

## GUARANTEE SPECIFICATIONS

### Part A: LV board requirements

S/N	ITEM	TECHNICAL REQUIREMENTS	MODEL/COUNTRY OF ORIGIN	BIDDERS COMPLIANCE
1.	Switchboard Panel	Free-standing purpose made front access Main LV Switchboard (Fully Type-Tested Assemblies – TTA), Form 2/3b (NAKURU), Form 3b (KISUMU) modular, metal clad, dustproof cubicle type suitable for floor mounting, IP 54, manufactured in 12 SWG galvanised mild steel sheet and finished in cream (or appropriate colour) powder coating as shown on the schematic. The Low Voltage Switchboard should consist of a PLC section, allowing for priority switching.		
2.	1000 A TPN ACB	Be adjustable with over current settings and having a short-circuit breaking capacity of 50KA at 415Vac, 50Hz, with shunt trip coil for fireman's switch. The MCCB to be adjustable in 600-1000A range, set at 1000A. The MCCBs to be motorized with both electrical and mechanical inter-lock with the Tie breaker/Coupler, with an automatic control system. Allow for manual override and remote monitored, Modbus TCP/IP, Ethernet enabled.		
3.	1000Amp MCCB	Of type 1000A with adjustable over current settings and having a short-circuit breaking capacity of 50KA at 415Vac, 50Hz. The MCCB to be adjustable in 600-1000A range, set at 600A. The MCCBs to be motorized.		
4.	Change Over	2No x 1000 A TPN ACB/MCCB main incomer (for the existing 630KVA transformer and genset 1000A with adjustable over current settings and having a short-circuit breaking capacity of 50KA at 415Vac, 50Hz, with shunt trip coil for fireman's switch. The ACB/MCCB to be adjustable in 600-1000A range, set at 1000A. The ACBs/MCCBs to be motorized with		

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		<p>both electrical and mechanical inter-lock with the Tie breaker/Coupler, with an automatic control system. Allow for manual override and remote monitored, Modbus TCP/IP, Ethernet enabled.</p> <p>Operational Condition</p> <ul style="list-style-type: none"> <li>• Be remote monitored.</li> <li>• Ethernet enabled</li> <li>• Genset run command</li> <li>• On load and off load test functions</li> <li>• Schedule starts</li> <li>• voltage and frequency thresholds</li> <li>• Load shedding</li> </ul> <p>Should have an inbuilt Power Quality Analyzer to detect</p> <ul style="list-style-type: none"> <li>• Frequency</li> <li>• Phase sequence</li> <li>• Power fluctuations</li> </ul>		
5.	Automatic Change-over Contactor Unit	<p><b>General</b></p> <p>The Contractor shall supply and install complete, an automatic changeover Contactor to operate in conjunction with the KPLC supply and the standby diesel plant. The automatic changeover Contactor shall be housed within a cubicle type L.V. switchboard.</p> <p><b>Contactor Unit</b></p> <p>The automatic changeover Contactor Unit shall consist of contactors feeding a common bus-bar system to which the loads are directly connected. One contactor shall control the normal mains supply and the other controls the standby diesel supply. Substantial mechanical and electrical interlocks shall be provided so that both supplies cannot be operated at the same time and shall be suitable for continuous rating and robust construction.</p>		

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S/N	ITEM	TECHNICAL REQUIREMENTS	MODEL/COUNTRY OF ORIGIN	BIDDERS COMPLIANCE
		<p><b>Manual Change-Over Switches</b></p> <p>Manual changeover switches shall be provided so that the supply can be maintained from source, normal or standby in the event of a Contactor failure. These shall be suitable for continuous rating and of robust construction. They shall be installed in a separate compartment in the L.V. Switchboard, or elsewhere to be agreed with the Engineer.</p> <p><b>Operation</b></p> <p>The Contractor shall ensure that in the event of a KPLC mains power supply failure, the automatic changeover contactor break the connections of the Mains Supply and make the connections to the standby diesel generator set supply. When the normal supply is restored the reverse action should take place. The standby generator also operates if there is loss of one or more phase on the incoming KPLC mains supply cable.</p> <p>The automatic changeover unit shall come into operation in the event of one or more of the following occurring: -</p> <ul style="list-style-type: none"> <li>• Loss of KPLC mains supply</li> <li>• Loss of one or more phases;</li> <li>• Under-voltage, within prescribed limits;</li> <li>• Over-voltage, within prescribed limits;</li> <li>• Any other additional feature offered by the specialist manufacturers.</li> </ul> <p>With the restoration of the KPLC mains supply to the normal voltage, frequency and regulation, the automatic changeover unit shall again, automatically connect the loads back onto the main supply. This taking place after a prescribed time to prevent the continual starting and stopping of the diesel generating plant, in the event of there being intermittent KPLC mains supply interruptions. Suitable timers shall be provided so that the change-back period can be adjusted and agreed with the Client. The protection relays and monitoring device shall be suitably mounted and located on the incoming supply with signal cables extended to the Diesel Generator Control Panel.</p>		

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		The Diesel Generator shall continue to run for a pre-determined period after the restoration of the mains supply, and then stop and revert automatically to a standby power unit ready to start-up in the event of future loss of KPLC main supply. Full operational details shall be agreed with the Engineer.		
6.	GENSET control module	Provide GENSET control module that will be compatible with the new changeover		
7.	415V three-phase surge diverter	Type 1+2, wired as shown, complete with enclosure with viewing window.		
8.	PFCU	<p>1No. x 150kVAR power factor correction capacitor bank with the following parameters</p> <p>1 x 50 KVAR's 415 V,50Hz, 3-Phase</p> <p>2 x 25 KVAR's 415 V,50Hz, 3-Phase</p> <p>2 x 20 KVAR's 415 V,50Hz, 3-Phase</p> <p>1 x 10 KVAR's 415 V,50Hz, 3-Phase</p> <p>6 x Special contactors for capacitor switching.</p> <p>6 x Fuse bases and fuses for each capacitor protection</p> <p>6 x Step indicator lamps</p> <p>1 x Control circuit protection fuse/fuse holder</p> <p>1 x 6-Step automatic control regulator for maintaining power factor at the set level and regulating the switching of capacitor steps</p> <p>1 x 1250/5A Current transformer (to be mounted after the mains incoming circuit breaker)</p> <p>The bank to be made from low-loss bio-degradable capacitive units, complete with earthed enclosure.</p>		

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S/N	ITEM	TECHNICAL REQUIREMENTS	MODEL/COUNTRY OF ORIGIN	BIDDERS COMPLIANCE
9.	CT three phase digital check meters	Digital multimeter of type PM820/METSEPM5320 with CTs and fuse protection capable of measuring voltage in the range 0 – 1000V, 3-phase, current in the range 0-2000A, 3-phase, and all power system parameters (KW, KVA, KWHr, KVAr, Frequency, P.F., harmonics and all the parameters).  The multimeter to have an accessible terminal for connecting an external printer, and should be complete with selector switches for viewing / displaying the various parameters.  Digital multimeter should be Ethernet enable, with Modbus TCP/IP port.		
10.	TPN Stabilizer bypass switchgear	Set of Stabilizer Bypass Switch comprising of the following: 1000A 4P non-withdrawable ACB/MCCB (to AVR stabilizer) 1000A 4P key interlocked non-withdrawable switch disconnect (from stabilizer and bypass)		
11.	Protection & Earthing requirement	All MCCBs should have adjustable over current settings, selectivity observed.  Comprehensive protective multiple earthing of the above board in 120mm long 12mm diameter pure electrolytic copper earth rod deep driven to permanent moisture level, copper clamp. 50mm <sup>2</sup> green earth lead complete with all accessories. (Note: Use parallel rods if effective earthing cannot be achieved with 1).		
12.	Other Works	Supply and install Evacuators fans/units 2 in the LV Switchroom, Units auto control with temperature sensors i.e. temp >30°C.  All cables to be secure on appropriate cable trays		

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S/N	ITEM	TECHNICAL REQUIREMENTS	MODEL/COUNTRY OF ORIGIN	BIDDERS COMPLIANCE
		<p>Label of rooms with KPLC logo's.</p> <p><b><u>EXISTING LV BOARD ROOM DIMENSIONS</u></b></p> <p><b>Kisumu LV room</b></p> <ul style="list-style-type: none"> <li>The dimensions of the existing LV board room is 5.75m by 4.4m</li> </ul> <p><b>Nakuru LV room</b></p> <ul style="list-style-type: none"> <li>The dimensions of the existing LV board room is 2.5m by 4.3m</li> </ul>		
13.	Riser boards	<p>Replacement of existing Distribution boards, Fuses and tidying the risers, Painting.</p> <p>Tracing of line and ensuring retouch of existing circuits.</p> <p>Making good all electrical wiring and electrical fittings, Labelling of all circuits and painting.</p>		
14.	Communication	<ul style="list-style-type: none"> <li>All ACBs/MCCBs for incomers and AVR's to be remotely monitored (using appropriate branch circuit monitor)</li> <li>When generator kicks in a SMS alert is sent</li> <li>Monitoring software to be supplied and configured by the contractor.</li> <li>KPLC to provide simcards.</li> </ul>		
15.	Layout drawings	<p>Bidders to provide proposed layout drawings</p> <p>Switchboard working drawings to be prepared with full site understanding as to how the existing cables will be terminated into the proposed positions of the various outgoing circuit breakers)</p>		
16.	Work schedule	<p>Bidders to provide work schedule detailing all activities.</p>		

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S/N	ITEM	TECHNICAL REQUIREMENTS	MODEL/COUNTRY OF ORIGIN	BIDDERS COMPLIANCE
17.	Testing and commissioning	Perform all the necessary testing and commissioning. All necessary integration tests performed and operational before handing over. All reports to be provided.		

**PART B: RISER BOARD REQUIREMENTS**

S/N	ITEM	TECHNICAL REQUIREMENTS	MODEL/COUNTRY OF ORIGIN	BIDDERS COMPLIANCE
1.	Riser/Sub Main Distribution boards	<p>The riser/sub main boards shall be connected to a supply voltage system of 415/240V, 3 phase, 4 wire and 50 Hz.</p> <ul style="list-style-type: none"> <li>Fully tested conditional short circuit rating of 25kA to BS EN 61439-3 (Submit test certificate)</li> <li>High performance MCB 10kA BS EN 60898 15kA BS EN 60947-2; 1, 2, 3 pole</li> <li>250A busbar rating</li> <li>Interlocked switch disconnection to BS EN 60947-3 ensuring unused outgoing ways are isolated</li> <li>Switching outgoing neutral on all boards using distributed neutral kit</li> <li>Terminal block for feeding up to 100A</li> <li>Incomer: MCCB, padlockable in the off position only</li> <li>Device accessories and auxiliaries: add-on earth leakage modules</li> <li>Knockouts for cable gland and conduit mixed to suit the installation needs without loss of space</li> </ul>		

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S/N	ITEM	TECHNICAL REQUIREMENTS	MODEL/COUNTRY OF ORIGIN	BIDDERS COMPLIANCE
		<ul style="list-style-type: none"> <li>• Removable insulated pan assembly</li> <li>• Fully shrouded neutral</li> <li>• Split neutral bars</li> <li>• Removable gland plates</li> <li>• IP 54</li> </ul>		
2.	Layout drawings	<p>Bidders to provide proposed layout drawings</p> <p>Sub main board working drawings to be prepared with full site understanding as to how the existing cables will be terminated into the proposed positions of the various outgoing circuit breakers</p>		
3.	Work schedule	Bidders to provide work schedule detailing all activities.		

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**PROPOSED REPLACEMENT OF LOW VOLTAGE BOARD, RISER BOARD AND ASSOCIATED WORKS AT  
ELECTRICITY HOUSE NAKURU.**

	BILL No. 1	Shs.
A	<p style="text-align: center;"><b>PRELIMINARIES</b></p> <p><b><u>PRELIMINARY PARTICULARS</u></b> <b><u>NAME OF PARTIES</u></b></p> <p>The "Employer" is : Kenya Power &amp; Lighting Co. Ltd P.O. Box 30099 - 00100 <u>NAIROBI</u></p> <p>The term "Employer" and "Kenya Power" and "Kenya Power &amp; Lighting Co. Ltd" wherever used in the contract document shall be synonymous</p> <p>The "Project Manager" is : The Manager, Administration &amp; Property, HR&amp; Administration Kenya Power &amp; Lighting Co. Ltd P.O. Box 30099 - 00101 <u>NAIROBI</u></p> <p>The "Project Officer" is : The Kenya Power Projects Officer Administration &amp; Property, HR&amp; Administration Kenya Power &amp; Lighting Co. Ltd P.O. Box 30099 - 00101 <u>NAIROBI</u></p> <p>The "Project Quantity Surveyor" is The Kenya Power Quantity Surveyor, Administration &amp; Property, HR&amp; Administration Kenya Power &amp; Lighting Co. Ltd P.O. Box 30099 - 00101 <u>NAIROBI</u></p>	
B	<p><b><u>DESCRIPTION OF SITE</u></b></p> <p>The site is located within Nakuru CBD along government road opposite EACC South Rift Regional office. All access roads are tarmacked.</p> <p>The Contractor shall visit the Site to acquaint himself with its nature and position, the nature of the ground, substructure and other local conditions, position of power and water supplies, access roads or any other limitations, and no claims for extras will be considered on account of lack of knowledge in this respect.</p> <p>The Contractor must obtain the Project Manager's approval for the siting of temporary buildings, spoils heaps and directions regarding the use of any materials found on the site.</p>	
C	<p><b><u>ACCESS TO SITE</u></b></p> <p>Access to site shall be as directed by the Project Manager. The Contractor shall strictly observe National police service, NTSA and county government of Nakuru regulations regarding traffic movement.</p>	
	<p>Preliminaries Carried to collection KShs.</p>	

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A	<p><b><u>WORKING AND STORAGE SPACE</u></b></p> <p>Working and storage space will be confined to the area designated by the Project Manager within the site.</p>		
B	<p><b><u>WORKING HOURS</u></b></p> <p>The Work must be carried out to cause the minimum inconvenience to the occupants of the adjoining premises. In particular, no hammering, mechanical drilling or other unduly noisy work may be commenced before 8.00 a.m. or continued after 6.00 p.m. without prior approval of the Project Manager.</p>		
C	<p><b><u>DESCRIPTION OF THE WORKS</u></b></p> <p>Works shall generally consist of :-</p> <ul style="list-style-type: none"> <li>a) Replacement of existing LV board , Riser board and associated works</li> <li>b) Recabling and wiring to Ganset and reset of change over.</li> <li>c) Tenant metering</li> <li>d) Supply and installation of fireman switch.</li> <li>e) Water pump automation</li> <li>f) Indoor lighting control</li> <li>g) Installation of out door security lights.</li> <li>h) KPLC LOGO repair.</li> <li>j) Supply , install , Test and Commissioning of DBS</li> <li>k) Supply and installation of clean power to Data cabinets.</li> <li>l) Earthing</li> <li>m) All associated builders works.</li> </ul>		
D	<p><b><u>APPROVAL OF THE DRAWINGS</u></b></p> <p>The contractor will provide proposed certified working drawings to be prepared with full site understanding as to how the existing cables will be terminated into the proposed positions of the various outgoing circuite breakers.</p> <p>The Contractor shall furnish 3 copies of the drawing within the first three weeks of site take over and before work commences to the Project Manager for his approval or rejection, Such approved drawings 2 copies shall be filed and kept on site and one copy to to project managers office.</p>		
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	<b><u>GENERAL MATTERS</u></b>	Shs.
A	<b><u>SUFFICIENCY OF TENDER</u></b>  The Contractor shall be deemed to have satisfied himself before tendering as to the correctness and sufficiency of his Tender for the Works and of the rates and prices stated in the Priced Bills of Quantities, which rates and prices shall cover all his obligations under the Contract and all matters and things necessary for the proper completion and maintenance of the Works.	
B	<b><u>STAMP CHARGES</u></b>  The Contractor shall allow for the payment of all Stamp Charges in connection with the Surety and Contract Agreement.	
C	<b><u>DEFINITIONS AND ABBREVIATIONS</u></b>  Terms used in these Bills of Quantities shall be interpreted as follows:  "Approved"                Shall mean approved by the Project Manager.  "as directed"             Shall mean as directed by the Project Manager.  "B.S."                      Shall mean the current British Standard specifications published by the British Standards Institution, 2 Park Street, London W.I., England.  "CM."                      Shall mean Cubic Metres.  "SM."                      Shall mean Square Metres.  "LM."                      Shall mean Linear Metres.  "MM"                      Shall mean Millimetres.  "KG."                      Shall mean Kilogramme.  "NO."                      Shall mean Number.  "M.S"                      Shall mean Measured Separately  PRS or Prs                Shall mean Pairs  a.b.d                      Shall mean as before described  Ditto or Do                Shall mean the whole of the preceding description except as qualified in the description in which it occurs  NTSA                      Shall mean National Transport & Safety Authority  NPS                        National police service	
	Preliminaries	
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A	<p><b><u>PROGRESS SCHEDULE</u></b></p> <p>The Contractor shall, upon receiving instructions to proceed with the Work, draw up a time and progress Schedule setting out the order in which the Works are to be carried out with the appropriate dates thereof. This Time and Progress schedule is to be agreed with the Project Manager and no deviation from the order set out in this Schedule will be permitted without the written consent of the Project Manager. The Main Contractor will be responsible for arranging the above programme with all Sub-Contractors including the Nominated Sub-Contractors and Nominated Suppliers.</p>	
B	<p><b><u>FIGURED DIMENSIONS</u></b></p> <p>Figured dimensions are to be followed in preference to dimensions scaled from the Drawings; but wherever possible dimensions are to be taken on the Site or from the Buildings. Before any Work is commenced by Sub-Contractors or Specialist Firms, dimensions must be checked on the Site and/or buildings and agreed with the Contractor, irrespective of the comparable dimensions shown on the Drawings. The Contractor shall be responsible for the accuracy of such dimensions.</p>	
C	<p><b><u>PROVISIONAL WORK</u></b></p> <p>All "Provisional" and other work liable to adjustment under this Contract shall be left uncovered for a reasonable time to allow all measurements needed for such adjustment to be taken by the Quantity Surveyor. Immediately the work is ready for measurement, the Contractor shall give notice to the Quantity Surveyor.</p> <p>If the Contractor makes default in these respects he shall, if the Project Manager so directs, uncover the work at his own expense to enable the measurements to be taken.</p>	
D	<p><b><u>EXISTING SERVICES</u></b></p> <p>Prior to commencement of any work the Contractor is to ascertain from the relevant Authorities the exact position, depth and level of all existing electric cables, water pipes or other services in the area and he shall make whatever provisions may be required by the Authorities concerned for the support and protection of such services. Any damage or disturbance caused to any services shall be reported immediately to the Project Manager and the relevant Authority and shall be made good to their satisfaction at the Contractor's expense.</p>	
E	<p><b><u>TRANSPORT TO AND FROM THE SITE</u></b></p> <p>The Contractor shall include in his prices for the transport of materials workmen, etc., to and from the Site of the Proposed Works, at such hours and by such routes and vehicles as are permitted by the Authorities and in particular by the Transport Licensing Board and / or the National Transport &amp; Safety Authority.</p>	
F	<p><b><u>PUBLIC AND PRIVATE ROADS, PAVEMENTS, ETC</u></b></p> <p>The Contractor will be required to make good, at his own expense any damage he may cause to the present road surfaces and pavements within or beyond the boundary of the Site, during the period of the Works. In particular, all existing trees, shrubs, plants, etc., which may be destroyed or damaged during the progress of the Works are to be made good by the Contractor to the approval of the Project Manager.</p>	
	<p>Preliminaries</p>	<p>Carried to collection</p>
		<p>KShs.</p>

A	<p><b><u>POLICE REGULATIONS</u></b></p> <p>The Contractor is to allow for complying with all instructions and regulations of the police Authorities.</p>	Shs.
B	<p><b><u>ENVIRONMENTAL REGULATIONS</u></b></p> <p>The Contractor shall observe all the requirements of the National Environment Management Authority</p> <p>In particular the Contractor shall give special emphasis to control dust. The contractor shall provide all The Contractor shall put emphasis on controlling noise, vibrations and occupational hazards. The</p>	
C	<p><b><u>CONTRACTORS' SUPERINTENDENCE</u></b></p> <p>The Contractor shall constantly keep on the Works a literate English-speaking Agent or Representative, competent, NCA accredited and experienced in the kind of work involved, who shall give his whole time to the superintendence of the Works. Such Agent or Representative shall receive on behalf of the Contractor, directions and instructions from the Project Manager and such directions and instructions shall be deemed given to the Contractor in accordance with the conditions of the Contract. The Agent shall not be replaced without the specific approval of the Project Manager.</p> <p>It is to be a specific condition of this Contract that the successful Tenderer shall provide on Site throughout the period of construction until the Date for Practical completion a suitably qualified, experienced and competent person to ensure that the works are carried out to the standard required by the specification and detailed on the Drawings; and shall ensure that upon any termination of employment a suitable replacement is found.</p> <p>Such site superrintendent shall have a National Construction Authority's accreditation.</p> <p>Before the Tenderer's offer is accepted the Project Manager may personally interview the Contractor's proposed Representative.</p> <p>A curriculum vitae of past experience and qualifications must be provided for the Project Manager's scrutiny.</p> <p>The Project Manager's decision will be final regarding the suitability of the proposed Representative.</p>	
D	<p><b><u>WATER</u></b></p> <p>All water shall be fresh, clean and pure, free from earthy, vegetable or organic mater, acid or alkaline substances in solution or suspension.</p> <p>The Contractor shall provide at his own risk and cost all water for use in connection with the Works (including the work of Sub-Contractors). The Contractor shall provide at his own expense all temporary distribution pipes, storage tanks, metres, etc., and he shall clear away same upon completion of the Works.</p>	
E	<p><b><u>LIGHTING AND POWER</u></b></p> <p>The Contractor shall provide at his own risk and cost all artificial lighting and power for use on the Works, including all Sub-Contractors' and Specialists' requirements and including all temporary connections, wiring, fittings, etc., and clearing away on completion. The Contractor shall pay all fees and obtain all permits in connection therewith.</p>	
	<p>Preliminaries Carried to collection KShs.</p>	

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A	<p><b><u>SAFETY</u></b></p> <p>The Contractor shall comply at all times with the requirements of the Factory Act (Cap 514), Building Construction Rules, Supplement 18, Legal Notice No.40 dated April, 1984 and ensure that the safety of his workpeople and authorised visitors to the Site is protected at all times. In particular there shall be proper provision of planked footways and guard-rails to scaffolding, etc., protection against falling materials and tools and the Site shall be tidy and clear of dangerous rubbish.</p> <p>The Contractor shall appoint a safety officer as required by the Factory Act and notify the Factory Inspector of his name. the safety Officer shall be on Site at all times and all directions given by the Project Manager to the Safety Officer shall be deemed to be Project Manager's Instructions, and shall be complied with promptly without additional cost to the contract.</p> <p>Occupational Safety and Health Act no. 15 of 2007 must also be complied with.</p> <p>The Project Manager shall be empowered to suspend work on the Site should he consider these conditions are not being observed, and no claim arising from such suspension will be allowed.</p> <p><b><u>PROTECTIVE CLOTHING</u></b></p> <p>The Contractor shall provide all protective or any other special clothing or equipment for his employees that may be necessary.</p> <p>This shall include, inter-alia, safety helmets, gloves, goggles, earmuffs, gumboots, overalls, etc., according to the type of work. The Contractor shall ensure that safety helmets are worn by all staff at all times.</p> <p><b><u>PROVISIONAL SUMS</u></b></p> <p>The term "Provisional Sum" wherever used in these Bills of Quantities shall have the meaning stated in Section A Item A7(i) of the Standard Method of measurements. Such sums are net and no addition shall be made to them for profit.</p> <p><b><u>ADJUSTMENT OF PROVISIONAL SUMS</u></b></p> <p>In the final account all provisional sums shall be deducted and the value of the work properly executed in respect of them upon the Project Manager's order added to the contract sum. Such work shall be valued as described for variations in variation clause of the conditions of contract, but should any articles for the work be executed by a Nominated Sub-Contractor, or any articles for the work be supplied by a Nominated Supplier, the Value of such work or articles shall be treated as a P.C. sum and profit and attendance comparable to that contained in the priced Bills of Quantities for similar items added.</p> <p><b><u>PRIME COST (OR P.C.) SUMS</u></b></p> <p>The term "Prime Cost Sum" or "P.C. Sum" wherever used in these Bills of Quantities shall have the meaning stated in Section A item A7(ii) of the Standard Method of Measurements.</p> <p>Persons or firms Nominated to execute the work or to provide and fix materials or goods as stated in the Conditions of Contract are described herein as Nominated Sub-Contractors. Persons or firms so nominated to supply goods or materials are described as Nominated suppliers.</p>	
	<div>Preliminaries</div> <div>Carried to collection</div> <div>KShs.</div>	

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A	<p><b><u>ADJUSTMENT OF P.C. SUMS</u></b></p> <p>In the final account all P.C. sums shall be deducted and the amount properly expended upon the Project Manager's order in respect of each of them added to the contract sum. The Contractor shall produce to the Project Manager such quotation, invoices or bills properly receipted as may be necessary to show the actual details of the sums paid by the contractor.</p> <p>Items of profit upon P.C. sums shall be adjusted in the final account prorata to the amount paid.</p> <p>Items of Attendance following P.C. Sums shall be adjusted prorata to the physical extent of the work executed (not prorata to the amount paid) and this shall apply though the Contractor's Bills shows a percentage in the rate column in respect of them.</p> <p>Should the Contractor be permitted to tender and his tender be accepted for any work which a P.C. sum is included in these Bills of Quantities, profit and attendance will be allowed at the same rate as it would if the work were executed by a Nominated Sub-Contractor.</p>	
B	<p><b><u>NOMINATED SUB-CONTRACTORS</u></b></p> <p>When any work is ordered by the PROJECT MANAGER to be executed by nominated sub-contractors, the Contractor shall enter into subcontracts and shall thereafter be responsible for such sub-contractors in every respect. Unless otherwise described the Contractor is to provide for such Sub-Contractors any or all of the facilities described in these Preliminaries. The Contractor should price for these with the nominated Sub-contract Contractor's work concerned in the P.C. Sums under the description "add for Attendance</p>	
C	<p><b><u>MATERIALS AND WORKMANSHIP</u></b></p> <p><b><u>GENERALLY</u></b></p> <p>All materials shall be new unless otherwise directed or permitted by the Project Manager and in all cases where the quality of goods or materials is not described or otherwise specified, is to be the best quality obtainable in the ordinary meaning of the word "best" and not merely a trade signification of that word.</p> <p>All materials and workmanship shall, unless otherwise specified or described, conform to the appropriate British Standard Institution specification current at the date of tender.</p> <p>The Contractor shall order all materials to be obtained from overseas immediately after the Contract is signed and shall also order materials to be obtained from local sources as early as necessary to ensure that such materials are on Site when required for use in the Works.</p> <p>The Contractor shall be responsible for and shall replace or make good at his own expense any materials lost or damaged.</p> <p>The Works throughout shall be executed by skilled workmen well versed in their respective trades.</p>	
D	<p><b><u>REJECTED WORKMANSHIP OR MATERIALS</u></b></p> <p>Any workmanship or materials not complying with the specific requirements or approved samples or which have been damaged, contaminated or have deteriorated, must immediately be removed from the Site and replaced at the Contractor's expense, as required.</p>	
	<p>Preliminaries</p> <p>Carried to collection</p> <p>KShs.</p>	

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8/1/24

		Shs.
C	<p><b><u>PROPRIETARY MATERIALS</u></b></p> <p>Where proprietary materials are specified herein-after the contractor may propose the use of materials of other manufacturer but equal quality for approval by the Project Manager.</p> <p>All materials and goods, where specified to be obtained from a particular manufacturer or supplier are to be used or fixed strictly in accordance with their instructions.</p>	
A	<p><b><u>SAMPLES</u></b></p> <p>The Contractor shall furnish within the first one week of site take over and before work commences and at his own cost, any samples of materials or workmanship that may be called for by the Project Manager for his approval or rejection, and any further samples in case of rejection until such samples are approved by the Project Manager and such samples, when approved, shall be the minimum standard for the work to which they apply. Such approved samples shall be mounted on a sample board erected on site.</p> <p>commences and at his own cost, any samples of materials or workmanship that may be called for by the Project Manager for his approval or rejection, and any further samples in case of rejection until such samples are approved by the Project Manager and such samples, when approved, shall be the minimum standard for the work to which they apply.</p> <p>The sample of Copper cables , MCCB, Distribution boards , shall be required and available for quick reference during the entire period of the contract. The approved samples shall be mounted / applied using the correct methodology, edging and finish as per the bill of quantities; all to reflect the high quality workmanship that will be replicated on the permanent works.</p>	
B	<p><b><u>CONCRETE TESTS</u></b></p> <p>Concrete test cubes, will not be required under these works; any concrete works Must be done in the presence of the Project Manager or his/her representative</p>	
C	<p><b><u>OTHER MATERIAL TESTS</u></b></p> <p>The Contractor shall allow for providing samples of all other materials such as reinforcement bars, building sand, cement, building stone, concrete blocks, hardcore,etc, that may be requested by the Project Manager or Engineer for testing. He shall allow for the delivery of the same to the testing Laboratory(ies)), pay the testing fees andany other costs that may be required and arrange for test certificates to be sent directlyto the Project Manager or Engineer by the testing Laboratory. Under no circumstances will the Contractor be paid for such tests if he does not allow for that here</p>	
	<p>Preliminaries</p> <p>Carried to collection</p> <p>KShs.</p>	



		Shs.
A	<p><b><u>PROGRAM OF WORKS</u></b></p> <p>The Contractor shall allow in his programme for the following 11 public holidays per calendar year in Kenya.</p> <ol style="list-style-type: none"> <li>1. New Year's Day (1st January)</li> <li>2. Good Friday</li> <li>3. Easter Monday</li> <li>4. Labour Day (1st May)</li> <li>5. Madaraka Day (1st June)</li> <li>6. Idd Ul Fitr</li> <li>7. "Utamaduni" Day (10th October)</li> <li>8. Mashujaa Day (20th October)</li> <li>9. Jamhuri day (12th December)</li> <li>10. Christmas Day (25th December)</li> <li>11. Boxing Day (26th December)</li> </ol> <p>The Contractor should also allow per calendar year for a further 2 unspecified public holidays which may be announced by the Government of Kenya with no prior notification.</p>	
B	<p><b><u>MINISTRY OF HEALTH REGULATIONS</u></b></p> <p>The Contractor shall adhere to the interim guidelines and protocols for SARS-CoV 2 and COVID 19 which were developed in response to the new Coronavirus Disease 2019. The adherence to these guidelines shall include any periodical updated guidelines by the said MoH - Kenya.</p>	
C	<p><b><u>TEMPORARY WORKS</u></b></p> <p><b><u>OFFICE AND SHEDS</u></b></p> <p>The Contractor shall erect and maintain temporary office accommodation for his own use, and ample temporary watertight sheds for the proper storage and protection of materials and for the use of artisans and remove when ordered. Floors of sheds shall be at least 150mm above ground level.</p>	
C	<p><b><u>SANITATION</u></b></p> <p>The Contractor shall provide the necessary sanitation for his staff and workmen to the requirements and satisfaction of the Health Authorities and maintain the same in a thoroughly clean and sanitary condition and pay all conservancy fees during the period of the Works and remove when no longer required.</p>	
D	<p><b><u>SECURITY</u></b></p> <p>The Contractor shall be responsible for the security of the works in every respect and in particular it shall be the Contractor's responsibility to ensure that each of his workers security is guaranteed while working on the site and in such manner as is acceptable by KPLC.</p> <p>The Contractor shall also accept liability for and bear the cost of failure to provide security for the works and workers as per the conditions of this contract once entered into.</p>	
	<p>Preliminaries</p> <p>Carried to collection</p> <p>KShs.</p>	

		Shs.
A	<p><b><u>ALTERATIONS TO BILLS, PRICING, ETC.</u></b></p>	
	<p>Any unauthorised alteration or qualification made to the text of the Bills of Quantities may cause the Tender to be disqualified and will in any case be ignored. The Contractor shall be deemed to have made allowance in his prices generally to cover any items against which no price has been inserted in the priced Bills of Quantities. All items of measured work shall be priced in detail and the Tenders containing Lump Sums to cover trades or groups of work must be broken down to show the price of each item before they will be accepted.</p>	
B	<p><b><u>PLANT, TOOLS AND SCAFFOLDING</u></b></p> <p>The Contractor shall provide all necessary hoists, tackle, plant, vehicles, tools and appliances of every description for the due and satisfactory completion of the Works and shall remove same on completion.</p> <p>The Contractor shall provide, erect and maintain all temporary scaffolding, sufficiently strong and efficient for the due performance of the Works, including Sub-Contract works, provide special scaffolding as and when required during the Works and remove on completion and make good.</p> <p>Such scaffolding shall be constructed of tubular steel or timber of sufficient scantlings and be provided with planked footways and guard-rails to approval.</p> <p>All such plant, tools and scaffolding shall comply with all regulations whether general or local, in force throughout the period of the contract and shall be altered or adapted during the Contract as may be necessary to comply with any amendments in or additions to such regulations.</p> <p>Scaffolding is not measured hereinafter, and the Contractor must allow here.</p>	
C	<p><b><u>EXISTING AND ADJACENT PROPERTY</u></b></p> <p>The Contractor must take all steps necessary to safeguard existing and adjacent property, make good at his own expense any damage to persons or property caused thereon, and hold the Employer indemnified against any such claim arising.</p> <p>The Contractor will be held fully responsible for the safety of the existing and adjacent buildings and for any damage caused in consequence of these Works. He must reinstate all damage at his own expense and indemnify the Employer against any loss.</p> <p>The Contractor must take such steps and exercise such care and diligence as to minimise nuisance from dust, noise or any other cause to the occupiers of the existing and adjacent property.</p>	
D	<p><b><u>LABOUR CAMPS</u></b></p> <p>No labour camps, with the exception of watchmen may be housed on the site and the Contractor shall provide, erect and maintain satisfactory housing for the watchmen and shall remove</p>	
	<p>Preliminaries Carried to collection KShs.</p>	

		Shs.
A	<p><b><u>INSURANCE</u></b></p> <p>The Contractor shall insure as required in the Conditions of Contract. No payment on account of the work executed will be made to the Contractor until he has satisfied the PROJECT MANAGER either by production of an Insurance Policy or and Insurance Certificate that the provision of the foregoing Insurance Clauses have been complied with in all respects. Thereafter the PROJECT MANAGER shall from time to time ascertain that premiums are duly paid up by the Contractor who shall if called upon to do so, produce the receipted premium renewals for the PROJECT MANAGER's inspection.</p>	
B	<p><b><u>HOARDING</u></b></p> <p>The contractor shall enclose the site either wholly or in parts with a holding 2.40 metres high with openings and gates as required, constructed of substantial timbers to approval and covered with new Galvanised iron corrugated sheeting painted to approval.</p>	
D	<p><b><u>TEMPORARY ROADS</u></b></p> <p>The Contractor shall provide where directed all temporary access roads, tracks and paths necessary for the execution of the Works, including making good when no longer in use.</p>	
E	<p><b><u>SIGNBOARD</u></b></p> <p>The Signboard and lettering on same for the display of the General and</p> <p>Sub-Contractor's names shall be of an approved size with the Employer's name painted there on.</p> <p>The Project Manager's name shall be printed in letters not exceeding 100mm in height all to the Project Manager's design. No other signboard or advertising will be permitted.</p>	
	<p>Preliminaries</p> <p>Carried to collection</p> <p>KShs.</p>	

		Shs.
	<p><b><u>NOMINATED SUB-CONTRACTORS AND SUPPLIERS</u></b></p>	
A	<p><b><u>NOMINATED SUB-CONTRACTORS</u></b></p> <p>The Contractor shall be responsible for Nominated Sub-Contractors in every respect and in particular it shall be the contractor's responsibility to ensure that each Sub- Contractor commences and completes the works in such manner and is ready on the Site with his materials , labour and special plant at such times so as to conform with the progress Schedule, as specified previously, and so ensure satisfactory progress.</p> <p>The Contractor shall also accept liability for and bear the cost of General Attendance on Nominated Sub-Contractors which shall be deemed to for:</p> <p>Allowing the use of standing scaffolding, maintenance and alteration of all scaffolding, retention of all scaffolding until such times as all relevant Sub Contractors' works are complete and removal of all scaffolding on completion. Providing space for office accommodation, and for storage of plant and materials; allowing use of sanitary accommodation; the supply of all necessary water, and lighting; and clearing away all rubbish.</p> <p>The items for "General Attendance" given herein-after following P.C. Sums in respect of Sub-Contractors' work shall be deemed to include all the above.</p> <p>The Contractor shall also accept liability for and bear the cost of Special Attendance on Nominated Sub-Contractors which shall include for one or more of the following:</p> <p>Unloading, storing, hoisting, placing in position, providing power, provision of special scaffolding.</p> <p>The items of "Special Attendance" given herein-after following P.C. Sums shall include any one or more of the above items as set out in the particular reference.</p> <p>Cutting away for and making good after the work of Sub-Contractors as may be required will be measured and valued separately by the Surveyor.</p>	
B	<p><b><u>NOMINATED SUPPLIERS</u></b></p> <p>The cost of "Fix only" materials to be obtained from Nominated Suppliers which are covered by prime Cost or Provisional Sums shall include for taking delivery where directed, checking with invoices or indents, reporting and claiming damages for shortages and damaged goods, defraying demurrage signing for as having been received in good order, transporting, unloading, storing, covering and protecting until the time of fixing, unpacking, replacing anything lost or damaged, sorting, assembling, hoisting to required levels and fixing as described.</p> <p>Before placing any orders with Nominated Sub-Contractors or Nominated Suppliers the Contractors must ascertain that the terms and conditions of the quotations and the dates of delivery of materials or execution of works comply with the terms of Contract and the Progress Schedule.</p>	
	<p>Preliminaries</p> <p>Carried to collection</p> <p>KShs.</p>	

		Shs.
A	<p><b><u>PRIME COST RATES</u></b></p> <p>Where description of items include a P.C. rate per unit this rate is to cover the nett supply of the unit only. The Contractor's price must include for the cost of the unit at the rate stated, plus waste, taking delivery, storage, fixing in position, profit and overheads.</p> <p>The actual nett cost per unit will be adjusted within the Final Account</p>	
B	<p><b><u>PROTECTION</u></b></p> <p>The Contractor shall cover up and protect from damage, including damage from inclement weather, all finished work existing power equipment and unfixed materials, including that of Sub-Contractors, etc., to the satisfaction of the Project Manager until the completion of the Contract, and carefully preserve all trees or bushes on or near the Site.</p>	
C	<p><b><u>CLEANING</u></b></p> <p>The Contractor shall, upon completing of the Works, at his own expense, remove and clear away all surplus excavated materials, plant, rubbish and unused materials and shall leave the whole of the Site and Works in a clean and tidy state to the satisfaction of the Project Manager, including clearing away and making good all traces of temporary access roads, offices, sheds camps, etc. Particular care shall be taken to leave clean all floors and windows and to remove all rubbish and dirt as it accumulates. The Contractor is to find his own dump and shall pay all charges in connection therewith.</p>	
A	<p><b><u>TRAINING LEVY</u></b></p> <p>The Contractor's attention is drawn to legal Notice No. 237 of October, 1971, which requires payment by the Contractor of Training Levy on all Contracts of more than 50,000/- in value and his Tender must include for all costs arising therefrom.</p>	
B	<p><b><u>STANDARD LEVY (STANDARDS ACT- CAP 496)</u></b></p> <p>The Contractor's attention is drawn to legal Notice No. 267 of 2<sup>nd</sup> June, 1990 which requires payment by the Contractor of the Standards Levy at a rate of 0.2% of the contract sum less allocation for prime cost sums and provisional sums, subject to a ceiling of KShs. 400,000.00 per annum. The Contractor must therefore include for all costs (if any) arising or resulting therefrom.</p>	
C	<p><b><u>NATIONAL CONSTRUCTION AUTHORITY LEVY (NCA)</u></b></p> <p>The contractor shall comply with all necessary National Construction Authority Act requirements including NCA levy. No claims for failure to comply with the NCA act will be entertained.</p>	
D	<p><b><u>DEVELOPMENT APPROVALS</u></b></p> <p>The contractor shall allow for all necessary county government permits &amp; approvals with regard to these works. No claim for failure to comply with county governments requirements shall be entertained.</p> <p>Allow for all necessary permits/approvals by the County Government of Nakuru.</p>	
E	<p><b><u>VALUE ADDED TAX</u></b></p> <p>The Contractor's attention is drawn to the Finance Act 1993 and subsequent amendments thereof which requires payment by the Contractor of Value Added Tax (VAT) on construction services rendered. Whether VAT is added at the grand summary page or inclusive in the rates, The tender sum as stated in the form of tender shall be deemed to be inclusive of VAT.</p>	
F	<p><b><u>BILL OF QUANTITIES SITE COPY</u></b></p> <p>It shall be a requirement under this contract for the contractor to keep a true and complete copy of the unpriced tender document on site at all times. The contractor shall also be expected to keep in his possession a true and complete copy of the priced tender document.</p>	
	<p>Preliminaries Carried to collection KShs.</p>	

*Ben*  
31/1/24

<b><u>COLLECTION</u></b>		
From page	P/1	
" "	P/2	
" "	P/3	
" "	P/4	
" "	P/5	
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" "	P/9	
" "	P/10	
" "	P/11	
" "	P/12	
" "	P/13	
<b><u>PRELIMINARIES</u></b>	<b><u>TO SUMMARY AT END OF BILL</u></b>	<b><u>KSHS.</u></b>
Preliminaries		

**BILL No 2**

**ELECTRICAL WORKS**

**PRICE SCHEDULE-ELECTRICAL WORKS**

**CATEGORY B-ELECTRICITY HOUSE NAKURU**

ITEM	DESCRIPTION	UNIT	QTY	WARRANTY / DELIVERY SCHEDULE	UNIT PRICE VAT EXCLUSIVE	DDP	TOTAL PRICE DDP VAT EXCLUSIVE
<b>LOT 2</b>	<b>SUPPLY &amp; INSTALLATION OF NEW LV BOARD</b>						
<b>A</b>	<b>GENERAL ITEMS</b>						
A/1	Allow for the inspection of the existing LV and meter boards, decommissioning, disconnection of the existing boards and services and handing over to the client with signed delivery note, modifications and replacement of any accessories such as cable glands and lugs etc.	Lot	1				
A/2	Allow for the preparation of all "As Built" drawings after testing and commissioning	Set	3				
A/3	The Tenderer is to describe hereunder inserting any relevant clause number, any other works, obligations or items that may be referred to in the Conditions of Contract, Specification, Drawings or Data Schedule in respect of the works for which he desires to enter a separate charge (this charge is to be entered in the Amount column). If no charge is entered hereunder, rates and amounts elsewhere in the schedule of prices shall be deemed to cover all expenses for such works, obligations or items.	Lot	1				
<b>TOTAL FOR GENERAL ITEMS CARRIED TO SUMMARY</b>							

*Billy*  
17/1/2024

ITEM	DESCRIPTION	UNIT	QTY	WARRANTY / DELIVERY SCHEDULE	UNIT PRICE VAT EXCLUSIVE	DDP EXCLUSIVE	TOTAL PRICE DDP VAT EXCLUSIVE
B	<b>ELECTRICAL DISTRIBUTION</b>						
	Supply, install, test, commission and set to work the following at Ground Floor: -						
B/1	<b>SECTION 1 — SUPPLY TX</b>	<b>PANEL</b>	<b>1</b>				
B/1.1	1000 A TPN draw out type MCCB main incomer	No	2				
B/1.2	415V three-phase surge Protection Device	No	1				
B/1.3	1200A TPN insulated copper bus bars	No	1				
B/1.4	1000 A TPN MCCB	No	1				
B/1.5	Set of neon/LED phase presence indicator lamps - All indicators	No	1				
B/1.6	TPN stabilizer bypass switchgear (for 630Kva )	No	1				
B/1.7	Space for 1 No. KPLC TPN cut-out	No	1				
B/1.8	Space for 1 No. CT Chambers	No	1				
B/1.9	Space for 1 No. KPLC TPN Meter	No	1				
B/1.10	The spaces to be provided with punched studs for installing Kenya Power's seals.	No	1				
B/1.11	Sufficient cable ways and 20% spare space for any future additions.	Lot	1				
	<b>TOTAL FOR ELECTRICAL DISTRIBUTION CARRIED TO SUMMARY</b>						

*Dolly*  
17/1/2024



ITEM	DESCRIPTION	UNIT	QTY	WARRANTY / DELIVERY SCHEDULE	UNIT PRICE VAT EXCLUSIVE	DDP	TOTAL PRICE DDP VAT EXCLUSIVE
B/2 S	SECTION 2 — GENSET	PANEL	1				
B/2.1	1000 A TPN MCCB	No	1				
B/2.2	Supply 3P digital check meter for Genset and CTs	No	1				
B/2.3	Space for 1No. CT	No	1				
B/2.4	Space for 1No. check meter	No	1				
B/2.5	The spaces to be provided with punched studs for installing Kenya Power's seals.	Lot	1				
B/2.6	Set of neon phase presence indicator lamps - All indicators	No	1				
B/2.7	Allow for (provisional) 150 mm sq cable (4 core Copper) to the generator. Bidders to do site inspection to ascertain cable requirement before quoting this section	Metres	30				
B/3	SECTION 3 — CHANGE OVER	PANEL	1				
	(The bidder should ensure compatibility with the existing generator)						
B/3.1	Automatic Change Over switch (refer GTP)	No	1				
B/3.2	Set of neon phase presence indicator lamps - All indicators	No	1				
B/3.3	1000 A TPN ACB(motorized) (with Key interlock) refer GTP	No	2				
TOTAL FOR GENSET AND CHANGE OVER CARRIED TO SUMMARY							

ITEM	DESCRIPTION	UNIT	QTY	WARRANTY / DELIVERY SCHEDULE	UNIT PRICE VAT EXCLUSIVE	DDP	TOTAL PRICE DDP VAT EXCLUSIVE
B/4	SECTION 4 — LOAD & PFCU	PANEL	1				
B/4.1	1000Amp MCCB	No	1				
B/4.2	Set of neon phase presence indicator lamps - All indicators	No	1				
B/4.3	1000Amp TPN insulated copper bus bars	No	1				
B/4.4	200A TPN MCCB, (adjustable in 63 — 250A range) to be set as per the SLD	No	4				
B/4.5	400A TPN MCCB, (adjustable in 100 — 400A range) to be set as per the SLD	No	1				
B/4.6	63A TPN MCCB, (adjustable in 63 — 125A range)	No	8				
B/4.7	100A TP change-over for (allow sprinkler board during fire emergencies)	No	1				
B/4.8	Sufficient cable ways	No	1				
B/4.9	Supply and install of 150 kVAR power factor correction capacitor bank in LV Switchboard	Lot	1				
	TOTAL FOR LOAD AND PFCU CARRIED TO SUMMARY						

17/1/2024

ITEM	DESCRIPTION	UNIT	QTY	WARRANTY / DELIVERY SCHEDULE	UNIT PRICE VAT EXCLUSIVE	DDP	TOTAL PRICE DDP VAT EXCLUSIVE
B/5	SECTION 5 -TENANT METERING	PANEL	1				
B/5.1	400A TPN Busbars	No	2				
B/5.2	400A TPN MCCB(adjustable in 250 – 400A range)	No	2				
B/5.3	100 A TPN MCCB, (adjustable in 80 – 100A range)	No	18				
B/5.4	Automatic Change-over Contactor Unit	No					
B/5.5	CTs for three phase digital check meter	No	6				
B/5.6	check meter	No	6				
B/5.7	Space for 6No. KPLC TPN cut outs	No	1				
B/5.8	Space for 6No. KPLC TPN CTs	No	1				
B/5.9	Space for 6No. KPLC TPN Meter	Lot	1				
B/6	Carry out load balancing on all phases.	Lot	1				
B/7	Supply and install complete all earthing requirements for the above boards including, inspection pits, rods, tapes etc. all as per the requirements of the technical specifications.	Lot	1				
B/8	Allow for the transfer of all existing circuits to the new main Switchboard. This will involve supply and installation of all necessary cables. Please study the existing arrangement first before pricing this item.	Lot	1				
	<b>Bidders to do site inspection to ascertain cable requirement before quoting this section.</b>						
B/9	GSM/GPRS module incorporated to send SMS alerts.						
	• Power monitoring (using branch circuit monitor)						
	• Genset low fuel alerts						
	• Operation of changeover	Lot	1				
	• High Temperature alerts						
	• Faults						
	NOTE: You will be required to carry out the configuration to achieve the above.						
B/10	Supply and installation of Fireman Switch	No	1				
	As per drawing or appropriately design to ensure overall safety.						
	<b>TOTAL FOR TENANT METERING CARRIED TO SUMMARY</b>						

Contractors official Rubber stamp Signature:.....

NKR

17/11/2024

E.W/S

ITEM	DESCRIPTION	UNIT	QTY	WARRANTY / DELIVERY SCHEDULE	UNIT PRICE VAT EXCLUSIVE	DDP EXCLUSIVE	TOTAL PRICE DDP VAT EXCLUSIVE
C	<b>OTHER WORKS</b>						
C/1	All cables to be secured on appropriate cable trays	Lot	1				
C/2	Supply and install Evacuators fans/units 2 in the LV Switchroom	Qty	2				
C/3	Label of rooms with KPLC logo's. Carry out comprehensive labelling of all the bus bars, circuit breakers etc. of the board above, indicating the areas served, outgoing cable sizes etc.	Lot	1				
C/4	<b>Earthing</b> Comprehensive protective multiple earthing of the LVboard, Genset and AVR to achieve expected earthing values	Lot	1				
C/5	<b>Water pump automation</b> Supply and install automated domestic 1HP control panel and associated plumbing accessories to 2no water reservoir tanks on ground floor and 4th floor	Qty	2				
C/6	<b>Indoor Lighting Control</b> Supply and install ceiling mounted lighting motion sensors with: 360° low profile ceiling mount PIR, Coverage 12m (40') diameter, Digital Detector with True Temperature Compensation, Built-in Double EOL resistors, jumper selectable including cabling using 1.5sq.mm s/c CU. Cable concealed in trunks to stair case, office corridors and washrooms	Qty	39				
C/7	<b>KPLC LOGO Repair</b> Diagnose, service, repair, test and commission company LOGO by replacing faulty controls, wiring, LEDs lighting system Supply 2.5mm T/E cable from DB and associated accessories	lot	1				
C/8	<b>Outdoor Security Lights</b> Supply and install mounting brackets, cabling and photocells to achieve centralized control system. Switching through 20Amps Photocell Cable should be 2.5 mm sq 3core sheathed flex copper- Aprox. 250 mtrs Provision of necessary conduits/trunking and joint boxes Lighting fittings to be client supplied.	Lot	8				
<b>TOTAL FOR OTHER WORKS CARRIED TO SUMMARY</b>							

*Delly*  
17/1/2024

ITEM	DESCRIPTION	UNIT	QTY	WARRANTY / DELIVERY SCHEDULE	UNIT PRICE VAT EXCLUSIVE	DDP	TOTAL PRICE DDP VAT EXCLUSIVE
D	<b>RISER DISTRIBUTION BOARDS</b>						
D/1	Decommissioning of existing Distribution boards, Fuses and tidying the risers	Lot	1				
D/2	Tracing of line and ensuring retouch of existing circuits and labelling to detail.	Lot	1				
D/3	Making good all electrical wiring and electrical fittings, · Labelling and marking of all circuits · Replacement of cable/up ratings · Provide new supply cables to each floor · Carry out painting in the riser boards. · Carry out cable management on the risers and making good of risers · Provide cable tray and covers along the risers.	Lot	1				
D/4	<b>SUPPLY, INSTALL, TEST, COMMISSION OF DBS TO FLOORS</b>						
D/4.1	12-way fully populated TPN DBs 125A 4P Isolators at 415Vac, 50Hz; each comprising of: 32A 1P MCBs 10A 1P MCBs	Qty	4				
	10A 1P MCBs	Lot	1				
D/4.2	12-way fully populated Consumer Unit 32A 1P MCBs 10A 1P MCBs	Qty	4				
	10A 1P MCBs	Lot	1				
D/4.3	4-way fully populated Consumer Unit	No.	2				
D/4.4	Supply and install 250A, 15m Busbar (replace existing), with:	No	1				
D/4.4.1	250A Busbar Trunking Infeed Box With 250A TPN MCCB,	No.	1				
D/4.4.2	Busbar Trunking Tap Off Box, with : 3 x 3-pole, 63A MCB	No	5				
D/4.5	Allow for (provisional) 16 mm sq cable (Single core Copper) to be used for looping at the DBs. Bidders to do site inspection to ascertain cable requirement before quoting this section	metres	30				
	<b>TOTAL FOR RISER DISTRIBUTION BOARDS CARRIED TO SUMMARY</b>						

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## SUMMARY PAGE

ELEMENT NO.	DESCRIPTION	PAGE NO.	TOTAL PRICE DDP VAT EXCLUSIVE K.SHS.
1	GENERAL ITEMS	E.W / 1	
2	ELECTRICAL DISTRIBUTION	E.W / 2	
3	GENSET, CHANGE OVER ,	E.W / 3	
4	LOAD AND PFCU	E.W / 4	
5	TENANT METERING	E.W / 5	
6	OTHERS WORKS	E.W / 6	
7	RISER DISTRIBUTION BOARD	E.W / 7	
8	SUPPLY AND INSTALLATION OF CLEAN POWER TO DATA CABINETS	E.W / 8	
TOTAL FOR ELECTRICAL WORKS CARRIED TO GRAND SUMMARY			

Contractors official Rubber stamp Signature.....

乙未

E.W/9

Stolly  
17/11/2024



**PROPOSED REPLACEMENT OF LOW VOLTAGE BOARD RISER DISTRIBUTION  
BOARDS AND ASSOCIATED BUILDING REPAIRS FOR ELECTRICITY HOUSE  
NAKURU.**

ITEM	DESCRIPTION	QTY	UNIT	RATE	K.SHS
	<b>BILL No. 3</b> <b><u>BUILDERS WORKS- PROPOSED BUILDING REPAIR WORKS</u></b> <b><u>ELEMENT 1</u></b> <b><u>DEMOLITIONS AND ALTERATIONS (All Provisional)</u></b> <u>The items of demolitions and removal shall include making good disturbed areas to match existing and loading and carting away debris unless otherwise.</u>				
A	Carefully remove existing wooden door size 900x2700 seal; the opening with masonry wall 200mm thick to match with existing MS.	1	No		
B	Ditto to replace with metal door size 900x2700mm MS.	1	No		
C	Ditto louver windows size 1170x1600mm to replace aluminium sliding windows MS.	1	No		
D	Carefully demolish existing masonry in c/s (1:3) mortar , make good the disturbed works and cart away arrising debris.	10	No		
E	Cut and chase the existing reinforced floor slab for provision of cable ducts size 500x600mm (Wxd).	2	cm		
F	Hack the floor surfaces and make good to receive 38mm thick terrazzo finish MS.	13	sm		
	<u>Water tank area.</u>				
G	Remove and cart away all the debris from site to a dumping site approved by county government.	40	sm		
	<b>TOTAL FOR DEMOLITION AND ALTERATIONS CARRIED TO SUMMARY</b>				

Contractor's Official Rubber stamp Signature:...

NKR

*Bu*  
31/1/24

BW / 1



ITEM	DESCRIPTION	QTY	UNIT	RATE	K.SHS
	<u>ELEMENT No. 2</u>				
	<b><u>NEW WORKS</u></b>				
	<b><u>WATER TANK AREA AND LV BOARD ROOM</u></b>				
	<b><u>WATER TANK AREA</u></b>				
	<u>Over-site excavations: 100-200mm Depth, load and cart away surplus excavations spoil to a dumping site approved by county government.</u>				
A	Reducing levels; 150 mm	20	sm		
B	Extra-over all excavation for excavating rock irrespective of class.	2	cm		
C	load and cart away surplus excavated materials to approved dumping site by county government.	5	cm		
	<u>Fillings.</u>				
D	Hardcore filling in making up levels, hand packed, 250mm thick in layers.	5	cm		
E	50mm (average) thick quarry dust blinding to surfaces of hardcore	20	sm		
	<u>Concrete</u>				
	Insitu concrete				
	<u>Vibrated Reinforced concrete class Q mix (1:3:6) in.</u>				
F	100mm thick floor bed in falls	20	sm		
	<b><u>LV BOARD ROOM</u></b>				
	<b><u>WALLING</u></b>				
G	200mm thick natural stone walling machine dressed on cement sand (1:3)mortar including reinforcement with hoop iron at alternate courses.	6	sm		
	<b><u>FINISHES</u></b>				
	Wall Finish				
	In-situ Finishes				
	Plaster and Render				
B	15mm thick two coats cement sand (1:4) plaster troweled smooth and comprising 12mm thick backing and 3mm finishing coat internally.	6	sm		
C	12mm thick cement sand (1:3) render externally.	6	sm		
	Carried to collection				

ITEM	DESCRIPTION	QTY	UNIT	RATE	K.SHS
	Floor Finish In-situ Finishes				
A	38mm thick(24mm thick cement sand (1:3) backing & 15mm thick terrazzo layer polished.	13	sm		
B	30mm thick two coats cement sand (1:4) floor screed troweled smooth and comprising 3mm finishing coat.	20	sm		
C	15mm thick two coats cement sand (1:4) plaster troweled smooth and comprising 12mm thick backing and 3mm finishing coat to cable duct.	12	sm		
	<b>Windows &amp; Doors</b>				
	<b>Windows</b>				
	Aluminium Windows				
	Heavy duty powder coated Aluminum windows frames including glass and matching ironmongery.				
D	1200x1600mm window with two sliding panels glazed with 6mm thick tinted glass one way.	1	No.		
	<b>Doors</b>				
	<b>Metal works</b>				
	<u>Purpose -made units</u>				
	<u>Mild steel panned doors ; 100 x 50 x 3mm thick steel frame plugged to concrete or blockwork with 100mm long fishtailed 25 x 25 x 2mm thick angle section. 50x50x3mm thick hollow section stiles , top , bottom and middle rails at 600mm centres vertical and horizontal , angles cut, mitred and welded ; all panels faced with 2mm thick mild steel plates both sides; no allowance for forced entry; complete with necessary iron mongary including 1No x200mm long tower bolt.; door furniture, framings and the like; one coat manufacture's primer; all welding ground to smooth finish , or any other equal and approved ; all to the satisfaction of the project manager.</u>				
E	Single leaf; 900 x 2700mm high, complete; including 3 No hinges ( Bushes), 1No x200mm long tower bolt and one fixed top light size 900x600mm comprising 4mm thick clear glass panes in purty.	1	No		
	Carried to collection				

ITEM	DESCRIPTION	QTY	UNIT	RATE	K.SHS
A	<p><u>Mild steel grating assembled and fixed to including cutting and pinning lugs to concrete or block work surround and bedding frame in cement and mortar (1.4) steel gritting comprising 25x25x3mm Angle Line framing and bearing bars @550mm c/c, 25mm dia. High yield steel cross rods @32mm c/c all primed with grey oxide.</u></p> <p>1000 x550mm (LxW) Mild steel grating in 25x25x3mm Angle sections framing.</p> <p><u>PAINTING AND DECORATIONS</u></p> <p><u>On Metal work</u></p> <p><u>Prepare and spray one under coat ( metal primer) and two coats finishing coats to Crown Solo or other equal and approved to: -</u></p>	5	No		
B	General surfaces of metal grating over 300mm girth; both surfaces.	6	sm		
C	Ditto door	13	sm		
D	<p>Ditt to general surfaces n.e 100mm girth grating frames</p> <p>On plastered surfaces</p> <p><u>Prepare and apply one under coat (matt) and two coats finishing coats (silk vinyl) to Crown Solo or other equal and approved to: -</u></p>	12	lm		
E	To Plastered wall surfaces internally.	58	sm		
F	<p>Matt vinyl paint to ceiling soffits.</p> <p><u>Prepare and apply o two coats finishing coats weather guard to Crown Solo or other equal and approved to: -</u></p>	20	sm		
G	<p>Rendered wall surfaces externally.</p> <p>Plumbing</p> <p><b>Associated Pipework</b></p> <p>Supply and installation of Galvanised mild steel piping and fittings with screwed &amp; socketed joint to medium grade class "B" to BS. 1387 including bends, tee and unions joint and fitted to existing network.</p>	71	sm		
H	<p><b>GMS Pipework</b></p> <p>50mm dia. GMS pipes</p>	2	LM		
J	25mm dia. ditto	2	LM		
K	<p><b>Extra over Pipework</b></p> <p>50mm diameter gate valve brass coated as Pegler or equivalent.</p>	2	No.		
L	25mm diameter ditto	2	No.		
	Carried to collection				



SUMMARY PAGE.

ELEMENT	DESCRIPTION		PAGE NO.	K.SHS.
1	DEMOLITIONS AND ALTERATIONS		BW/ 1	
2	NEW WORKS		BW/ 5	
	TOTAL FOR BUILDERS WORKS IN CONNECTION WITH SPECIALISED WORKS CARRIED TO PRIME COST SUM AND PROVISIONAL SUM PAGE 2.			

Contractor's Official Rubber stamp Signature:...

NKR

*Ben*  
5/1/24

BW / 6

# PRIME COSTS & PROVISIONAL SUMS

Contractor's Official Rubber stamp Signature:....

NKR

*Ben*  
31/1/24 PC/1

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMNT
A	<p><u>Allow the following PROVISIONAL SUM to be expended in whole or in part upon the directions of the PM</u></p> <p><b>Contingences</b></p> <p>Kenya Shillings NINE HUNDRED AND ONE THOUSANDS, FOUR HUNDRED FIFTY SIX (KShs 901,456)only for contingencies.</p> <p><u>PRIME COST SUMS</u></p> <p><u>Allow for the following PRIME COST SUMS for works to be executed by a domestic sub-contractor</u></p> <p><b>Builders works</b></p>	1	ITEM	901,456	901,456.25
	B	1	ITEM		
	C	1	ITEM		
	D		%		
	TOTAL FOR PROVISIONAL COST AND PRIME COST CARRIED TO GRAND SUMMARY				

Contractor's Official Rubber stamp Signature:....

NKR

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31/7/24 PC/2

**PROPOSED REPLACEMENT OF LV BOARD , RISERS DISTRIBUTION BOARDS AT AND ASSOCIATED WORKS AT ELECTRICITY HOUSE NAKURU**

**GRAND SUMMARY**

BILL NO.	DESCRIPTION	Page No.	K.SHS.	CTS.
1	Preliminaries Works.	PRELIM/14		
2	Electrical works	E.W/8		
4	Prime cost & Provisional Sum.	PC/2		
	Sub-Total VAT Exclusive			
	Add 16% VAT			
<b>GRAND TOTAL TENDER SUM (VAT INCLUSIVE)</b>				

**Amount In Words:**

**Kenya Shillings:**.....

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.....

.....

**Name of Contractor:**.....

**Signature:**.....

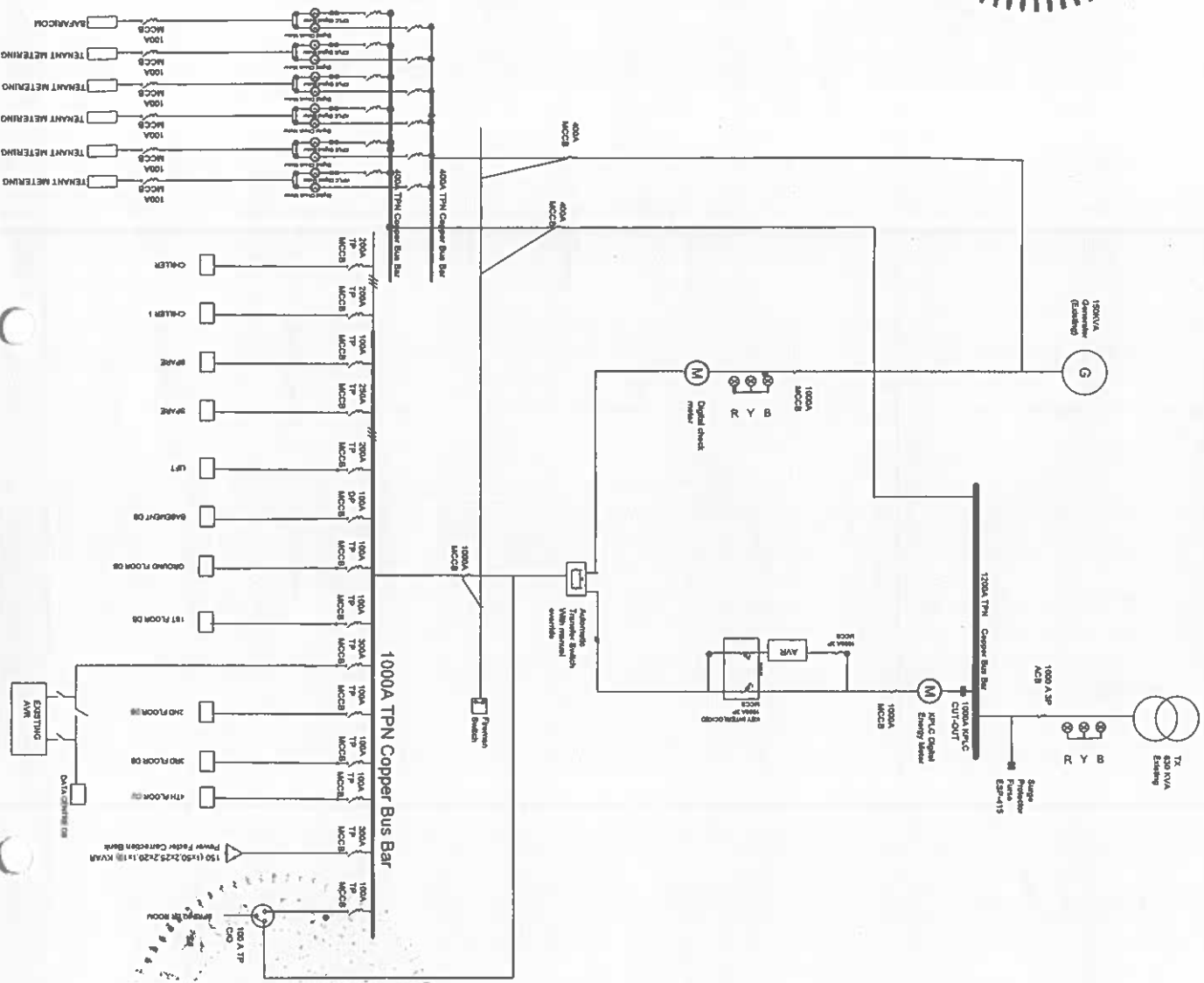
**Date:**.....

Official Rubber stamp Signature:.....

NKR.

*Ben* GS/1  
21/1/24



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