

IMPACTS OF SOLAR ELECTRICITY ON RURAL PRIMARY SCHOOL EDUCATION.

Community Energy Malawi



ISSUE

In Malawi, education is one of the most important sectors often ranked second from agriculture. The educational system in Malawi is categorized into three main divisions namely, primary schools, secondary schools and tertiary, of the three primary school being is the biggest division. Though the education sector is regarded as the largest and most crucial, but it is considerably facing many challenges ranging from inadequate qualified teachers, poor infrastructure and insufficient learning materials and low number of electrified school (in most cases primary schools and community day secondary schools in rural areas).

Primary School electrification

The issue of electrifying classroom blocks for primary school students to study during night especially in rural areas has not to an extent been dealt with. This is compromises the time which pupils can study at night, with only 2% of rural areas connected to the national grid, there is little or no chances that pupils can study during the night, this has resorted parents to purchase candles, paraffin and battery torches for their children to use for studying at night. Whilst these sources provide a solution to the problem, but these sources are health hazard and economically not viable.

ACTION

Community Energy Malawi recognises the role that electricity has on education, and through our work in community Development Program (CEDP) under the

Malawi Renewable Acceleration Program (MREAP) we implemented school lighting project in the 12 district of Malawi, Namely: Balaka, Chitipa, Nsanje, Nkhonkhotakota, Lilongwe, Mchinji, Ntchisi, Phalombe, Machinga, Mzimba, Likoma and Neno. Where 100 solar home systems were installed in 20 primary schools across the 12 districts. on each school, systems were installed on two classroom blocks, staff room as well as 3 teachers houses. The system installed in classrooms provides lighting only whilst those in teacher's houses provide services such as lighting, phone charging and entertainment.

RESULTS

Since the implementation of the project, there have been stories of change in different primary schools across the 12 districts, according to CEM survey carried out between February and March 2016, the following Impacts have been recorded

- ✚ Students are able to study at night which has led to improved pass rates as well as secondary school selections
- ✚ Teachers are able to study and prepare work plans as well as conduct extra lessons at night
- ✚ Teachers retention has improved tremendously, as most teachers are willing to stay at the school because their houses are electrified.

- The project has also promoted reading culture amongst pupils who are not in the examination class as they also come during the night to study

An example of Chididi Primary school

Chididi primary school is one of the schools that was electrified in 2014, and since the electrification, performances of standard 8 pupils has tremendously improved, the performance records captured at the school are as shown below.

CHIDIIDI SCHOOL STD8 RESULTS:										
YEAR	NO ON ROLL		NO SAT		NO PASSED		NO FAILED		NO SELECTED	
	M	F	M	F	M	F	M	F	M	F
2003	13	07	11	4	11	4	-	-	3	3
2004	12	07	11	06	11	06	-	-	9	6
2005										
2006	12	13	11	13	10	13	1	-	-	-
2007	23	17	23	15	23	13	-	2	5	2
2008	20	21	15	16	14	11	1	-	1	2
2009	20	26	19	20	7	13	12	7	-	-
2010	23	11	21	11	14	6	8	4	01	01
2011	28	21	25	19	12	03	13	05	05	-
2012	37	22	34	16	23	14	11	02	02	03
2013	27	15	25	13	18	04	07	09	02	-
2014	32	16	32	16	26	2	16	14	1	1
2015	17	11	17	11	19	11	-	-	5	9
2016										
2017										

Paying particular attention between the years 2014 and 2015, where in 2013-2014 was the academic year before project implementation whilst the academic year 2014-2015 was after project implementation.

Comparing the years 2014 and 2015, the pass rate increased from 54% to 100%, the failure rate dropped from 63% to 0%, whilst secondary selection has increased from 4% to 56% and 2015 recorded the highest selection number of girls to secondary as compared to all the previous years.

As the statistics show, the impacts of solar electrification in rural primary schools are huge, and replicating scaling up such projects can great development strides in the education sector and CEM is looking forward to stepping up such interventions to in order to bring positive impacts.



Solar electricity allows pupils to have ample time to study during the night

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