**SIERRA LEONE**

**Solar Rural Electrification for Communities**

Submitted by: ChildHelp Sierra Leone

4 Police Barracks Road, Makeni City, Sierra Leone

To: Global Giving Foundation

***Solar Energy Pilot Initiative for 9 villages***

**Overall Strategic Goal**: Life quality of Communities’ beneficiaries improved.

**Expected Outcomes:** Community-based associations strengthened, decision-making positions filled by women, literacy courses followed by higher number of beneficiaries and different community activities implemented at night time

**Expected Outputs:** Installation of Solar Systems in 9 out of 24 Villages for homes, charging centres, street lightening, schools and community centers (and health centers and water supplies, when existent).

**Executing Agency: ChildHelp Sierra Leone**

**Implementing Partners: joint team**

**Main Cooperating committee: Members of Steering Committee**

**Summary**

This project is a pilot phase for 9 out 24 villages. ChildHelp’s pilot initiative aims at installing solar energy equipment in 9 out 24 villages in Gbendembu chiefdom village communities. It will incorporate lessons and experiences learnt from 3 villages. The project will focus on strengthening the capacity of local associations of each village in order to help them gain a stronger sense of ownership over solar energy activities. A team of local and international technicians on Solar Energy will be in charge of installation.

Total resources US$ 107,525

Amount needed: USD 96,800

Total local contribution: US$ 10, 725

Programme Period: 12 - 48 months

Start date: November: 2018

End Date December: 2022

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**Part I. Context analysis**

1. **Situational Background: Country and Project**

Sierra Leone, a country in West Africa, has a special significance in the history of the transatlantic slave trade as the departure point for thousands of west African captives. The capital, Freetown, was founded as a home for repatriated former slaves in 1787. But the country's modern history has been overshadowed by a brutal civil war that ended in 2002 with the help of Britain, the former colonial power, and a large United Nations peacekeeping mission.

Sierra Leone has experienced substantial economic growth in recent years, although the ruinous effects of the civil war continue to be felt. In **2014-2016** - Sierra Leone declares a state of emergency to tackle the deadly Ebola outbreak in West Africa which persists into 2016, killing more than 11,000 people in the region. The country is also rich in diamonds and other minerals. The trade in illicit gems, known as "blood diamonds" for their role in funding conflicts, perpetuated the civil war.

It is amongst the poorest in the world according to UNDP´s Human Development Index. Absolute poverty reaches 2 out of 3 people, while extreme poverty affects one out of every 5 individuals. Women are most directly affected by poverty and are often excluded from being decision-makers on the development process of the country. Agriculture is the most important economic activity, and unemployment rate is high. In light of this reality, and in response to a request from the community, ChildHelp is working in this chiefdom to enhance livelihoods through agricultural development and the enhancement of other services to rural communities.

**Gbendembu Ngowahun** is a chiefdom of Bombali District in the Northern Province of [Sierra Leone](https://wikivividly.com/wiki/Sierra_Leone). The principal towns are Gbendembu and Kalangba. As of 2015 the chiefdom has a population of 38,000. Males 18,498 and female 20,302

**Gbendembu** is the chiefdom seat town in the Gbendembu Ngowahun Chiefdom (an amalgamated Chiefdom), in the Bombali District, Northern Province of Sierra Leone. It is located about 30 miles north west of Makeni, Sierra Leone's Northern provincial city. Gbendembu is a multicultural settlement with significant number of Loko, Temne, [Fula](https://en.wikipedia.org/wiki/Fula_people) and Mandingo. The natives of Gbendembu are the Loko community, the fifth largest ethnic group in Sierra Leone, who are believed to have originated from Liberia.

ChildHelp’s first Project in the chiefdom, titled was *“Agricultural Development and Services to Rural Communities”*, funded by OREINT in 2012 through 2014 May, when Ebola virus disease breakout. During this period, the project sought to strategically assist the development of sustainable management capacities in agriculture and local businesses, so as to increase household income in beneficiary communities.

Over 2,437 farmers were trained in modern agricultural techniques to improve rice cultivation and citrus fruits and mango production. ChildHelp partners assisted the introduction of new seeds species that improve yield and permit agricultural production even during rainy season. They also provided training on water management and control.

ChildHelp is raising funds as Phase II to be initiated from 2018 through 2022. The project will currently aims at reinforcing the training on agricultural development techniques carried out during phase I. funds are needed for a functional literacy element that will reach 600 women and youth, develop small agro-industries and add a solar energy component that will supply solar equipment to schools, health centers, community centers, central street areas and water pumps in needy villages. A total of 24 villages, located in the Gbendembu chiefdom of Bombali district – one of the poorest chiefdoms in the country – will be directly benefiting from ChildHelp ´s activities. 9 out of the 24 villages will be chosen in this phase.

Solar energy will bring about an undisputable positive impact in the lives of community members in the neediest 9 out of 24 villages where pilot initiative on solar electrification will be introduced. Beneficiaries will have an enormous satisfaction with the equipments, especially streetlights. Streetlight poles will enable villagers to be engaged in a variety of different activities at night, which were previously considered doable only during hours of daylight. This fact alone is that, this project will bring about a tremendous change in their lifestyle and in the way they manage their daily productivity. Up to this moment, the benefits of solar energy have been more visible in some villages than others.

Two community youths used as a concrete success model, who raised approximately US$ 300in a three-month-period, only through the use of a Chinese cell phone solar charging device powered, bought from the local market. Moreover, the number of individuals attending school has increased to a very large extent, and there are classes, need to be attended by youths and women available at night. School children fail when they don’t have access to lights at night to study and improve in their skills at nights. Finally, people don’t have regular access to computer and internet to check and send emails except by paying transportation to the Makeni city which is 24 miles every 2 or 3 days as the road is also not good.

It is important to emphasize the importance of the local ministry of Energy for the sustainability of solar energy in each village. When funds is made available, expert engineering volunteers from Senior Experten Services (SES Bonn), or Volunteer Match will be requested to trained staff in projects strategy. This training will serve as a great opportunity for the technicians to improve their knowledge on solar energy as well as to familiarize themselves with solar equipment. These technicians will so far participate directly in the installation of the equipment and considered key elements for ensuring its regular and appropriate maintenance, especially through the capacity-building of local communities on how to manage the equipment.

1. **Area of Intervention**

Phase I involved training of agricultural activities that covered 24 villages. From the recommendations of phase I evaluation, phase II is designed to strategically target 9 out of 24 villages in the Gbendembu chiefdom, one of the most impoverished chiefdoms in the district of Bombali, North-East province of Sierra Leone. These identified communities need comprehensive support and interventions, so as to enhance impact and sustainability.

The 9 proposed villages within ChildHelp´s intervention area in Gbendembu Chiefdom would benefit in the solar energy electrification system. These villages are directly involved in activities implemented by ChildHelp’s project. A sense of trust and respect has been established between community members and the Project Coordination team and in most cases; ChildHelp is the only organisation acting in rural electrification. The most sound strategy at this time is to implement a pilot project and to roll-out its successes.

**Proposed villages for Phase II of Solar Energy Component**

|  |  |  |
| --- | --- | --- |
| REGION | N0 | VILLAGES |
| Gbendembu Chiefdom,  Bombali District,  North-East Province  Sierra Leone | 1 | Manjawor |
| 2 | Makiteh |
| 3 | Sahun |
| 4 | Malai |
| 5 | Kortuhun |
| 6 | Longorhun |
| 7 | Makondor |
| 8 | Magua |
| 9 | Gbendembu |
| Total Villages For 1st Phase |  | 9 |

Each village is comprised of a community based association that functions as their local representative body. While a few associations have a more organized structure, – *some, for example, have already created a statute and are seeking to be legally recognized* - most are still in their initial stages of development. All associations experience great difficulty in raising funds. In most cases, community members are required to provide their respective association with a monthly contribution, which is insufficient to cover extremely basic necessities, such as the payment of an incentive for school teachers (daycare or elementary school, depending on the case), for women who help other women while giving birth and for the purchase of civil construction material, such as cement.

It is rare to find associations that have a facility that can be used as some sort of office, for official meetings or other important community activities. Although women are largely represented in all associations, it is still difficult to find them in decision-making positions. Functional literacy courses are being conducted in practically few villages; some with the direct support from churches, other friendly bodies or communities´ own efforts. Although the literacy component has been welcomed by most project beneficiaries, it is important to note that if an individual desires to attend courses, he or she has to interrupt approximately two hours of his/her daily work.

Also other villages have not yet started but have proposed due to lack of electricity supply. Despite having their income diminished by such interruption, many villagers have still opted to join these activities, seeking to become functionally literate. For others, however, the idea of having two hours of work ´removed´ is simply unfeasible and for that reason, they have decided not to participate in literacy training.

None of the 9 out of 24 villages that this project will electrify as pilot phase currently have light during nighttime. Most community activities are finished before 7 pm, when villagers usually gather around their households. Health Centers are in place in only two villages, which means that in most cases, villagers travel to the center that is located the closest to their village in order to be treated. Two village health centres already have a solar powered system for only the conservation of medication and vaccines (provided by another project) and no solar system for water wells, but are in conditions to benefit from solar water pumping equipment. The villages’ have water wells but no installation of solar energy systems.

**Part II. Strategy**

1. **Project Strategy: Roll-out Solar Energy pilot initiative**

The roll-out pilot initiative will aim at installing solar energy equipment in the 9 villages proposed. It will incorporate lessons and experiences learnt from 3 villages in the Port Loko district. For example, participatory formulation processes will provide partner communities with a greater role in the selection of the solar energy systems that are most meaningful to them, the security instruments to ensure their safety, and the organizational arrangements to support their sustainable management. The infrastructure and peculiarities for each roll-out village will be taken into consideration in the selection of the type and amount of equipment it will be install.

The first activity to be implemented in the roll-out of the pilot initiative on solar energy systems will focus on awareness-building and the mobilization of the members of local associations of each of the proposed villages. A key element for the success of the Solar Energy roll-out will rely on the capacity of community-based associations to exercise ownership and effective management of solar activities within their villages. It is therefore unquestionably necessary that they are well-organized and fully committed to this cause before any other step in taken.

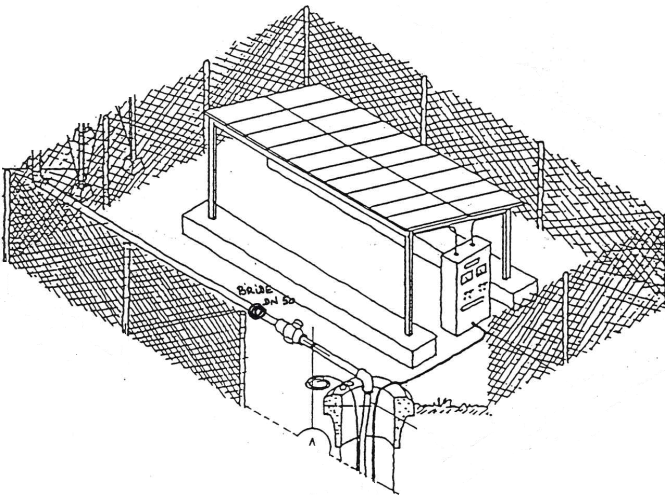
This project will therefore provide support for capacity development and for participatory formulation and management activities. Workshops will be held in the center of the first 9 villages, with the participation of 9 representatives (3 female) from each community association. The facilitators of these seminars will include local NGOs/CBOs that are located in the region.

One of the expert trained from Barefoot College in India with valuable skills will be also involved to be part of the training which will include experts from SES-Bonn and or Volunteer Match on solar energy. Their knowledge and experience will be used for increasing the involvement of female beneficiaries in solar equipment activities, as well as for the enhancement of local ownership of the project.

During these workshops, topics such as counterparts from communities, creation of Solar Energy Management committees, theft prevention and inclusion of women in decision-making positions within these committees will be discussed.

After the conclusion of these participatory workshops, the Coordination team (with the help of the local NGOs/CBOs) will visit each village in order to hold consultations and similar workshops with local associations and beneficiaries in general. Each community will be requested to jointly present a list with the names, positions and responsibilities (vigilance, maintenance, fund-raising, etc) of its Solar Energy Management Commission members. Communities will also present Project Coordination team with its counterpart and an Agreement will be signed between both parties, in the presence of villagers, local leaders and a member from the community´s corresponding Regional Governmental Division. This will contribute to increase community awareness of their responsibility over the equipment that will be installed while it will also facilitate the interaction between communities and Regional Governmental Divisions, which is central to fostering ownership of this activity.

After having the assurance that communities are sufficiently mobilized and committed, the project will initiate the preparation of all civil works that are necessary for the installation of solar equipment, with the direct involvement of the local District Council and Government ministry of Energy and technicians that were trained for the pilot phase of this project and community members. Only after it is ensured that all necessary equipments, tools and materials that are required for installation are ready for use, the project will move on to transporting and installing solar equipment.



Sample design of theft-protection infrastructure for solar panels

A detailed chronogram and plan for transportation and installation will be designed by the Joint Team of ChildHelp, SES, Volunteer Match and stakeholders as a Coordination team, with the collaboration of the District Council and Ministry of Energy and Natural Resources. Installation will be conducted by the 3 technicians from SES/Volunteer Match and those trained (including 2 women) for the purpose, including Barefoot College expert, would also participate in the installation process in some of the villages. The trained women involved will be to encourage the engagement of a larger number of women in the activity.

1. **Expected Outcomes**

By bringing solar energy into the first 9 out of the 24 villages, ChildHelp will be contributing to the **improvement of quality of life** amongst beneficiaries in many different levels. First, the Solar Energy roll-out will be directly linked to the development of communities’ local associations and their ownership in regard to the project. Each association will be required to create Management committees – ***having women as decision-makers*** –, which will be in charge of monitoring all solar energy activities within their corresponding zone. **Local associations** will be also required to demonstrate a more concrete commitment to the project by **providing their own counterpart** - which might be, for example, the construction of a community center.

It is also important to emphasize that solar energy will enable local associations to **increase their ability to raise funds**, especially with the introduction of solar powered cell phone charging devices, which have already proved to be considerably profitable in the village of Manjawor.

Secondly, solar energy will enhance one of ChildHelp´s most successful activities in the field, which is Functional Literacy Courses. By having the opportunity to study at night, **a much larger number of beneficiaries will be able to become functionally literate**. Moreover, those who are already attending classes will be able return to what used to be their daily productive routine, since they will no longer have to interrupt their work during the day.

Thirdly, the roll-out willbenefit villages that have the bore-wholes required for theinstallation of solar water pumping systems and public facilities where to place refrigerators for the conservation of medication and vaccines. Lastly, solar street lights and portable lanterns will **enable villagers from all communities to implement a variety of activities during night hours.** This will not only help create a greater sense of cohesion amongst community members but it will most importantly **provide hope, a sense of progress** **and an interest in consolidating peace** **and accomplishments** to those communities.

1. **Monitoring and Evaluation**

Management committees from each local association will play a fundamental role in monitoring and evaluating solar energy activities. They will collect regular information on the functioning of solar equipment and on the work implemented by those responsible for vigilance and maintenance, among other. This information will be given to ChildHelp´s Coordination team and included in ChildHelp´s quarterly reports. ChildHelp’s Coordination team will also visit beneficiary villages on occasion. A more comprehensive evaluation of the overall impact of the roll-out will be elaborated after a careful analysis of all information provided throughout the year and will be attached to ChildHelp´s annual project report.

1. **Management Arrangements and Partnership Strategy**

The Project will be executed in collaboration with the local district council, ministry of energy, local associations and the general stakeholders represented. ChildHelp Coordination Team will have a National Project Coordinator, an Administrative Assistant, a Driver and an international Volunteering expert. The Project´s Steering Committee will involve representatives from funding and local NGOs partners including line ministries. The local District Council, ministry of energy, International and local engineering experts will play a fundamental role in this project using their technical expertise. They will be responsible not only for the installation of the equipment but also for ensuring that community members are appropriately capable of maintaining the solar equipment.

A local NGO within the chiefdom will lead the workshops on community awareness and ownership and will continue working with those communities directly in the field in order to follow-up on their progress. The 2 trained women involved will also mobilise communities and for the encourage women participation in the process. Regional Governmental Divisions will be involved during mobilization, installation and maintenance in order to increase their sense of responsibility over the equipment and also foster a greater interaction with local communities. Lastly, local community associations will be responsible creating Local Management committees (with a detailed list of names and functions), for providing a counterpart (according to their local reality) and will be required to sign an agreement demonstrating their commitment with the project.

OREINT/CARDA is responsible for purchasing and delivering the equipment, a signed Project Cooperation Agreement between both parties. All stakeholders for this project will be given due credit for their engagement in this initiative. ChildHelp partners will be provided with visibility and recognition for their instrumental role supporting this project. Credit will be given to ChildHelp partners during public engagements by the project, particularly in interactions with the media, public and academic appearances and presentations, relations with the villages, the government of Sierra Leone, project visitors and other institutions. Solar Energy systems installed through this project will be labeled ChildHelp and donor’s logo. Other efforts will be made where appropriate to provide visibility to donors and their cooperation elements in the project.

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| **PART III: RESULTS FRAMEWORK**  **Project Title:** Solar Rural Electrification for Communities | | | | |
| **Expected outcome:** Outcome: **L**ife quality of beneficiaries and its communities improved and sustained | | | | |
| Indicators and baseline:   1. Improvement in management skills, self-initiative and capacity to raise funds of local communities/associations. 2. Number of women in decision- making positions in villages. 3. Number of beneficiaries attending literacy courses and doing local businesses especially in solar charging of devices 4. Variety of different activities implemented.   **Baseline:**   1. Villages/Communities/Local associations lacking structure, management and fund raising skills. 2. Low number of women in decision-making positions within villages. 3. Many beneficiaries not able to attend literacy courses and undertaking of community businesses due to lack of funding. 4. Communities not able to conduct activities at night. | | | | |
| **Partnership strategy:** Besides the leading role of the Ministry of Agriculture and Rural Development, the Ministry of Energy and Natural Resources should play a key role in the Component, especially with the participation of the SES-Bonn and Volunteer Match international trained engineers in the installation process. ChildHelp and the community people are the implementing partners for provision of solar systems. Other groups including Local NGOs, businesses, companies, within the project proposal communities or region, beneficiaries and the local association will also contribute by encouraging the participation of women in solar energy activities and helping enhance local associations. | | | | |
| **Project title:** Solar Rural Electrification for Communities | | | | |
| **Project objective:**  Installation of Solar Energy Systems in 9 villages.  Develop capacity of local associations to take ownership of the project.  **PART IV: BUDGET** | | | | |
| INTENDED OUTPUTS | OUTPUT TARGETS FOR (Months) | INDICATIVE ACTIVITIES | RESPONSIBLE PARTIES | INPUTS AND BUDGET |
| 1. Solar Energy Systems installed in 9 villages.  **Indicator:**  **A.** Solar Energy equipment transportation and installation in 9 villages.  **Baseline**: 9 villages with their solar energy potential not explored at all.  **General Management Services (GMS)**  **Subtotal** | * 1. Solar equipment as per specification manufactured.   2. Solar transportation and installation.   3. Civil works implemented in all 9 villages.   4. Equipments stored at safe place. | 1. 1. Manufacturing of solar equipment as per specification.  1.2: Solar transportation and installation.  1.3. Under take civil works.  1.4. safe storage.  1.5 Monitoring and Evaluation.  1.7. Contingencies | * 1. ChildHelp/SES   2. ChildHelp/SES   3. Coordination   By ChildHelp, Stakeholders, Community Members.   * 1. ChildHelp Coordination   2. ChildHelp Coordination/   Ministry of Energy, Community Members. | **78,000**  1 ,**500**  **7,500**  **500**  **1,400**  **9,000**  **5,075**  **102,975** |
| **2. Capacity of local communities/associations to take ownership of the project developed**.  **Indicator:**  **B.** 100 community/Local Association members trained on Mobilization, Sensitization and Pro-activism.  **Baseline:** communities/Local Associations lacking proactive behaviour and contact with Regional Governmental Bodies.  **General Management Services (GMS)**  **Subtotal** | 2.1. 100 beneficiaries from communities/ local associations trained on Mobilization, Sensitization and Pro-activism.  2.2. 9 villages visited: (Solar Energy Management Commissions formed, Counterpart from Communities formalized, Document signed in the presence of Regional Governmental Direction). | 2.1. Seminars on Mobilization and Sensitization with members from communities/local associations of 9 villages.  2.2. Visit to villages (establishment of Solar Energy Management Commission, approval of counterpart from communities and signing of Agreement with local associations, in the presence of Regional Governmental Direction member). | 2.1. ChildHelp Coordination Team/Local NGOS/Stakeholders/Govt ministry of Energy/Local Association.  2.2. ChildHelp Coordination Team/Local NGOS/Stakeholders/  Govt ministry of Energy/. Regional Governmental Directions. . | **2,400**  **1,200**  **300**  **1,650**  **4,550** |
| TOTAL | | | | **107,525** |