



MICAT Press Briefing

Thursday, September 14, 2017



Rural and Renewable Energy Agency (RREA)

Update on RREA's Rural Energy Interventions

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History



- ❖ RREA started as a Prototype within the Ministry of Lands, Mines & Energy following the Formulation of the National Energy Policy (NEP) in 2008.
- ❖ The Agency was established by Executive Order No. 23 in 2010, giving the RREA a semi-autonomous status.
- ❖ The RREA was established by legislation in July 2015, thus giving the agency full autonomy.
- ❖ The Agency is governed by a Board of Directors.



Mandate

- ❖ To facilitate and accelerate the economic transformation of rural Liberia by promoting the commercial development and supply of modern energy services to rural areas with an emphasis on locally available renewable resources.



Principal Functions

- ❖ Planning and financing of renewable energy projects to be operated and managed by public, private, and community developers/institutions;
- ❖ Carrying out educational campaigns and targeted training;
- ❖ Serving as Liberia's information clearinghouse on rural and renewable energy development;
- ❖ Management of the Rural Energy Fund (financial management system) through which domestic and international resources intended for rural energy program delivery is managed with transparency and accountability.



Rural Energy Strategy and Master Plan (RESMP) – 2030



www.liberiaruralenergy.org

“The Agency shall develop in collaboration with the Ministry of Lands, Mines & Energy and other stakeholders a Rural Energy Strategy and Master Plan for Liberia. The Master Plan shall be formulated on the basis of well-defined project selection and prioritization criteria designed to ensure enhanced energy access with equity, sustainable development and optimal use of indigenous and renewable resources, and ensure that these are integrated into the national energy Master Plan.”

Section 2.1(a) of the RREA Act.



Rural Energy Strategy and Master Plan (RESMP) – 2030

www.liberiaruralenergy.org

With this very important legislative mandate, the RREA in consultation with all stakeholders and partners has developed a comprehensive ***Rural Energy Strategy and Master Plan with the key objective of achieving 35% rural electrification by 2030.***



Rural Energy Investment and Action Plan



Five Main RESMP Programs

I. GTG Growing the National Grid

National Grid extension

4 initiatives
• 15 projects

II. DG Decentralized Grids

Solar/Diesel transitional mini-grids, decentralized grids and renewable energy

4 initiatives
• 24 projects

III. BTG Beyond the Grid

Small scale off-grid initiatives in non-grid and rural areas

3 initiatives
• 9 projects

IV. OTP Other than Power

LPG and efficient cook stoves.
Energy Efficiency

4 initiatives
• 12 projects

V. BC Building Capacity

Building capacity and systems for implementation and operation

6 initiatives
• 32 projects



Rural Electrification Target & Access Rate

In line with global, regional, sub-regional initiatives, and the **GOL Agenda for Transformation & Vision 2030, the **RREA** aims to achieve the following in terms of rural electricity access:**

- ❖ Electrification rate for the population outside of Monrovia is set at 10% in 2020, 20% in 2025 and 35% in 2030.
- ❖ Electrification of at least 2,000 settlements with grid infrastructure connecting at least 50% of those settlement's population by 2030.
- ❖ All county capitals electrified by 2025.

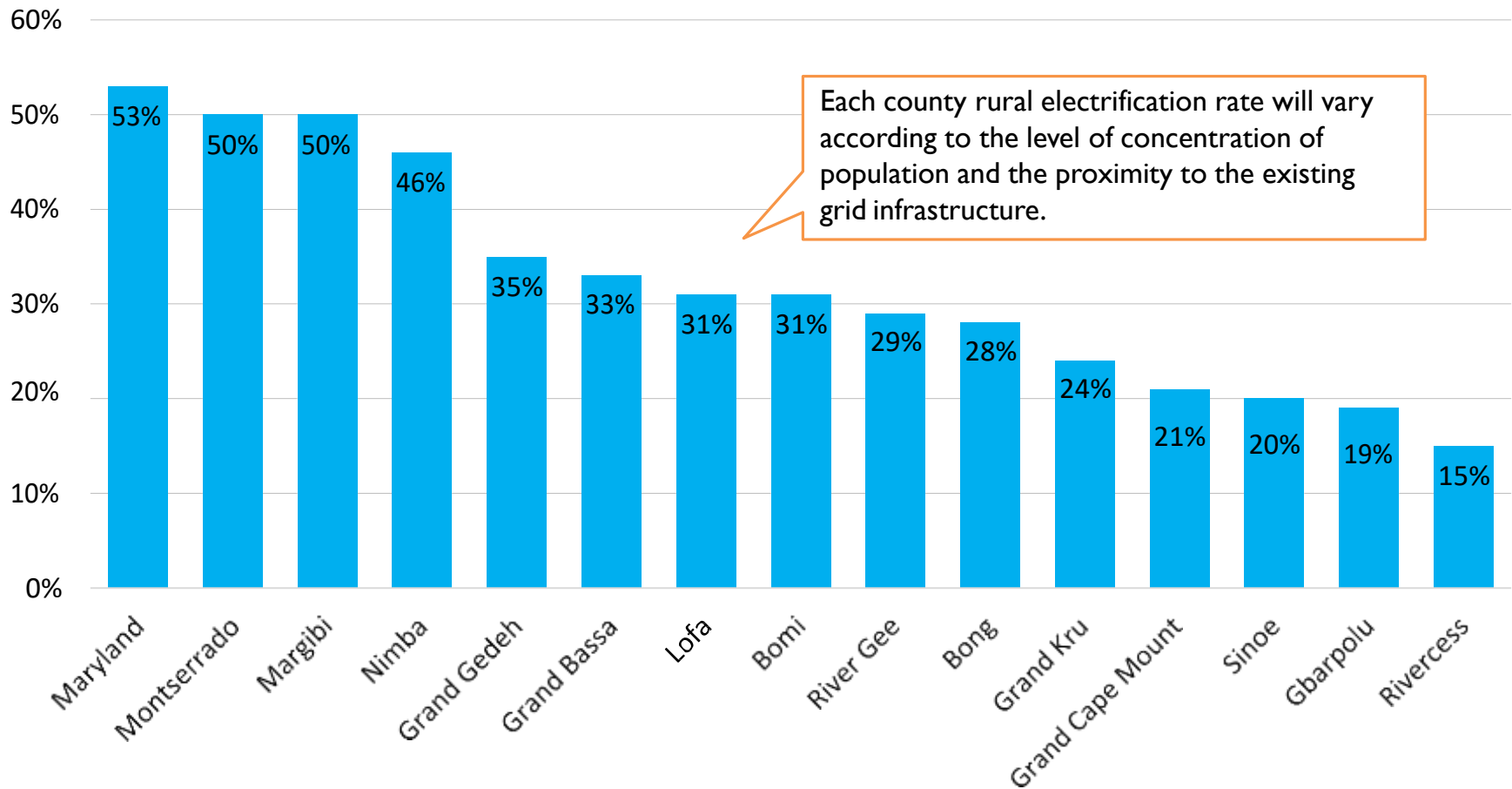


Rural Electrification Target & Access Rate Cont'd

- ❖ All health facilities and secondary schools electrified by 2025.
- ❖ The ten largest settlements in every county electrified with no county having less than 15% electrification rate by 2030.
- ❖ Establish a credit/subsidy mechanism for connection of poor and woman-led households through Rural Energy Fund and promote active participation of women in the jobs that will be created for electrifying the country.



Rural Electrification Rate Per County By 2030





Timeline for Phased Implementation

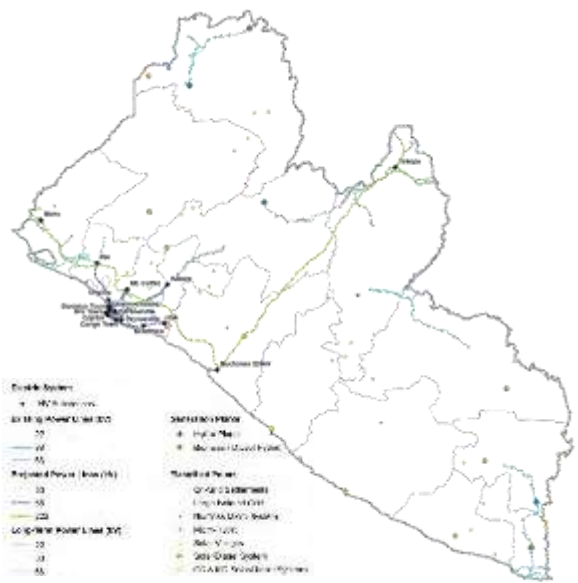
Three phases of the RESMP:

Phase 1 – From 2015 until 2020 with a strong emphasis on the setup of the rural energy master plan and the implementation of ongoing and planned projects;

Phase 2 – From 2020 to 2025, with acceleration and roll out of the main initiatives;

Phase 3 – From 2025 to 2030, the consolidation phase when most people will be electrified.

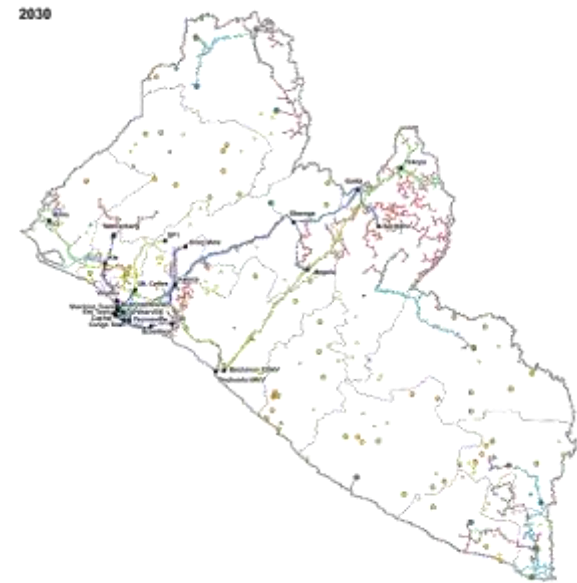
Phase 1: 2020



Phase 2: 2025



Phase 3: 2030



Evolution of Liberia's power Sector – Phases 1, 2

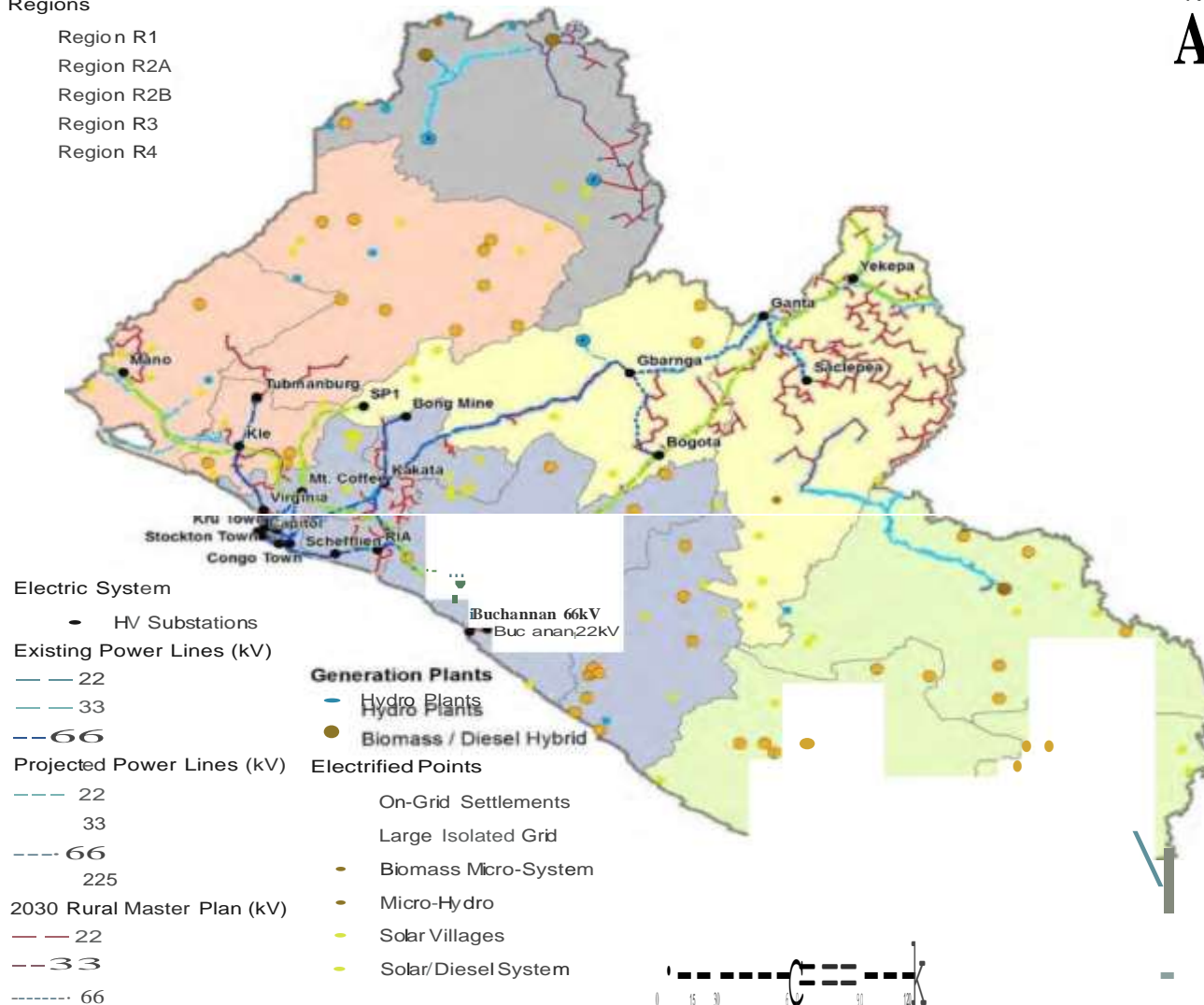


Projected 2030 Rural Energy Master Plan Map



Regions

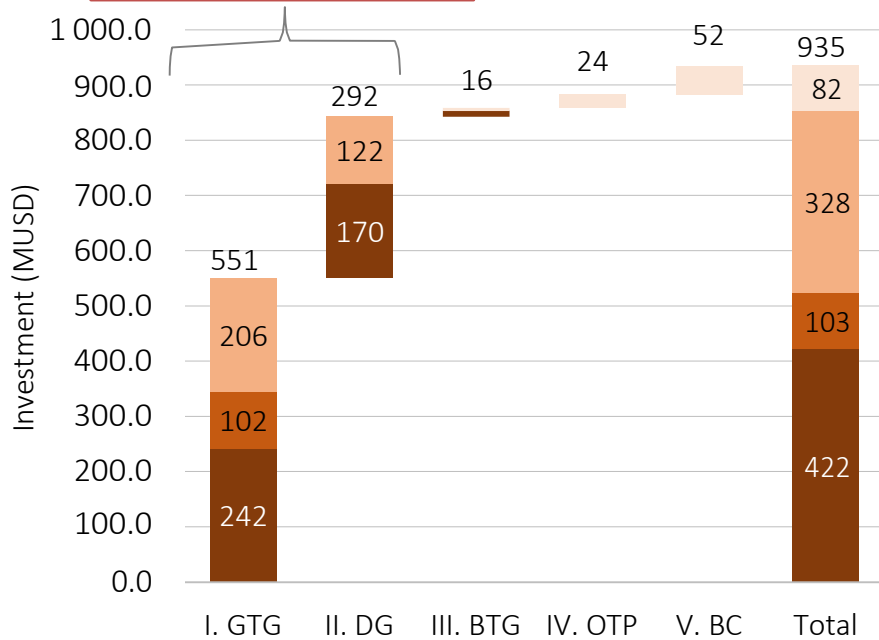
- Region R1
- Region R2A
- Region R2B
- Region R3
- Region R4





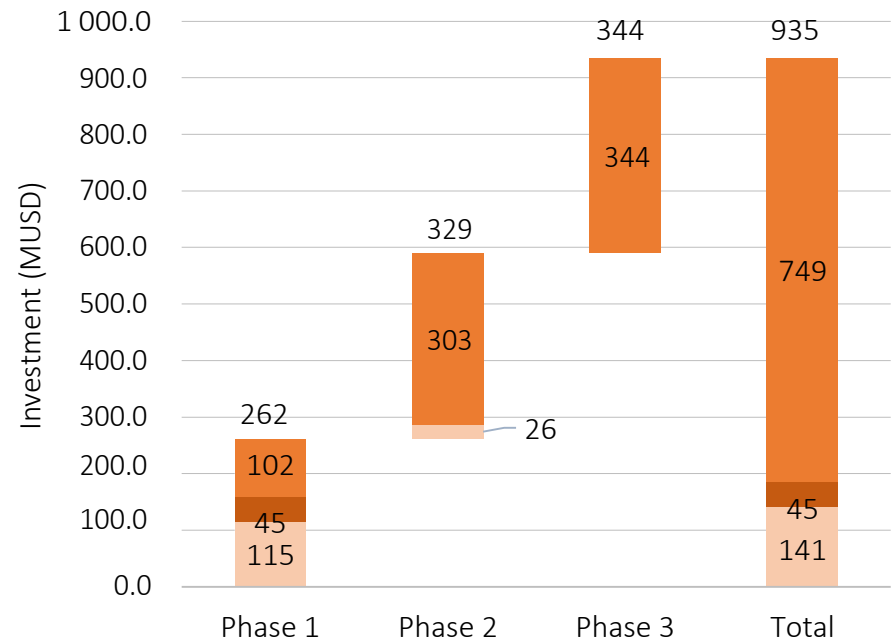
RESMP Investment Costs

The GTG and DG Programs represent around 90% of the total investment



- Other
- Distribution and MV Extensions
- HV Transmission
- Generation

Investment per program



- Total
- Committed funding (estimate)
- Secured funding

Investment per phase and funding gap



Demonstration Projects



Project	Location	Capacity	# of HHs	Technology	Donor	Imp. Entity
Yandohun MHPP	Yandohun, Lofa	60 kW	170	Hydro/Mini-grid	World Bank	RREA
SSMP/Lofa	Zorzor, Lofa	43 kWp	N/A	Solar/Stand-alone	EU	RREA
Gbarnway Solar Project	Gbarnway, Lofa	25 kWp	175	Solar/Stand-alone	USAID	NRECA
Kwendin Biomass Gasifier Project	Kwendin, Nimba	60 kW	250	Biomass/Mini-grid	USAID	NRECA
Sorlumba Biodiesel Project	Sorlumba, Lofa	54 kW	205	Biomass/Mini-grid	USAID	NRECA
Taninahum Solar Minigrid	Taninahum, Lofa	28.5 kWp	101	Solar/Mini-grid	EU	Plan Int'l.
Koiyama Solar Minigrid	Koiyama, Lofa	22.5 kWp	98	Solar/Mini-grid	EU	Plan Int'l.
Mamikonedu Solar Minigrid	Mamikonedu, Lofa	22.5 kWp	146	Solar/Mini-grid	EU	Plan Intl.
Nyengbelahun Solar Minigrid	Nyengbelahun, Lofa	15 kWp	65	Solar/Mini-grid	EU	Plan Int'l.
Lengbamah Solar Minigrid	Lengbamah, Lofa	31.5 kWp	159	Solar/Mini-grid	EU	Plan Int'l.
Schools, Health Clinics, Hospitals Staff Quarters,	Across Liberia	249 Clinics		Solar/Stand-alone	Multi-donor	Merlin, GIZ/EnDev
		120 Schools		Solar/Stand-alone		
		56 Health Centers		Solar/Stand-alone		
		13 Staff Qtrs.		Solar/Stand-alone		
		2 Hospitals		Solar/Stand-alone		We Care Solar
Lighting Lives in Liberia (LLL) - Solar	The 15 counties	N/A	30,000	Solar lanterns/SHS	World Bank	RREA
Salala Immigration Checkpoint	Salala, Bong	3.5 kWp	Immigration	Solar/Stand-alone	Multi-donor	RREA
LNP Depot RIA #5, Schieffelin	Schieffelin, Margibi	2.72 kWp	Police Station	Solar/Stand-alone	Multi-donor	RREA



Pictorial of Demonstration Projects





Pictorial of Demonstration Projects





Pictorial of Demonstration Projects





Pictorial of Demonstration Projects



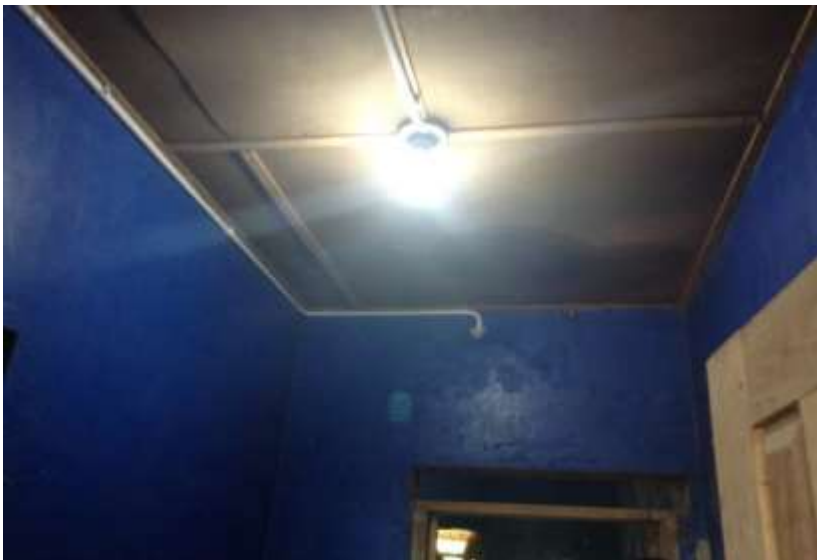


Pictorial of Demonstration Projects





Pictorial of Demonstration Projects





Pictorial of Demonstration Projects





Liberia Renewable Energy Access Project (LIRENAP)



The Liberia Renewable Energy Access Project (LIRENAP) is a 27 million USD (25 million grant & 2 million credit) investment project signed between the Government of Liberia and World Bank in February 2016.

LIRENAP supports the construction of a mini-grid powered mainly by a 2.5-MW hydropower plant with diesel back-up to supply electricity to major population centers (Voinjama, Foya, Kolahun, Massambolahun, Bolahun) and surrounding small towns in Lofa County.



Liberia Renewable Energy Access Project (LIRENAP)

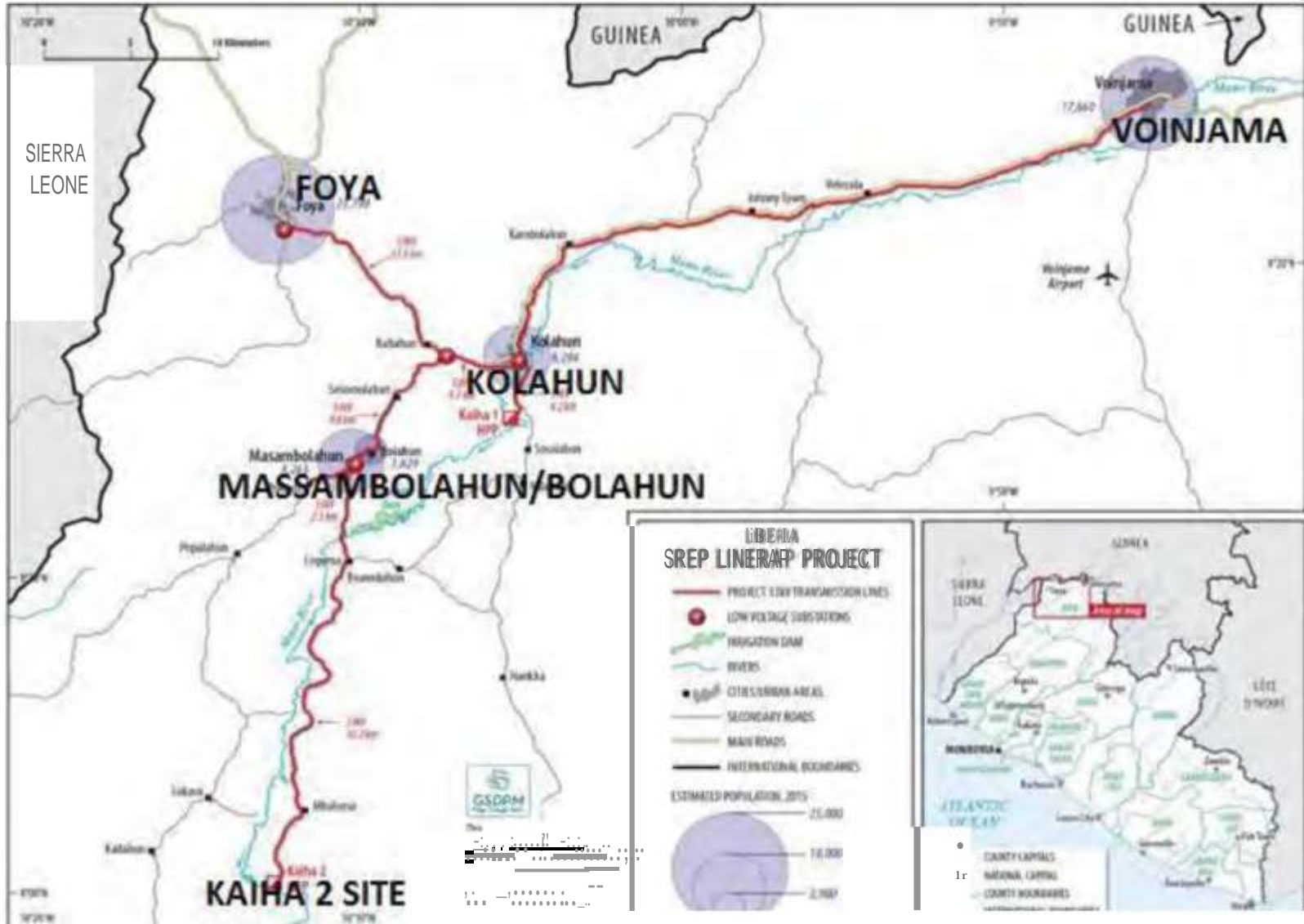


The three components of LIRENAP are:

1. Construction of a mini-hydropower plant and a diesel generation back-up plant for decentralized electrification in Lofa County.
2. Technical assistance in regulations of decentralized electricity services and institutional strengthening of RREA.
3. Market development of stand-alone solar systems – support RREA to continue fostering the growth of a market for solar lighting and home systems.



LIRENAP Project Map





Planned Interventions



Intervention	Description	Scope	Status	Donor
Electricity Concession in South-Eastern Liberia	Setting-up electricity concession agreements in the major settlements of south-eastern of Liberia as a pre-condition for EU funding	9 towns/cities in south-eastern Liberia: <i>Cestos city, Greenville, Barclayville, Harper, Pleebo (Plibo), Fish town, Zwedru, Tappita, and Gbarnga.</i>	Feasibility and other studies ongoing	EU
Extension of the 33kV Liberia-Cote d'Ivoire Cross-border line	Extension of the line from Nimba County to Bong County	To supply electricity from Ganta to Gbarnga, Phebe, Cuttington University, and CARI.	Feasibility and design work ongoing	UASID
Liberia Renewable Energy Project	Development of a 9.34 MW mini-hydro power plant located at Gbedin Falls in Nimba County	The electricity to be generated) will be transmitted via the existing Liberia-Cote d'Ivoire cross-border transmission line in Nimba County.	Detailed feasibility studies including design, ECOFIN analyses and costing completed. A grant of 23.25 million USD has been allocated by the CIF through the AfDB against total project cost of 27 million USD.	CIF/AfDB



Thank You