

## Newsletter 03/16 Smart Solar Off-Grid for La Gracia

Friday, 26<sup>th</sup> of February was an important day for the Smart Solar Off-Grid project. Nadja and Silvan, the managers of SESB, ZENNA's local partner for installation, met with Mr. Ambrose Tillett, the Director of the Ministry of Energy, Science & Technology and Public Utilities (MESTPU) at the village of La Gracia to announce the project officially.

Earlier this year, the lack of regulations for Mini-Grid Projects in rural areas led to concerns from Public Utilities Commission (PUC), namely about the tariff structure and the management model. However, it seems that the internal discussions between PUC and MESTPU have cleared the hurdles.

Mr. Ambrose Tillett declared in the presence of the village chairman, the school principle and other representatives from government and the village, that his Ministry is in full support of this project and that he is confident, that the project can be carried out according to the original schedule.



Picture 1: Byron Miranda (Chairman of La Gracia), Noemi Westby (School Principal), Luis Carballo (Ministry of Education), Nadja and Silvan (SESB), Ambrose Tillett (Ministry of Energy), Ansel Dubon (Ministry of Energy)

The three big questions of the villagers are:

1. When will I get electricity?
2. What appliances will I be able to run?
3. How much will it cost?

If we follow our schedule, the first phase of electrification will be accomplished by the end of August. The villagers will be able to use appliances such as mobile phone chargers, light bulbs, TV and small fridges. The fee for electricity will be the same as people pay for grid electricity in Belize.

Silvan from SESB will provide the school principal with a list of appliances that can be used with the new power grid and others that won't work, because they need too much power. Via a simple educational tool, this knowledge will be transferred to the kids in a dedicated lesson about energy awareness. The goal is, to integrate the kids from the very beginning and have them share their newly learned lessons with the entire family.

The villagers also hope for work during the installation of the Smart Solar Off-Grid. SESB will try to involve villagers for simple duties like digging and constructing the concrete foundations for the container. As the work on the solar system itself requires professional skills, the SESB workers will carry out this part.



Picture 2 Mr Tillett (Ministry of Energy), Mr Carballo (Ministry of Education), Mr Miranda (Chairman of La Gracia) discussing in the school building

We also made a big step forward regarding the system design. As presented in these visualization pictures, the solar panels will build the rooftop of a 40 feet shipping container. The inverters, the batteries and the battery inverters will be mounted inside the container. It will also accommodate a small office used by the chairman of the electricity board to hand out and recharge the RFI prepaid-cards. The gas tank and the LP-gas generator will be set outside the container, while a fence is protecting the whole installation.



Picture 3: 40 feet ship container with solar rooftop



Picture 4: Gas-tank and LP-gas generator outside the container

To inform the villagers about the project, we are planning to place the container in the village as soon as possible. The villagers will have the possibility to enter the container and find relevant project information on an information wall. Outside the container we will place a billboard with the logos of our project partners.



Picture 5 Billboard with logos of the project partners

All our partners mentioned above make this project possible. We thank all our project partners for their support, especially the Rotary Clubs of Bad Ragaz (CH) and Vaduz (LI) who even took a special effort of starting a global grant request to support the Smart Solar Off-Grid for La Gracia.

ZENNA's Smart Solar Off-Grid for La Gracia Project is displayed online now by the REPIC-platform of the Swiss federal offices SECO, SDC and SFOE.

<http://www.repic.ch/repic-en/projects/ongoing-projects/photovoltaics/zenna-belize/>

An animated video about the Smart Solar Off-Grid for La Gracia project is available on vimeo:

<https://vimeo.com/145614639>