



Kenya Airports Authority

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KAA/OT/EIA/0153/2023-2024

13th February, 2024

To: All Tenderers

RE: SUPPLY, DELIVER, INSTALL, TEST AND COMMISSION ECO-FRIENDLY DIESEL GENERATORS AT ELDORET INTERNATIONAL AIRPORT

TENDER NO. KAA/OT/EIA/0153/2023-2024

ADDENDUM NO. 3

The following are tender clarifications/addendum issued regarding the above tender in accordance to instructions to tenderers clause 10.3 of the bidding document for the referenced tender.

No.	Clarification	Response
1	Changes in BOQ	Bidders are hereby informed that the original BOQ sent out with the tender document is expunged and replaced with appendix BOQ
2	Extension of tender for another seven days to enable bidder prepare a competitive document	Bidders are hereby advised that the New tender closing/opening dates as indicated below
3	Request to participate in mandatory site visit on any date	Bidders are hereby advised the final site visit is scheduled on 13 th February 2024 at Eldoret International Airport from 10.00 am
4	Inclusion of decommission of the and removal of existing generator sets in the bill of quantities	Bidders are advised to use the attached Bill of quantities
5	Provision for the tender eRfx number in order to identify the same in procurement portal and create a response	The tender has been posted on our portal
6	Mandatory Evaluation Item no. 18. Submission of valid NCA Registration certificate and a valid practicing licenses that fall within categories NCA 3 – electrical services installations Clarification The specifications of the tender can be met by NCA 3 and above.	Bidders are hereby advise that Categories NCA1 to NCA 3 will be acceptable

7	Request to quote in foreign currency due to unpredictability of the dollar	Bidders are hereby advised to use USD or a currency that is convertible to KES using the CBK rates as at the tender closing/opening date
8	As per the technical specifications, the generator model required as per KAA's requirement below is Enclosed. The existing generator sets at site are open sets and from the site visit it was noted that the 500kva enclosed unit cannot fit in the current generator room which was noted by the engineer at site. Please kindly clarify if we still quote as per the below table or we offer open sets which will have minimal or no structural changes to the facility. The generator room can then be sound attenuated to mitigate sound levels. From the generator house design, the beam is too low and the generator doors are small making sound attenuated generators unable to be moved inside the room.	Due to the structural feature of the generator house Quote for Open Bidders are advised to use the attached technical Compliance table.
9	As per the visit, it was agreed that the procuring entity will share the Single line diagram on what they intend to achieve with the two generator sets, Synchronisation was not an option as per the discussions at site. We request the client to share the SLD for the intended wiring to achieve redundancy as it was discussed, Are you looking at a scheduler panel between the generator sets or each generator set is to have changeover with the mains. Share SLD to enable us understand how the said redundancy is to be achieved.	Find attached appendix
10	Under Technical Compliance Table the KAA Requirements for Item Nos g, j, k,m and n are absolute figures which may lead to a specific brand hence a proposal of equal or greater than suggested by the Bidders.	Bidders are advised to use the attached Technical Compliance Table
11	In the BOQ the Decommissioning of existing Gen sets has not been Provided for?	Bidders are advised to use the attached Bill of quantities
12	Item No.5 talks about Prime Output of 455kVA / 364kW, however on the BOQ item No 2.01 talks about a prime rated of 500 KVA 3-phase, 415V, 50Hz?	Bidders are advised to use the attached Bill of quantities and Technical Compliance table
13	Under Technical Compliance Table the KAA Requirements for Item Nos g, j, k,m and n are absolute figures which may lead to a specific brand hence a proposal of equal or greater than suggested by the Bidders.	Bidders are advised to use the attached Technical Compliance Table

14	There is No guidance on Control Logics for interface between Gen sets and Mains power.	Each generator will run independently no synchronization is required at this stage. Automatic transfer switch is required integrated with a scheduler Panel. The scheduler should be able to monitor KPLC power supply, in the event both KPLC supply lines are lost it starts one generator, if the started generator fails the second generator is started. Concurrently it should be able to start the generators alternative.
	Page 119 Section 2.39. Technical Compliance Table, item No 5, Prime Output 455kVA/ 364kW contradicts with the information provided on the BOQ, BILL NO.2: SCHEDULE I; GENERATOR SET item no 2.01 which requires the prime output of the generator to be 500kVA	Bidders are advised to use the attached Technical Compliance Table. Required prime output for both Generator Set is 500KVA
15	Page 119 section 2.39. Technical Compliance Table Item No 8e Synchronized upgrade options available contradicts with the information provided on page 120 item No 9h Auto start control system with electronic digital control module DSE7320 – Kindly note that this controller does support synch options	Bidder to provide both: 1) Synchronized upgrade options should be available on the Generator Set, 2) The Auto start control system with electronic digital control module DSE7320

The closing/opening is hereby extended to **22nd February, 2024** from **15th February, 2024 at 11.00 a.m.**

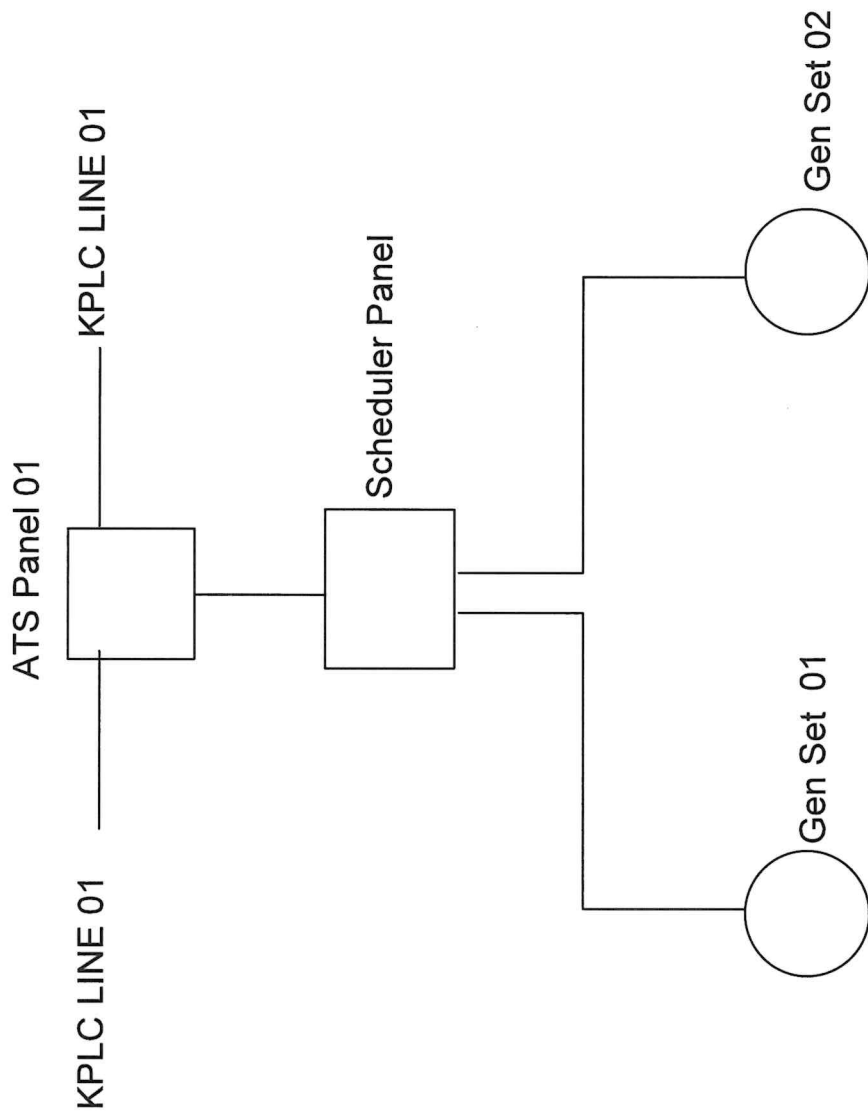
Kindly ensure your tender is valid for a period of **126 days** and your tender security is valid for a period of **156 days** from the NEW closing/opening date of **22nd February, 2024 at 11.00. a. m.**

This addendum forms part of the bidding document and is binding on all bidders. All other conditions remain the same.



Vincent Korir
GM (PROCUREMENT AND LOGISTICS)
For: MANAGING DIRECTOR/CEO

SINGLE LINE DIAGRAM FOR LOGIC CONTROLS



TENDER NO KAA/OT/HQ/0153/2023-2024 FOR SUPPLY, DELIVERY, INSTALLATION, TESTING AND COMMISSIONING OF ECO-FRIENDLY DIESEL GENERATORS AT ELDORET INTERNATIONAL AIRPORT

Bill of quantities

	TITLE: PROPOSED GENERATOR WORKS AT ELDORET INTERNATIONAL AIRPORT				
	BILL No.1: PRELIMINARIES & GENERAL CONDITIONS				
ITEM No.	DESCRIPTION	UNIT	QTY	RATE (KES)	AMOUNT (KES)
	PRELIMINARIES & GENERAL CONDITIONS				
	=====				
1	EMPLOYER				
	The Employer is the Kenya Airports Authority. The terms "Employer" and "KAA" wherever used in any contract Document shall be synonymous				
2	DEFINITION OF TERMS				
A	'Approved' shall mean approved by the Project Manager at his absolute discretion				
B	'Directed' shall mean directed by the Project Manager at his absolute discretion				
C	'Selected' shall mean directed by the Project Manager at his absolute discretion				
D	'B.S.' - shall mean the current British Standard Specification published by the British Standards Institution, 2 Park Street, London, W1A 2BS, England				
E	'K.S.' - shall mean the current Kenya Standard Specification published by the Kenya Bureau of Standards Institution.				
F	CM - shall mean cubic metre SM - shall mean square metre LM - shall mean linear metre MM - shall mean millimeter KG - shall mean Kilogramme NO - shall mean Number				
G	Ditto - shall mean the whole of the preceding description except as qualifies in the description in which it occurs Where it occurs in descriptions of succeeding items it shall mean the same as in the first descriptions of the series in which it occurs except as qualified in the description concerned.				
H	KES - shall mean Kenya Shillings				
I	'As described' shall mean as described in the 'Descriptions of Materials and Workmanship' contained in the Appendices to these Bills of Quantities and technical specifications				
3	GROUPED SIZES				
	Girths, depths, or sizes grouped together in the Bills of Quantities item descriptions by means of hyphenated upper and lower limits shall be interpreted as 'exceeding' the lower limit and 'not exceeding' the upper limit.				
4	DESCRIPTION OF SITE				
	The site of the proposed works is within KAA's Eldoret International Airport- Uasin Gishu COUNTY. The Contractor is recommended to visit the site and will be deemed to have satisfied himself with regard to the conditions of the site.				
5	DESCRIPTION OF THE WORKS				
	The works in this contract comprise :-				
	1) Supply and Install, Test and Commission of Generators				

TITLE: PROPOSED GENERATOR WORKS AT ELDORET INTERNATIONAL AIRPORT					
BILL No.1: PRELIMINARIES & GENERAL CONDITIONS					
ITEM No.	DESCRIPTION	UNIT	QTY	RATE (KES)	AMOUNT (KES)
	PRELIMINARIES & GENERAL CONDITIONS				
	li) Supply and Install Cables & Cable Works				
	lii) Supply And Install of The Electrical Power Boards				
	lv) Associated Mechanical Works				
	V) Associated Building Works				
6	<u>AREA TO BE OCCUPIED BY CONTRACTOR</u>				
	The area of the site which may be occupied by the Contractor for use as storage or for the erection of workshops etc. shall be defined on the site by the Project Manager and the Contractor must confine his activities to the areas so marked and must ensure that his own and his sub-contractors workmen do not trespass on the adjoining property or cause inconvenience to its occupiers.				
7	<u>SITE VISIT & EXAMINATION OF DRAWINGS</u>				
	The Contractor is recommended to examine the original drawings and to satisfy himself regarding their details and regarding the extent and the nature of the works and the method of construction involved, and visit the site to familiarize himself with all local conditions before tendering. He shall be deemed to have acquainted himself with the nature of the existing conditions or any other matter which may affect his tender. No claim arising from his failure to comply with this recommendation will be considered. Drawings may be seen by appointment at the office of the General Manager (P & ES), KAA, during normal working hours.	ITEM			
8	<u>VALUATION OF LUMP SUM COSTS.</u>				
	Lump sums entered in these Bills of Quantities against any item of Preliminaries and General Conditions will be included in appropriate valuations according to reasonable assessment of actual costs involved in the item. Any balance between this assessment and the actual sum entered in the Bills of Quantities will be included in subsequent valuations as monthly instalments over the balance of the Contract Period.	ITEM			
9	<u>PAYMENT FOR MATERIALS ON SITE</u>				
	All materials for incorporation in the works must be stored on or adjacent to the site before payment is effected, unless specifically exempted by the Project Manager. This is to include materials of the Contractor, Nominated Sub-Contractors, and Nominated Suppliers.	ITEM			
10	<u>CONTRACT AGREEMENT AND CONDITIONS</u>				
	The Instructions to Tenderers and Conditions of Contract shall be the 'Standard Tender Document for Procurement of SUPPLY AND INSTALLATION OF PLANT AND EQUIPMENT' EFFECTIVE 21st April, 2021, published by the Public Procurement Regulatory Authority (the Authority). For the purposes of this Contract the said Schedule of Conditions and any such note or amendments shall be read and construed together.	ITEM			
11	<u>TOOLS, PLANT, ETC.</u>				

TITLE: PROPOSED GENERATOR WORKS AT ELDORET INTERNATIONAL AIRPORT					
BILL No.1: PRELIMINARIES & GENERAL CONDITIONS					
ITEM No.	DESCRIPTION	UNIT	QTY	RATE (KES)	AMOUNT (KES)
	PRELIMINARIES & GENERAL CONDITIONS				
	The Contractor shall allow for providing all ladders, tools, plant and transport required for the works, except in so far as may be specifically stated otherwise herein.	ITEM			
12	<u>SAFETY, HEALTH AND WELFARE OF WORKPEOPLE</u>				
	The Contractor shall allow for providing for the safety, health and welfare of workpeople and for complying with any relevant Ordinances, Regulations or Union Agreement.	ITEM			
13	<u>NATIONAL INSURANCE AND PENSIONS</u>				
	The Contractor shall allow for making any National Hospital Insurance and National Social Security Fund payments due in respect of workpeople.	ITEM			
14	<u>HOLIDAYS AND TRANSPORT FOR WORKPEOPLE</u>				
	The Contractor shall allow for providing holidays and transport for workpeople and for complying with any relevant Ordinances, Regulations or Union Agreement.	ITEM			
15	<u>TRAINING LEVY</u>				
	The Contractor's attention is drawn to Legal Notice No. 237 of October, 1971, which requires payment by the Contractor of a Training Levy on all contracts of more than Shs.50,000/ in value and his tender must include for all costs arising or resulting therefrom. Proof of payment of this Training Levy will be required.	ITEM			
16	<u>PROJECT VEHICLE</u>				
	Provide for hiring a vehicle with a driver for exclusive use by the project team: 4WD Double Cabin Pick-Up, Minimum Engine Capacity: 2400cc Petrol/Diesel with mileage Less than 8,000km. This will also include maintenance and fuelling. For entire contract duration period. (The vehicle reverts back to the contractor at the end of contract period)	MONTHLY			
17	<u>PROTECTION OF WORKS AND PERSONS</u>				

TITLE: PROPOSED GENERATOR WORKS AT ELDORET INTERNATIONAL AIRPORT					
BILL No.1: PRELIMINARIES & GENERAL CONDITIONS					
ITEM No.	DESCRIPTION	UNIT	QTY	RATE (KES)	AMOUNT (KES)
	PRELIMINARIES & GENERAL CONDITIONS				
	The Contractor shall allow for the protection of his own and his Sub Contractor's work liable to damage, including provision of temporary roofs, gutters, drains, etc., if necessary and shall case up, cover, or in other suitable ways protect all finished work liable to injury, to the satisfaction of the Project Manag, and shall at all times keep all paths and roads affected by the works in a safe and clear state, and shall use proper precautions to ensure the safety of all wheeled traffic and pedestrians. The Contractor shall allow for providing all watching, lighting, barriers, covering open trenches and protection of the works, including Sub Contract works, as may be necessary for the safety of the works and for the protection of the public and his own and Sub Contractors' employees. In the event of any damage or loss occurring to the works, or to materials or to any sewers, gullies, drains, paths, or other works on the site in temporary possession of the Contractor for the purpose of this Contract, either from the weather, want of proper protection, defects, theft, insufficiency of the works, or any other cause whatsoever during the progress of the works, or for any accident or damage to property or persons by reason of the said works, the Contractor alone shall be responsible and shall without extra charge, make good all damage and pay all costs incurred.	ITEM			
18	STANDARDS LEVY AND STANDARDS ACTS				
	The Contractor's attention is drawn to legal notice No. 267 of 1990 which requires payment by Contractors of an annual Standards Levy and his tender must include for all costs arising or resulting therefrom.	ITEM			
19	NATIONAL CONSTRUCTION AUTHORITY LEVY				
	The Contractor shall allow 0.5% of the Cost of construction as a levy payable to the National Construction Authority in accordance with Section 31 of National Construction Act No. 41 of 2011. Note that this must be paid before Commencement of the Works	ITEM			
20	POLICE REGULATIONS				
	The Contractor shall allow for complying with any relevant police regulations.	ITEM			
21	PROCEDURE AND TIME FOR COMPLETION				
	The Contractor shall proceed with the works in such manner and such order as the Project Manager may direct.	ITEM			
22	PROGRAMME AND PROGRESS				
	The Contractor shall furnish to the Project Manager, within 7days, for approval and display in the site offices, a program and progress chart devised in such a way that the lined program is shown and progress can be marked up as the work proceeds. The Contractor shall keep this chart up to date at all times.	ITEM			
23	WORKING HOURS				

TITLE: PROPOSED GENERATOR WORKS AT ELDORET INTERNATIONAL AIRPORT					
BILL No. I: PRELIMINARIES & GENERAL CONDITIONS					
ITEM No.	DESCRIPTION	UNIT	QTY	RATE (KES)	AMOUNT (KES)
	PRELIMINARIES & GENERAL CONDITIONS				
	Generally there will be no restrictions on working hours. In the interest of the usage of the new property the employer may require that overtime be worked so as to complete the works as quickly as possible. The Contractor must allow for all costs in complying with the Project Managers instructions of working outside normal hours. No claims for extras in connection with this compliance will be entertained.	ITEM			
24	<u>DAYWORKS</u>				
	The Project Manager, if in his opinion it is necessary or desirable, order in writing that any additional or substituted work shall be executed on a Daywork basis. The Contractor shall then be paid for such work in accordance with Daywork rates and percentage additions as inserted hereafter in these Bills of Quantities. The Contractor shall furnish to the Project Manager all receipts or vouchers as may be necessary to prove the amounts paid and before ordering materials shall submit to the Project Manager quotations for the same for his approval. In respect of all work executed on a Daywork basis the Contractor shall, during the continuance of such work, deliver each day to the Project Manager a list in duplicate of the names, occupation and time of all workmen employed on such work and a statement also in duplicate showing the description and quantity of all materials and plant used thereon or therefore (other than plant which is included in the percentage addition on net amount of wages). One copy of each list and statement will, if correct or when agreed, be signed by the Project Manager and returned to the Contractor. At the end of each month the Contractor shall deliver to the Project Manager a priced statement of the labour, material and plant (except as aforesaid) used and the Contractor shall not be entitled to any Payment unless such lists and statements have been fully and punctually rendered. Provided always that, if the Project Manager shall consider that for any reason the sending of such list or statement by the Contractor is impracticable, he shall nevertheless be entitled to authorise payment for such work either as Daywork (on being satisfied as to the time employed and plant and materials used on such work) or at such value thereof as he shall consider fair and reasonable accordance with the foregoing provision was authorise payment for such work either as Daywork (on being satisfied as to the time employed and plant and materials used on such work) or at such value thereof as he shall consider fair and reasonable.	ITEM			
25	<u>WATER FOR THE WORKS</u>				

TITLE: PROPOSED GENERATOR WORKS AT ELDORET INTERNATIONAL AIRPORT					
BILL No.I: PRELIMINARIES & GENERAL CONDITIONS					
ITEM No.	DESCRIPTION	UNIT	QTY	RATE (KES)	AMOUNT (KES)
	PRELIMINARIES & GENERAL CONDITIONS				
	The Contractor shall allow for providing all temporary water supplies required for the works, including Sub Contract works, together with all necessary storage tanks, meters and distribution systems for the same and must allow for bearing all expenses incurred and paying for all water consumed without charge to any Sub Contractor. Expenses in connection with Nominated Sub Contractors should be allowed for in the attendance items under the relevant P.C. Sums. Existing water supplies may be utilized by agreement with the Employer who however gives no undertaking as to the sufficiency or suitability of existing supplies.	ITEM			
26	<u>LIGHTING AND POWER FOR THE WORKS</u>				
	The Contractor shall allow for providing all temporary lighting and power supplies required for the works, including Sub Contract works, together with all necessary meters and distribution systems for the same and must allow for bearing all expenses incurred and paying for all current consumed without charge to any Sub Contractor. Expenses in connection with Nominated Sub Contractors should be allowed for in the attendance items under the relevant P.C. Sums. Existing mains power supplies may be utilized by agreement with the Employer who however gives no undertaking as to the sufficiency or suitability of existing supplies.	ITEM			
27	<u>SIGNPOST</u>				
	The Contractor shall erect and maintain a signpost describing the nature of the project, names of the consultants, names of the contractor and his sub-contractors and any other details as specified by the Project Manager for the entire duration of the project	ITEM			
28	<u>SITE OFFICES</u>				

TITLE: PROPOSED GENERATOR WORKS AT ELDORET INTERNATIONAL AIRPORT					
BILL No. I: PRELIMINARIES & GENERAL CONDITIONS					
ITEM No.	DESCRIPTION	UNIT	QTY	RATE (KES)	AMOUNT (KES)
	PRELIMINARIES & GENERAL CONDITIONS				
	The Contractor must allow for erecting and maintaining on the site in such positions as may be directed, adequate site offices for the use of his own site staff and removing the same at completion and making good all surfaces disturbed. The site office shall have sufficient furniture to permit the Project Manager to hold site meetings in it. The site office shall conform to requirements set out in the drawings provided and shall be approved by the Project Manager. The Contractor shall also allow for providing, erecting and maintaining where directed a lock up hut containing a pedestal type water closet and wash basin for the sole use of the Project Manager and other consultants, including making temporary connections to drains and water supplies and paying all charges for connections, conservancy and water consumed. The Contractor shall also allow for providing the services of a sweeper, for keeping both office and closet in a clean and sanitary condition from the commencement to completion of the works; and for dismantling at completion and making good all disturbed surfaces. The office and closet shall be completed before the Contractor will be permitted to commence the works. The contractor to provided 3No. office laptops, 2no. IPad, 3No. mobile phones , 1No. A3 colour printer for project office use as per Project Engineer's Specification and Approval	ITEM			
29	<u>SHEDS FOR STORAGE OF MATERIALS</u>				
	The Contractor shall provide, erect and maintain on the site, in such positions as may be directed, ample temporary watertight, lock up sheds for the proper storage and protection of cement and other materials liable to damage and shall remove same at completion and make good all surfaces disturbed. He shall also provide space for storage accommodation which Sub Contractors may wish to erect for themselves.	ITEM			
30	<u>SPACE FOR STORAGE SHEDS AND SITE OFFICES</u>				
	The site is developed, so space for site offices and storage accommodation, as described above, will be extremely limited. The Contractor shall allow for all necessary temporary erection, dismantling and re-erection of site offices and storage sheds made necessary by the restricted nature of the site.	ITEM			
31	<u>SANITATION OF THE WORKS</u>				
	The Contractor shall allow for providing the necessary latrines for the labour employed on the works, including labour employed by Sub Contractors, to the satisfaction of the Health and Medical Authorities and for maintaining the same in a thoroughly clean and sanitary condition and paying all conservancy fees. The Contractor shall allow for removing the said latrines and leaving the ground clean and free from pollution upon completion to the satisfaction of the Health and Medical Authorities.				
32	<u>NO WORKMEN TO BE HOUSED ON SITE</u>				

TITLE: PROPOSED GENERATOR WORKS AT ELDORET INTERNATIONAL AIRPORT					
BILL No.1: PRELIMINARIES & GENERAL CONDITIONS					
ITEM No.	DESCRIPTION	UNIT	QTY	RATE (KES)	AMOUNT (KES)
	PRELIMINARIES & GENERAL CONDITIONS				
	No labour with the exception of a watchman may be housed on the site. The cost of transporting labour to and from the site or elsewhere will be deemed to be included in the tender.				
33	HOARDING				
	The Contractor shall allow for providing and clearing away on completion such hoarding, fencing, gates etc. as may be required for the security of the site, and as instructed by the Project Manager to prevent access to the site by the public. The exact location and type of these items are to be agreed with the Project Manager and negotiated with the local Authority by the Contractor who will also be responsible for paying any fees or taxes to the Local Authority in respect of the hoarding, fencing or gates and providing any drawings necessary for approval. The Contractor shall allow for thoroughly maintaining the hoarding and gates throughout the Contract and clearing away and making good disturbed ground on completion. All materials arising will remain the property of the Contractor and he should allow credit against this accordingly.	ITEM			
34	TRADE NAMES				
	Where trade names or manufacturers' catalogue numbers are mentioned in these Bills of Quantities, the reference is intended as a guide to the type of article or quality of materials required. The Contractor may use any article or material equal in type or quality to those herein described subject to the prior approval of the Project Manager and at his absolute discretion. The onus of proof as to equivalent quality will rest with the Contractor, whose tender will be deemed to include for the makes described herein.				
35	REMOVAL OF PLANT, RUBBISH ETC				
A	The Contractor must allow for removing and clearing away all plant, rubbish and unused materials, and leaving the whole of the site of the works in a clean and tidy state at completion to the satisfaction of the Project Manager. He must also allow for removing all rubbish and dirt from the site as it accumulates during the performance of the Contract.				
36	DEDUCTION FROM MONEY DUE TO THE CONTRACTOR				
	The Project Manager shall be entitled to deduct any monies which the Contractor shall be liable to pay under the Contract to the Employer from any sum which may become payable to the Contractor hereunder and the Project Manager in issuing his Certificates as provided of the Schedule of Conditions shall have regard to any sum so chargeable to the Contractor. Provided always that this provision shall not affect any other remedy by action at law or otherwise to which the Employer may be entitled for the recovery of such monies.				
37	WORKS TO BE DELIVERED UP CLEAN	ITEM			

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BILL No.1: PRELIMINARIES & GENERAL CONDITIONS					
ITEM No.	DESCRIPTION	UNIT	QTY	RATE (KES)	AMOUNT (KES)
	PRELIMINARIES & GENERAL CONDITIONS				
	On completion of the Contract, the site and the works shall be cleared of all plant, scaffolding, rubbish and unused materials and shall be delivered up clean and in perfect condition in every respect to the satisfaction of the Project Manager. Particular attention is to be paid to leaving all windows and floors clean and removing all paint and cement stains.				
38	<u>APPROVAL OF PROJECT MANAGER FOR EMPLOYMENT OF SUB CONTRACTORS</u>				
	The Contractor will be required to obtain the approval of the Project Manager in writing before Employing any of his own Sub Contractors for any portion of the work.				
39	<u>DISPOSAL OF WATER</u>				
	Allow for keeping the excavations and works free from all water, including spring and running water, by pumping or other means as required.				
40	<u>SECURITIES</u>				
	Allow for the provision of Securities				
41	<u>INSURANCE</u>				
A	Allow for the provision of Insurance for the works, plant and material				
B	Ditto for Equipment Ditto for other property				
C	Ditto but against accidents or personal injury or death to workmen and third party	ITEM			
42	<u>OPERATION EXPENSES</u>				
A	Allow a provisional sum of Three Hundred Thousand Shillings (Kshs.300,000) for miscellaneous expenses comprising stationery, office consumables including photograph processing and other charges where ere directed by the Project Manager.	ITEM			
B	Allow for Contractor's Profit Allow for Contractor's Overheads	% SUM			
43	<u>SAMPLES</u>				
	Note: - The Contractor shall allow for furnishing at his own cost any samples of materials or workmanship that may be called for by the Project Manager for his/her approval and any further samples in the case of rejection until such samples are approved by the project Manager and the project manager may reject any materials or workmanship not in his opinion in accordance with the approved samples. The project manager shall make such tests of the samples or any materials as s/he may at her/his discretion deem desirable, but such tests shall be made at the expense of the Employer and not of the Contractor, unless the result causes the project manager to reject any samples or materials as not being in his opinion in accordance with the specified requirements, in which case the Contractor shall pay for such tests and the cost thereof shall be recovered from the Contractor by the project manager by deduction from the Contract Sum.				

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BILL No.1: PRELIMINARIES & GENERAL CONDITIONS					
ITEM No.	DESCRIPTION	UNIT	QTY	RATE (KES)	AMOUNT (KES)
	PRELIMINARIES & GENERAL CONDITIONS				
44	<u>NECESSARY TESTS</u>				
A	Allow for factory acceptance tests for major equipment at manufacturer's premises	ITEM			
B	Allow for executing various tests during commissioning and installation stages as per required specifications and engineer's request	ITEM			
C	The Contractor shall allow for all other testing of materials, apart from the above, required by the Appendices of the Bills of Quantities and he shall be responsible for all expenses incurred in completing such tests including costs of materials and labour, equipment, transport and charges of testing authority, etc.	ITEM			
45	<u>SITE PHOTOGRAPHS</u>				
	The Contractor shall take and hand over to the project manager at approved intervals site progress photographs in a format to be directed by the project manager .	ITEM			
46	<u>HOISTING</u>				
	The Contractor shall allow for all costs related to hoisting his and his Sub Contractor's materials for fixing at any level within the limits shown on the drawings or included in the general description of the works.	ITEM			
47	<u>SCAFFOLDING</u>				
	The Contractor shall allow for providing, erecting and dismantling all general scaffolding required for the works. The Contractor must allow here or in his rates for providing all special scaffolding required by his Sub Contractors, other than Nominated Sub Contractors carrying out works for which P.C. Sums are included in these Bills. Where the Contractor is required to provide special scaffolding for these latter Sub Contractors, an item is included for pricing under the relevant P.C. Sum.	ITEM			
48	<u>CROSSINGS AND TEMPORARY ROADS</u>				
	The Contractor must allow for providing, forming and maintaining necessary crossings on to the site and temporary roads as may be required by the project manager and removing same at completion and making good damaged or disturbed surfaces as directed by and to the approval of the project manager.	ITEM			
49	<u>WORK TO BE OPENED UP AT THE REQUEST OF THE ENGINEER</u>				

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	BILL No.1: PRELIMINARIES & GENERAL CONDITIONS				
ITEM No.	DESCRIPTION	UNIT	QTY	RATE (KES)	AMOUNT (KES)
	PRELIMINARIES & GENERAL CONDITIONS				
	The Contractor shall, at the request of the project manager within such time as the project manager shall name, open for inspection any work covered up, and, should the Contractor refuse or neglect to comply with such request, the project manager may employ workmen other than those employed by the Contractor to open up the same. If the said work has been covered up in contravention of the project manager's instructions, or if, on being opened up, it be found not in accordance with the drawings or Bills of Quantities or the instructions of the project manager, the expenses of opening and covering it up again whether done by the Contractor or by the project manager, shall be borne by and be recoverable from the Contractor or may be deducted from any monies due to the Contractor. If the work has not been covered up in contravention of such instructions and be found in accordance with the said drawings and Bills of Quantities, then the expenses aforesaid shall be borne by the Employer, and be added to the Contract Sum; provided always that, in the case of foundations or of any other urgent work so opened up and requiring immediate attention, the project manager shall, within a reasonable time after the work has been opened, make or cause to be made the inspection thereof, and at the expiration of such time, if such inspection shall not have been made the Contractor may cover up the same and shall not be required to open it up again for inspection except at the expense of the Employer.	ITEM			
50	<u>PROVISION OF TEMPORARY POWER BACK UP</u>				
	The Contractor shall allow for providing of temporary power back-up at the Airport during the works. at no point should the airport be left without back-up supply, The Contractor must allow here or in his rates for providing of 500KVA temporary generator set in connected to the main power board together with cables. this return to contractor after commissioning of the new set.	ITEM			
51	<u>DECOMMISSIONING AND STORAGE OF EXISTING GENERATORS</u>				
	The Contractor shall allow for decommission of 3no. generator sets and provision of 40FT containerised storage facility complete with locks, making good of the existing generator room i.e. painting and change of ventilation filter, repair of doors lock or any other item that might be damaged in the process of removal of the generators sets .	ITEM			
	TOTAL CARRIED FORWARD TO BILL COLLECTION SHEET				

	BILL NO.2: SCHEDULE I; GENERATOR SET				
ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT

				(KES)	(KES)
2.01	Supply, deliver to site, install, test and commission a prime rated 500 KVA 3-phase, 415V, 50Hz diesel generating set with a continuous power factor of 0.8 lagging and as fully described in the particular specifications. The generator set is to be with an integral base / belly. Daily service fuel tank with an operational running capacity of 8 hours.	No.	2		
2.02	Supply, deliver to site and install a steel exhaust pipe of not less than 14 SWG and of adequate diameter-(equivalent to generator exhaust dimensions) running from the generating set to the outside of the generator house	M	12		
2.03	Connect the exhaust pipe above in item 2.02 using steel pipes of adequate diameter, and flexible piping off engine exhaust manifold complete with heavy duty silencer	Item	2		
2.04	Complete earthing of generating set to electrical Engineer's approval	Item	2		
	SUB- TOTAL C/F TO PRICE SUMMARY PAGE				

BILL NO.2: SCHEDULE 2- AMF CONTROL PANEL					
ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
				(KES)	(KES)
	Supply, deliver to site, install, test and commission the following:				
3.01	An electrical control panel complete with suitable rated incoming MCCBs and contactors for automatic change over operation and complete with all other control accessories as fully described in clauses of the particular specifications	No	1		
3.02	Suitable rated manual by-pass switch with clearly labelled NORMAL-OFF- BYPASS positions, and shall such be wired that when the switch is on either OFF or BYPASS position, the generator shall receive no signal to start.	No.	1		
3.03	240V AC 24V /12V DC mains power supply trickle battery charger as specified in clause 9.6 of specifications. The trickle charger shall charge the battery when the set is on IDLE mode, otherwise when the set is RUNNING, the battery shall be charged by the generator charger.	No.	1		
3.04	12/24 volts battery as specified in clause 2.21 of the particular specifications	No.	1		
3.05	Allow for Inter-wiring the control panel with the Main L.V board	Item	1		
3.06	Complete earthing of panel to electrical engineer's approval	Item	1		
	SUB-TOTAL C/F TO PRICE SUMMARY PAGE				

BILL NO.2 SCHEDULE3-RECOMMENDED SPARE PARTS AND LUBRICATORS

				RATE	AMOUNT
ITEM	DESCRIPTION	UNIT	QTY	(KES)	(KES)

	For the supply to the site of the following spare parts and lubricators:				
4.01	Oil Filters	No.	4		
4.02	Air Filters	No.	4		
4.03	Fuel filters to suit the set	No.	4		
4.04	Set of Fan belts to suit the set	No.	1		
4.05	10 litres container of sump oil of grade *	No.	1		
4.06	2 kilogram grease in a tin of grade*	No.	1		
4.07	10 litre plastic container of distilled water	No.	1		
4.08	20 litre of engine oil in a tin of grade*	No.	1		
4.09	Any other spare parts recommended by Tenderer	No.	1		
	SUB-TOTAL CIF TO PRICE SUMMARY PAGE				
	* The tenderer to fill in the Grade quality to be supplied				

BILL NO.2 SCHEDULE 4 -TOOLS TO BE SUPPLIED WITH THE SET					
ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
				(KES)	(KES)
	For the supply to site of the following tools:				
4.01	Mechanical Metal tool box with lock and two keys		1		
4.02	Electrical Metal tool box with lock and two keys		1		
4.03	Set of 8 No. Chrome vanadium ring spanners in sizes to suit the set		1		
4.04	Set of 3 screwdrivers, 75mm, 200mm and 300mm plus one 200mm Philips type		1		
4.05	- ditto -but open ended spanners		1		
4.06	Set of feeler gauges		1		
4.07	Grease gun to suit greasing points		1		
4.08	Oil can, trigger type		1		
4.09	Any other special tools which the tenderer recommends should be purchased as optional:*				
	SUB-TOTAL CIF TO PRICE SUMMARY PAGE				

BILL NO.2 SCHEDULE 5 - AUXILIARY FUEL TANK, GASES HOOD					
ITEM	DESCRIPTION	UNIT	QTY	RATE (KES)	AMOUNT (KES)
5.01	Supply, deliver to site and install, to the approval of the project manager, and connect to the daily service base / belly fuel tank, an auxiliary fuel tank with level indicator and with an operational running capacity of 72 hours. The tank is to be complete with stand and all interconnecting G.I pipe work.	No	1		
5.02	Supply and deliver 3000 litres of automotive diesel fuel for the base tank and auxiliary tanks.	Item	1		
5.03	Fabricate a hot gases extractor hood size 1000x1000mm and exhaust duct size 200x150 x2000mm long made from gauge 16 steel sheets complete with painting and connecting to the exhaust gas system of the generator including all other necessary accessories.	Item	1		
	Armoured cables complete with glands and HVG PVC sleeves with concrete surround:				
	(a) 240mm sq. 7No.1 core PVC/SWA/PVC copper cable from the main switchboard to the Generator AMF	M	100		
	(b) 2.5mm ² , 4 core, PVC/SWA/PVC copper sensor cable	M	100		
5.04	Cable laying, and Hatari tiling for item 5.03 above where applicable	Item	1		
	SUB-TOTAL C / F TO PRICE SUMMARY PAGE				

PRICE SUMMARY PAGE		
Item	Description	Amount (KES)
1	Sub-Total for Bill No.1 - Contract preliminaries BIF from page...55...	
2	Sub- Total for Bill No.2: Schedule 1 - Generator Set BIF from page ...56.....	
3	Sub-Total for Bill No.2: Schedule 2 - AMF Panel from page.....56.....	
4	Sub-Total for Bill No.2: Schedule 3 - Recommended Spare Parts Lubricators BIF from page56.....	
5	Sub-Total for Bill No.2: Schedule 4 - Tools to be Supplied with the Set B/F from page57.....	
6	Sub-Total for Bill No.2: Schedule 5 - Auxiliary Fuel Tank and hot gases exhaust hood from page57.....	
7	Allow a 10% contingency.	
	SUBTOTAL	
	Allow 16% VAT for the vatable components	
	TOTAL CARRIED TO FORM OF TENDER	

Amount in words (Kenya shillings)

.....

Name and address of bidder

.....
 ...

Date..... Signature

2. Technical Compliance Table

	Description	KAA's Requirements	Bidder's Offer
1	Model Set	Open	
2	Frequency	50Hz	
3	Phases	3	
4	Power Factor	0.8	
5	Prime Output	500kVA / 400kW	
6	Ratings		
a	• Prime output:	This rating is applicable for supplying continuous electrical power at variable load. There is no limitation to the annual hours of operation and this model can supply 10% overload power for 1 hour in 12 hours.	
b	• Standard reference conditions:	25°C, 100m A.S.L., 30% relative humidity	
7	Design features	• High quality assembly, providing stiffness and low vibration	
a		• Power coated steel. Corrosion and scratch resistant. Treated with anti-corrosion paint	
b		• Compact and long service life	
c		• Wiring and connectors with double protection.	
d		All moving parts protected with guards	
e		Synchronized upgrade options available	
f		• Protection guards in radiator and high voltage parts.	
g		Full 12 month Power warranty	
h		Battery charger and block heater options	
i		BMS output signaling included	
j		Governor type: electronic / mechanical	
8	Configuration		
a		• 4-Stroke water-cooled diesel engine.	
b		• Industrial silencer.	
c		• Coolant recovery tank	
d		• Single bearing, 4 pole brushless alternator.	
e		• Anti vibration mountings	

2. Technical Compliance Table

	Description	KAA's Requirements	Bidder's Offer
f		• Integral fuel tank with fully bunded base protection.	
g		• Fuel level sensor and gauge	
h		• Auto start control system with electronic digital control module DSE7320	
i		• Output circuit breaker.(ABB/ Schneider)	
j		• Emergency stop button	
k		• High engine temperature and low oil pressure shutdown system.	
l		12V/24V starter battery with leads and isolator switch	
9	Engine		
a	Engine brand	Perkins or equivalent	
b	Engine model	to specify	
c	Engine speed	1500 RPM	
d	Number of cylinders	4	
e	Aspiration	Turbo & inter cooler	
f	Combustion system	Direct injection	
g	Displacement	>=15.2 Litres	
h	Governor type	Electronic	
i	Cooling system	Water Cooled	
j	Total coolant capacity	>=58 Litres	
k	Total lube oil capacity	>=62Litres	
l	Cooling air flow	>=722 m³/min	
m	Exhaust gas flow	>=81 m³/min	
10	Alternator		
a	Alternator brand	Leroy Somer or equivalent	
b	Excitation	AVR brushless	
c	Insulation class	H	
d	Drip proof protection	IP23	
e	Connection Type	STAR	
f	Number of wires	6	

2. Technical Compliance Table

	Description	KAA's Requirements	Bidder's Offer
g	AVR model	Brushless	
h	Voltage regulation	$\pm 1\%$	
i	Total Harmonic distortion	< 1.5% no load	
j	Telephone interference	TIF < 50%, THF < 2%	
II	Open Set		
a	L x W x H (mm)	< 1650x5500x2050	
b	Weight	< 4800 kg	
c	Fuel tank	> 970 Litres	
d	Noise@7M	< 70db	