



# Rural and Renewable Energy Agency (RREA) Presentation at Beyond The Grid Fund for Africa (BGFA) Launch

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صندوق أبوظبي للتنمية  
ABU DHABI FUND FOR DEVELOPMENT



USAID





# A Glance at the RREA

Mandate of RREA, Overall Rural Energy Strategy and Master Plan, and Global Achievement of the Plan as at current



# About the RREA: Key Mandate and Functions

- ☐ Autonomous Agency
- ☐ Established by Executive Order in 2010; Enacted into law in 2015

## MANDATE

Facilitate & accelerate the economic transformation of rural Liberia by promoting the commercial development & supply of modern energy services to rural areas with an emphasis on locally available renewable energy resources

## PRINCIPAL FUNCTIONS

- ☐ Plan and facilitate funding of rural/renewable energy projects
- ☐ Carry out educational campaigns and targeted training for rural/renewable energy
- ☐ Serve as Liberia's information clearinghouse on rural/ renewable energy development
- ☐ Manage Rural Energy Fund (REFUND)

For further details go to: [www.rrealiberia.org](http://www.rrealiberia.org)



# The Rural Energy Strategy and Masterplan (RESMP)

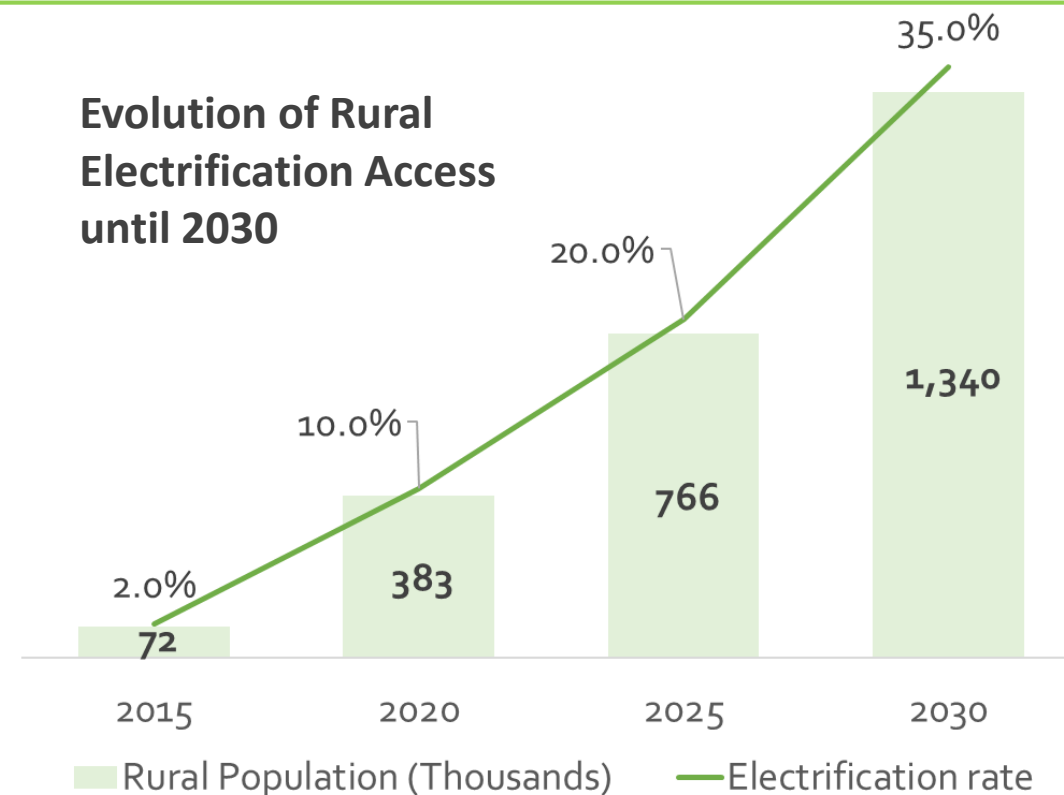


RREA has an ambitious plan for increasing rural electricity access to 35% by 2030.  
An expected 265,000 homes or 1.34 million people to be electrified!

## Targets:

- ❑ Rural electrification rate at 10% in 2020, 20% in 2025 and 35% in 2030
- ❑ At least 2,000 settlements electrified with grid infra-structure connecting at least 50% of those settlement's population by 2030.
- ❑ All county capitals, health facilities and secondary schools electrified by 2025
- ❑ Universal access to affordable SHS, etc. – 250,000 units sold by 2030

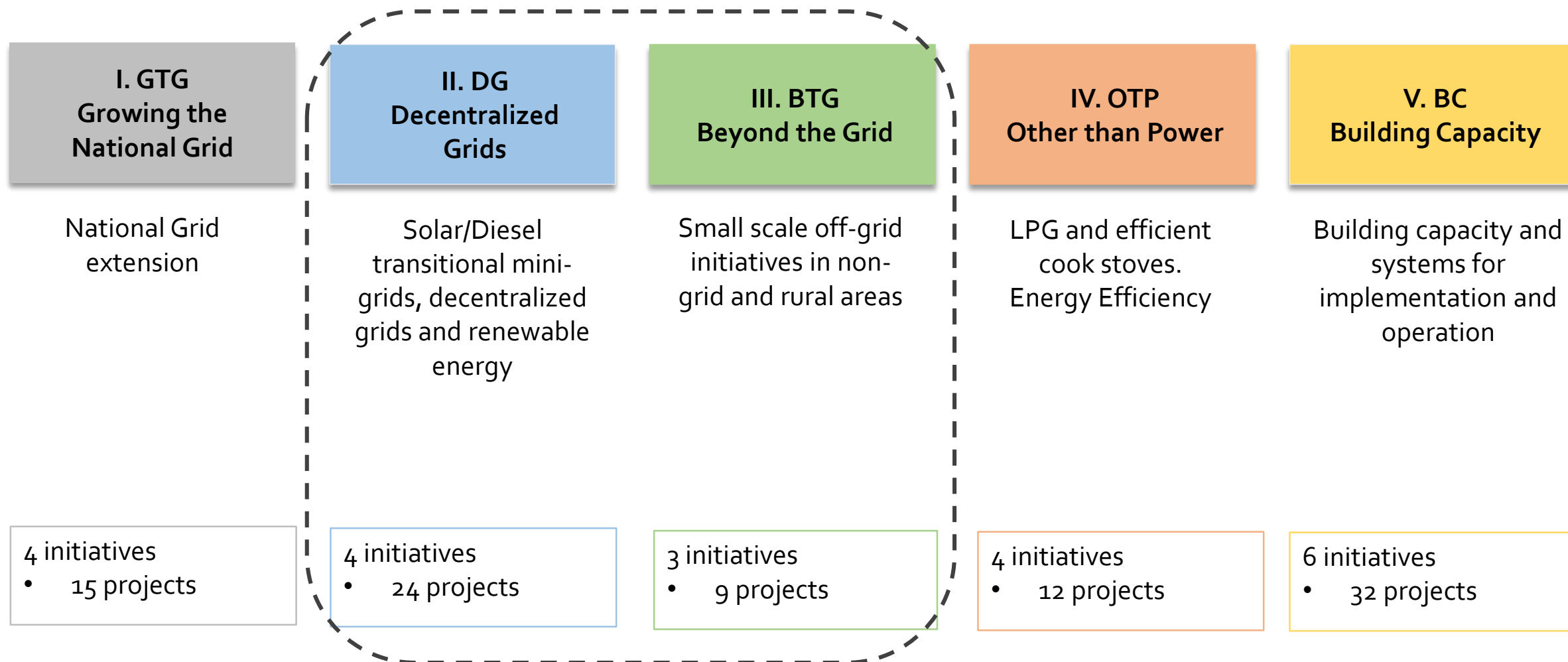
Evolution of Rural Electrification Access until 2030



For further details go to: [www.liberiaruralenergy.org](http://www.liberiaruralenergy.org)



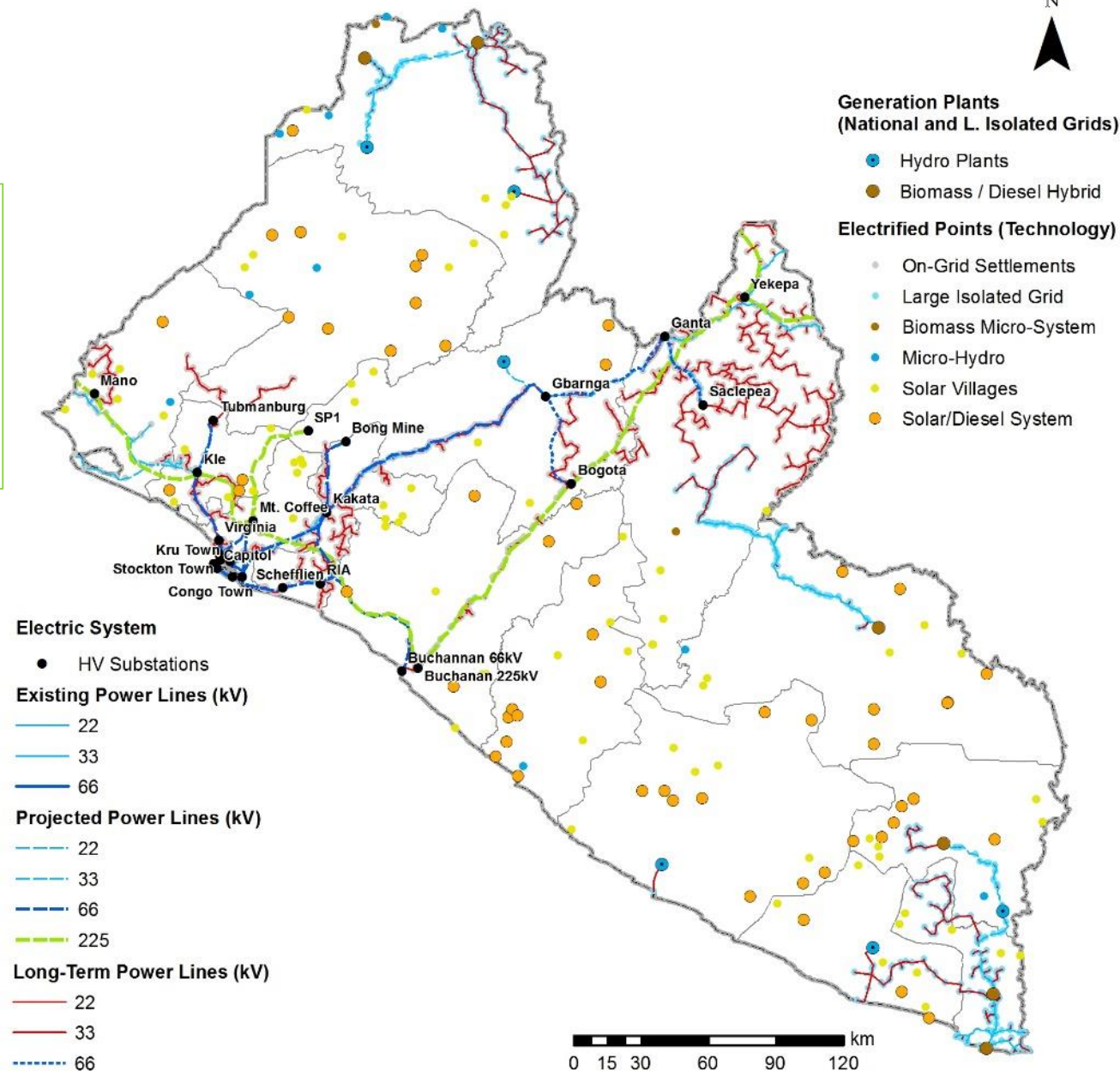
The RESMP has 5 key programs, 21 Initiatives and 92 projects & investments, with an estimated cost of \$935M (20% committed)



Outline of the 5- Rural Energy Master Plan Programs



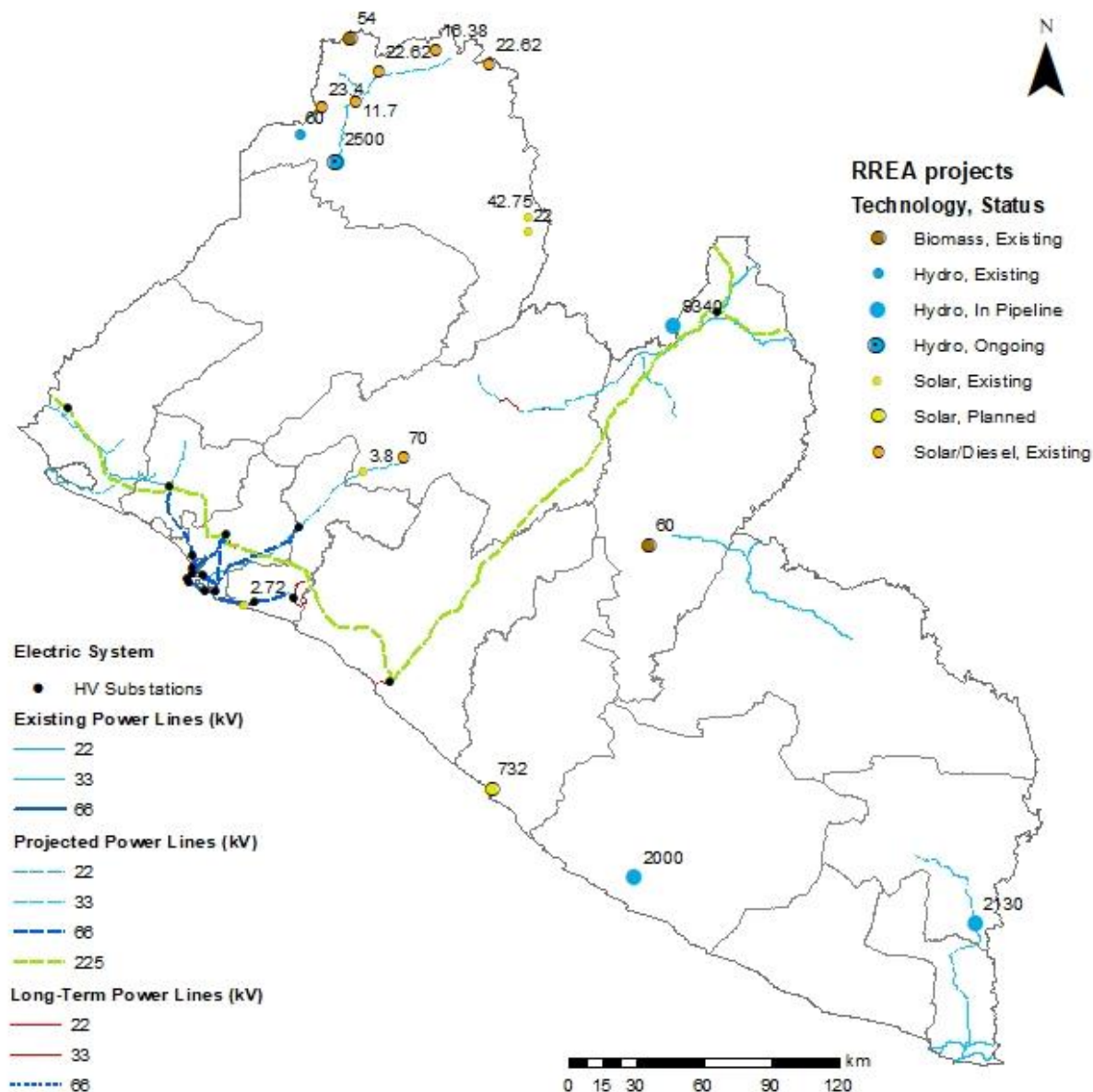
# POWER SYSTEM OF LIBERIA: OUTLOOK AT 2030







# Global Achievement of the RESMP



RESULTS	Power (MW)	People (nos)
Existing	0.691	100,398
micro-grids & others	0.412	10,812
SHS & pico-PV systems	0.279	89,586
Committed (Ongoing & in pipeline)	17.052	237,000
<b>TOTAL</b>	<b>17.743</b>	<b>337,398</b>



# RURAL ENERGY FUND

Rural Energy Fund's mission is to facilitate the coordinated funding of economically viable, socially acceptable, and environmentally friendly rural electrical and improved energy technology projects and programs through public-private partnerships. The funding is managed by the Rural Energy Fund Committee, an arm of the RREA Board of Directors.

## **Funding sources:**

- Government budgetary funding,
- Special levies or fees and revenues & taxes determined by the GoL,
- Grants, donations or other funding from RREA's operations.

## **Funding usage:**

- Grant financing for project development, capital expenditures and & implementation by private and public entities, co-operatives, and local community organizations.
- Market studies, resource assessments, monitoring and evaluation, information dissemination, planning, and training relevant to RREA's operations,
- Other operational costs relevant to the functioning of RREA.





# Specific Elaboration on Off-grid initiatives

Background to previous and ongoing off-grid focused programs, building blocks for long-term sector development - of relevance for BGFA – revisiting off-grid solar targets in Liberia



# Initially, RREA played a direct role to stimulate the young off-grid solar market



## Starting point

- ✓ Very nascent market, with abundance of sub-standard products
- ✓ Need to increase consumer awareness and interest in quality off-grid systems
- ✓ RREA established as lead agency to drive these efforts

## Lighting Lives Liberia (2012 – 2017)

- **30 retailers selected** by RREA following a review of their business practices
- RREA served as **bulk procurer**, supporting retailers to procure systems (10% paid upfront)
- Only **quality certified products** used
- **All import duties waved** for imports by RREA, lowering costs along the supply chain and final retail prices
- Partners received **technical, financial and business training** (e.g. around offering access to finance)
- RREA **supported national roadshows** to promote products and off-grid solar

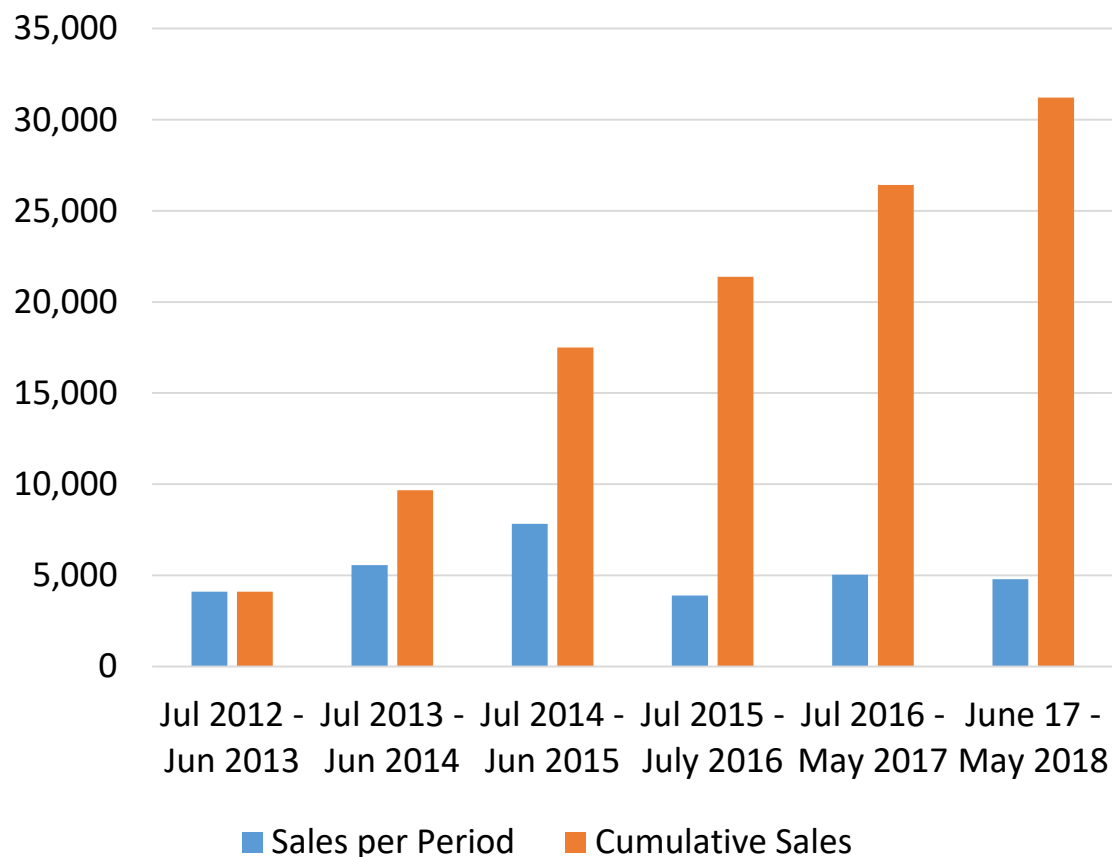
## Indicative key results

- **To date, 37,223** quality certified systems sold across the country benefiting **106,427** persons,
- **Network of 2 import distributors and 49 rural retail distributors** developed to support sector growth
- **Market and consumer outreach efforts** undertaken
- **Framework for future market development** established



# As a result, the current market is predominantly through RREA – though this picture is changing

Sales of Quality-Verified Products 2012-2018



Most sales to date have been through RREA’s Lighting Lives Liberia Program (2012 – 2017). According to Customs and RREA data, a **total of 33,585 OGS products imported between 2012 and 2019**. This product list included **solar lamps, lanterns and standalone solar home systems and appliances < 350 W**.

RREA’s LLL program **sold just over 26, 412 products**. RREA carried out wholesale distribution function through importation of products and strengthened capacity of local Retail Partners to carry out retail distribution function.

The flatline in sales since a predictable Ebola downturn likely due to a **range of challenges faced by national and international companies**, principally lack of access to finance needed to build out distribution networks, or to invest in sales and marketing



# RREA-led market assessment established a set of recommendations for long-term sector development



## **Promoting Quality:**

- ✓ Development of Harmonised National Quality Standards
- ✓ Introduction of Pre-Shipment Conformity Assessment Program

## **Improving Affordability through a Sector-Wide Duty Waiver**

- ✓ Fiscal Impact Study (undertaken in mid-2019)
- ✓ Duty Waiver Implementation (ongoing)

## **Improving Awareness:**

- ✓ Work more closely with LEAP Network to design & implement activities
- ✓ Limit geographical scope
- ✓ Jointly plan activities

## **Improving Acceptability**

- ✓ Develop consumer-facing quality seal
- ✓ Work with international manufacturers to set up repair centre

## **Improving Affordability and Availability:**

- ✓ Let companies set margins & prices
- ✓ Encourage donors to provide grants, working capital & technical support
- ✓ Accelerate transition away from subsidising specific costs towards Results-Based Financing based on milestones & sales

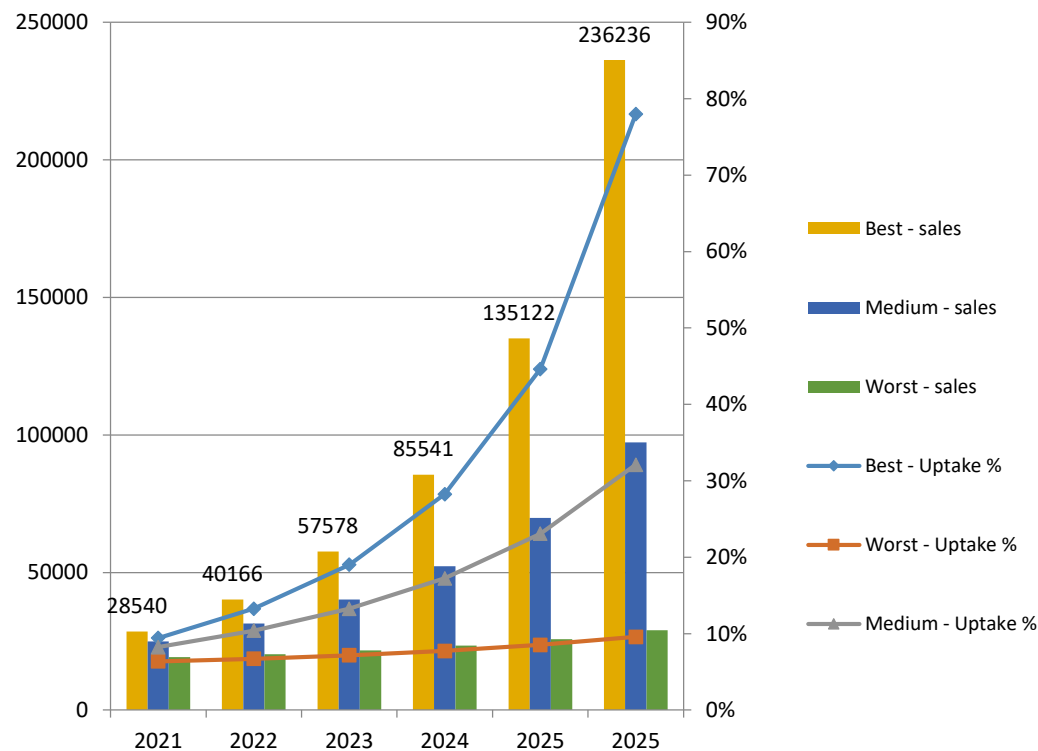
## **Coordinating Stakeholders:**

- ✓ RREA delegate responsibilities to specialised organisations freeing up time to provide leadership, coordination and oversight of the sector
- ✓ In time, set up an Off-Grid Solar Sub-Committee under the Rural Energy Working Group



# Findings of Off-Grid Solar Fiscal Impact Study build a strong case for introduction of sector-wide Duty Waiver

Forthcoming RREA-MFDP Report (TBI/USAID) estimated that the revenue implications for introducing a duty waiver range between \$106k and \$356k total until 2025, depending on the market scenario being considered



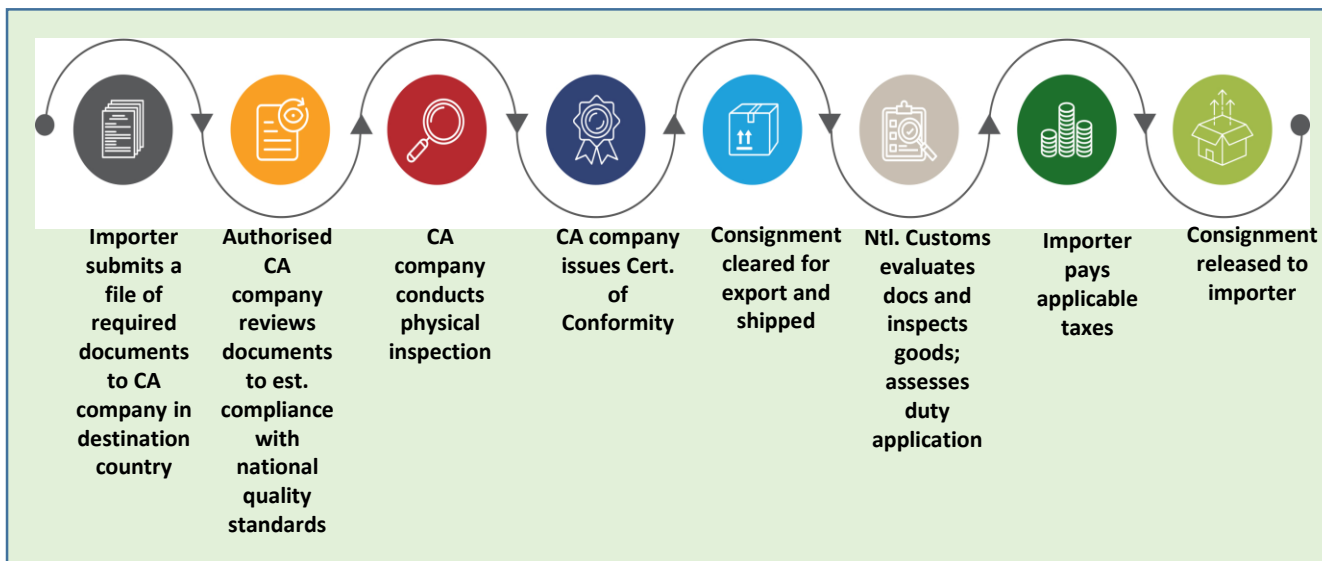
Impact Assessment compared this loss against predicted gains in energy access resulting from a duty waiver on off-grid solar products, over 6 year period:

Best Case Scenario	Medium Case Scenario	Worst Case
<b>\$356,766 cost to GoL (with DW)</b>	<b>\$106,715 cost to GoL (with DW)</b>	No DW, no revenue loss
88,834 more households gain access to off-grid solar products	24,715 more households gain access to off-grid solar products	Sales only marginally outpace 2012-2019

Impact Assessment Recommended introduction of Duty Waiver (0% import duty) for an initial six years (2020 – 2025) linked to specific HS-codes (with new HS coding at Customs) and ONLY for Lighting Global Qualified Products



# RREA to complement sector-wide duty waiver with a robust Standards Inspection Regime



RREA and Standards Bureau are currently designing a **pilot for a Pre-Shipment Conformity Assessment program**, to be introduced once new **Standards for Off-Grid Solar (ECOWAS)** are introduced in late 2019.

➤ This will ensure that only quality-verified products will benefit from tax relief by GoL.

In line with the Fiscal Impact Assessment, RREA will also be supporting:

- 1) **Introduction of new import (HS Codes) for solar home systems, solar lamps and solar light kits** in line with the Liberian Revenue Authority's implementation of a proposed Sector-Wide Duty Waiver for quality-verified off-grid solar products. This would be based on the latest amendments to the Global Customs tariff code – **positioning Liberia as a leader in effective off-grid solar duty waiver implementation.**
- 2) **RREA continuing to monitor the prevalence of low quality, generic products** in the market and what companies benefit from future fiscal incentives.





# These activities complement ongoing support to the sector through RREA's LIRENAP program (2017 – 2021)



LIRENAP's intended output is a private-sector-led supply chain or commercial market for sale of high-quality solar lights. 100,000 people nationwide to gain access to improved solar lights or standalone solar systems, of which 45% female beneficiaries.

## Availability

Strengthening supply chain by providing incentives/subsidies and grants to LIRENAP partner companies, including **importation subsidy, importation consignment facility and performance-based grants targeting marketing and sales outreach facilities**

## Affordability

Ensuring that products sold are affordable per consumers in various market segments by **promoting PAYGO business models**, increasing competition and addressing policy barriers. Including **advocating for duty waiver and PAYG-linked requirement for subsidies**

## Awareness

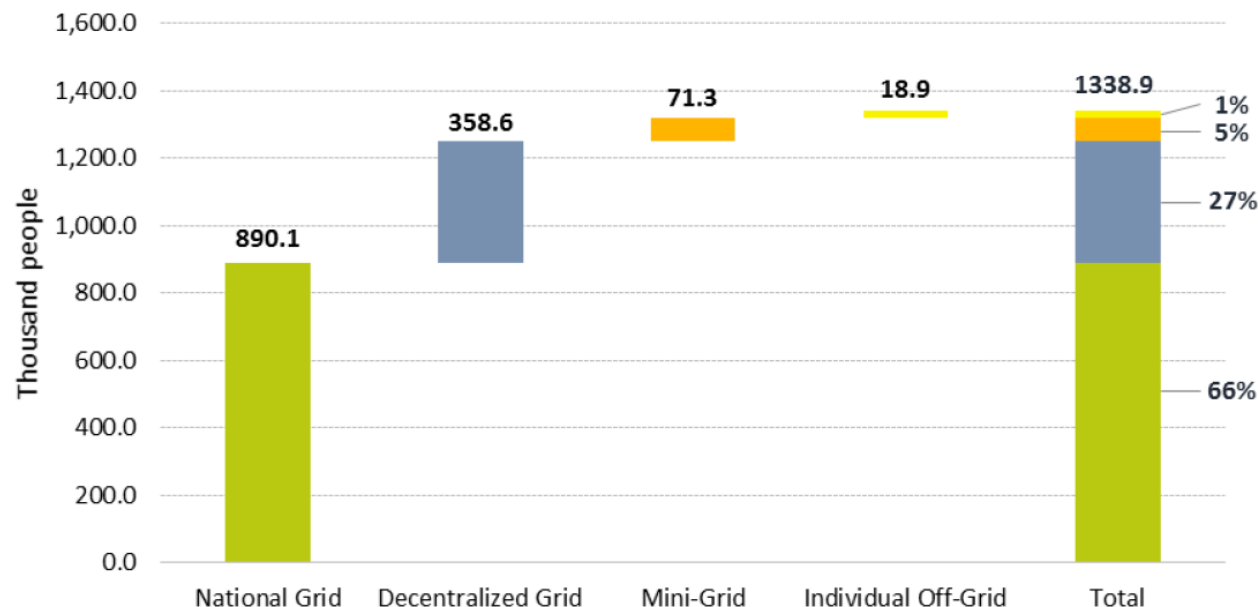
Stimulate sales by creating massive demand for the products by supporting marketing-driven public awareness and promotional activities. Including **support to LEAP Network, nation-wide consumer awareness activities** through RREA.

## Acceptability

Ensure that the high quality and economic, social & environmental reputations of the products are accepted by the market, including by establishing **after-sales servicing locations, subsidizing import of spare parts, ensuring quality standards framework adopted** – while enforcing compliance



# Revisiting off-grid targets in with current RREA plans and off-grid ambitions – informing BGFA target in Liberia?



## RESMP:

- Electrification rate for the population outside of Monrovia of 10% in 2020, 20% in 2025 and 35% in 2030, electrifying the largest cities and towns of the country first. **Approx. 1.3 million people electrified in rural areas** (260 000 households)
- RESMP target for off-grid is low: **less than 1%** contribution of off-grid or **just under 4,000 households (18,900 people) by 2030**

## REVISITING LIRENAP AND RESMP OFF-GRID TARGETS:

- LIREANP targets deployment of **25,000 systems benefiting 100,000 persons until 2021**. About 10,811 units benefiting 29,786 persons deployed to-date through the program
- Under the Duty Waiver Fiscal Impact Study 40% of the 'unelectrified population' could reasonably be targeted for off-grid solar (pico and SHS) products, equalling **300,000 households or 1,4 million beneficiaries by 2025**,
- **The ECREEE ROGEP Market Assessment Study projects access to offgrid solar for 456,807 households considering consumers & entrepreneurs financing up to 2023**



## Other Off-grid Interventions



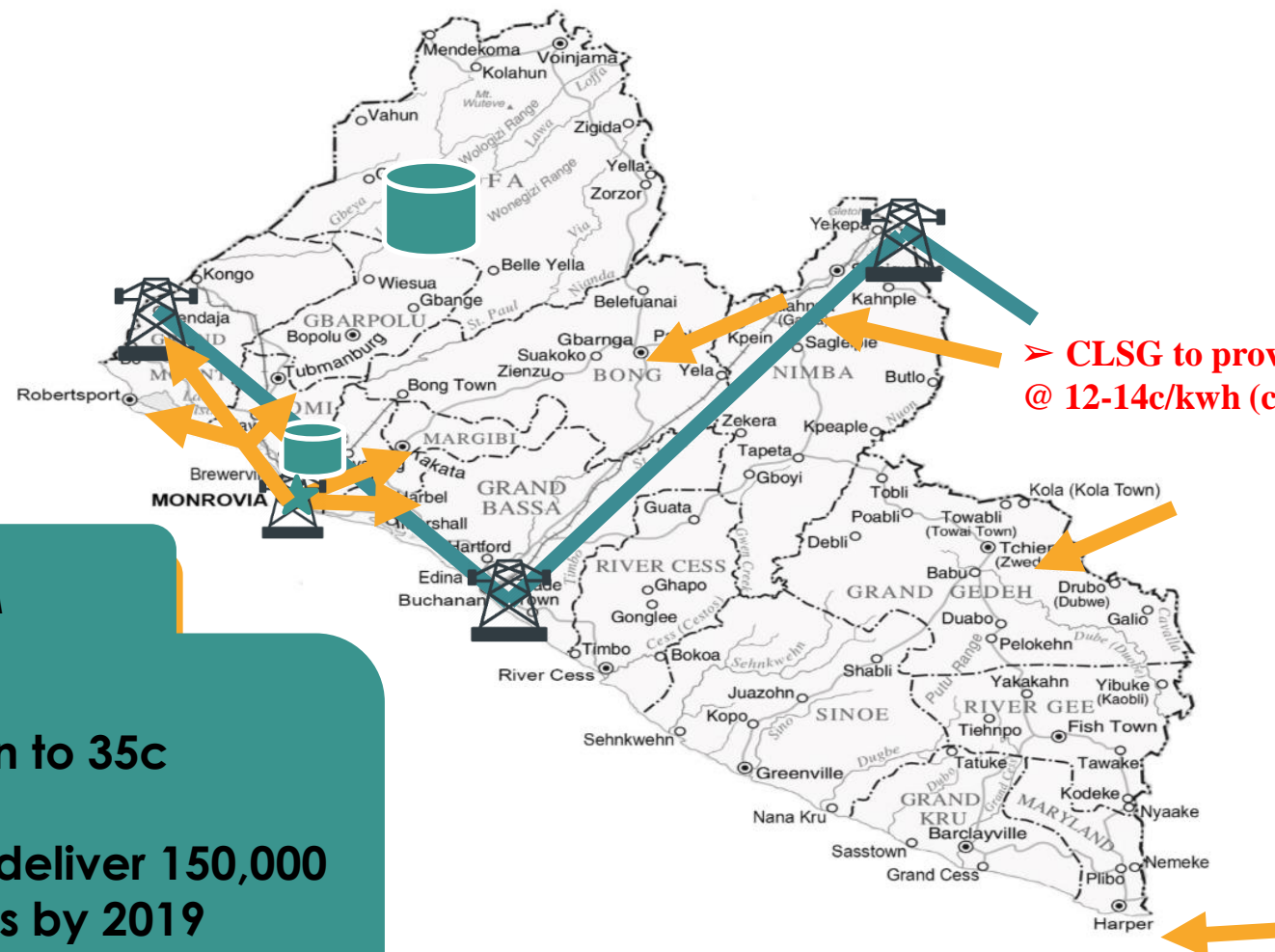
- **Mercy Corps Light Up Liberia Project** with **funding from the EU (ended Sept 2019)** with objective to facilitate a market for Tier I & II lighting and clean cook stove products to benefit 3,000 persons through rural market expansion activities (Nimba, Bong, Lofa, Gbarpolu, Margibi & Grand Bassa counties) and promotion of 2,000 units of Pay-As-You-Go products
- **GIZ/EnDev Project** targeting market development for off-grid solar and clean cookstoves through technical trainings, market information sharing platform, awareness creation and marketing events for distributors,
- **AECF REACT SSA Project** with **funding from the Embassy of Sweden** targeting technical assistance, seed funding and matching grants to startup & early-stage companies into off-grid solar, clean fuel, energy efficient cook stoves, stand-alone solar systems for households & productive use and microgrids/minigrids (pending regulations)
- **ECREEE ROGEP Project** with **funding from the World Bank** with objective to create the enabling policy and regulatory environments for off-grid solar products  $\leq 350$  watts, by providing technical and business trainings to entrepreneurs, access to finance opportunities for entrepreneurs (matching grants, credit lines for solar off-grid consumers) and risk mitigation funds for commercial financial institutions lending to off-grid consumers and entrepreneurs. for off-grid standalone systems up to 350W,



# Current Situation and Next Step



# Summary – Current Situation Highlights



➤ CLSG to provide cheap power  
@ 12-14c/kwh (cost to LEC)

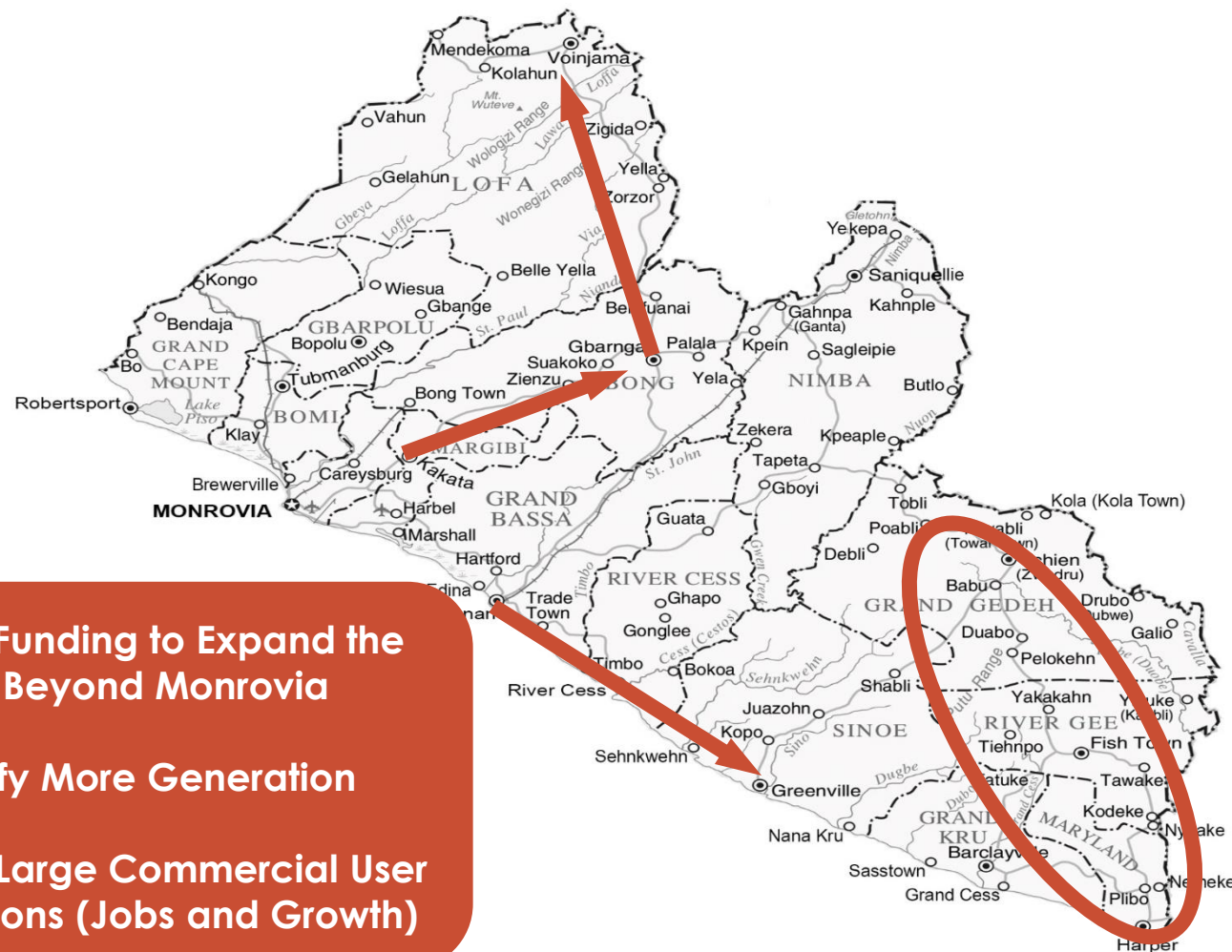
VIA DAM

Tariff down to 35c  
&  
Projects / LEC to deliver 150,000  
connections by 2019





## 3.0 Next Steps – Beyond Monrovia



Identify Funding to Expand the grid Beyond Monrovia

Identify More Generation

Increase Large Commercial User Connections (Jobs and Growth)



