

## SUMMARY

This Proposal is to install a solar powered water pump with a 10,000 liter water storage tank and two meter high tank stand at Peace Demonstration Farm. We are referring to this as “Phase 2” of installing the water system at Peace Farm.

We have fund-raised the capital necessary for the initial installation and drilling of the borehole at Peace Demonstration Farm. We have signed our contracts, and we are scheduled to break ground on the water well June 25<sup>th</sup> 2013. (Copies of these documents are available upon your request.)

For Phase 2, we have decided to contract with Innovation Africa, as Sumadhura Technologies is currently unable to install the pumping system we require. The quote from Innovation Africa is \$12,000 USD including the underground pumping mechanism, large solar panels, the storage tank, and all other minor essentials, labor, and mobilization necessary to complete Phase 2 of the water system. The tank stand needs to be a minimum of 2 meters high as the farm is on a gradual slope and the drip irrigation system (Phase 3) will dependent on the force of gravity to spread the water and irrigate the property. The tank stand comes to \$1,905.83 USD making the total amount of money needed to complete Phase 2 of the water system project \$13,905.83 USD.



## INTRODUCTION

Peace Demonstration Farm is a project of Grassroots Uganda- Empowering African Women (GRU). The mission of Grassroots Uganda is to help women pull themselves out of poverty by giving them a hand up, instead of a hand out. The purpose of the farm is to teach Ugandans to expand their thinking about farming, and to teach them new and innovative farming techniques. Instead of focusing on local and mass produced crops, which keep most small farmers living a subsistence hand to mouth lifestyle, Peace Farm teaches them the value of growing cash crops that can be sold to the upcoming and ever changing multi-cultural market. We value hard work and dedication and through our own efforts, we are leading by example and both showing and teaching people that through hard work they too can improve their lives and the lives of their families.

For additional information about the general demographics of the region and the people, please refer to the proposal regarding Phase 1- Drilling a Borehole at Peace Demonstration farm.



Some of the cash-crop produce from Peace farm

## DESCRIPTION OF THE PROJECT

Our proposed project (Phase 2 of installing our water system) is to install an underground solar pump, with large solar panels, 10,000 liter water storage tank and tank stand at Peace Demonstration Farm.

We require this pumping and water storage system, as in the future we plan on hooking up the tank to a drip irrigation system such that we can constantly water our crops in a sustainable fashion during our dry seasons. This will help the farm run smoothly and be sustainable as eventually the produce from the farm will be able to fund all operations and initiatives of Peace Demonstration farm.

We are using a solar pump as the village currently does not have access to electricity, and using a diesel pump is both costly and bad for the environment.

As we are a demonstration farm, our job is to demonstrate new and innovative farming techniques to our target demographic, which is rural farmers, primarily women. One of the farming techniques we are teaching is simply watering the crops during times of drought, or basic irrigating. We understand that the average

villager will not be able to install their own irrigation systems, but seeing as their cash crop farming would be on a much smaller scale than we are farming, they will be able to easily water the crops by hand, especially seeing as in July the village will have easy access to our newly drilled borehole!

Currently, Peace Demonstration Farm is using water harvested from a newly installed water catchment system. This is a large water tank attached to rain gutters that gather rain water from the roof of Peace Farm Director, Fred Kyakonye's house. Seeing as we get HOT during the dry season, we are currently using a basic rudimentary form of drip irrigation, by pricking holes in large plastic bottles and placing the bottles strategically around the crops and new trees.



Our current form of drip irrigation System



Sack gardening is another technique we teach and practice

## **BUDGETS**

Attached are the Budgets from Innovation Africa and for the Water Tank Stand. Please note that the budget from innovation Africa lists the water tank as holding 8,000 liters. This is a typo and they have assured me that a 10,000 liter water tank will be installed at the same listed price.

The total price from Innovation Africa is \$12,000 USD, and the cost of building the Tank Stand is \$1,905.83 making the total funding we require to complete Phase 2 of installing a water system at Peace Demonstration Farm \$13,905.83



# INNOVATION AFRICA LTD

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P.O. Box 36160

KAMPALA

UGANDA

REF: Q244

## QUOTATION

Lee Koelzer  
Mukono  
Uganda

4/2/2013

Please find below our quotation for solar powered water pumping system, equipment and associated installation works for your project in Mukono

Sizing of pump is based on a requirement of approx 10,000L per day, a CASS pump simulation will be submitted and is to be used in conjunction with this quotation to confirm the average water yields expected.

Item	No	Description	USD
1	1	Mono Sun Sub Series 2000 solar water pumping system fitted with 50 mm x 2.5mm submersible cable	3,500.00
2	2	1 x 525 w Solar arrays in anti theft frames mounted on 4.5m high posts at borehole location includes electrical interconnection cables.	3,800.00
3	4	Plumbing works: a) Steel borecap assembly and 1 1/4" GI to below ground BH, b) 40m of 40mm HDPE rising main from pump to surface c) 40m pump rope safety cabling and fittings d) HP float stop valve for tank full switching e) 100m supply pipe from borehole location to tank f) GI 1 1/4" pipe in/out of tank (connection provision) g) 8,000L tank to be installed on client base	3,200.00
4	4	Transport, accommodation, materials and labour to install all of the above	1,500.00
		VAT exempt community water project	
<b>TOTAL USD:</b>			<b>\$12,000.00</b>

### NOTES:

- 1) Quotation Valid for 60 days
- 2) Payment terms require 50% on order with Items, balance within 14 days of installation.

Yours Sincerely

Neil G Robertson  
Innovation Africa Ltd

Authorised Distributor of **Mono** Pumps and Equipment

<b>WATER TANK STAND</b>			
<b>Description/ item</b>	<b>Quantity</b>	<b>Amount</b>	<b>Total</b>
concrete stones/ ton	10	50,000	500,000
cement/ bag	22	29,500	649,000
lake sand/trip	2	250,000	500,000
clay bricks	2,000	220	440,000
iron bars	18	30,000	540,000
ring wires	30	4,500	135,000
building wires/ kg	10	3,000	30,000
slab timbers	35	11,000	385,000
slab poles	30	3,500	105,000
nails/kg	6	6,000	36,000
transport	1	300,000	300,000
Labor mason 3 @ 20,000ush per day each	7	60,000	420,000
Labor porters 3 @ 12,000ush per day each	7	36,000	252,000
black plastic sheeting/ meter	12	5,000	60,000
small timbers	13	4,000	52,000
floor sand	1	170,000	170,000
<b>Total</b>			<b>4,574,000</b>
<b>USD (exch rate 2400ush/ \$1)</b>			<b>\$ 1,905.83</b>