EarthSpark International
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Washington, DC 20006
USA

REQUEST FOR QUOTES – REPAIRS TO THE LES ANGLAIS GRID

To Whom It May Concern:

EarthSpark International is pleased to invite you to submit a quote for providing and installing Electrical Items & Accessories as described below on EarthSpark's Les Anglais microgrid.

The Les Anglais microgrid was launched in April 2015 as a town-sized solar hybrid smart grid serving 450 connections at its peak. The grid was comprised of 93kW of PV panels, 410kWh of battery storage and a small diesel backup generator. A distribution system of 1.3 km of 7.2kV medium voltage lines and 4.5 km of 120V low voltage lines was designed and installed by the firm GEMSA, based out of the Dominican Republic.

Unfortunately, the Les Anglais grid was seriously damaged due to Hurricane Matthew in October 2016. 40% of the solar panels were lost as well as most of the distribution system and home connections. The purpose of this RFQ is to procure materials needed to repair the distribution system. EarthSpark cannot provide funds for exploratory visits at this time, but will welcome visits with advance notification.

Submissions should be quoted in **USD** and are for labor and materials only. Required documents are listed below. Quotes should be valid for a minimum of 120 days from submission. Quotes will be accepted in English or French. All contracting will take place in English. Quotes should be submitted to info@earthsparkinternational.org by August 24, 2017 at the latest. Please send any questions to info@earthsparkinternational.org.

1. **Documents required for submission**
    a. Company Certificate of Incorporation
    b. Completed Delivery Data Form (Annex IV)
    c. Completed Previous Experience Form (Annex V)
    d. Completed Materials Price List Form (Annex VI)
    e. Completed Labor Quote (Annex VII)
    f. Spec sheets and/or photos as available for materials
    g. Estimate of travel expenses if required
    h. Schedule of work

2. **Selection Criteria**

Criteria	Required Documentation	Evaluation
Company registration	Certificate of incorporation	Included? y/n
Value	Materials Price List Form	Fully completed? y/n Best value? y/n
	Labor quote	Best value? y/n Fully completed? y/n
	Spec sheets and/or photos	Are high quality materials being

		proposed? y/n
Experience	Previous Experience Form	Included? y/n Experience in Haiti? y/n Minimum experience with 3 similar projects/ y/n Local language skills? y/n
Schedule	Delivery Data Form, Schedule of Work	Fully completed? y/n Able to complete within 60 days of the timeline proposed? y/n

3. Estimated Timeline

a. Deadline for submissions: 8/24/17
b. Review period: 8/24-9/10/17
c. Contracting period: 9/10-9/15/17
d. Importation/delivery of goods: 9/15/17-10/30/17
e. Estimated installation: ~10/15-11/31/17

Please note that EarthSpark retains the right to reject or refuse any submissions. We look forward to reviewing your submissions and potential collaboration.

Yours sincerely,

EarthSpark International

Please find annexed to this document:

- *Annex I – Contents of the Original RFP*
- *Annex II – Specs of the Distribution System*
- *Annex III – Materials Required*
- *Annex IV – Delivery Data Form*
- *Annex V – Previous Experience Form*
- *Annex VI – Materials Price List*
- *Annex VII – Labor Quote*

ANNEX I – CONTENTS OF THE ORIGINAL RFP

EarthSpark International is currently operating a microgrid serving 54 customers in the town of Les Anglais (Sud department, Haiti). An expansion of the grid is planned, with the goal of serving the whole downtown and around 500 customers, both residential and small businesses. EarthSpark intends this grid to be powered by a hybrid solar-diesel generation system, and to respect international safety and quality norms.

In order to achieve that, EarthSpark International needs to upgrade its distribution system. This Request For Proposal covers the upgrade of the entire distribution system, including:

- Design of the distribution system:
    - Pole placement and dimensioning for medium- and low voltage lines
    - Medium-voltage three-phase and one-phase distribution lines: wire ratings and line layout
    - Low-voltage (110 V) distribution lines: wire ratings, number of subsystems and subsystems layout
    - Up-scale and down-scale transformers: ratings and placement
- Bill Of Materials for transformers, cabling and every necessary part
- Itemized quotation and labor quotation
- Time estimate for shipping materials
- Time estimate for install
- Bill Of Materials for direct drop customers connections and 1 day of training of qualified local electricians to perform the direct drops.

NB1: This RFP doesn't cover connection of customers to the grid, neither does it cover the generation system
NB2: Local workforce will be available for non-electrical work.

ANNEX II – SPECS OF THE DISTRIBUTION SYSTEM

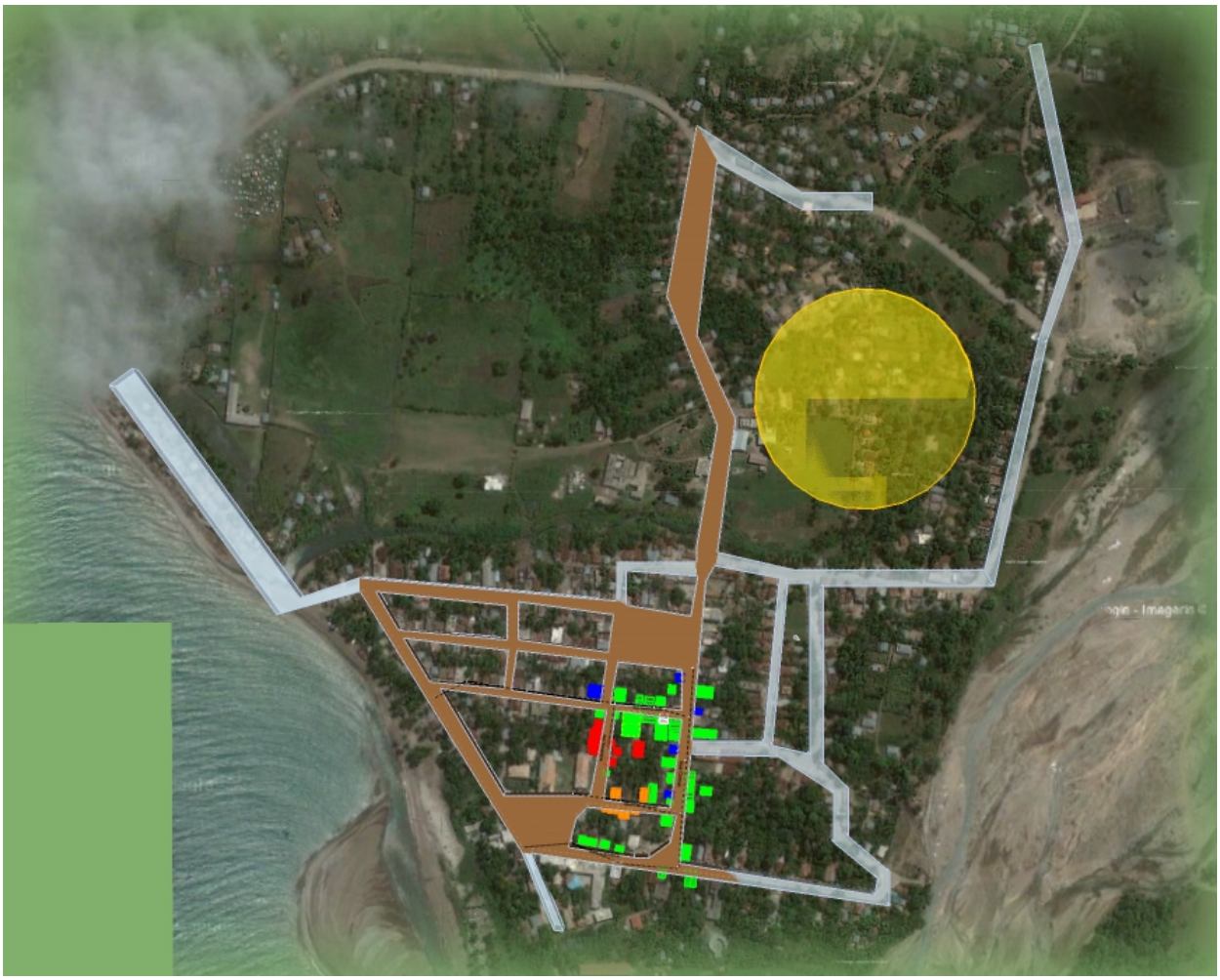
EarthSpark International is in the process of defining accurately the specs of the grid:

- Grid extension,
- Generation system ratings and placement,
- Customers to be served by the grid and power limits,
- Planned load curves

A first version of these specs is given below, and will be refined soon.

Grid extension

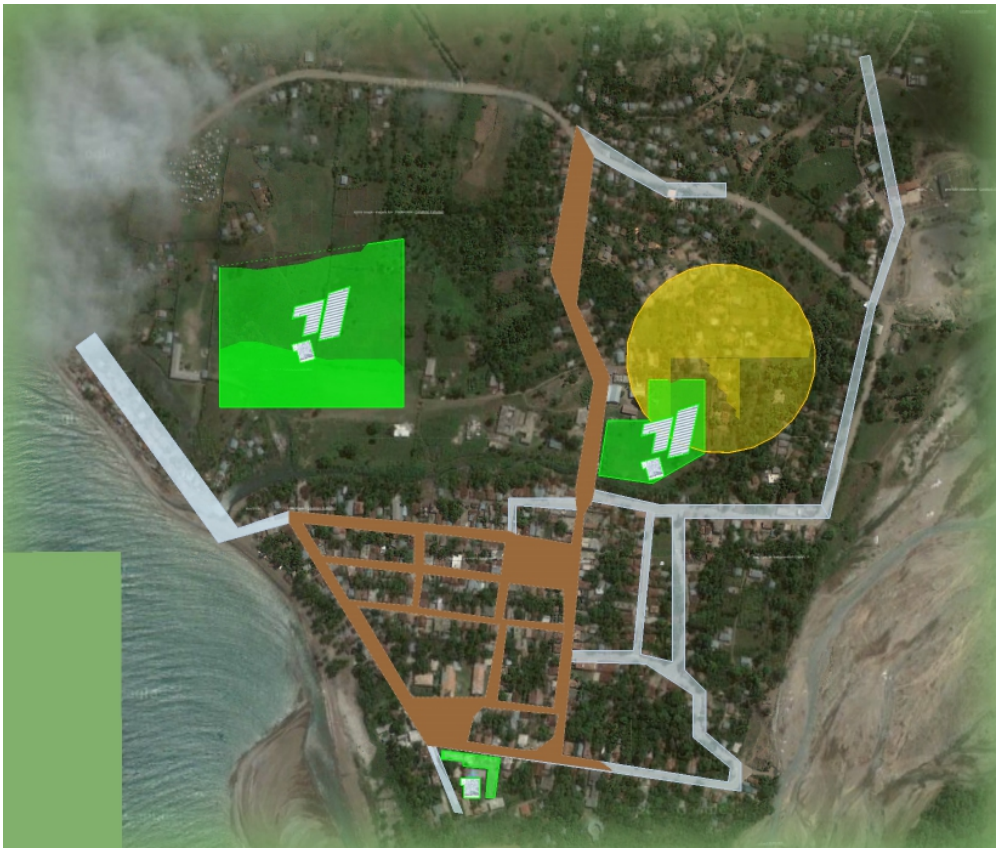
- The grid will cover approximately 4.5 km of streets in downtown Les Anglais
- 2.5km of streets already have 30ft-high wooden poles installed (brown area in the map)
- Given the low level of energy the grid will provide in a first time, it is extremely important that it would be able to absorb evolutions; specifically, subsystems layout and wire ratings should be designed to allow large increase in consumption.



Planned grid extension, to be refined. In brown, existing wooden poles (~every 40m)

Generation system ratings and placement

- A few potential locations for the generation system have been defined, as can be seen on the map (green areas).
- As defined now, the generation system would have a max output of 50 kW, growing to 80 kW after a few years.



Potential locations for the generation system (PV farm and genset) – in green

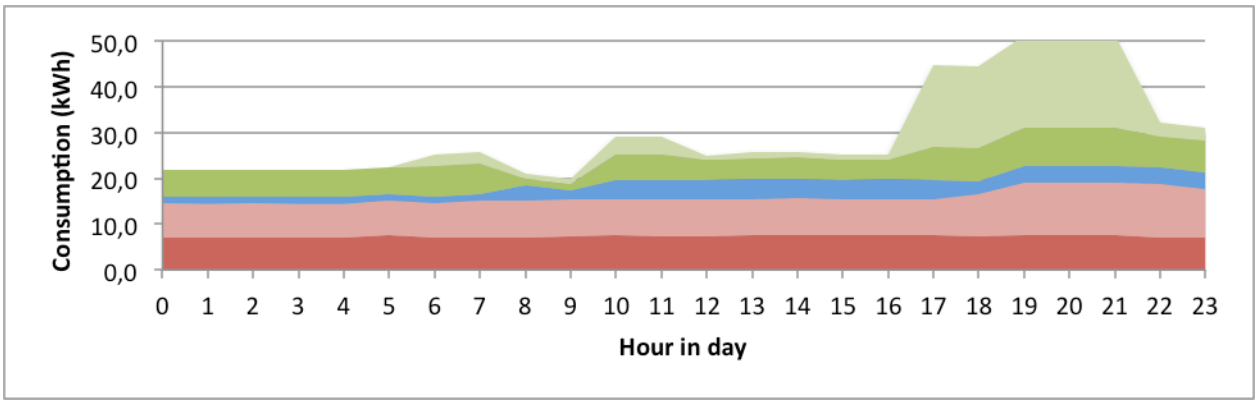
Customers to be served by the grids and power limits

- An estimated location of customers is provided in the map and will be refined. Red are house locations, blue are first "big customers" identified (potentially needing their own transformer, or even a three-phase connection)
- The total number of residential customers is estimated around 500, and around 10 big commercial customers.

A first count of buildings in the zone shows approximately 500 of them in the service zone (in red). Potential "big customers" are shown in blue

Planned load curves

- It is difficult to plan for consumption in a town where there's never been electricity. Based on first estimations and surveys in the town and similar towns, a 50 kW peak load growing to 80 kW after a few years seems reasonable.
- The census currently done in Les Anglais will allow us a better confidence in these figures, and will also establish neighborhoods and their contribution to the load.



Example of a potential load curve in the 500 customers grid

ANNEX III- Materials required. Please note if there are any materials you are unable to acquire.

Item	Approximate Quantity
Triplex Cable AWG #2 (per meter)	2863
AAAC Cable #2	3206
25' Pole	1
30' Pole	2
Metal tool for lightning arrestor	2
Insulators (pin type)	5
Wind tension supports	6
Metal wire holder	10
Bolts	8
Wind tension looped wiring	22
Square bolt washers	6
Zip ties	1000
Covers	1000
Burndy connector size 1	50
Burndy connector size 2	100
Wind tension looped wiring	50
Vinyl tape	25
Electrical tape	25
URD #2 Cable (med voltage insulated)	150
Insulated tubing	6
URD cable connector	6
Insulated support	1
Fuse holder	3
Lightening surge protector	5
Grounding connector	15
Curved PVC 3"	2
Straight PVC 3"	2
Conduit exit fitting	1
Structure modification from type 302 to 322	4
Structure modification from type 301 to 319	1
Crossbar support rod	10
Bolts 1/2"x12"	20
Bolts 3/8"x3"	20
150 kVA pad mounted transformer	*3*
Crane or bucket truck rental	

ANNEX IV - DELIVERY DATA FORM

Bidder's delivery data Quotations are understood to be under **Delivery At Terminal (DAT)** conditions, with proposals for **sea freight or overland delivery**.				
DAT point for offered products				
Country of origin of offered products				
Delivery time (DAT from time of order)				
Total DAT price				
Shipment dimensions of offered products (including package)	**Gross weight**	**Total volume**	**Containers (if applicable)**	
			Number	**Size**

Authorized signature: _____

Date: _____

ANNEX V - PREVIOUS EXPERIENCE FORM

Description of Contract	Country	Contract value (USD)	Contract name	Contact details of Client (Name, Country, Telephone, Email)	Year

Authorized signature: _____

Date: _____

ANNEX VI – MATERIALS PRICE LIST

Item	Quantity	Unit Price	Total Price
Triplex Cable AWG #2 (per meter)	2863		
AAAC Cable #2	3206		
25' Pole	1		
30' Pole	2		
Metal tool for lightning arrestor	2		
Insulators (pin type)	5		
Wind tension supports	6		
Metal wire holder	10		
Bolts	8		
Wind tension looped wiring	22		
Square bolt washers	6		
Zip ties	1000		
Covers	1000		
Burndy connector size 1	50		
Burndy connector size 2	100		
Wind tension looped wiring	50		
Vinyl tape	25		
Electrical tape	25		
URD #2 Cable (med voltage insulated)	150		
Insulated tubing	6		
URD cable connector	6		
Insulated support	1		
Fuse holder	3		
Lightening surge protector	5		
Grounding connector	15		
Curved PVC 3"	2		
Straight PVC 3"	2		
Conduit exit fitting	1		
Structure modification from type 302 to 322	4		
Structure modification from type 301 to 319	1		
Crossbar support rod	10		
Bolts 1/2"x12"	20		
Bolts 3/8"x3"	20		
150 kVA pad mounted transformer	*3*		
		Total	

ANNEX VII – LABOR QUOTE

Role	Days required	Day Rate	Total Cost	Qualifications, including language spoken
Total				