



managed by camco clean energy

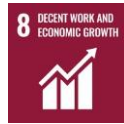
# QUARTERLY IMPACT REPORT

Quarter 3 2021



# EXPECTED DEVELOPMENT AND CLIMATE RESULTS

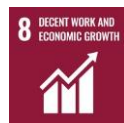
Expected programme lifetime results of current project portfolio as of 31 September 2021



<p><b>18</b> Countries with NDCs supported</p>	% of 2023 target N/A	<p><b>\$106m</b> Capital contracted</p>	% of 2023 target 85%	<p><b>10,000</b> Jobs created</p>	% of 2023 target N/A
<p><b>101MW</b> New renewable capacity</p>	83%	<p><b>204,213</b> tCO<sub>2</sub>e avoided</p>	69%	<p><b>1,700</b> Women hired from jobs created</p>	N/A
<p><b>39</b> Projects reaching financial close</p>	89%	<p><b>1.19m</b> People provided first-time electricity access</p>	124%	<p><b>\$537m</b> Third-party funding mobilised</p>	63%

# ACTUAL DEVELOPMENT AND CLIMATE RESULTS

Actual out-turn as of 31 September 2021



<p><b>18</b> Countries with NDCs supported</p>	% of 2021 target N/A	<p><b>\$54.6m</b> Capital committed</p>	% of 2021 target 50%	<p><b>2,958</b> Jobs created</p>	% of 2021 target N/A
<p><b>21.3MW</b> New renewable capacity</p>	103%	<p><b>39,942</b> tCO<sub>2</sub>e avoided</p>	72%	<p><b>561</b> Women hired from jobs created</p>	N/A
<p><b>20</b> Projects reaching financial close to date</p>	74%	<p><b>793k</b> People provided first-time electricity access</p>	114%	<p><b>\$151m</b> Third-party funding mobilised</p>	28%

# WELCOME

Solar PV mini-grids make up a large and ever-growing part of the portfolio of projects supported by REPP, and for very good reasons. Mini-grids' potential for delivering clean and reliable energy to off-grid, rural communities at a high service quality so as to promote the productive use of electricity - and thereby increase income-generating capabilities for end users - is nothing short of transformative. At the same time, the electricity mini-grids supply for lighting is in most instances replacing traditionally used kerosene and candles, with obvious positive health implications. Although numerous barriers are still preventing the tried and tested technology from delivering at scale, it is just a matter of time before the sector truly takes off.

In this latest quarterly impact report, we have the pleasure of introducing the latest mini-grid additions to the REPP portfolio - Winch and Moyamba - and look forward to many more to come.

## GROUND-BREAKING MINI-GRID PROJECT UNVEILED

More than 55,000 people will be connected to electricity for the first time through a REPP-supported project to develop [Sierra Leone and Uganda's first ever large-scale mini-grid programmes](#).

*See page 6 for more.*



Image source: Winch Energy

## MINI-GRID PROJECT FOCUSES ON HUMAN IMPACT

Rural communities are reaping the health and socio-economic benefits of the [REPP-supported Moyamba solar mini-grid project in Sierra Leone](#). REPP's USD 1.25m loan to developer Energicity also marks

the UK government-funded facility's first investment in a majority women-led company.



Image source: Energicity

## GEOHERMAL PROJECT PLANS MORE DRILLING

Kalahari GeoEnergy's ongoing feasibility study has modelled that a shallow outflow reservoir within the Bweengwa River Geothermal Area in Zambia has power capacity of 4.2-6.2 MWe, which could decline slightly to 4.0-5.9MWe after 30 years. Further drilling is planned to improve the understanding of the size of the resource and to locate the upflow.



## HYBRIDISATION PROJECT PROGRESSING IN MADAGASCAR

Work to install 2.4MW of solar PV panels in the city of Diego is on track for a targeted completion date in Q4 2021. Developer LIDERA Green Power has already installed 2MW in the city of Toamasina, and a further 1.25MW in Mahajanga, following a USD 6 million bridge loan from REPP. More [here](#).



Image source: LIDERA Green Power

## TALKING POINTS INTERVIEW WITH CHRIS LONGBOTTOM

Read our latest [Talking Points interview](#) with Mobile Power founder Chris Longbottom covering a range of topics, including how the company brought its energy access

model involving solar-powered pay-per-use battery sharing to life.



Image source: Mobile Power

## ROUNDTABLE TALKS FOCUS ON MINI-GRID REGULATIONS

REPP delivered a high impact roundtable in partnership with the Africa Mini-grid Developers Association in July. This [follow-up article](#) co-written by Camco Clean Energy's Policy and Partnerships Manager Ieva Indriunaite provides a round-up of the takeaways from the session, "Scaling up mini-grids in Kenya: How can the enabling environment drive investment?".

Image source: OnePower Lesotho

# WINCH ENERGY



Image source: Winch Energy

Plans to build a portfolio of 49 solar PV mini-grids rural Sierra Leone and Uganda are progressing well following USD2.1m loans from both REPP and co-funder, FMO.

As well as bringing first-time electricity access to over 55,000 rural people in two of the world’s least electrified countries, the mini-grids will mitigate GHG emissions and generate a host of other co-benefits. These include:

- New opportunities for social and economic development through extended working hours, and reduced wastage of time and physical exertion and provided improved information access;
- An increase in productive use of energy opportunities, which works as a driver for long-term economic growth in the project community, increasing the resilience of the community to climate change;
- The replacement of kerosene, candles and charcoal, thus improving indoor air quality; and
- Employment opportunities across numerous skills created during the project’s development and operation.

## COUNTRY POLICY ALIGNMENT

The Winch project supports both countries' NDC targets to reduce GHG emissions by 2030 and promote renewable energy development in rural areas, and contributes to Sierra Leone’s national electrification target of 92% by 2030 (National Renewable Energy Action Plan, 2016) and Uganda’s 100% electrification by 2030 target (Draft Revised National Energy Policy, 2019). Improving energy access through renewable energy supports the implementation of Sierra Leone’s medium term development vision 2019-2023 and Uganda’s National Development Plan III (2020/21-2024/25).

## LOCATION

Sierra Leone and Uganda

## AT A GLANCE

### Technology

Solar PV mini-grids



### Project type

Off-grid




### Offtaker

Rural communities

## Supported SDGs




## KPIs

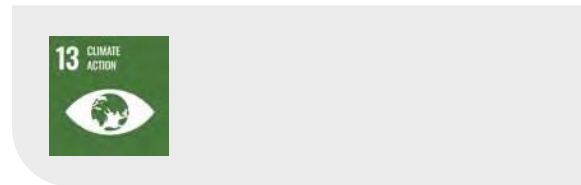
-  Greenhouse gas emissions avoided: 964 tCO<sub>2</sub>e per year
-  People with first-time access to clean energy: 55,000
-  Installed capacity: 2.2MW




# REPP'S REALISED IMPACT AT A GLANCE<sup>1</sup>

**GHG AVOIDED** 


Year to date: 17,889 tCO<sub>2</sub>e  
 For quarter: 7,637 tCO<sub>2</sub>e  
 Increase: 74%



**INSTALLED CAPACITY** 

To date: 21.3MW  
 For quarter: 0.5MW  
 Increase: 2%



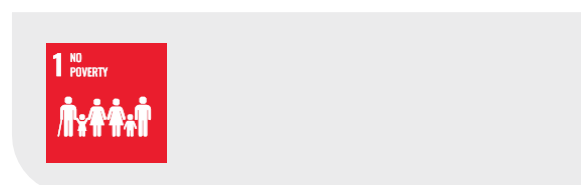
**NEW CONNECTIONS<sup>2</sup>** 

To date: 793,155  
 For quarter: 73,290  
 Increase: 10%



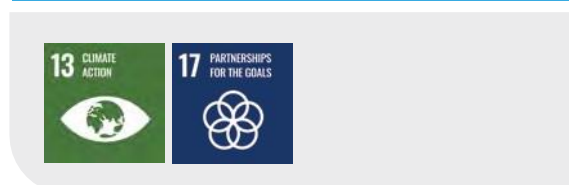
**FULL-TIME JOBS CREATED** 


Year to date: 2,958



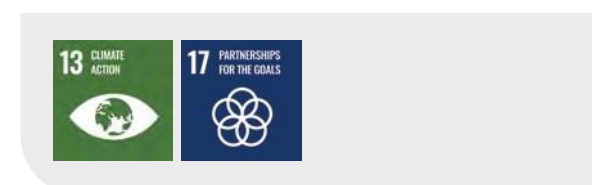
**COMMITTED CAPITAL BY REPP** 

To date: USD 54.6 m  
 For quarter: USD 3.9 m  
 Increase: 8%



**ADDITIONAL FINANCE MOBILISED** 

To date: USD 151 m  
 For quarter: USD 22m  
 Increase: 17%



<sup>1</sup> See page 13 for definitions for greenhouse gases (GHG) avoided, installed capacity, new connections and finance mobilised.

<sup>2</sup> Refers to number of people connected to electricity for the first time .

# REPP'S IMPACT

## PROJECT BY PROJECT<sup>1</sup>

### ARC Power

Mini-grids project, Rwanda



23 tCO<sub>2</sub>e



0.07 MW



7,120 new connections

### CBEA

Mini-grids project, Tanzania



36 tCO<sub>2</sub>e



0.04 MW



1,166 new connections

### GVE

Mini-grids project, Nigeria



260 tCO<sub>2</sub>e



0.43 MW



22,779 new connections

### Ha Makebe

Mini-grids project, Lesotho



14 tCO<sub>2</sub>e



0.07 MW



915 new connections

### Malile - Mahajanga

Solar PV hybridisation project, Madagascar



431 tCO<sub>2</sub>e



1.25 MW



Improves stability of grid supply

### Malile - Toamasina

Solar PV hybridisation project, Madagascar



1,262 tCO<sub>2</sub>e



2.0 MW



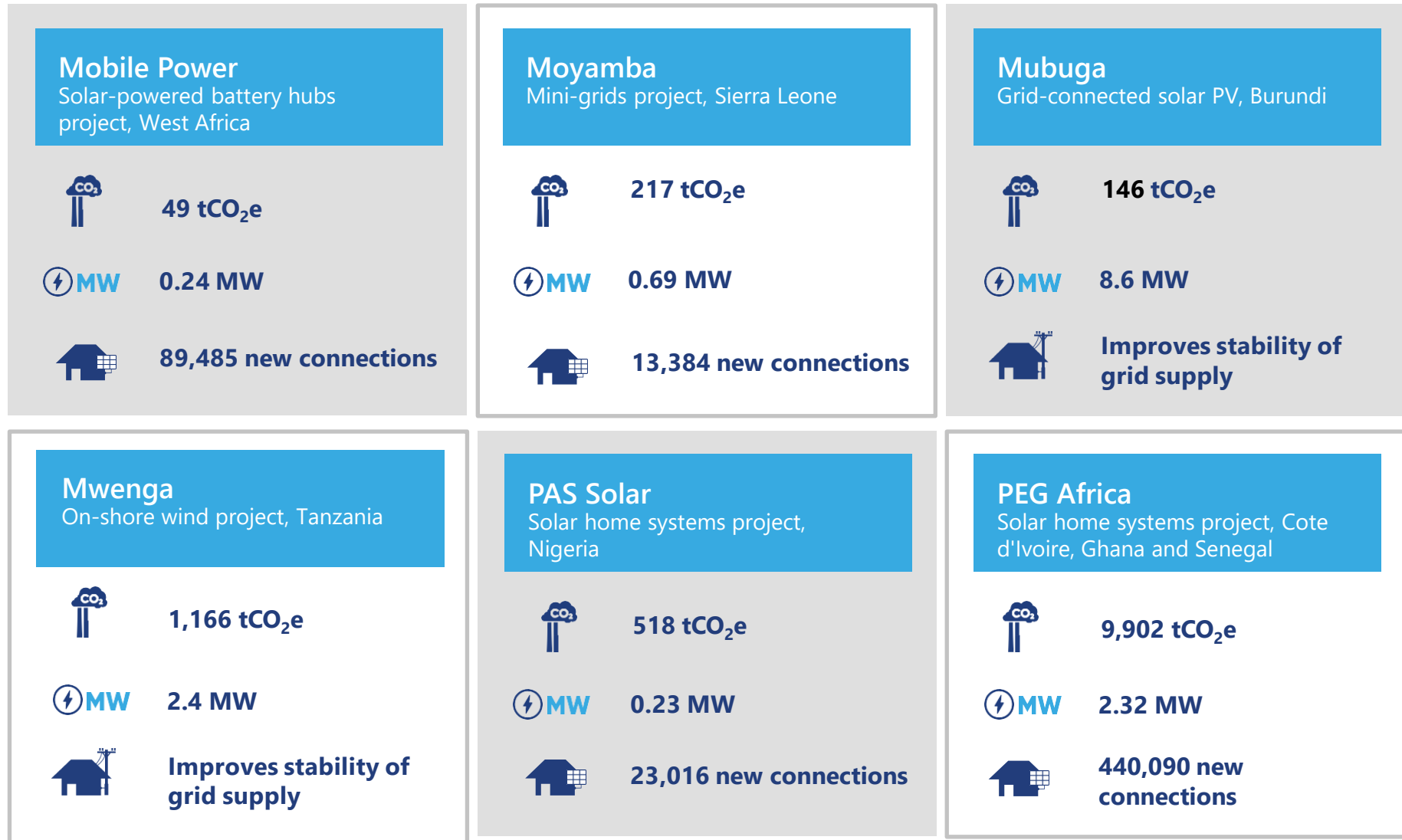
Improves stability of grid supply

<sup>1</sup> Figures shown for the number of new connections and installed capacity reflect total performance to date. Figures for GHG avoided are for the year to date..



# REPP'S IMPACT

## PROJECT BY PROJECT<sup>1</sup>



<sup>1</sup> Figures shown for the number of new connections and installed capacity reflect total performance to date. Figures for GHG avoided are for the year to date..

# REPP'S IMPACT

## PROJECT BY PROJECT<sup>1</sup>

### PowerGen

Mini-grids project, Nigeria and Tanzania



710 tCO<sub>2</sub>e



1.8 MW



47,269 new connections

### Powerhive

Mini-grids project, Kenya



375 tCO<sub>2</sub>e



0.86 MW



24,262 new connections

### upOwa

Solar homes systems project, Cameroon



2,780 tCO<sub>2</sub>e



0.3 MW



123,575 new connections



Image source: PowerGen

<sup>1</sup> Figures shown for the number of new connections and installed capacity reflect total performance to date. Figures for GHG avoided are for the year to date..

WHAT					HOW MUCH							
Focus area	Performance indicators	Link to SDGs		Alignment with IRIS+	Achieved			Forecast <sup>1</sup>		Target		Data quality
		SDGs	Target		2019	2020	2021	2021	2023	2021	2023	
Prosperity	Number of projects supported by REPP	7 13	7.1, 7.2, 13.1		25	27	33	40	45	44	60	High. Measured.
	Number of projects reaching financial close	7 13	7.1, 7.2, 13.1		8	16	20	28	40	27	44	High. Measured.
	REPP funding committed in USD	17	17.3	OD5990	24	47	55	83	107	110	171	High. Measured.
	Finance mobilised in USD	17	17.3		61	114	151	633	716	533	846	High. Measured.
Planet	Direct job creation in each year <sup>2</sup>	1 8	1.2, 8.5	OI8869 OI9028	1,512	2,104	2,958	MNT	MNT	MNT	MNT	High. Measured.
	Installed renewable energy capacity in MW	1 7 8 13	1.5, 8.4, 7.1, 7.2, 13.1	PD1602	2.4	8.4	21.3	26.6	139.6	20.7	122.5	High. Measured.
	Number of countries whose NDCs are supported	13	13.2		-	14	18	MNT	MNT	MNT	MNT	High. Measured.
	Greenhouse gases avoided in tCO <sub>2</sub> e	13	13.1	PI2764	5,958	22,053	39,942	54,007	358,504	55,766	298,091	Medium to high. <sup>3</sup>
People	Number of people with first-time access to clean energy	1 3 7 11	1.4, 1.5, 3.4, 7.1, 7.2, 11.1	PI2822	174,220	581,400	793,155	834,311	1.29M	694,948	960,645	Medium to high. <sup>4</sup>
	Number of households using products to support business / microbusiness	1 8	11.2, 8.5		-	9,509	6,583	MNT	MNT	MNT	MNT	High. Measured.
	Number of critical services supported <sup>5</sup>	1	1.4, 1.5	PI2822	-	371	411	MNT	MNT	MNT	MNT	High. Measured.
	Number of women in the workforce from direct jobs created <sup>6</sup>	5	5.5	OI2444 OI6978	278	501	561	MNT	MNT	MNT	MNT	High. Measured.
	Investments aligned with X2 criteria (USD)	5	5.5	OI1571 OI8118 OI8709	-	18	47	MNT	MNT	MNT	MNT	High. Measured.

MNT = Monitored. No Targets.

<sup>1</sup> Risk-adjusted pipeline includes committed projects and projects in advanced pipeline.

<sup>2</sup> 2020 job figures have been rectified.

<sup>3</sup> Calculated from kWh produced and UNFCCC-approved country specific grid emission factor. For SHS projects, calculated based on sales and a conservative emission factor of 0.15 tCO<sub>2</sub>/SHS/year.

<sup>4</sup> Calculated based on sales / customers and conservative average household size of 5 people.

<sup>5</sup> Refers to schools, clinics, hospitals, waterworks and water-pumping stations that have received electricity through the projects.

<sup>6</sup> Agent jobs not included





# LOOKING AHEAD

At the time of writing, the **COP26 climate conference** had got into full swing in Glasgow. Some major announcements have already hit the headlines, including pledges by more than 450 banks, insurers and assets managers with USD 130 trillion in assets under management to set science-based targets in line with net zero emissions by 2050; a commitment by 40 countries to phase out coal with timelines for implementation ranging from the 2030s to the 2040s; and a “game-changing” pledge by world leaders to cut methane emission levels by 30% by 2030.

The developments have been met with mixed reactions, with some observers hailing major breakthroughs while many others claiming the measures do not nearly meet the scale of action needed to avert climate catastrophe. Whatever the final outcomes of the talks, actions speak louder than words and it will be very clear very soon as to whether COP26 has been the success the world needs it to be.

As far as REPP is concerned, it is business as usual as the UK government-funded facility and its partners continue to build a self-sustaining renewable energy market in Sub-Saharan Africa. In the next quarterly impact report, we look forward to sharing the results of a recent **innovation-themed request for proposals**, as well as an update on the recent **REPP Academy** with links to related thought pieces that emerged from the capacity building event.



Image source: Voltalia



# ABOUT REPP

The Renewable Energy Performance Platform (REPP) works to mobilise private sector development activity – and investment – in small to medium-sized renewable energy projects (typically up to 25MW) in West, Central, East and Southern Africa to ensure access to clean energy for all and mitigate greenhouse gas emissions (GHG) in line with SDG 7 and SDG 13 and the Paris Agreement.

REPP is managed by Camco Clean Energy, a leading fund management company, and is supported with USD 200m funding from the UK's International Climate Finance through the Department for Business, Energy and Industrial Strategy (BEIS).

To date, REPP has financing agreements with **33 projects** or companies spread across **18 countries** and employing **7 different technologies** (grid-connected solar PV, run-of-river hydro, on-shore wind, solar PV mini-grids, solar home systems, solar PV-powered batteries, geothermal).<sup>1</sup> A total of **USD 54.6m** has been contracted through these projects and a further **USD 106m** committed to projects in the pipeline.



Image source: upOwa



Image source: ARC Power

<sup>1</sup> Five earlier projects were terminated.



# HOW CAN REPP HELP?



## DEVELOPMENT AND GROWTH PHASE CAPITAL AND SUPPORT

REPP provides loans for selected third-party development expenses (such as feasibility studies, environmental and social impact assessments, legal advice etc.), financial structuring support, general project guidance and, in selected cases, developer capital. It also provides convertibles loans to support the growth of start-ups in the sector. REPP also supports developers and investors with business planning, training, workshops and seminars, and facilitates learning and exchange between developers.



## GAP FINANCING

REPP helps to bring projects to financial close, and supports the growth of early-stage companies in the sector, by providing funding using a range of finance products, including equity, loans (junior, senior, bridging), and convertible notes.



## ACCESS TO RISK MITIGATION INSTRUMENTS

REPP helps projects and developers to access appropriate risk mitigation instruments provided by third-party providers. These instruments typically focus on risks that cannot be cost-effectively managed by the private sector - in particular, political, regulatory, currency and offtaker risk. REPP also works with governments and other stakeholders on regulatory improvements to reduce risk in the long-term.



## ACCESS TO LONG-TERM CAPITAL

REPP helps developers to structure project finances in the right way, and to secure finance from REPP partners and other sources of capital - both private and public. It also works with lenders and risk mitigation instrument providers to coordinate their approval and due diligence requirements so that the funding process is simplified for developers. REPP incentivises refinancing to crowd in other financiers postconstruction which enables the platform to recycle its capital.



# DEFINITIONS

**Finance mobilised** - financial resources committed by third parties to a project being supported by REPP.

**Greenhouse gases (GHG) avoided** - the amount of emissions, in tonnes of carbon dioxide equivalent (tCO<sub>2</sub>e), which would have been created to generate the same amount of electricity produced by a REPP-financed renewable energy project if fossil fuels had been used.

**Installed capacity** - the rated power output, in MW, of a power plant or other electricity generator when operational. Also known as nameplate capacity and rated capacity.

**New connections** - the number of people connected to an off-grid renewable energy project. It is calculated as the number of customers served by the project multiplied by the average number of people per household, which is deemed to be five persons.



Image: PAS Solar



Image source: PEG Africa

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