing operations contractor for ten days hand over on the operation and maintenance of the gas engines.		10	R 12 325.00	R 123 250.00
A2.13	Allowance for the handover of newly installed gas engines from a construction contractor to ensure system functionality.	Rate per site	5	R 19 813.00	R 99 065.00
			5	R 19 813.00	R 99 065.00
A2.14	Health and safety requirements as per specification.	Rate per month	60	R 5 800.00	R 348 000.00
			60	R 5 800.00	R 348 000.00
A2.15	Construction works to repair and maintain existing infrastructure.	P _{Sum}	2.5%	R 2 000 000	R 2 000 000.00
A2.16	Extra overhead charges linked to item 2.15.	%		R 50 000	R 50 000.00
A2.17	Provision of spares for gas engines as per spares lists as per the validated PDD and ACM 0001 monitoring methodology for CDM projects.	P _{Sum}	2.5%	R 4 000 000	R 4 000 000.00
A2.18	Extra overhead charges linked to item 2.17.	%		R 50 000	R 50 000.00
A2.19	Provision of GE Jenbacher approved oil for engines.	P _{Sum}	2.5%	R 5 000 000	R 5 000 000.00
A2.20	Extra overhead charges linked to item 2.19.	%		R 50 000	R 50 000.00
A2.21	Call out of specialist to attend to breakdowns or equipment installations during warranty period.	P _{Sum}	2.5%	R 500 000	R 500 000.00
A2.22	Extra overhead charges linked to item 2.21.	%		R 12 500	R 12 500

TENDER NO:108C/2022/23

PART	DESCRIPTION	Unit	Quantity	Rate (ZAR)	TOTALS (Quantity x Rate) (ZAR)
PART A.2	Operation and maintenance of gas engines, generator and sub-systems				
A2.23	Management of hazardous waste, and disposal of hazardous and liquid waste.	Rate per month	60	R 875	R 52 500.00
				TOTAL A2	R 22 429 835.00

PART	DESCRIPTION	Unit	Quantity	Rate (ZAR)	TOTALS (Quantity x Rate) (ZAR)
PART A.3	Operation and maintenance of the associated ICT equipment				
A3.1	Operation and maintenance of ITC equipment including telemetry systems	Rate per month	Coastal Park	R 7 650.00	R 459 000.00
			Belville	R 7 650.00	R 459 000.00
			Vissershok	R 7 650.00	R 459 000.00
A3.2	Provision of telemetry systems	P _{sum}		R 500 000	R 500 000.00
A3.3	Extra overhead charges linked to item 3.2	%	R500 000	R 12 500	R 12 500.00
A3.4	Provision of spares for ICT system	P _{sum}		R 500 000	R 500 000.00
A3.5	Extra overhead charges linked to item 3.4	%	R500 000	R 12 500	R 12 500.00
				TOTAL A3	R 2 402 000.00

TENDER NO:108C/2022/23

NOTE:

1. "Quantity" means the number of units required.
2. "Rate" means the calculated total rate required per unit without including CPA that is needed to execute an activity in order to deliver a specified service or output.
3. "Total" means the Quantity multiplied by the Rate.
4. All value to be stated in South African Rand (ZAR).
5. All tables' prices must correspond with totals generated, based on defined assumptions, tendered hourly rates and other relevant the details set out in an Excel spreadsheet used to model the pricing.
6. Sources must be indicated and be linked to the Excel Spreadsheet details. Spreadsheets are to be provided unabridged in Excel Format, with no password protection.

PRICING SCHEDULE B: CARBON REPORTING AND ADVISORY SERVICES

PART	DESCRIPTION	Unit	Quantity	Rate (ZAR)	TOTALS (Quantity x Rate) (ZAR)
PART B.1	Data monitoring, collection and storage and data reporting				
B1.1	Data compilation and calculation of the monthly CERs generated, attendance at feedback meetings on a monthly basis and annual reporting of CERs generated.	Rate per month	Coastal Park	R 32 846.00	R 1 970 760.00
			Bellville	R 32 846.00	R 1 970 760.00
			Vissershok	R 32 846.00	R 1 970 760.00
		TOTAL B1			

PART	DESCRIPTION	Unit	Quantity	Rate (ZAR)	TOTALS (Quantity x Rate) (ZAR)
PART B.2	Validation, verification and registration of new projects by the City				
B2.1	Rate to prepare and submit monitoring report and attend to all queries for verification until issuance.	Rate per report	15	R 302 221.00	R 4 533 315.00
B2.2	Rate to prepare and submit PDD and attend to all queries for validation until approval of new CPAs.	Rate per report	5	R 577 407.00	R 2 887 035.00
B2.3	Rate to prepare for renewal of PoA including all queries until approval.	Rate per report	2	R 324 614.00	R 649 228.00
B2.4	Post-registration change of PoA or CPAs.	Rate per report	10	R 295 989.00	R 2 959 690.00
B2.5a	DOE appointment and costs (validation and verification).	P _{Sum}		R300 000	R 300 000.00

TENDER NO:108C/2022/23

PART	DESCRIPTION	Unit	Quantity	Rate (ZAR)	TOTALS (Quantity x Rate) (ZAR)
PART B.2	Validation, verification and registration of new projects by the City				
B2.5b	Cost of registration and issuance of CERs	P _{Sum}		R 3 000 000	R 3 000 000.00
B2.6	Extra overhead charges linked to item 2.5.	%	R300 000	R 300 000	R 7 500.00
B2.7	Provision for unforeseen changes to CDM methodologies or requirements.	P _{Sum}		R500 000	R 500 000.00
B2.8	Extra overhead charges linked to item 2.7.	%	R500 000	R12 500	R 12 500.00
				TOTAL B2	R 14 849 268.00

PART	DESCRIPTION	Unit	Quantity	Rate (ZAR)	TOTALS (Quantity x Rate) (ZAR)
Section B.3	Ad-hoc carbon advisory services (as and when required)				
B3.1	Ad-hoc carbon advisory services as per specification.	Rate per hour	200	R 1 390.00	R 278 000.00
B3.3	Rate to update CME operating manual.	Rate per report	2	R 151 131.00	R 302 262.00
B3.4	Rate to update Inclusion Agreement.	Rate per report	2	R 151 131.00	R 302 262.00
B3.5	Rate to update carbon trading strategy in the Carbon Advisory and Information Report.	Rate per report	2	R 151 131.00	R 302 262.00
B3.6	Rate to include third party projects.	Rate per hour	50	R 1 390.00	R 69 500.00

PART	DESCRIPTION	Unit	Quantity	Rate (ZAR)	TOTALS (Quantity x Rate) (ZAR)
Section B.3	Ad-hoc carbon advisory services (as and when required)				
B3.7	Rate to prepare and submit documentation for transfer to a new standard.	Rate per hour	50	R 1 390.00	R 69 500.00
B3.8	Provision to prepare and submit documentation for carbon tax purposes.	Rate per hour	100	R 1 390.00	R 139 000.00
B3.9	Attend meetings (ad hoc)	Rate	18	R 1 390.00	R 25 020.00
				TOTAL B3	R 1 487 806.00

NOTE:

1. "Quantity" means the number of units required.
2. "Rate" means the calculated total rate required per unit without including CPA that is needed to execute an activity in order to deliver a specified service or output.
3. "Total" means the Quantity multiplied by the Rate.
4. All value to be stated in South African Rand (ZAR).
5. All tables' prices must correspond with totals generated, based on defined assumptions, tendered hourly rates and other relevant the details set out in an Excel spreadsheet used to model the pricing.
6. Sources must be indicated and be linked to the Excel Spreadsheet details. Spreadsheets are to be provided unabridged in Excel Format, with no password protection.

PRICING SCHEDULE C: PROJECT MANAGEMENT, COORDINATION AND ADMINISTRATIVE SERVICES

Section C		Project Management Coordination and administrative services			
PART	DESCRIPTION	Unit	Quantity	Rate (ZAR)	TOTALS (Quantity x Rate) (ZAR)
C1	Project management, coordination of all aspects in terms of the specification.	Rate per month	60	R 7 250.00	R 435 000.00
C2	Input at design stage of wellfield system expansions and input on snag lists prior to commissioning and handover of capital works.	Rate per hour	50	R 1 450.00	R 72 500.00
C3	Attendance at project meetings on a monthly basis.	Rate per month	60	R 14 075.00	R 844 500.00
C4	Data gathering and compilation of the monthly report	Rate per month	60	R 7 250.00	R 435 000.00
				TOTAL C	R 1 787 000.00

NOTE:

1. "Quantity" means the number of units required.
2. "Rate" means the calculated total rate required per unit without including CPA that is needed to execute an activity in order to deliver a specified service or output.
3. "Total" means the Quantity multiplied by the Rate.
4. All value to be stated in South African Rand (ZAR).
5. All tables' prices must correspond with totals generated, based on any assumptions, hourly rates and the relevant the details set out in an Excel spreadsheet used to model the pricing.
6. Sources must be indicated and be linked to the Excel Spreadsheet details. Spreadsheets are to be provided unabridged in Excel Format, with no password protection.

PART 6: OCCUPATIONAL HEALTH AND SAFETY AGREEMENT

TENDER No: 108C/2022/23

(11) OCCUPATIONAL HEALTH AND SAFETY AGREEMENT

AGREEMENT MADE AND ENTERED INTO BETWEEN THE CITY OF CAPE TOWN (HEREINAFTER CALLED THE "CCT") AND

ENERGY Systems SA (PTY) Ltd
(Supplier/Mandatory/Company/CC Name)

IN TERMS OF SECTION 37(2) OF THE OCCUPATIONAL HEALTH AND SAFETY ACT, 85 OF 1993 AS AMENDED.

I, [REDACTED], representing
ENERGY Systems SA (PTY) Ltd

as an employer in its own right, do hereby undertake to ensure, as far as is reasonably practicable, that all work will be performed, and all equipment, machinery or plant used in such a manner as to comply with the provisions of the Occupational Health and Safety Act (OHSA) and the Regulations promulgated thereunder.

I further confirm that I am/we are registered with the Compensation Commissioner and that all registration and assessment monies due to the Compensation Commissioner have been fully paid or that I/we are insured with an approved licensed compensation insurer.

C.O.I.D. ACT Registration Number: [REDACTED]

OR Compensation Insurer: [REDACTED] Policy No.: [REDACTED]

I undertake to appoint, where required, suitable competent persons, in writing, in terms of the requirements of OHSA and the Regulations and to charge him/them with the duty of ensuring that the provisions of OHSA and Regulations as well as the Council's Special Conditions of Contract, Way Leave, Lock-Out and Work Permit Procedures are adhered to as far as reasonably practicable.

I further undertake to ensure that any subcontractors employed by me will enter into an occupational health and safety agreement separately, and that such subcontractors comply with the conditions set.

I hereby declare that I have read and understand the Occupational Health and Safety Specifications contained in this tender and undertake to comply therewith at all times.

I hereby also undertake to comply with the Occupational Health and Safety Specification and Plan submitted and approved in terms thereof.

Signed [REDACTED] on the 10th day of October 2022

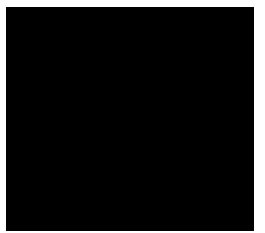
Witness [REDACTED]

Mandatory [REDACTED]

Signed at CAPE TOWN on the 14th day of December 2022

Witness [REDACTED]

PART 7: SUPPORTING SCHEDULES



Schedule 8: Contract Price Adjustment and/or Rate of Exchange Variation

The prices for the goods delivered and services performed shall be subject to contract price adjustment and the following conditions will be applicable:

- 8.1 The Contract Price Adjustment mechanism and/or provisions relating to Rate of Exchange Variation, contained in this schedule is compulsory and binding on all tenderers.
- 8.2 Failure to complete this schedule or any part thereof may result in the tender offer being declared non-responsive.
- 8.3 Tenderers are not permitted to amend, vary, alter or delete this schedule or any part thereof unless otherwise stated in this schedule, failing which the tender offer shall be declared non-responsive.
- 8.4 Tenderers are not permitted to offer firm prices except as provided for in the Price Schedule, and if the tenderer offers firm prices in contravention of this clause the tender offer shall be declared non-responsive.

8.5 Contract Price Adjustment – General

8.5.1 All requests for contract price adjustment shall be submitted in writing as follows:

- By letter to : Director Supply Chain Management, City of Cape Town, P O Box 655, Cape Town, 8000, or
- by email to: CPA.Request@capetown.gov.za and barry.coetzee@capetown.gov.za

prior to the month upon which the price adjustment would become effective.

- 8.6 The CCT reserves the right to withhold payment of any claim for contract price adjustment while only provisional figures are available and until the final (revised) figures are issued by the relevant authority.
- 8.7 When submitting a claim for contract price adjustment a supplier shall indicate the actual amount claimed for each item. A mere notification of a claim for contract price adjustment without stating the new price claimed for each item shall, for the purpose of this clause, not be regarded as a valid claim.
- 8.8 The CCT reserves the right to request the supplier to submit auditor's certificates or such other documentary proof as it may require in order to verify a claim for contract price adjustment. Should the supplier fail to submit such auditor's certificates or other documentary proof to the CCT within a period of 30 (thirty) days from the date of the request, it shall be presumed that the supplier has abandoned his claim.
- 8.9 The effective date of any price increases granted will be the date on which the abovementioned documentation/claim is submitted or, by agreement between the Contractor and the City, a subsequent date on which the price increase will be effective.
- 8.10 In instances where the Contractor's price claimed is less than entitled, the lesser price will be accepted.
- 8.11 The CCT reserves the right to apply the indices available at the date of the claim submitted by the Contractor.
- 8.12 **The rates submitted as per the Pricing Schedule will be subject to Contract Price Adjustment based on the Consumer Price Index (excepting for the items of the pricing schedule subject to Rate of Exchange (ROE)) as follows:**

8.12.1 The Contract Price as per GCC shall remain **Firm** for the first 12 months (from date of

commencement of the contract) and no claims for contract price adjustment will be considered for the first 12 months of the contract period subject to the provisions in the price schedule.

- 8.12.2 Items or services that are priced under Provisional Sums (Psum) in the Price Schedules are not subject to Contract Price Adjustment.
- 8.12.3 The delivery price must reflect the Rate of Exchange changes as at the date of a transaction for imported items per the Provisional Sums (Psum), or for imported services, and are not subject to further Rate of Exchange Variation adjustments.
- 8.12.4 Subject to 8.12.1, 8.12.2 and 8.12.3 above, Contract Price Adjustment will be applicable as from commencement of the 13th month of the contract period.
- 8.12.5 **90%** of the tendered price will be subject to adjustment **annually** based on the Consumer Price Index (P0141-Table B2 – CPI headline year-on-year rates):

From start of 13th month to the end of the 24th month: Subject to contract price adjustment in accordance with the **Consumer Price Index (P0141-Table B2 – CPI headline year-on-year rates)**. **Base month** for the price adjustment shall be two (2) calendar months prior to the date of commencement. The **end month** shall be two (2) calendar months prior to the 12th month.

From start of 25th month to end of the 36th month: Subject to the contract price adjustment in accordance with the **Consumer Price Index (P0141-Table B2 – CPI headline year-on-year rates)**. **Base month** for the price adjustment shall be two (2) calendar months prior to the 13th month. The **end month** shall be two (2) calendar months prior to 24th month.

From start of 37th month to end of the 48th month: Subject to the contract price adjustment in accordance with the **Consumer Price Index (P0141-Table B2 – CPI headline year-on-year rates)**. **Base month** for the price adjustment shall be two (2) calendar months prior to the 25th month. The **end month** shall be two (2) calendar months prior to 36th month.

From start of 49th month to end of the 60th month: Subject to the contract price adjustment in accordance with the **Consumer Price Index (P0141-Table B2 – CPI headline year-on-year rates)**. **Base month** for the price adjustment shall be two (2) calendar months prior to the 37th month. The **end month** shall be two (2) calendar months prior to 48th month.

The **average CPI** will be calculated, the base month to the end month (both included) divided by the number of months.

The claim will be based on the **average** between the "base month" and the "end month"

e.g.: $7+6+9+6 = 28$, $(28/4) = 7$ therefore the claim will be 7%.

- 8.12.5 **10%** of the rate will remain fixed.
- 8.12.6 Should the original contract period be extended via a further formal approval of the City, CPA will be applicable according to the same conditions than what were applied in the original contract.

ANNEXURE

LIST OF APPROVED FINANCIAL INSTITUTIONS

The following financial institutions are currently (as at 18 October 2016) approved for issue of contract guarantees to the City:

National Banks:

ABSA Bank Ltd.
FirstRand Bank Ltd.
Investec Bank Ltd.
Nedbank Ltd.
Standard Bank of SA Ltd.

International Banks (with branches in SA):

Barclays Bank plc.
Citibank n.a.
Credit Agricole Corporate and Investment Bank
HSBC Bank plc.
JP Morgan Chase Bank
Societe Generale
Standard Chartered Bank

Insurance companies:

ABSA Insurance
Coface s.a.
Compass Insurance Co.
Constantia Insurance Co.
Credit Guarantee Insurance Co.
Guardrisk Insurance Co.
Hollard Insurance Company Ltd.
Infiniti Insurance Limited
Lombard Insurance
New National Assurance Co.
Regent Insurance Co.
Renasia Insurance Company Ltd.
Santam Limited
Zurich Insurance Co.

(12) INSURANCE BROKER'S WARRANTY (PRO FORMA)

TENDER No: 108C/2022/23

(12) INSURANCE BROKER'S WARRANTY (PRO FORMA)*Logo**Letterhead of supplier's Insurance Broker*

Date _____

CITY OF CAPE TOWN
 City Manager
 Civic Centre
 12 Hertzog Boulevard
 Cape Town
 8000

Dear Sir

TENDER No: 108C/2022/23

TENDER DESCRIPTION: APPOINTMENT OF SPECIALIST CONTRACTORS TO OPERATE AND MAINTAIN
 LANDFILL GAS EXTRACTION AND POWER GENERATION SYSTEMS AT CITY
 LANDFILLS AND TO PROVIDE CARBON ADVISORY SERVICES FOR CARBON
 PROJECTS IN THE CITY OF CAPE TOWN

NAME OF SUPPLIER: _____

I, the undersigned, do hereby confirm and warrant that all the insurances required in terms of the abovementioned contract have been issued and/or in the case of blanket/umbrella policies, have been endorsed to reflect the interests of the CITY OF CAPE TOWN with regard to the abovementioned contract, and that all the insurances and endorsements, etc., are all in accordance with the requirements of the contract.

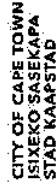
I furthermore confirm that all premiums in the above regard have been paid.

Yours faithfully

Signed: _____

For: _____ (Supplier's Insurance Broker)

**CITY OF CAPE TOWN
MONTHLY PROJECT LABOUR REPORT**



General

- 9 A new beneficiary is one in respect of which a new employment contract is signed in the current month. A certified ID copy must accompany this labour report on submission.
- 10 Was the beneficiary sourced from the City's job seeker database?
- 11 The contract end date as stated in the beneficiary's employment contract.
- 12 Where a beneficiary has not worked in a particular month, the beneficiary's name shall not be reflected on this form at all for the month in question.
- 13 Training will be recorded separately from normal working days and together shall not exceed the maximum of 23 days per month.
- 14 Workers earning more than the maximum daily rate (currently R450 excluding any benefits) shall not be reflected on this form at all.
- 15 Submission of Forms
Signed hardcopy forms must be scanned and submitted to the City's project manager in electronic (.pdf) format, together with the completed form in Microsoft Excel format.
- 16 Scanned copies of all applicable supporting documentation must be submitted along with each monthly project labour report. Copies of employment contracts and ID-documents are only required in respect of new beneficiaries.
- 17 If a computer is not available, handwritten forms and supporting documentation will be accepted.

Numbers in cells below e.g. (6) refer to the relevant instruction above for completing and submitting forms

ACTUAL START DATE (yyyy/mm/dd)										ANTICIPATED / ACTUAL END DATE (yyyy/mm/dd)										(7)									
TOTAL PROJECT EXPENDITURE / VALUE OF WORK DONE TO-DATE (INCLUDING ALL COSTS, BUT EXCLUDING VAT)																													
R																													

MONTHLY PROJECT LABOUR REPORT



CITY OF CAPE TOWN
ISIXHO SASEKAPA
STAD KAAPSTAD

BENEFICIARY DETAILS AND WORK INFORMATION

CONTRACT OR WORKS PROJECT NUMBER:		Year		Month		Sheet of						
						1						
(3)	(8)	(8)	(9)	(10)	(11)	(12)	(13)	(14)				
No.	First name	Surname	ID number	New Beneficiary (Y/N)	Gender (M/F)	Disabled (Y/N)	Job seeker database (Y/N)	Contract start date (DDMMYY)	Contract end date (DDMMYY)	No. days worked this month (excl. training)	Training days	Rate of pay per day (R - c)
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												
20												

Declared by Contractor or Vendor to be true and correct:	Name	Signature
	Date	

Received by Employer's Agent / Representative:	Name	Signature
	Date	

(14.2) B-BBEE SUB-CONTRACT EXPENDITURE REPORT (PRO FORMA)TENDER
108C/2022/23:NO. APPOINTMENT OF SPECIALIST CONTRACTORS TO OPERATE AND MAINTAIN
LANDFILL GAS EXTRACTION AND POWER GENERATION SYSTEMS AT CITY LANDFILLS
AND TO PROVIDE CARBON ADVISORY SERVICES FOR CARBON PROJECTS IN THE
CITY OF CAPE TOWN

SUPPLIER: _____

B-BBEE SUB-CONTRACT EXPENDITURE REPORT

Rand Value of the contract (as defined in Schedule 4: Preference Schedule) (P*)	R	B-BBEE Status Level of Prime Supplier	
---	---	---------------------------------------	--

Name of Sub-contractor (list all)	B-BBEE Status Level of supplier ¹	Total value of Sub-contract (excl. VAT) ¹	Value of Sub- contract work to date (excl. VAT) ¹	Value of Sub- contract work to Sub-contractors with a lower B-BBEE Status Level than supplier
Sub-contractor A		R	R	R
Sub-contractor B		R	R	R
Sub-contractor C		R	R	R

¹Documentary evidence to be
provided

Total: R

Expressed as
a percentage
of P*

%

SignaturesDeclared by
supplier to be
true and
correct:

Date: _____

Verified by
CCT Project
Manager:

Date: _____

(14.3) PARTNERSHIP/ JOINT VENTURE (JV) / CONSORTIUM/ EXPENDITURE REPORT (PRO FORMA)

TENDER NO.
108C/2022/23:

APPOINTMENT OF SPECIALIST CONTRACTORS TO OPERATE AND MAINTAIN
LANDFILL GAS EXTRACTION AND POWER GENERATION SYSTEMS AT CITY
LANDFILLS AND TO PROVIDE CARBON ADVISORY SERVICES FOR CARBON
PROJECTS IN THE CITY OF CAPE TOWN

SUPPLIER: _____

PARTNERSHIP/ JOINT VENTURE (JV)/ CONSORTIUM EXPENDITURE REPORT

Rand value of the contract (as defined in Schedule 4: Preference Schedule) (P*)	R	B-BBEE Status Level of Partnership/ Joint Venture (JV)/ Consortium	
---	---	---	--

Name of partners to the Partnership/ JV / Consortium (list all)	B-BBEE Status Level of each partner at contract award	Percentage contribution of each partner as per the Partnership/ JV/ Consortium Agreement ¹	Total value of partner's contribution (excl. VAT) ¹	Value of partner's contribution to date (excl. VAT) ¹	Value of partner's contribution as a percentage of the work executed to date
		A	$B = A\% \times P^*$	C	$D = C/P^* \times 100$
Partner A		%	R	R	%
Partner B		%	R	R	%
Partner C		%	R	R	%

¹Documentary evidence to be provided

Signatures

Declared by
supplier to be
true and
correct:

Date: _____

Verified by
CCT Project
Manager:

Date: _____