3.12 SOLERGIE: 0.3 KWP SOLAR PV SYSTEMS (TOGO, KAMINA & BROUNFOU)

July - September 2019

Stakeholders

- **DRE project developer**: Solergie
- **Funding**: Own equity
- **Beneficiary**: Two health centres and surrounding communities in Kamina & Brounfou

CONTEXT

The two health centres, located in Kamina and Brounfou villages, were previously running without electricity. Before the installation of the DRE solution, health care workers needed to use flashlights for child deliveries at night. This posed a serious problem for nurses to conduct their work properly and deterred women from staying in the centre after they gave birth, therefore leaving them unattended and increasing the health risks for them and their babies.

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To solve this, Solergie installed lights in every room with 220 V outlets. The major obstacle was the price of the system, as the health care facilities could not pay for a solar system at once. That is why Solergie offered a monthly payment over a limited period that is affordable for the local health care facilites. The energy consumption of the health care centres is around 600 Wh per day.

DRE SOLUTION

Solergie trained more than 300 independent technicians to operate and maintain all the solar systems in the country. Thanks to the after sales service of Solergie, the long-term sustainability of the project is guaranteed. The project started with a request from the local health care centre. One week later, Solergie installed the system and started the follow-up. The systems consist of two solar panels of 155 Wp, one battery of 145 Ah and an inverter of 800 W.

BUSINESS MODEL AND PROJECT FINANCING

The total cost of the project to electrify the two health centres was EUR 2,440, covered by equity investors to pre-finance the equipment. Solergie is the owner of the system until the total amount is paid off by the health care facility. The local health care facilities payed a one-time small fee (EUR 15) for the installation. Afterwards, the health care facilities have been paying a fixed amount of EUR 30 per month. 40 months (3.4 years) later, the system will become their property. Once the health care facilities have paid off the systems and they become the owners, they will only need to pay a maintenance fee of EUR 10 per month so Solergie can continue to follow up on the system maintenance. The cost is equivalent to only one third of their initial monthly fee.

OUTCOMES

7,000 people now benefit from the electricity improvement of the local health care facilities. Before, the facilities used flashlights, whose batteries needed to be replaced every two weeks and were afterwards disposed of by littering. This resulted in pollution to the drinking water and made it unhealthy for local children who played with the broken batteries. Now, the

health care facilities have reliable and sustainable 24/7 light. The quality of work of the nurses has been improved and health problems reduced. In addition, with a light installed outside the health centres, people can easily find their way to the facility at night. Mr. Tissou from the health centre in Brounfou, said: *"Before, women didn't want to stay after they gave birth, because they didn't want to stay in a dark room. Now, thanks to the light provided by SolergieBox, women stay a few days so mother and baby can be followed up and be taken care of. This has helped reduce the mortality of mothers and babies."*

This project is only one of the installations that Solergie has implemented in Togo. In total, Solergie has now 35 full-time employees and has trained more than 300 independent sales and technical experts.

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LESSONS LEARNT AND NEXT STEPS

The main challenge was the amount of money that the health care facility needed to cover its monthly electricity fees. Their budget was very limited, which is why they could not afford a larger system, which would be needed to run a fridge for vaccines or medicines. In the next project, Solergie wants to solve this problem by assigning a local entrepreneur in the village and neighbouring households to the system. This way, the entrepreneur can start an economic activity thanks to the electricity and he or she will help pay off the system. The SolergieBox has eight different energy metres that can be controlled and monitored remotely. Solergie is able to guarantee the necessary energy for the health care facility even if other users are connected to the system by giving priority to the health care.

To deploy this project, Solergie relied on a competitive cost advantage that is possible thanks to the scale Solergie has already achieved in Togo, with more than 500 nano-grids installed, serving almost 2,400 customers (families, heath centres and businesses). The Solergie system can be replicated in other countries. Preparations are being made to develop projects in Mali, Benin, Burkina Faso, Ivory Coast and Nigeria.

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