

Investment Pipeline for Reliable Power and Expanded Access



Managing Director | Liberia Electricity Corporation

EU Business Forum

Powering Liberia's Future

Overview of Liberia Electricity Corp.



Liberia's national power utility, moving from stabilization to scale.

- ✓ LEC is the national utility responsible for electricity supply and grid operations across Liberia
- ✓ **Core business:** generation dispatch, transmission & distribution, customer service, billing and collections
- ✓ **Where we stand:** revenue up 30.8% vs 2024; system losses down to 42.3%; SAIFI improved from 866 (2024) to 262 (2025)



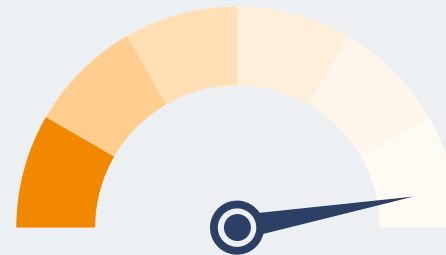
37%

Access Rate



42.3%

AT&C Losses



93%

Collection Rate



262/year

Outage Frequency (SAIFI)

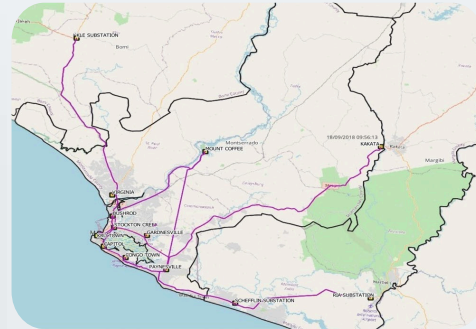
LEC is turning the corner, but scaling access and reliability requires major network investment

Generation, Transmission & Distribution



Generation

- Mt. Coffee Hydro **88 MW** installed; thermal generation of **38 MW**
- Imports: CLSG imports up to **80 MW**



Transmission & Distribution

Grid footprint:

- **317 km** transmission
- **13** substations
- **461 km** distribution



Ongoing Delivery

- 30 MWp Solar PV
- SCADA & National Dispatch Center
- Mt. Coffee Extension (+42 MW)

Access (Where we are and where we want to go)



Access must move from pockets of electrification to a national scale

- ✓ **Access rate:** 37% overall, reflecting the share of the target population currently reached/served
- ✓ **National target:** **75% access by 2030** aligned with Mission 300



Five Strategic Pillars



1 Financial Sustainability

Cost recovery, ATC&C loss reduction, revenue diversification

2 Operational Excellence

SCADA, network upgrades, new generation (IPP/solar & hydro), reliability

3 Customer-Centric Utility

Digital services, faster complaint resolution, broader connections

4 Digital Transformation

Integrated ERP/CIS/SCADA/AMI, smart grid automation and analytics, customer self-service/mobile payments, cybersecurity, and IT/OT resilience

5 Governance & Institutional Effectiveness

Governance reforms, HR systems, audit, performance management



Pipeline Projects 5: Bushrod-Mt Coffee-Paynesville Transmission Line Upgrade

Objective

Backbone reinforcement to increase transfer capability and reduce overload-driven outages:

Total project cost (EUR): **€50M**

Scope focus

- ✓ Reinforce Bushrod–Mt. Coffee–Paynesville corridor
- ✓ Target congestion relief and voltage stability
- ✓ Strengthen operational flexibility under peak load

Why it matters

- ✓ More headroom for demand growth
- ✓ Reduced risk of cascading outages
- ✓ Improves stability for key Monrovia supply nodes

Pipeline Projects I: Mount Coffee St. Paul (SP) 2



Purpose:

Improves **dry-season reliability** and reduces dependence on high-cost thermal

Planned Capacity

190 – 250 MW

Total Project Cost (EUR)

€600M-720M



Status: baseline & feasibility ongoing; funding mobilization; PPP approach planned

SP2 is the single most important reliability project for Liberia's next decade.

Pipeline Projects 2: CNL



605 km of 66 kV transmission lines



4 new 66/33 kV substations: Gbarnga, Zorzor, Voinjama, Foya

Central & Northwestern Liberia Electrification Project



Scalable design: **upgradeable to 132 kV** as demand grows



70,872 new customer connections across Bong and Lofa



€185,000,000
Total Project Cost (EUR)

Pipeline Projects 3: Monrovia Substation & Transmission Upgrade Program (MSTUP)



Objective

Reinforce key substations and strategic 66 kV corridors in Greater Monrovia to improve reliability and capacity.

Total project cost (EUR): **€30,000,000**

Typical scope includes

- ✓ Line and corridor upgrades (capacity and condition)
- ✓ Protection coordination and reliability improvements
- ✓ OPGW / communications and SCADA upgrades
- ✓ Testing, commissioning, and operational readiness

Expected outcomes

- ✓ Reduced congestion
- ✓ Improved reliability
- ✓ Lower technical losses

Pipeline Projects 4: Monrovia Substation Construction & Commissioning Program (MSCCP)



Objective

Build three new primary substations to improve redundancy and serve emerging load centers:

Monrovia Industrial Park

Fendell

Po River

Total project cost (EUR): **€24,000,000**

Typical scope includes

- ✓ Engineering design, civil works, transformers and switchgear
- ✓ Protection & control, SCADA integration, FAT/SAT
- ✓ Testing, commissioning, and handover

Pipeline Projects 5: **ST. JOHN RIVER HYDROPOWER**



Long-Term Energy Security, Affordability & Climate Alignment



Strategic Vision

- **Project:** St. John River Hydropower Scheme (Cascade)
- **Total Capacity:** ~316 MW
- **SJ2:** 100MW @316 MUSD;
SJ3: 96MW@337MUSD;
SJ5: 120MW@330MUSD
- **Asset Life:** 40–60 years



Why This Is a Sovereign-Scale Development Asset

- Provides **low-cost, renewable baseload** for decades
- Reduces long-term reliance on thermal generation and fuel imports
- Anchors **industrialization, electrification, and regional power trade**
- Aligns fully with **climate resilience and energy transition goals**



Why EU Is a Natural Partner

- Large-scale, multi-generational infrastructure with **clear national ownership**
- Strong social returns: affordability, access, and energy sovereignty
- Enables phased, concessional financing aligned with construction milestones
- Complements EU's portfolio of **transformational power and water infrastructure**



Institutional Readiness

- Government MOU executed
- Developer engagement advanced
- LEC positioned as long-term offtaker and system operator
- Project structured to ensure affordability, bankability, and national benefit

What we hope to solve from these projects



These projects target the real constraints holding back growth.



Aging network and
~15% technical losses



Financial constraints vs
tariff recovery; revenue
leakages and power
theft



Seasonal generation
deficit



Institutional capacity and
digital system gaps

Fixing these constraints unlocks reliability, affordability, and investor confidence.



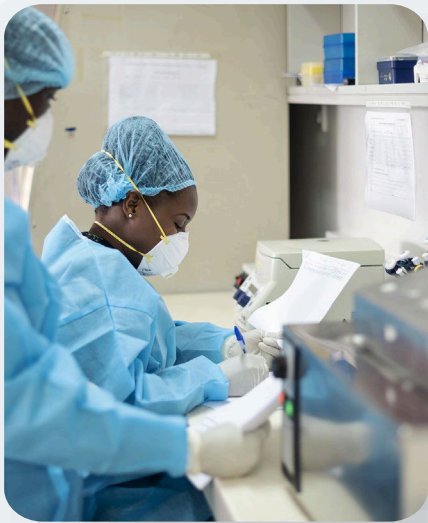
SDG 7 (Energy)



SDG 8 (Jobs)



SDG 2 (Food Security)



SDG 3 (Health)



SDG 9 (Infrastructure)



SDG 13 (Climate Action)



SDG 4 (Education)

Project support to

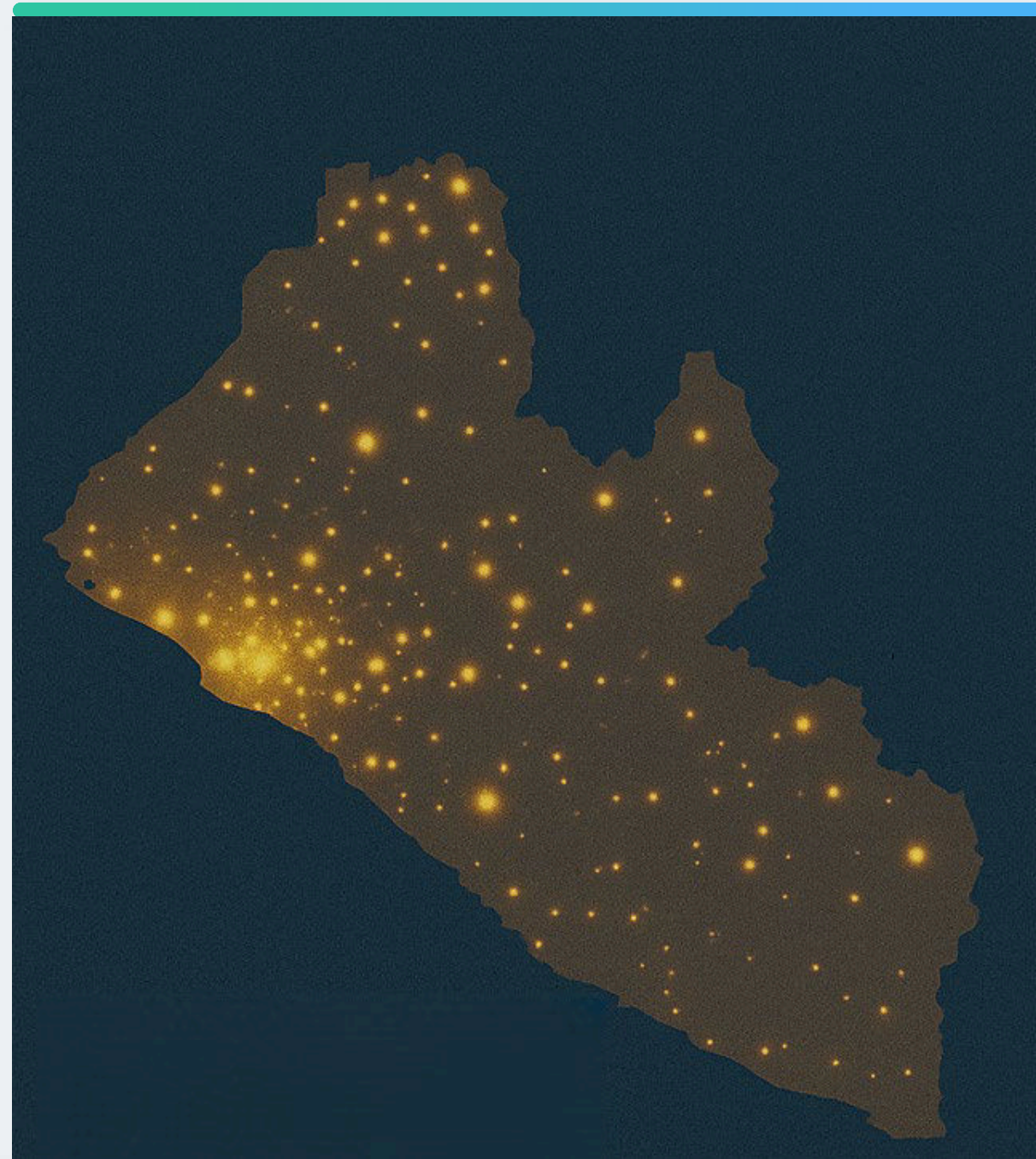
UN SDG

Support Needed



Total funding required: €1.6 Billion required to implement the priority projects

Requesting support from development partners to unlock the economic potential of the Republic of Liberia





THANKS

**Powering Liberia's
Future**