

SIERRA LEONE RURAL RENEWABLE ENERGY PROJECT (RREP)

Establishing the enabling environment for a private sector driven rural mini-grid market



Presentation Outline

- About RREP
- What We're Working On
- Lessons Learned

About RREP

- RREP was developed to support the Government of Sierra Leone's goals towards low emissions, climate resilient, gender sensitive and sustainable growth trajectory
- Implemented by the Ministry of Energy with support from the United Nations Office for Project Services (UNOPS) and funding from UK Department for International Development (DFID)
- Aiming to establish an enabling environment in Sierra Leone for a private sector driven rural mini-grid market and to provide up to 5MW of sustainable renewable power in rural.



What We're Working On

INFRASTRUCTURE IMPLEMENTATION

- Electrification of Community Health Centres (CHCs)
- Installation of mini-grids in communities

ENABLING ENVIRONMENT

- Mini-grid regulation
- Mini-grid tariff
- EPA guideline
- Capacity building
- Competitive tender for private sector participation

PRIVATE SECTOR DEVELOPMENT

- Uncover productive use investment opportunities and increase access to quality, productive use equipment, appliances and services by strengthening private sector performance



Secondary school at Conakry Dee

Impact & Outcome

ACCESS TO ELECTRICITY

94 94 rural communities, 360,000 direct beneficiaries will have access to electricity

IMPROVED HEALTH

97 Strengthening the health sector by electrifying 97 Community Health centres

ECONOMIC GROWTH

Encourage economic growth through providing opportunities for businesses to develop electricity based businesses and services

CAPACITY BUILDING

Contributing to capacity building through use of local content, training and technical assistance



Community Health Centre at Petifu

INFRASTRUCTURE IMPLEMENTATION

- 54 Community Health Centers Electrified
- 50 mini-grids installed in 50 rural communities

ENABLING ENVIRONMENT

- First Mini-grid regulation for Sierra Leone developed
- First Mini-grid cost reflective tariff Model developed
- First EPA Guidelines on renewable projects developed



Mini-grid at Bumpeh



Studying in the evening at a school in Conakry Dee

MINI-GRID REGULATION

- Regulation of market entry
- Regulation of retail tariff
- Regulation of technical and service standards
- Regulation of arrival of the main grid

PRIVATE SECTOR PARTNERSHIP

- **3** private sector companies engaged to maintain and to operate the systems. The companies signed a Public Private Partnership (PPP) agreement with the Government of Sierra Leone leveraging **\$10M** in private sector investment
- **44** additional mini-grids will be completed by the end of the project through co-investment with the 3 private sector companies



Private operator connection testing at Dia



M&E Enumerator at Kayima

MONITORING & EVALUATION

Impact Evaluation to assess the socio-economic impact and outcome of the project and generate recommendations that can be used in future interventions

PRIVATE SECTOR DEVELOPMENT

A rural energy market development strategy to collaborate with private sector to increase access to and drive uptake of new and improved rural energy-reliant economic opportunities and productive use equipment



Barbershop at Kombayendeh

Lessons Learned



Patient at Conakry Dee clinic

- The Government assumes responsibility in project implementation, and decisions taken can be implemented with full political support
- Private sector critical for sustainability
- Role of an independent implementer, such as UNOPS, to bring the private and public sector together and create the enabling environment
- Constant community engagement and consultation, and stakeholder management – critical for success
- Land swap agreement 54 Health centres – solved a massive problem, bought us some time, and created ownership

Lessons Learned



Battery room at Dia

- Provision of basic Household starter kits – energy efficient bulbs, and sockets to demonstrate and encourage efficient use of energy
- Reserve Funds to facilitate sustainability of the system
- Lot bidding. Lots, grouping of communities with varying economic viability. Sufficient enough to attract investors as well as include less economic variable communities.
- Cost reflective tariff methodology to provided informed decisions in tariff setting
- Scalable design. Systems designed and implemented to be responsive to demand
- “Ownership” by community (No fences)

[Click here to watch the video](#)

RREP IN MOTION

In September 2018 the UK DFID conducted a field trip as part of the Annual Review of the project.

THE END



Mini-grid at Kamasondo



Generation facility at Conakry Dee clinic



Melekuray generation facility



Mini-grid at Futa

Project Milestones

JULY 2017

- 54 solar generation system in 54 communities
- Electrification of 54 Community health centers
- Electrification of one school in Conakry Dee

OCTOBER 2018

- 50 mini-grids in 50 communities

DECEMBER 2018

- Three private operators signed PPP contracts with the Government of Sierra Leone. The operators will maintain and operate the mini-grid systems in all the communities. The operators will co-invest in the completion of 44 more mini-grid systems

JUNE 2019

- Handover of 54 installations to private operators
- Mini-grid tariff approved by the commission

RREP Sites

S/n	Lot	District	Community	Operator	Work Package	S/n	Lot	District	Community	Operator	Work Package	S/n	Lot	District	Community	Operator	Work Package
1	3	Karene	Kagbere	Winch Energy	1	41	1	Kailahun	Bandajuma Yawiel	OGP	1	81	2	Kenema	Baoma	OGP	2
2	3	Karene	Kamaranka	Winch Energy	1	42	1	Kailahun	Sandaru	OGP	1	82	3	Koinadugu	Kondembaia	Winch Energy	2
3	3	Tonkololi	Mabang	Winch Energy	1	43	1	Kono	Njagbwema	OGP	1	83	3	Koinadugu	Falaba	Winch Energy	2
4	3	Koinadugu	Sinkunia	Winch Energy	1	44	1	Kono	Kombayendeh	OGP	1	84	2	Bonthe	Bonthe	OGP	2
5	3	Koinadugu	Musaia	Winch Energy	1	45	1	Kono	Kayima	OGP	1	85	4	Port Loko	Foredugu	Enegiciti	2
6	3	Koinadugu	Bafodia	Winch Energy	1	46	1	Kono	Tombodu	OGP	1	86	3	Koinadugu	Firawa	Winch Energy	2
7	3	Koinadugu	Koinadugu	Winch Energy	1	47	1	Kono	kaodu	OGP	1	87	3	Tonkolili	Mathoir	Winch Energy	2
8	3	Tonkololi	Mara	Winch Energy	1	48	1	Kono	Kainkordu	OGP	1	88	2	Pujehun	Sahn	OGP	2
9	3	Bombali	Rokonta	Winch Energy	1	49	1	kailahun	Dia	OGP	1	89	4	Port Loko	Mange	Enegiciti	2
10	3	Bombali	Batkanu CHC	Winch Energy	1	50	2	Pujehun	Mano Gbogiama	OGP	1	90	4	Kambia	Madina Junction	Enegiciti	2
11	3	Karene	Kathantha Yimboi	Winch Energy	1	51	2	Pujehun	Bandajuma Sowa	OGP	1	91	3	Koinadugu	Dogoloya	Winch Energy	2
12	3	Karene	Fintonia	Winch Energy	1	52	2	Pujehun	Futa pejuh	OGP	1	92	3	Tonkolili	Bendugu	Winch Energy	2
13	3	Koinadugu	Yiffin	Winch Energy	1	53	2	Bonthe	Madina	OGP	1	93	2	Bonthe	Mogbwemo	OGP	2
14	4	Portloko	Petifu	Enegiciti	1	54	2	Bonthe	Gbap	OGP	1	94	3	Koinadugu	Bendugu	Winch Energy	2
15	4	Karene	Kamasondo	Enegiciti	1	55	2	Bo	Koribondu	OGP	2	95	1	Kailahun	Nyandehun	OGP	2
16	4	Portloko	Malekuray	Enegiciti	1	56	1	Kailahun	Buedu	OGP	2	96	2	Pujehun	Sulima	OGP	2
17	4	Portloko	Conakry Dee	Enegiciti	1	57	2	Bonthe	Moriba Town	OGP	2	97	3	Tonkolili	Masumbri	Winch Energy	2
18	4	Moyamba	Bauya	Enegiciti	1	58	2	Bo	Sumbuya	OGP	2						
19	4	Moyamba	Bradford	Enegiciti	1	59	1	Kailahun	Manowa	OGP	2						
20	4	Moyamba	Sembehun	Enegiciti	1	60	3	Koinadugu	Bindi	Winch Energy	2						
21	4	Moyamba	Bomotoke	Enegiciti	1	61	2	Bo	Baomahun	OGP	2						
22	4	Moyamba	Shenge	Enegiciti	1	62	2	Bo	Tikonko	OGP	2						
23	4	Portloko	Masimera	Enegiciti	1	63	4	Moyamba	Taiama	Enegiciti	2						
24	4	Moyamba	Senehun	Enegiciti	1	64	2	Bo	Jimi Bagbor	OGP	2						
25	4	Moyamba	Njama	Enegiciti	1	65	3	Koinadugu	Alikalia	Winch Energy	2						
26	4	Moyamba	Kangahun	Enegiciti	1	66	4	Port Loko	Masiaka	Enegiciti	2						
27	4	Moyamba	Mokelleh	Enegiciti	1	67	2	Kenema	Gbojibu	OGP	2						
28	4	Moyamba	Gbangbatoke	Enegiciti	1	68	1	Kailahun	Bonumbu	OGP	2						
29	4	Moyamba	Mano	Enegiciti	1	69	4	Moyamba	Rotifunk	Enegiciti	2						
30	4	Kambia	Kychom	Enegiciti	1	70	4	Kambia	Rokupr	Enegiciti	2						
31	4	Kambia	Barmoi Munu	Enegiciti	1	71	1	Kailahun	Jojoima	OGP	2						
32	4	Kambia	Kamasasa	Enegiciti	1	72	1	Kailahun	Mobai	OGP	2						
33	4	Kambia	Kukuna CHC	Enegiciti	1	73	1	Kailahun	Koindu	OGP	2						
34	4	Kambia	Mafaray-Gbalamuya	Enegiciti	1	74	1	Kailahun	Daru	OGP	2						
35	4	Portloko	Sendugu	Enegiciti	1	75	4	Moyamba	Moyamba Junction	Enegiciti	2						
36	4	Kambia	Mambolo CHC	Enegiciti	2	76	2	Kenema	Gegbwema	OGP	2						
37	2	Bo	Bumpeh	OGP	1	77	1	Kailahun	Pendembu	OGP	2						
38	2	Bonthe	Tihun	OGP	1	78	3	Bombali	Gbendembu	Winch Energy	2						
39	2		Levuma	OGP	1	79	2	Kenema	Gorahun	OGP	2						
40	1	Kono	Gandorhun	OGP	1	80	3	Koinadugu	Seria	Winch Energy	2						

Community Health Centres
(Work package 1)

Grids (Work Package 1+)

Grids (Work Package 2)

Settlements

Urban

Communities

CLWG

CLWG

CLWG

Communities Co-Invest

Boundaries

Regional

Province

District

Autonomy

Settlement

Urban

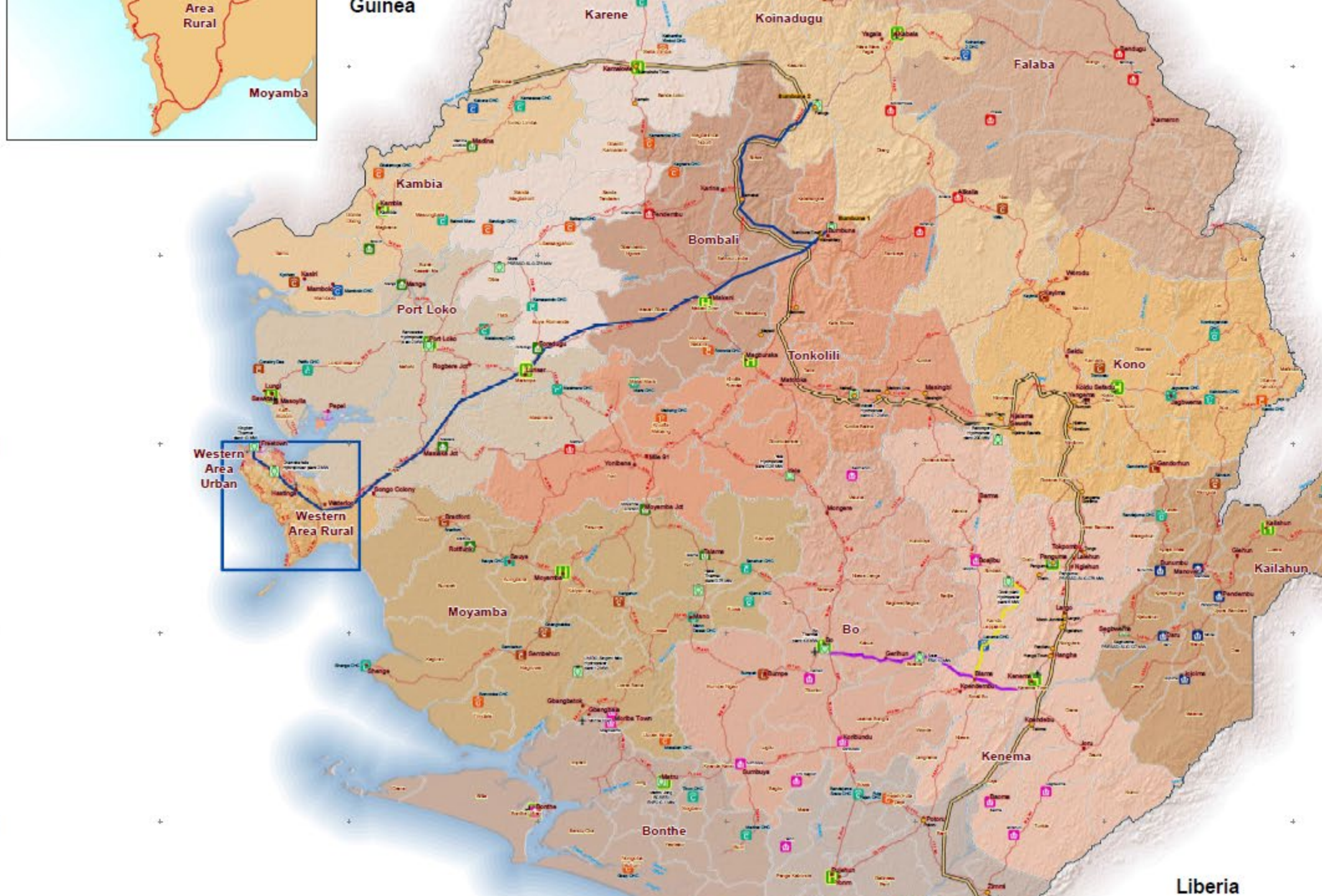
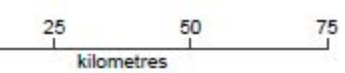
Rural

Port

Main Roads

Water Rivers

Coastal



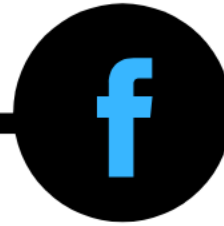
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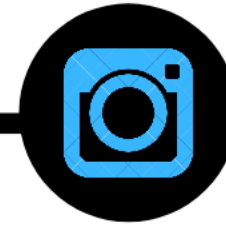
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