

## Synopsis of check sheets and logbooks for PV Microgrid in Kigeme, Rwanda: July 2019 to March 2020\*

This report provides a summary of the check sheets and logbooks completed by the field personnel in Kigeme, Rwanda, with regards to the usage of the PV microgrid installed at 2 nurseries and a playground. The report outlines the key issues identified as well as the energy usage pattern at the microgrid for each month. The key feedback from users is also included.

### I. Summary of check sheets

Month	Report
Aug 2019	<ol style="list-style-type: none"> <li>1. Check sheets were only available for the week of 26<sup>th</sup> Aug.</li> <li>2. Check sheets were not translated. No issues were reported.</li> </ol>
Sep 2019	<ol style="list-style-type: none"> <li>1. Check sheets were available for weeks commencing on 3<sup>rd</sup>, 10<sup>th</sup> and 17<sup>th</sup> Sep.</li> <li>2. Check sheets from the week of 3<sup>rd</sup> and 17<sup>th</sup> Sep were not translated.</li> <li>3. In the week of 10<sup>th</sup> Sep, a blackout was reported due to plant shutdown. Hence, none of the lights or sockets were working.</li> </ol>
Oct 2019	
Nov 2019	<ol style="list-style-type: none"> <li>1. Check sheets were available for all weeks but none of them were translated.</li> </ol>
Dec 2019	<ol style="list-style-type: none"> <li>1. Check sheets were only available for the week of 10<sup>th</sup> Dec.</li> <li>2. 3 lamps in nursery building 2, room 2, were reportedly not working as switches were not working.</li> <li>3. Check sheets not translated.</li> </ol>
Jan 2020	<ol style="list-style-type: none"> <li>1. In week 1, one socket and 2 switches at nursery school were not working. All 3 lights at the pole near playground were not working. Also, a light was not working.</li> <li>2. In week 2, one socket in nursery 2 room 1 was not in its right place but was working. 1 socket in nursery 1 room 3 was not working. A need for sim card was reported because the one available was not giving information at the right time.</li> <li>3. In week 3, 1 socket in nursery 1 room 3 was not working.</li> </ol>
Feb 2020	<ol style="list-style-type: none"> <li>1. For all weeks, a single report was shared, marked from 6<sup>th</sup> Feb to 9<sup>th</sup> Mar. It was reported that some documents were displaced.</li> <li>2. One socket was displaced in the nursery building 2, 1 CPE or switch each was not working in either of the nursery buildings.</li> <li>3. There are 7 lights which were not working – 3 in nursery building 1 third room, 3 in nursery building 2 and 1 in the playground.</li> </ol>

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	4. 4 sockets were not working in nursery building 2 – 2 in room 1, 1 in room 2 and 1 in room 3.
Mar 2020	<ol style="list-style-type: none"> <li>1. In the week of 3<sup>rd</sup> March, 7 lights were reportedly not working – 3 in nursery 1 (3<sup>rd</sup> room), 3 in nursery 2 (2<sup>nd</sup> room) and 1 in playground. 4 sockets were reportedly not working – all in nursery 2 (2 in room 1 and 1 each in rooms 2 and 3). Damage to the powerhouse was reported.</li> <li>2. In the week of 9<sup>th</sup> March, 1 socket was reportedly not working in nursery 2 room 1. Also, powerhouse was reportedly dirty.</li> <li>3. In the week of 15<sup>th</sup> March, 1 socket was still reportedly broken. The powerhouse was cleaned.</li> <li>4. In the week of 23<sup>rd</sup> March, 3 lights on 1<sup>st</sup> streetlight transmission line, 10 lights in playground and 3 lights in nursery 2 room 3 were not working. Out of 8 sockets, 3 sockets in nursery 2 were not working and another one elsewhere.</li> </ol>

## II. Summary of logbooks

Month	Users	Activities/Usage	Feedback
Aug 2019			1. Logbooks were available but difficult to read as pictures were not clear
Sep 2019	Playground: Users included children, youth and older men and women from the camp	<ol style="list-style-type: none"> <li>1. Charging of phone, torch</li> <li>2. Playing</li> </ol>	<ol style="list-style-type: none"> <li>1. Logbooks were not available between 24<sup>th</sup>-30<sup>th</sup> September</li> <li>2. Refugees complained of no light at the playground</li> </ol>
Oct 2019	Playground: Users included children, youth and older men and women from the camp	<ol style="list-style-type: none"> <li>1. Charging of phone, torch, power bank, radio and laptop</li> <li>2. Children playing football, cards, rope jumping</li> <li>3. Camp authority and community meeting</li> </ol>	1. Refugees requested for more sockets at the playground

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Nov 2019	Playground: Users included children, youth and older men and women from the camp	<ol style="list-style-type: none"> <li>1. Charging of phone, torch, radio, battery</li> <li>2. Cash machine</li> <li>3. Children playing</li> </ol>	<ol style="list-style-type: none"> <li>1. Refugees requested for an extension cable</li> </ol>
Dec 2019	<p>Playground: Users included children, youth and older men and women from the camp</p> <p>Nursery: Users included security guards, teachers, cleaners, and youth</p>	<ol style="list-style-type: none"> <li>1. Charging of phone, torch, radio, battery</li> <li>2. Cash machine</li> <li>3. Children playing</li> </ol> <ol style="list-style-type: none"> <li>1. Charging of phone, torch, radio, battery laptop</li> </ol>	<ol style="list-style-type: none"> <li>1. Refugees requested for an extension cable</li> </ol> <ol style="list-style-type: none"> <li>1. Logbooks were unavailable between 17<sup>th</sup> – 31<sup>st</sup> Dec</li> </ol>
Jan 2020	<p>Playground: Users included children, youth and older men and women from the camp</p> <p>Nursery: Users included students, teachers, and security guards</p>	<ol style="list-style-type: none"> <li>1. Charging phone, torch, computer, battery</li> <li>2. Playing football</li> </ol> <ol style="list-style-type: none"> <li>1. Charging phone, torch, radio,</li> <li>2. Personal studies</li> </ol>	<ol style="list-style-type: none"> <li>1. Refugees reported that the socket boxes were not enough</li> <li>2. Children were happy playing under the light</li> </ol> <ol style="list-style-type: none"> <li>1. Refugees requested for more sockets</li> <li>2. They were appreciative of the intervention. They previously had to pay to charge devices but now they could charge them for free</li> </ol>
Feb 2020	<p>Playground: Users included children, youth and older men and women from the camp</p> <p>Nursery building: Users included children, youth and older men and women of the camp,</p>	<ol style="list-style-type: none"> <li>1. Charging phone, machine</li> <li>2. Playing football, cards,</li> </ol> <ol style="list-style-type: none"> <li>1. Charging radio, phone, torch</li> </ol>	<ol style="list-style-type: none"> <li>1. Free sockets have helped reduce expenditure</li> <li>2. Light has helped children to play in the evening</li> <li>3. They were appreciative of free power provision</li> </ol> <ol style="list-style-type: none"> <li>1. They were appreciative of free power provision</li> <li>2. They have requested for more sockets</li> </ol>

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	teachers, and security personnel		<ol style="list-style-type: none"> <li>3. Sockets in Nursery 2 were reportedly not working</li> <li>4. Free sockets have helped reduce expenditure</li> </ol>
Mar 2020	<p>Playground: Users included children, youth and older men and women from the camp</p> <p>Nursey: Users included children, youth, older men and women from the camp, teachers, security guards, and cleaners</p>	<ol style="list-style-type: none"> <li>1. Playing football, cards</li> <li>2. Charging phone, radio, batteries, torch laptop</li> <li>3. Movement in and out of playground</li> </ol> <ol style="list-style-type: none"> <li>1. Charging phone, torch, radio, computer</li> </ol>	<ol style="list-style-type: none"> <li>1. The refugees were appreciative of the free energy provision as they previously had to walk long distances, to other camps, to charge their devices but could now charge them for free within the camp</li> <li>2. Due to COVID-19, fewer children were in the playground</li> </ol> <ol style="list-style-type: none"> <li>1. Free sockets helped reduce expenditure</li> <li>2. Refugees requested for more sockets</li> </ol>

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