



BUILDING FLOURISHING COMMUNITIES

Terms of Reference (T.O.R) Field Mission.

1. Work plan:
 - One day training of the technicians on the installation requirements of laboratory room for GeneXpert machine
 - Installation of the solar system (solar panel, batteries, inverter, A.C, power controller, room lights and sockets)
 - Inspections, testing for the performance of the system and
 - commissioning of laboratory solar system to the authorities
2. Expected working days for installation of one site is 4 days which include.
 - ✓ Day 1- internal installation of battery bank, inverter, charger controller, A.C, sockets, and lamp holders with connection of the distribution box,
 - ✓ Day 2- solar installation on the roof
 - ✓ Day 3- system allowed to charge fully
 - ✓ Day 4- testing of the system and commissioning to the authorities.
 - ✓ Day 5- depart from that facility.
3. Payment terms
 - Consultant will be paid per location that he has finished, so the agreement is based per site
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SCOPE OF WORK.

SOLAR					
1	Automatic voltage stabilizer AVS	mount the AVS box in the wall closer to the indoor A.C unit, connect the AVS to the a.c and to the socket using wires.	N0	1	
2	AC- LG . 70% Engergy saving with DUAL INVERTER COMPRESSOR	select the right installation area, fix the mounting plate and drill outlet hole, mounting the indoor a.c unit, choosing the right installation spot, fixing the wall brackets, mounting the outdoor unit, connecting the wires, connecting the copper pipes	N0	1	
3	Solar panels 24vdc, 280 watts cells made in German	set up scaffolding for safety during installation on the roof. Solar panel mounting system has to be set up, install the solar panels on the mounting structure, wire the solar panels, install solar inverter, bond the solar inverter and solar battery, connect the inverter to the consumer unit, start and test solar panels	N02	12	
4	Solar battery 220AH/12V vitron	place the metallic frame with wooden top on the right position, remove the batteries from its box and place them on the metallic frame, with good spacing, connect the cable jumpers using bolts and nuts and tighten the jumper at the terminals, connect the polarities to the charger controller and the solar inverter.	N0	10	
5	Inverter 3.5kva vitron 24Vdc	mount the solar inverter on the a good site on the wall, connect the inverter to the batteries using electric cables, connect the output line to the consumer distribution unit,	Item	1	
6	Power stabilizer 1.5kva	connect the power stabilizer to the socket outlet from the wall. Connect the output from the stabilizer to the load(genexpert machine and workstation PC)	Item	1	
7	flexible solar Cable 6mm	connect the flexible solar cable with each solar panels, connect the cable to the charger controller in the charging room.	meter	40	
8	Support stand with wooden top for 12 batteries	place the mettalic stand with wooden top in a suitable position for the batteries to be placed	N0	1	
9	Metallic frame for solar panel	mount the metallic frame on the roof of the building using the righ mounting materials	N0	24	
10	cable jumpers	use the cable jumpers to connect the batteries in series - parallel	N0	36	
11	cable 2.5mm, twin and earth	connect the internal wiring of the laboratory for lights, sockets, A.C switch and AVS, from the distribution board	N0	1	
12	Charger controller 60AMP MPPT, 12/24/48vdc	mount the charger controller on the wall using a good appropriate material connect the solar and batteries using the connecting wires from the controller	N0	1	
Total					

Detail plan for site visits

<i>s/no.</i>	<i>Location</i>	<i>State</i>	<i>county</i>	<i>Expected installation date.</i>
1.	Tambura hospital	WE	Tambura	
2.	Luonayker PHCC	Warrap	Gogrial East	
3.	Renk civil Hospital	Upper Nile	Renk	
4.	Nasir Hospital	Upper Nile	Nasir	
5.	Kodok hospital	Upper Nile	Fashoda	
6.	Boma Hospital	Jonglei	Pibor	
7.	Akobo Hospital	Jonglei	Akobo	
8.	Raja Hospital	WBG	Raja	
9.	Kajo Keji Hospital	CE	Kajo Keji	
10.	Matangai PHCC	Lakes	Rumbek centre	
11.	Chukudum Hospital	EE	Budi county	
12.	DLBH/Panyangro Hospital	Jonglei	Duk	
13.	Terekeka Hospital	CE	Terekeka	
14.	Nyamlel TB Hospital	NBG	Aweil West	
15.	Cuibet County Hospital	Lakes	Cuibet	
16.	Wulu PHCC	Lakes	Wulu	
17.	Waat PHCC	EE	Kapoeta East	
18.	Narus Govt PHCC	EE	Kapoeta East	