



**GOVERNMENT OF THE REPUBLIC OF ZAMBIA
MINISTRY OF INFRASTRUCTURE, HOUSING AND URBAN
DEVELOPMENT**

BILLS OF QUANTITIES

FOR THE PROPOSED

**INSTALLATION OF SOLAR POWER
GENERATION AT THE PROVINCIAL
ADMINISTRATION OFFICE BLOCK**

IN

MANSA DISTRICT - LUAPULA PROVINCE

**CONSULTANT
DEPARTMENT OF PUBLIC INFRASTRUCTURE
P.O. BOX 710003
MANSA
LUAPULA**

APRIL, 2025.

BILL NR. 1:
PRELIMINARIES AND GENERAL
ITEMS

PRELIMINARY AND GENERAL ITEMS

	<p>BILL OF QUANTITIES For the proposed</p> <p>PROPOSED INSTALLATION OF SOLAR POWER SYSTEM AT PROVINCIAL ADMINISTRATION</p> <p>IN</p> <p>MANSA DISTRICT - LUAPULA PROVINCE</p> <p>APRIL, 2025</p> <p>BILL NO. 1</p> <p>PRELIMINARIES AND GENERAL ITEMS</p> <p>NOTE:</p> <p>The Standard Preliminaries for Building Contract included in Section "A" of the Standard Specification of Materials and Workmanship for Building Works dated February, 1973 of the Contract Documents, have been omitted in its entirety there from, and replaced by the General Conditions and Preliminaries in this Bill of Quantities which shall be read, and understood to the full extent and meaning of each clause</p> <p>1.00 <u>PRELIMINARY PARTICULARS</u></p> <p>1.01 <u>Description of Works</u></p> <p>The works covered by the provisions of these Bills of Quantities are those required to the Proposed Installation of Solar power generation at Provincial Administration in accordance with the specifications engraved in the Bills of Quantities prepared by the Department of Public Infrastructure and to the Provincial Infrastructure Officers reasonable satisfaction.</p> <p><u>To Collection</u></p>	
		K

PRELIMINARY AND GENERAL ITEMS

1.02	<p>Names of Parties</p> <p>Employer: Government of the Republic of Zambia (GRZ)</p> <p>Client: Provincial Administration - Luapula</p> <p>Architect: Department of Public Infrastructure</p> <p>Electrical Engineer: Department of Public Infrastructure</p> <p>Quantity Surveyor: Department of Public Infrastructure</p> <p>The aforementioned terms of the parties shall be deemed to include their authorised representatives.</p>	
1.03	<p>Other Consultants</p> <p>Structural Engineers: Department of Public Infrastructure</p>	
1.04	<p>Description of Site</p> <p>The site of the works is situated at Provincial Administration in Mansa District, Luapula Province of Zambia</p>	
1.05	<p>Inspection of Site</p> <p>The Contractor shall visit and inspect the site at his own expense, previous to tendering and shall acquaint himself with the site, the accessibility of the site, the nature of the ground, the position and extent of all services, hidden services and, mains local conditions, the full extent and character of the work covered by the Contract, the supply of and conditions affecting labour, materials and the conditions under which the work is required to be executed, and no claim for variation, alterations or additional</p> <p style="text-align: center;"><u>To Collection</u></p>	K

PRELIMINARY AND GENERAL ITEMS

	<p>payment will at any time be considered or admitted on the grounds of lack of knowledge of the works, lack of information, deficiency of description or occasioned by any default of inspection on the part of the contractor or by any contingency arising which could be ascertained or indicated as a result of such inspection.</p>	
1.06	<p><u>Drawings and other Documents</u></p> <p>The drawings from which the Bills of Quantities have been prepared, together with location drawings, component details and the proposed contract Drawings are listed in Appendix 'A' attached to these Bills of Quantities.</p>	
1.07	<p><u>Bills of Quantities</u></p> <p>The Bills of Quantities are prepared in accordance with the principles of the standard method of measurement of building works: 5th Edition</p> <p>Bill Nr 2 contains description of materials and workmanship together with Section preambles, plant and protection clauses as well as other general item, and these are arranged in a similar order to that of the measured Bill Sections to which they refer and of which they are an amplification.</p> <p>Particulars for ordering materials shall be taken from the drawings and details or on the site and not from the Bills of Quantities.</p>	
2.00	<p><u>Contract</u></p>	
2.01	<p><u>Form, Type and Conditions of Contract</u></p> <p>The Contractor will be required to enter into a Contract in the current standard Form of Building Contract, FIDIC Minor works contract, Edition (incorporating) Amendments outlined under contract data</p> <p>The Contract will be executed under seal.</p> <p>For the purpose of this Bill the clauses of the conditions of contract are listed hereafter but the Contractor must read and acquaint himself with the full provisions and implications of the same and allow herein any sums of money which he deems necessary to comply completely with all the said provisions and implications and no claim will be admitted arising from the contractor's default so to acquaint himself with the said provisions and implications.</p>	
2.02	<p><u>Errors in Tender Bills of Quantities</u></p> <p>Error in the submitted Bills of Quantities shall be dealt with in accordance with Clause 27</p>	
	<p><u>To Collection</u></p>	K

PRELIMINARY AND GENERAL ITEMS

2.03	<p><u>Contractor's Liability</u></p> <p>The Contractor's attention is particularly drawn to the provisions of Clauses 10,11 and 12 of the Conditions of Contract with regard to injury to persons and property and Employer's indemnity, Insurance against injury to persons and property and insurance of the works against fire, etc.</p>	
2.04	<p><u>Notices and Fees</u></p> <p>The Contractors shall give all notices to Local Authorities and public undertakings and allow for the payment of all fees, charges.</p>	
2.05	<p><u>Rates and Taxes</u></p> <p>The Contractor shall include in his tender for all rates, taxes and other charges of a similar nature which may be levied by the appropriate Authority upon temporary buildings, plant, equipment or any other matters used either on the site or elsewhere for the purpose of the works</p> <p>NOTE: All rates to be inserted in the Bills of Quantities shall take into account the currency fluctuations as guided by the Zambia Public Procurement Authority in their letter No. ZPPA/11 dated 24 November, 2015.</p>	
3.00	<p><u>OBLIGATIONS AND RESTRICTIONS IMPOSED BY THE EMPLOYER</u></p>	
3.01	<p><u>Access to and Possession or use of Site</u></p> <p>The Contractor shall make his own arrangements for providing, maintaining and reinstating on completion adequate safe access to and egress from the site. His proposals for access and egress shall be submitted to the Architect for his approval prior to their implementation.</p>	
3.02	<p><u>Limitations of working Space</u></p> <p>The Contractor shall restrict his operation to within the confines of the site except when providing mains services and drainage works which extend beyond the site boundaries.</p> <p>The position of the Contractor's site storage area, site offices, canteen and toilet facilities shall be agreed with the Director of Public Infrastructures Representative prior to work commencing on site</p>	
3.03	<p><u>Limitations of working Hours</u></p> <p>Should the Contractor desire for his own convenience to work hours in excess of the normal working hours, he must first obtain permission from the Director of Public Infrastructures and he shall himself bear the cost of the overtime so worked. Where, however, the Director of Public Infrastructure directs the contractor to work hours in excess of the normal working hours, the net extra cost of the non-productive overtime so worked shall be borne by the site is operative and supervised for the standard hours worked by Sub-contractors and nominated Sub-contractors.</p>	
	<p><u>To Collection</u></p>	K

PRELIMINARY AND GENERAL ITEMS

3.04	<p><u>Materials Arising on site</u></p> <p>All sand, gravel. Etc, obtained from the excavations on the site shall remain the property of the Employer. When any such materials are approved by the Architect to be used in the works in substitution for any materials which the contractor would otherwise have provided, the materials will be paid for by the Contractor at a prices to be agreed.</p> <p>All materials arising from the excavations and not used on the works shall be disposed of as directed by the Architect.</p>	
	<p><u>Temporary Name Boards</u></p> <p>The contractor shall erect a trade sign for the project, and he shall be included for supplying, fixing and maintaining on the site, in a position to be approved by the Architect, the sign to be of approved size, design and construction, properly written up with the name of the Contract and the name of the Architect and Quantity Surveyor (or alternatively provision made for the standard 2400 x 600mm name boards of the Consultants), together with the names of the General Contractor and Sub contractors and he shall allow for removing and making good on completion of the Contract or as directed by the Director of Public Infrastructure</p> <p>Details of the sign shall be submitted to the Director of Public Infrastructure for his reasonable approval at least 4 weeks prior to erection.</p> <p>The Contractor shall also be reasonable for making application to the local planning Officer for the approval to the erection of notice board under the Town and Country planning Act.</p> <p>No trade sign other than the approved one will be allowed by the Director of Public Infrastructure on the site.</p>	
	<p><u>Advertisements</u></p> <p>The employer reserves himself the exclusive rights to all advertising upon the site and to all advertising space on any temporary fencing or hoardings, etc, erected by the contractor and for the purpose of this contract.</p>	
	<p><u>Maintenance of Existing Services</u></p> <p>Great care shall be taken to avoid any damage to exiting buried or hidden services and mains, sewers, or other works.</p> <p>All existing sewers, drainage systems, gas, electric, water and all other services on the site and to adjoining premises shall be fully maintained during the progress of the works and the Contractor shall take all necessary steps to prevent any interruption thereof and shall if necessary provide any temporary supports for the same before any excavation or demolition operations are commenced. Buried services shall be protected as they become exposed and shall be supported as necessary.</p> <p style="text-align: right;"><u>To Collection</u></p>	<p style="text-align: right;">K</p>

PRELIMINARY AND GENERAL ITEMS

	<p>The Contractor shall ascertain the position of all services before any excavation is commenced and he will be responsible for any subsequent damage and for paying all charges in connection with their reinstatement. No diversion of any of the said services other than as shown on the drawings or as instructed by the Director of Public Infrastructure shall be carried out without the written sanction of the Director of Public Infrastructures. Any temporary disconnection of services which may be necessary in connection with the works shall be done at such time as may be directed by the Director of Public Infrastructure</p> <p>The Contractor shall be responsible for maintaining close liaison with the local Authority and the Public Utility Authorities so as to avoid any disruption of the existing services.</p> <p>3.08 <u>Specific Order of Work</u></p> <p>The Director of Public Infrastructures shall carry out the works in such stages as the Director of Building or his representative may direct and he shall make due allowance for this in his tender. He shall also be responsible for the co-ordinating and phasing of all specialist work in accordance with these requirements.</p> <p>No claim for additional payment arising from the order in which the Architect requires the work to be carried out will be admitted unless such direction by the Architect constitute significant changes to the phasing of the works as indicated on the Contractor's programme.</p> <p>3.09 <u>Temporary Accommodation for the use of the Employer</u></p> <p>The Contractor shall provide temporary accommodation for the exclusive use of the Architect, Quantity Surveyor, and any other persons acting on behalf of the Employer on their visits and for site meetings. The area and specification of this accommodation shall be:-</p> <p>For site meetings and other purposes - not less than 21 square metres and not less than 2.50m high internally to the eaves: properly lined throughout internally and reasonably decorated, having a lockable door with a letter box, glazed opening windows and shutters secured from the inside, properly furnished and having a desk with at least four drawers to take A.O. size drawings laid flat, a suitable lockable cupboard panels on walls for pinning up drawings, hat and coat hooks.</p> <p>Toilet Accommodation - one unit housing 1 nr wc, 1 nr urinal and 1 nr. washbasin, complete with hot and cold water services, waste and drainage installations, disposable towels and dispenser. The drainage from the site toilets shall be connected to the main drainage system.</p> <p>Allow for the provision and maintenance of the above temporary buildings, including lighting, heating, fuel and attendance as required, cleaning, moving and adapting as necessary during the course of the works, and clearing away and making good on completion.</p> <p style="text-align: right;"><u>To Collection</u></p>	<div></div> <div>K</div>
--	---	--------------------------

PRELIMINARY AND GENERAL ITEMS

3.10	<p><u>Telephone for the use of the Employer</u></p> <p>The Contractor shall provide for the use of the Employer a telephone complete with dial lock and the contractor shall pay all charges in connection therewith, excepting that the net charges for the cost of all calls made on behalf of the Employer will be reimbursed to the contractor on production of authorised invoices, and the cost of those calls is provided for elsewhere in the Bills of Quantities under a Provisional Sum. NOT APPLICABLE.</p>	
3.11	<p><u>Certificates and Payments</u></p> <p>For the purpose of interim certificates and payments the contractor shall submit a detailed statement in support of each application for an interim payment showing the total value of the work properly executed to date and of the materials and good properly delivered upon the site, and shall include for paying any expenses which he may incur in connection with the preparation of such statements and in being represented at the measurement and valuation of the works.</p> <p>The Contractor shall include with each application for an interim payment all invoices, etc., from nominated suppliers and Sub-contractors in support of any sums included on their behalf in any sums application, together with receipted accounts for any sums included on their behalf in previous certificates.</p>	
3.12	<p><u>Contract Documents</u></p> <p>All Contract documents shall be equally binding upon the Contractors and the Contractor shall make such provisions and shall ensure that all Sub-Contractors are under the same obligations to him as he is to the Employer and the Contractor shall complete the works to the full intent and meaning of the Contract documents and to the reasonable satisfaction of the Director of Public Infrastructure.</p> <p>In the event of any discrepancy between the contract documents, then if such discrepancy is not resolved by the provisions of the Conditions of Contract, the matter shall be referred to the Architect whose decision upon such discrepancy shall be conclusive.</p> <p>At the completion of the Contract, the Contractor shall return to the Director of Public Infrastructure all plans, drawings and documents supplied to him for the purpose of the Contract.</p>	
3.13	<p><u>Master Programme</u></p> <p>The Contractor shall prepare a master programme for discussion with the Architect prior to commencement of works on site and shall include for providing an additional copy for use on site, together with additional copies for the Architect and Quantity Surveyor.</p> <p>The Programme shall make due allowance for the full expenditure of Provisional Sums and Provisional Quantities contained in the Bills of Quantities.</p>	
	<p><u>To Collection</u></p>	K

PRELIMINARY AND GENERAL ITEMS

	<p>The programme is to be based on the previously agreed draft programme and is to be prepared in such a manner that the planned programme and sequence of all the operations (including those of all Sub-Contractors and Nominated Sub-Contractors) may be readily compared with the actual progress of the work on site, and the Contractor shall allow for keeping up to date both the copy of the programme in his possession and the copy on the site by indicating in graphic form the true position reached in building operations.</p>	
<p>3.14</p>	<p><u>Name Products or Manufacturers</u></p> <p>Where in these Bills of Quantities any product is named by its brand or trade name, or where a firm is specified and named to carry out work, and whether or not these names are followed by the words "or similar equal and approved" or words of similar meaning: then unless these items are covered under Prime Cost Sum, the prices upon which the Contractor shall base his rates in the Bills of Quantities shall be the price for the item using the said named product, manufacturer or firm.</p> <p>Should the Contractor wish to submit any product other than the named product of the named manufacturer or have work carried out by another firm, then he shall make such submission as soon as possible after the signing of the Contract, and should the Director of Public Infrastructure wish to select any product other than the named then product or the product of the named manufacturer or specify another firm for any work, he shall notify the contractor of his decision to select the other product or firm as soon as possible after the signing of the Contract.</p> <p>Should the Director of Public Infrastructure in pursuance of his powers approve any product or the product of any manufacturer other than the product or manufacturer named or specify another firm, then an adjustment in the Contract Sum shall be made by the Chief Quantity Surveyor.</p> <p>The naming of any manufacturer or of any product shall not constitute nomination and such clauses shall be applicable only to nomination in respect of matters included in the bills if Quantities as Prime Cost Sums.</p> <p>The naming of any manufacturer or any product or firm shall not set up any special relationship between such named manufacturer or the manufacturer of such named product or such firm and the employer.</p>	
<p>3.15</p>	<p><u>Day works</u></p> <p>Works as performed as dayworks will only be admitted in accordance with the provisions of the Conditions of Contract.</p> <p>No payment in respect of non-productive overtime will be admitted in dayworks except in cases of emergency subsequently approved by the Director of Public Infrastructure or where the Architect has directed the Contractor to work hours in excess of the normal working hours. Such payments where admitted will be strictly net.</p>	<p style="text-align: right;">K</p>
	<p style="text-align: right;"><u>To Collection</u></p>	

PRELIMINARY AND GENERAL ITEMS

	<p>In all instance where works are performed as dayworks, the contractor shall submit to the clerk of <u>Works/Architect not later than the end of the week following that in which the works were performed full particulars in duplicate</u> of the nature of the works, the amount of time worked, the materials used and the mechanical plant employed, together with such corroborative detail by way of time sheets, invoices or other documents as will enable the clerk of works/Director of Public Infrastructure to satisfy himself as to the factual accuracy of the submitted particulars so far as hours of labour worked in respect of each class of workmen employed, quantities of each type of material used and hours of each kind of mechanical plant employed are concerned.</p> <p>When the Clerk of Works/Director of Public Infrastructure has satisfied himself as to the factual accuracy of the particulars submitted to him he shall sign them as a record of fact and return to the Contractor one copy of the signed particulars.</p> <p>The Contractor shall have the right to submit any matter to the clerk of Works/Director of Public Infrastructure or signature as a factual record and the clerk of Works/Architect shall not withhold signature if the facts shown are correct.</p> <p>Any signature of the Clerk of Works/Director of Public Infrastructure's representative shall not establish any right of payment.(as dayworks or in any other manner), the rates to be paid or any matter whatsoever, except the factual record referred to.</p>	
3.16	<p><u>Site Meeting</u></p> <p>The Contractor shall allow for all expenses in convening and attending site meeting and shall be responsible for arranging for attendance at these meetings by nominated Sub-Contractors when their presence is required.</p>	
3.17	<p><u>Information to the Architect</u></p> <p>Supply to the Director of Public Infrastructure or other Authorities all information required by them in connection with application and returns, progress or other matters that may be required.</p>	
3.18	<p><u>Person-in-charge</u></p> <p>Under the provision of clause 10 of the Conditions of Contract, the Contractor "shall constantly keep upon the works a competent person-in-charge". The person-in-charge shall have charge of no other job and he shall not be changed during the progress of the Contract except with the prior consent of the Director of Public Infrastructure.</p>	
	<p><u>To Collection</u></p>	<p>K</p>

PRELIMINARY AND GENERAL ITEMS

4.00	<u>WORKS BY NOMINATED SUB-CONTRACTORS, GOODS AND MATERIALS FROM NOMINATED SUPPLIERS AND WORKS BY PUBLIC BODIES</u>	
4.01	<p><u>Works by Nominated Sub-Contractors and statutory Undertakers</u></p> <p>The Contractor shall allow for all costs incurred in properly co-ordinating the works of Nominated Sub-Contractors and Statutory Undertakers and for obtaining in advance of construction all necessary information for the setting out positioning of holes, mortices, chases and the like. No claim will be entertained due to failure of the Contractor to obtain such information.</p> <p>The Contractor's attention is drawn to the fact that no allowance for Main Contractors discount will be made in respect of cost fluctuations on Nominated Sub-Contractors work and the Main Contractor will be deemed to have accepted this fact when entering the Sub-contract.</p>	
4.02	<p><u>Direct Contracts</u></p> <p>The Employer retains the right to enter into Direct Contracts. If the Direct Contractors are on site within the Contract Period then the Contractor shall allow unrestricted access to the relevant areas for the Direct Contractors.</p> <p>The Contractor shall include in his tender for affording all the same facilities, etc., to any Direct Contractor as he is required elsewhere in these Bills of Quantities and under the Conditions of Contract to afford to nominated Sub-Contractors.</p> <p>The Contractor shall also include in his tender for any additional cost to which he considers he may be put as a result of working in conjunction with any such Direct Contractor and no claim for additional payment will be admitted by the Employer as a result of such Direct Contracts other than payments for work specially ordered in writing by the Director of Public Infrastructure.</p> <p>All builder's work actually performed by the Contractor in connection with any such Direct Contract when specially ordered in writing by the Director of Public Infrastructure shall be measured on completion and valued under the provisions of the Conditions of Contract.</p>	
5.00	<u>GENERAL FACILITIES AND OBLIGATIONS</u>	
5.01	<p><u>Plant, Tools, Vehicles and Scaffolding</u></p> <p>Provide and Maintain all vehicles for carriage and haulage plant, mechanical plant, tools, labour, materials and whatsoever may be required to complete the works to the reasonable satisfaction of the Director of Public Infrastructure.</p> <p>Provide, erect and maintain all scaffolding required for the purpose of executing the works and make the same available for use of all Trades, Sub-Contractors and Nominated Sub-Contractors and no scaffolding shall be removed until instructed by the Director of Public Infrastructure.</p>	
	<u>To Collection</u>	K

PRELIMINARY AND GENERAL ITEMS

	<p>All plant, tools and scaffolding shall be maintained in such a manner as to comply with the requirements of the Safety, Health and Welfare Regulations or any amendment thereto, and records shall be maintained of periodic inspection with any other compliance with such regulations, and such records shall be kept upon the site and made available for inspection by the Director of Public Infrastructure or any other persons having reasonable cause to inspect such records.</p>	
5.02	<p><u>Site Administration and Security</u></p> <p>Provide and maintain all necessary day and night watching and lighting together with temporary barriers and fencing and take all other necessary precautions for the complete and adequate security of the works and the site and of all things on it and of the public, including the blind and infirm, and all persons lawfully using the site and premises during the progress of the Contract.</p> <p><u>NOTE:</u> - The Contractor's attention is drawn to the fact that the provisions of this clauses apply equally to the works to be executed outside the site boundary to make connections to mains services, connection of foul drainage to sewer and surface water drainage outfall.</p> <p>The Contractor shall take all precautions to eliminate as far as possible the danger to the public and other person arising from the entry and exit of vehicles to and from the site.</p>	
5.03	<p><u>Transport for Work People</u></p> <p>The Contractor will be deemed to have included in his tender for payment of all overtime, travelling time and expenses of cost of transport for workpeople, lodging and subsistence allowances, bonuses, etc. No additional amount in respect of costs incurred on these matters will be admitted.</p>	
5.04	<p><u>Protection Generally</u></p> <p>Take such measures to protect all works in all sections and by all Sub-Contractors and Nominated Sub-contractors as may be necessary and as the Director of Public Infrastructure may from time to time direct. In addition to any general protection required, the Contractor shall allow for providing particular protection to any special materials included in the works by Specialists, Sub-Contractors or Suppliers.</p> <p>Provide all sheets, tarpaulins and other coverings and protect any work which may be completed in advance of the Contract as a whole.</p> <p>Particular care shall be taken to case up and protect all work liable to damage by inclement weather. If any work shall be damaged by frost then the Contractor shall make good such work to the approval of the Director of Public Infrastructure subject only to the provisions of the Conditions of Contract.</p> <p>The contract shall suspend all painting or other works when in the opinion of the Director of Public Infrastructure the weather may be detrimental to work.</p> <p>Make good as directed by the Director of Public Infrastructure and to his requirement in respect of any works damaged and leave all works within the Contract perfect on completion.</p>	
	<p><u>To Collection</u></p>	<p>K</p>

PRELIMINARY AND GENERAL ITEMS

5.05	<p><u>Building in Adverse Weather Conditions</u></p> <p>The Contractor, as part of his best endeavours to prevent delay in the progress of the works, will be expected to adopt all reasonable measures to prevent or minimise harmful effects of weather conditions on the works. The extent to which he has taken such measures will be taken into account when considering any notice of delay due to exceptionally adverse weather conditions.</p> <p>In the event of inclement weather, the Contractor must submit for the approval of the Director of Public Infrastructures details of any special means and aids he may wish to adopt to achieve continuity of work but the Director of Public Infrastructure's approval of the use of such means and aids shall in no way relieve the Contractor of his responsibilities to make good or re-execute any work subsequently damaged through inclement weather.</p>	
5.06	<p><u>Water for the Works</u></p> <p>Provide and maintain an adequate temporary supply of clean fresh water for the whole of the works, complete with all necessary plumbing, stop and bib taps, tubs, tanks or other storage and all the necessary plumber's work.</p> <p>Make all the necessary arrangements with the local Water Authority and comply with all their formalities, including the provision of temporary meters if required, pay all charges and pay for all water used, remove all work in connection with the temporary water supply on completion and make good all work disturbed to the complete satisfaction of the Director of Public Infrastructures and the local water Authority.</p> <p>Allow for free use of water by all Trades, Sub-Contractors and Nominated Sub-Contractors.</p>	
5.07	<p><u>Lighting and Power for the Works</u></p> <p>Provide and maintain at all times, including periods of normal overtime by Sub-Contractors and Nominated Sub-Contractors if allowed all required temporary electric lighting and power at the appropriate voltage, with all required temporary wiring equipment and suitable transformer if necessary and all other wiring and lamps for providing and maintaining an adequate number of lighting and power points properly planned and positioned, all to the complete satisfaction of the Electricity supply Authority.</p> <p>Pay all charges in connection therewith and make the same available free of cost to all trades, Sub-Contractors and Nominated Sub-Contractors.</p> <p>Where the electric cable and supply are laid on to the site before the building is completed and the Contractor, Sub-Contractor or Nominated Sub-Contractors wish to make use of the service, the Contractor must become the official user of the electricity consumed on the site, and must enter into an agreement with the electricity Supply Authority and comply with all the formalities of that Authority and arrange for temporary metering, checking meters and payment of charges for all electricity used, including that used by Sub-Contractors and Nominated Sub-Contractor, from time to time the supply is first required to the final handing over of the building.</p>	
	<p style="text-align: center;">To Collection</p> <p style="text-align: right;">K</p>	

PRELIMINARY AND GENERAL ITEMS

	<p>If temporary lighting is required before the electricity supply is available, the Contractor must provide and maintain such temporary lighting.</p> <p>All temporary wiring for portable equipment, etc., must comply with the safety measures laid down by the Zambia Electricity Supply Corporation.</p> <p>NOTE: - Provision is made in the Prime Cost and Provisional Sums section of these Bills of Quantities for pricing free power to Nominated Sub-Contractors.</p> <p>Should the Contractor, Sub-Contractors or Nominated Sub-Contractors require the supply for welding purposes, the Contractor must first ascertain from the Supply Authority whether they will permit this type of load and he will be required to furnish details of voltage and power factors of the plant it is proposed to use before the Authority can make their decision.</p> <p>5.08 <u>Temporary Roads, Hard standings, Crossings, Etc.</u></p> <p>Provide and maintain any temporary roads and hard standings, including any necessary temporary crossings over public footpaths, required for the purpose of executing the works, remove and clear away on completion and make good to the satisfaction of the Director of Public Infrastructures</p> <p>Before any temporary roads, hard standings and crossings are formed the Contractor shall submit his proposals for sitting such temporary roads, hard standings and crossings to the Director of Public Infrastructures for approval and such temporary roads hard standings and crossings shall be sited only in the positions approved by the Director of Public Infrastructures If, because of the exigencies of the Contract, it is necessary to remove and re-site any temporary roads, hard standings and crossings, then the Contractor shall remove and re-site them immediately upon receiving the written directions of the Director of Public Infrastructures and such removing and re-sitting shall be performed entirely at the sole expense of the Contractor.</p> <p>5.09 <u>Temporary Accommodation for use of the Contractor</u></p> <p>Provide as necessary temporary sheds, offices, mess rooms, sanitary accommodation and other temporary buildings as required for the works.</p> <p>The Contractor's attention is particularly drawn to the fact that no part of the buildings will be allowed to be used as storage space or workshop accommodation unless written consent is first obtained from the Director of Public Infrastructures, which consent shall be at his sole discretion.</p> <p style="text-align: center;"><u>To Collection</u></p>	<p style="text-align: center;">K</p>
--	---	--------------------------------------

PRELIMINARY AND GENERAL ITEMS

5.10	<p><u>Temporary Telephone for the use of the Contractor</u></p> <p>The Contractor shall provide a Zamtel telephone for the use of his own site staff and pay all charges in connection therewith.</p>	
5.11	<p><u>Traffic Regulations</u></p> <p>The Contractor shall include in his tender for any additional costs to which he may be put by reason of having to comply with any Police Regulations in connection with the restriction of traffic routes to be taken by vehicles coming on to the site, loading or unloading of or waiting by vehicles or in connection with any other matters affecting the carrying out of the Contract.</p>	
5.12	<p><u>Safety, Health and Welfare of Workpeople</u></p> <p>Allow for providing and maintaining all measures which under or by virtue of the provisions of any enactment or regulation or the working rules of any industry the Contractor is required to take for the safety, health and welfare of workpeople employed on the site by himself or by Sub-Contractors or by Nominated Sub-Contractors.</p> <p>In addition the Contractor will be required to appoint a Safety Officer in accordance with the requirements of the Health and Safety Act.</p>	
5.13	<p><u>Disbursement arising from the Employment of workpeople</u></p> <p>Allow for all charges in respect of National Insurances and Pensions for Workpeople. Allow for all payments in connection with Annual and Public Holidays for workpeople, sick Pay scheme, Training scheme, Redundancy payment Act etc.</p> <p>Allow for all payments due as a result of the operation of the guaranteed minimum period and for time lost by inclement weather.</p>	
5.14	<p><u>Maintenance of Existing Buildings, Services, Public and Private Roads, etc.</u></p> <p>Great care shall be taken to avoid damage to existing buildings, adjacent properties, pavements, roads, kerbs, lawns, trees, shrubs, gardens or other works and additionally the Contractor shall take all necessary precautions to avoid all vehicles used in connection with the Contract from damaging or depositing mud, etc., upon the public highway or other private or public roads and footpaths.</p> <p>The Contractor shall be responsible for any damage or disturbance caused or mud, etc. deposited, and shall make good any damage or disturbance and clear up any mud, etc. deposited at his own expense to the satisfaction of the Director of Public Infrastructures and the appropriate Authority and he shall indemnify the Employer from any claims, costs or expense arising there from.</p> <p>Prior to commencement on site the Contractor must prepare and agree a "Schedule of Conditions", supported by photographs, of the existing buildings surrounding roads and footpaths, walls, etc., with the Director of Public Infrastructures, respective owners and Authorities.</p>	
	<p><u>To Collection</u></p>	K

PRELIMINARY AND GENERAL ITEMS

5.15	<p><u>Remove Rubbish and Cleaning</u></p> <p>Keep the site clean, clear up and remove all rubbish and debris, including Sub-Contractors' and Nominated Sub-Contractors' rubbish and debris, as it accumulates at regular intervals and at completion and leave the whole of the works internally and externally and the site clean to the satisfaction of the Director of Public Infrastructures.</p> <p>If for any reason it is necessary to permit rubbish to accumulate upon the site for any short period such accumulation shall only be permitted where directed by the Director of Public Infrastructures.</p> <p>Clean the whole of the works on completion (including furnishings, fixtures and fittings), internally, polish all glass and leave fit for occupation.</p>	
5.16	<p><u>Drying the Works</u></p> <p>Provide and include for drying out the Buildings as may be necessary to facilitate the progress and satisfactory completion of the Works, including the works of Sub-Contractors and Nominated Sub-Contractors.</p> <p>The Contractor must allow for all costs for providing temporary equipment, fuel and attendance for drying and controlling the humidity and temperature of the works consistent with the various materials used and prevailing weather conditions.</p>	
5.17	<p><u>Temporary Fencing, Hoardings Etc.</u></p> <p>Provide and maintain all necessary adequate temporary fencing, hoardings, fans planked footways, guard rails, gantries and the like for the protection of the public, including the blind and infirm for the proper execution of the works and for meeting the requirements of the local and other Authorities and current safety, Health and Welfare regulations.</p> <p>Remove all such temporary work on completion of the works and make good.</p>	
5.18	<p><u>Control of Noise, Pollution and all other Statutory Obligations</u></p> <p>The attention of the Contractor is drawn to the provisions of the Control of Pollution Act 1974 with reference to the control of noise in relation to any demolition or construction works and the need, particularly where such works are adjacent to occupied property where a high sensitivity to noise may be anticipated, to ascertain from the statutory Authority what requirements or restrictions, if any, shall apply to works in this respect</p> <p>The restrictions may relate to the type of plant to be used, the methods of working to be adopted, the hours of working permissible and may in addition impose a maximum noise level at the site boundary which must not be exceeded. The attention of the Contractor is also drawn to the provisions of sections 61 of the Control of Pollution Act with reference to the issue of prior consent and any application under that Section should be made to the statutory Authority on the appropriate form available from them.</p>	
	<p><u>To Collection</u></p>	K

PRELIMINARY AND GENERAL ITEMS

	<p>The Contractor is to be held responsible for complying with such requirements, restrictions, or consents, together with any other stipulations to which his attention may be drawn from time to time by the competent Authorities and is to allow herein, for any costs or expenses arising from such compliance.</p> <p>No instruction issued to the contractor by the Director of Public Infrastructures or his authorised representative shall relieve the Contractor from compliance with the Control of Pollution Act.</p>							
6	<u>GENERALLY</u>							
6.01	<u>Attendance</u> Provide and include for the attendance of Trade upon Trade and upon all Sub-Contractors and Nominated Sub-Contractors, as may be required to complete the work and leave perfect on completion.							
6.02	<u>Applicable Provisions</u> The provisions and descriptions of each Bill apply equally in all applicable provisions and descriptions to all Bills and the Contractor shall make himself fully acquainted with all such applicable provisions and descriptions and shall provide and include for any sums necessary to cover the requirements of the same.							
6.03	<u>Acceptance</u> The Employer is not bound to accept the lowest or any Tender or to pay the costs or expenses arising from the submission of any tender and the Employer reserves the right to obtain further tenders without obligation if so desired.							
	<u>NOTES:- (i) Provision is made on the General Summary Sheet for pricing of all</u> insurance statutory Orders and Regulations should the Contractor desire to price these items on the General Summary in lieu of pricing them within the body of Bill Nr 1 or within his rates							
	(ii). The Valuation of Preliminaries shall be as follows: <table><tr><td>Site Establishment</td><td>15%</td></tr><tr><td>Value Related</td><td>80%</td></tr><tr><td>Demobilization</td><td>5%</td></tr></table>	Site Establishment	15%	Value Related	80%	Demobilization	5%	
Site Establishment	15%							
Value Related	80%							
Demobilization	5%							
	(iii) For adjudication of Extension of Time with cost 10% of the Value of the Preliminaries (Time and value Related) shall be the basis							
	(iv) All Preliminaries and General Items shall be priced item by Item, except the ones that are marked NOT APPLICABLE							
	To Collection	K						

PRELIMINARY AND GENERAL ITEMS

BILL NR 1		
<u>PRELIMINARIES AND GENERAL ITEMS</u>		
	Page Nr. 1/1	K
	Page Nr. 1/2	K
	Page Nr. 1/3	K
	Page Nr. 1/4	K
	Page Nr. 1/5	K
	Page Nr. 1/6	K
	Page Nr. 1/7	K
	Page Nr. 1/8	K
	Page Nr. 1/9	K
	Page Nr. 1/10	K
	Page Nr. 1/11	K
	Page Nr. 1/12	K
	Page Nr. 1/13	K
	Page Nr. 1/14	K
	Page Nr. 1/15	K
	Page Nr. 1/16	K
	<u>BILL NR 1 - PRELIMINARIES AND GENERAL ITEMS</u>	
	<u>CARRIED TO GENERAL SUMMARY</u>	K

BILL NR. 2:
DESCRIPTION OF MATERIALS AND
WORKMANSHIP

DESCRIPTION OF MATERIALS AND WORKMANSHIP

SPECIFICATION AND BILLS OF QUANTITIES

for the

PROPOSED INSTALLATION OF SOLAR POWER GENERATION AT PROVINCIAL ADMINISTRATION OFFICE BLOCK IN MANSA DISTRICT, LUAPULA PROVINCE

BILL No. 2

1.00 Standard specification for Materials and Workmanship

1.01 The Specification for materials and workmanship is the “Standard General Specification of Materials and Workmanship for Building Works” interim metric 1970 edition current at time of tendering with any amendments, addenda or supplements thereto, together with any Particular Specifications, if any, all as detailed in the tender documents and on the drawings. These shall be read as mutually explanatory one with the other. Where a particular Specification is incorporated, it will take precedence and shall prevail over the Standard General Specification should any conflict discrepancy arise between these documents.

GENERALLY

2.00 Materials

2.01 All materials shall be of the specified quality if specified, shall be of the Generally best of the quality, no better quality being obtainable, trade usage's to the contrary notwithstanding. Where no quality is specified and a Specification issued by the British or Zambian Standards Institutions is current and is appropriate, all goods and materials shall where practicable be in accordance with the Specification. All materials shall be from approved manufacturers.

In the event of materials or articles specified being temporarily unobtained, the Contractor shall submit alternatives for the Director of Public Infrastructure's consideration in order to prevent delay.

Materials generally are referenced to the British or Zambian Standards. Where two or more Standards of the same reference number are issued the latest issued shall be the one applicable.

All materials shall be properly protected from snow, frost and inclement weather and any materials damaged shall be removed from the site immediately and replaced with sound materials.

2.02 The Director of Public Infrastructure may require the Contractor to submit samples of any Samples materials to be used in the works and if so required the Contractor shall submit samples without delay. The Director of Public Infrastructure may give or withhold approval of any submitted samples, and in the latter case may require the Contractor to re-submit further samples until an approved sample is submitted. All materials used in the works in respect of which samples have been submitted shall be equal in all respects to the samples in order to check that actual materials used in the works correspond thereto

2.03 The Director of Public Infrastructure may require the Contractor to test any of the material used Testing in the works and when so required the Contractor shall at his own expense supply test samples of pack in suitable containers and forward them to a firm or testing laboratory nominated or Materials approved by the Director of Public Infrastructure for such tests as the Director of Public Infrastructure may require. If the results of those tests are satisfactory and are approved by the Director of Public Infrastructure then the fees or charges of the firm or testing laboratory shall be paid by the Employer, but if the results of those test are unsatisfactory and are not approved by the Director of Public Infrastructure then the said fees or charges of the firm or testing laboratory shall be borne by the Contractor.

2.04 All materials used in the works shall be approved by the Director of Public Infrastructure and Approval no materials shall be used in the works which have not received the Director of Public Infrastructure of approval. Any materials sent onto the site of the works in respect of which the Director of Public Infrastructure may withhold approval shall be removed from the site within twenty-four hours.

2.05 Where approved materials or articles of every description and kind detailed in the Specification are of local manufacture or fabrication, these will be given preference over imported materials and must be used in the works.

2.06 Where a specific article or material is referred to by a trade or manufacture's name or is specified by a catalogue, or other reference number of description, it shall be deemed to indicate only the style type or quality of the article or material required and shall in no way restrict the Contractor's choice of supplier, provided that the alternative article or material offered is "equal and approved" to that specified, in the opinion of the Director of Public Infrastructure.

No claim will be entertained for any reason if any article or material is rejected as unsuitable by the Director at any time.

2.07 Where a British Standard is referred to in the Specification the relevant material or article shall Comply therewith. Where a Zambian Standard, exists which properly covers an article, at the Date of tender, then the conditions of that Zambian Standard shall apply. Provided always that The cost of the material or article so supplied shall not exceed the cost of the complying with The British Standard.

3.0 WORKMANSHIP

3.01 All workmanship shall be of the highest possible standard and shall accord with the recommendations in any appropriate current British or Zambian Standard Code of Practice.

BILL NO 2: DESCRIPTION OF MATERIALS AND WORKMANSHIP

TOTAL – CARRIED TO GENERAL SUMMARY

K_____

BILL NR. 3:
SOLAR POWER INSTALLATION

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	ADMINISTRATION SOLAR POWER GENERATION				
	<u>Supply, install and set to work solar generation system comprised of the following, including marking the position of holes, mortices, chases and the like in the structure, testing, protecting and commissioning</u>				
A	580W Monocrystalline Solar Module	Nr	20		
B	15kVA Three Phase Hybrid Smart Inverter	Nr	1		
C	48V 300Ah installed Lithium-Ion battery capacity	Nr	4		
D	Installation sundries complete with PV Cabling, Battery Cabling, AC Connection Cabling, Male/Female connectors, TP AC MCB's, Lightning Arrestors, AVS, ATS, DC Distribution Board C/W Accessories, Battery Disconnect, Solar Panel Rails/Support Structure for Roof/Ground Mount and Battery Rack/Stand.	Item	1		
	SOLAR POWER GENERATIONS - TOTAL CARRIED TO SUMMARY			K	

BILL NR. 4:
PRIME COST AND PROVISIONAL
SUMS

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<p><u>Include the following NET Provisional Sums to be expended by the Provincial Infrastructure Officer or omitted if not expended</u></p> <p><u>DAY WORKS</u></p> <p>A Allow the Provisional Sum of Five Thousand Kwacha (K5,000.00) for net cost of labour employed on authorised daywork cost based on the statutory minimum rates of wages to workmen as laid down under Industrial Relations Act- Volume X Cap 517</p> <p>B Add Percentage allowance for the cost of statutory and other obligations expenses and allowance arising out of the employment of the labour and including for all relevant contractor's overheads and profit on time 'C'</p> <p><u>MATERIALS</u></p> <p>C Allow the Provisional Sum of Five Thousand Kwacha only (K5,000.00) for net cost of materials and articles incorporated in authorised daywork at invoice rates including for a maximum of 5% cash discount if due to the contractor</p> <p>D Add Percentage allowance to cover complete cost of incorporating materials into the works including delivery of materials to site, off-loading, storing, checking replacing defective items, establishment charges all transport and for installation of materials on site and all contractor's overheads and profit on item 'C'</p> <p style="text-align: right;"><u>To Collection</u></p>			<p>K</p> <p>% K</p> <p>K</p> <p>% K</p> <p>K</p>	

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<u>PRIME COST AND PROVISIONAL SUMS</u>				
A	Allow a Provisional sum of Five Thousand Kwacha only (K 5,000.00) for Supervision and Administration costs Stationery allowances, Fuel, Site inspections works			K	
	<u>Contingencies</u>				
B	Provisional Sum for Contingencies to be expended by the Provincial Infrastructure Officer or omitted if not expended for any unforeseen Variations not measured - Twenty Thousand Kwacha only (K 30,000.00)			K	
	<u>To Collection</u>			K	
	<u>COLLECTION</u>				
	Page No.4/1			K	
	Page No.4/2			K	
	<u>PROVISIONAL SUMS AND PRIME COST</u>				
	<u>TOTAL CARRIED TO SUMMARY</u>			K	

GENERAL SUMMARY

GENERAL SUMMARY

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	<p align="center">BILLS OF QUANTITIES</p> <p align="center">For the Proposed</p> <p align="center">INSTALLATION OF SOLAR POWER GENERATION</p> <p align="center">at</p> <p align="center">PROVINCIAL ADMINISTRATION</p> <p align="center">OFFICE BLOCK</p> <p align="center">in</p> <p align="center">MANSA DISTRICT - LUAPULA PROVINCE</p>				
	GENERAL SUMMARY				
BILL NR. 1	PRELIMINARIES AND GENERAL ITEMS			K	
BILL NR. 2	DESCRIPTION OF MATERIALS & WORKMANSHIP			K	
BILL NR. 3	SOLAR POWER INSTALLATION			K	
	Carried Forward			K	
	(i)				

GENERAL SUMMARY

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	Brought Down			K	
	Add for the following in accordance with provisions of the contract (if not included within the body of the Bills)				
	<u>All Insurance</u>		Item	K	
	All Statutory orders and Regulations		Item	K	
	Water for the Works		Item	K	
	Any other Matters		Item	K	
				K	
	Should the Contractor desire to make any general increase or decrease on the above total, it is to be made here and the amount will be treated as a percentage of the total as above, after deducting the net amount of all provisional and prime cost sums uncluding profit. The rates inserted by the contractor against the items through out this tender will be deemed to be adjusted accordingly by this percentage.	%		K	
				K	
	BILL NR.4 PRIME COST AND PROVISIONAL SUMS			K	
	Add 16% Value Added Tax			K	
	TOTAL CARRIED TO CONTRACTOR'S BID FORM			K	
	Signature of Contractor :.....				
	Name of Firm:.....				
	Address:.....				
	Date:.....				
	DEPARTMENT OF PUBLIC INFRASTRUCTURE P.O BOX 710003 MANSA, LUAPULA				
	(ii)				