



NAME OF SPEAKER

Position

# The opportunity for Lesotho's financial institutions to invest in green energy

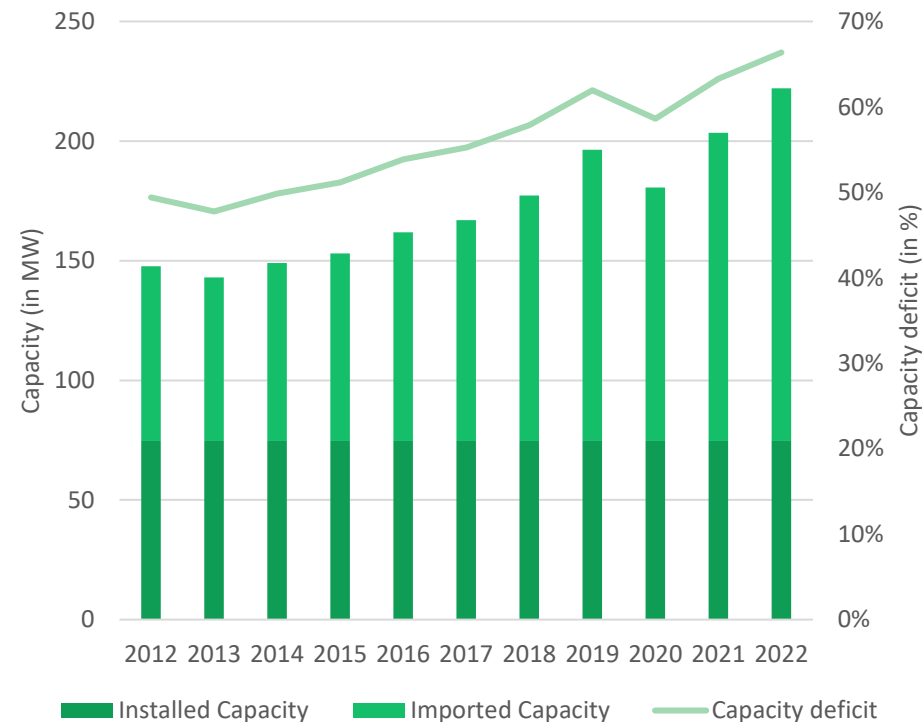
*GET.invest Lesotho – EDGE Finance*

GET.invest is co-funded by



# Lesotho's power market

**FIGURE 1:** Lesotho power demand and supply profile



## Overview:

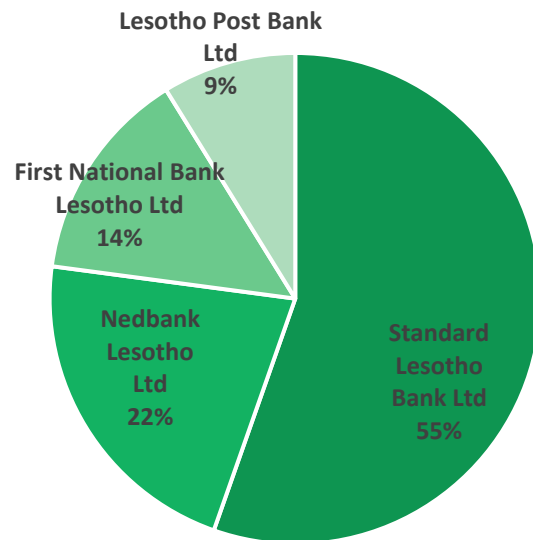
- **National energy consumption:** predominance of traditional biomass energy (esp. rural households) + heavy dependence on imported petroleum
- **Installed power capacities:** 102 MW (hydro + solar) versus peak demand of 203 MW, i.e. **50% capacity deficit**
- **Deficit is filled by imports mainly from South Africa**
- **Significant RE potential:** 6000 MW wind + solar; 4000 pump storage; > 1600 MW hydropower, of which 360 MW small hydropower plants (<10 MW)
- **Electrification rate of 50% (2022)**

**TABLE 1:** Key market statistics

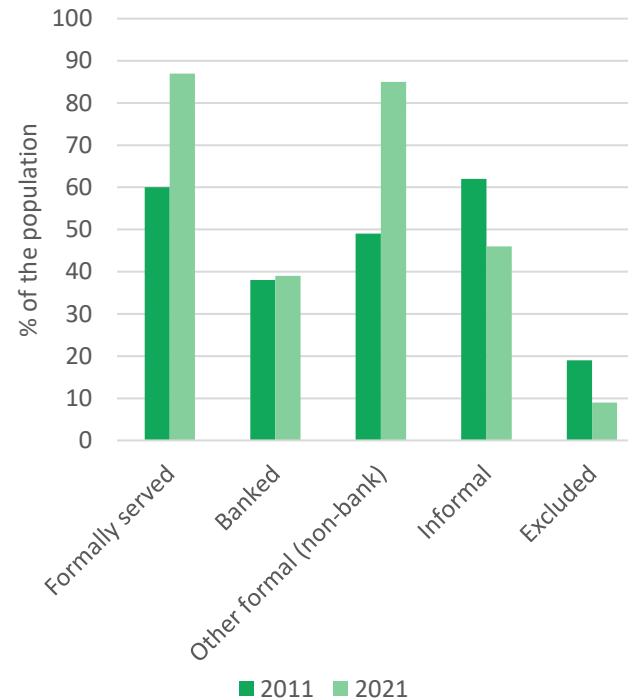
<b>Peak electricity demand</b>	203 MW
<b>Electricity consumption</b>	970 GWh (438 GWh imported)
<b>Grid connected capacity</b>	<p><b>LHDA (Lesotho Highlands Development Authority)</b></p> <ul style="list-style-type: none"> <li>• Muela Hydro – 72 MW</li> </ul> <p><b>LEGCO (Lesotho Electricity Generation Company)</b></p> <ul style="list-style-type: none"> <li>• Solar PV – 30 MW (being commissioned in 2024)</li> </ul>
<b>Off-grid capacity</b>	<p><b>OnePower Pty Ltd (IPP)</b></p> <ul style="list-style-type: none"> <li>• Ha Makeba mini-grid – 50 kW</li> <li>• Sotho mini-grids Portfolio: 3 out of 11 mini-grids are operational</li> </ul>

# Lesotho's financial market

**FIGURE 2:** Lesotho's banking sector



**FIGURE 3:** Financial products uptake



## Overview

- The banking sector consists of four licensed commercial banks that hold LSL 27,599 Bn. assets (EUR1.34 Bn.)
- There are 151 licensed MFIs in Lesotho
- Credit to the private sector is 22.84% with an annual credit growth of 8.78%.
- Monetary policy tightening led to a decline in nonperforming loans from 4.2% of gross loans in 2020 to 3.84% in December 2023 (below the Southern Africa average of 6.44%).
- Lesotho is one of the most financially included countries in Southern Africa. Approximately 91% are financially included (formal financial inclusion increased to 87% in 2021, strongly driven by vast uptake of non-bank formal products like mobile money)
  - About 39% of adults are banked (steady over the past decade)
  - There is high uptake of savings group (15%) whilst usage of cooperatives (2%) and MFIs (2%) is still low.
  - In 2021, remittances increased to 72% percent of adults, representing a 41% increase compared to 2021.

# Self-consumption C&I: Lack of grid reliability can make investments in solar PV profitable



## Overview

- C&Is are **not required to apply for any license** to generate electricity.
- The national regulation foresees a net-metering scheme for embedded generation projects of < 500 kW, but regulations are not yet in place.
- 74% of grid connected consumers suffer from **unreliable power supply** (50% grid availability for 22%; 25% grid availability for 54%).
- The estimated levelized cost of energy (**LCOE**) of solar PV is **significantly lower** than the LCOE for grid power **when 20% diesel** are included.
  - For all grid-connected C&I that rely **by 20% on diesel generators, an investment can be very profitable.**
  - For C&Is, who have a **very reliable grid supply (100% grid), the investment in solar PV is NOT profitable.**
- The investment in solar PV **does mostly make sense for small-scale C&Is** due to prices for electricity with a power load of <25kVA (Commercial) and <50kVA (Industrial).
- For larger-scale C&Is, the investment can become profitable if:
  - The **share of diesel power is higher** (e.g. 30%)
  - The **costs of installation are lower** (e.g. EUR 800 / kWp instead of EUR 900, due to scale)

**TABLE 2: Estimation of market size**

MARKET SIZE	
Investment costs per kWp	EUR 900
Average number of installations (based on past 5 years)	5
Average installed capacity of feasible solar PV system	75 kWp
<b>MARKET POTENTIAL UNTIL 2030</b>	<b>EUR 1.7 MIO.</b>



Foto: SolidarMed Lesotho - 30kW Solar PV System on health facility

# RE-IPP: No private RE-IPP is currently operational in Lesotho

## Overview

- Since 2008, potential IPPs have **sought government support** for renewable energy projects, but a **lack of clear frameworks** has hindered their participation.
- The Lesotho Electricity and Water Authority (LEWA) allows licensed renewable generators under 500kW to connect to the distribution network, and those over 500kW to the transmission network, for a fee.
- The 2015 "**Regulatory Framework for Renewable Energy in Lesotho**" addresses IPP licensing but hasn't been updated or officially gazetted.
- The current structure allows **IPPs to sell directly to Lesotho Energy Company (LEC)** as single buyer
- Every **IPP negotiates their PPA with LEC directly** which needs to be approved by LEWA afterwards.
- Muela Hydro (72 MW) and the 30 MW solar PV plant of LEGCO are **2 state-owned and the only power generating plants connected to the national grid**
  - 100% RE power mix (not considering the imports from neighbouring countries)

**TABLE 3: Estimation of market size**

MARKET SIZE	
<b>CAPEX / KW</b>	Solar PV: EUR 500-800
	Wind (onshore): EUR 1,160
<b>Project Pipeline (until 2030)</b>	<ul style="list-style-type: none"> <li>- Hirundo 85 MW wind (EUR 98.6 Mio.)</li> <li>- Rexivista 100 MW solar (EUR 65 Mio.)</li> <li>- Astra 100 MW wind (EUR 116 Mio.)</li> </ul>
<b>MARKET POTENTIAL UNTIL 2030</b>	<b>EUR 280 MIO.</b>



Foto: Muela Hydro (72 MW) plant

While the total potential for RE in Lesotho is estimated to be 8 Bn. investment volume (based on national objectives), the **expected private investments** in the next 5 years (based on the existing pipeline of private IPPs) are approx. EUR 280 Mio. for around 285 MW until 2030.

# Stand-alone off-grid systems for consumptive purpose : Lesotho is a small market

## Overview

- **Solar home systems (SHS):**
  - SHS are one powerful measure to address the 300,000 **households in Lesotho that remain unelectrified**
  - **RBF** by UNDP is underdevelopment with envisaged USD75 per unit
- **Clean cook stoves:**
  - The market for clean cook stoves shows substantial potential, but due to its **immature status**, opportunities for commercial lending are limited.
- **Solar geyser (SWH)**
  - Highest demand is in the **residential sector**
  - **No incentives**, but a solar geyser of e.g. 700 EUR (150 l) is **very competitive** to the lifecycle costs of an electric hot water system (475 EUR + high operation costs)
  - According to the Lesotho Energy Policy, electric geysers shall be phased out in existing **public buildings**; SWH in NEW public buildings shall become mandatory

**TABLE 4:** Estimation of market size

APPLIANCE	MARKET POTENTIAL	
<b>SHS</b> 	Annual sales ( <i>based on past sales</i> )	~1,000 units
	Price per SHS (40-50 W)	~EUR 180
	<b>SHS MARKET POTENTIAL (UNTIL 2030)</b>	<b>EUR 900.000</b>
<b>Clean cook stoves</b> 	Households to be served annually ( <i>based on current trends</i> )	~16.000
	Average price per Unit	~EUR 60
	<b>CLEAN COOK STOVE MARKET POTENTIAL (UNTIL 2030)</b>	<b>EUR 4,8 MIO.</b>
<b>SWH</b> 	Annual sales ( <i>based on past sales</i> )	~670 units
	Average price per Unit (150L)	~EUR700
	<b>SWH MARKET POTENTIAL (UNTIL 2030)</b>	<b>EUR 2.33 MIO.</b>

# Isolated mini-grids: RBF scheme can be a bridge towards involvement of local commercial banks

## Overview

- The national objective of universal access by 2030 implicates that 60% of unelectrified households (**180,000 households**) are supposed to be electrified through mini-grids: 22.5 MW (125 W/ HH)
- Currently, 6 mini-grids are in operation, e.g. the Ha-Makebe ko kWp solar PV system
- The mini-grid regulations 2021 for mini-grids < 2MW are under review
- The mini-grid market does not offer substantial financing potential for banks

**TABLE 5: Estimation of market size**

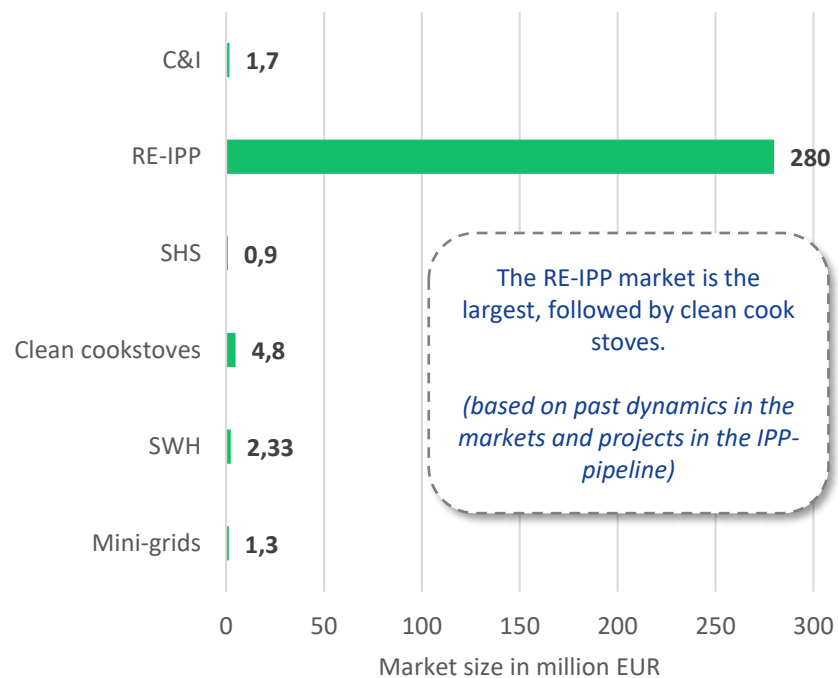
MARKET SIZE	
Price per kWp	EUR 4,300
Number of projects until 2030	6
Average size	50 kWp
<b>MARKET POTENTIAL UNTIL 2030</b>	<b>EUR 1.3 MIO.</b>



Foto: Ha-Makebe  
Solar PV mini-grid

# Renewable energy market size

**FIGURE 4:** Market size per segment

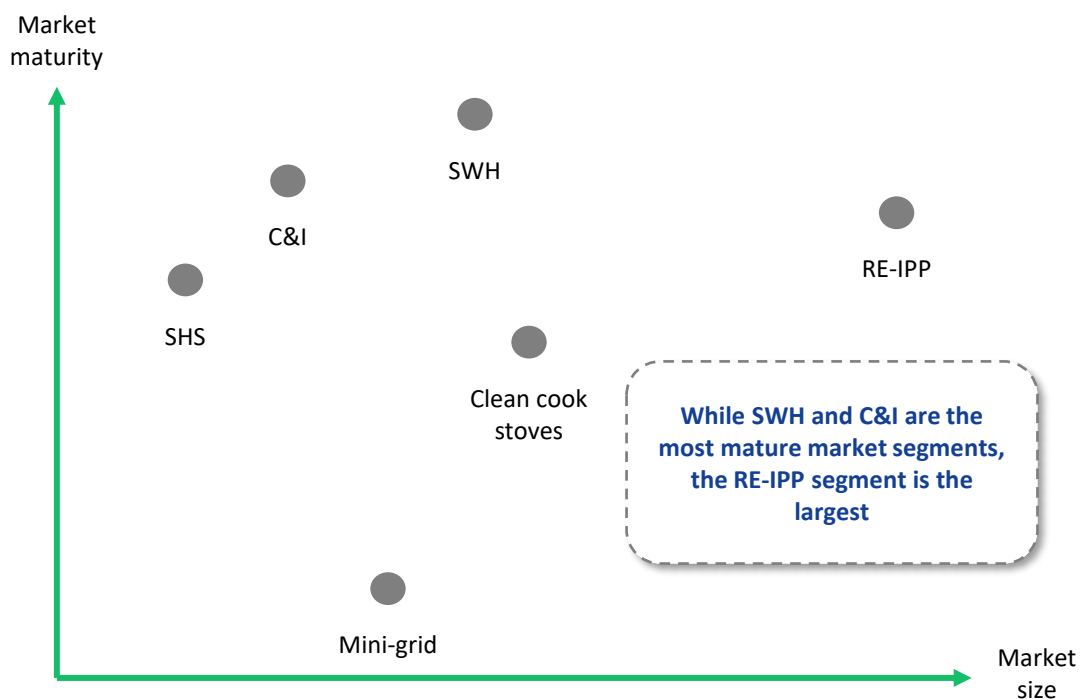


**TABLE 6:** Basis of the market size estimation

SEGMENT	EXPLANATION
<b>Captive power, C&amp;I</b> EUR 1.7 MIO	<ul style="list-style-type: none"> <li>• Very few projects realized until now</li> <li>• 25 projects until 2030 (5 projects per year)</li> </ul>
<b>RE-IPP</b> EUR 280 MIO	<ul style="list-style-type: none"> <li>• Existing pipeline of 286 MW private IPPs, including 185 MW wind and 100 MW solar PV</li> <li>• PPAs not yet closed</li> <li>• System costs: EUR 650 / kWp solar; EUR 1,160 / kW wind (onshore)</li> </ul>
<b>Isolated mini-grids</b> EUR 1.3 MIO	<ul style="list-style-type: none"> <li>• Doubling of installed capacity in next 5 years</li> <li>• 6 mini-grids à 50 kWp</li> </ul>
<b>SHS</b> EUR 0.9 MIO	<ul style="list-style-type: none"> <li>• Annual sales 1,000 at EUR 180 (range EUR 120-240) per unit</li> </ul>
<b>Clean cooking</b> EUR 4.8 MIO	<ul style="list-style-type: none"> <li>• 80,000 households will get a clean cook stove in next 5 years (sales of 16.000 p.a. in past years)</li> <li>• Prices for clean cook stoves in Lesotho: EUR 20 – 100</li> </ul>
<b>SWH/ solar geyser</b> EUR 2.33 MIO	<ul style="list-style-type: none"> <li>• Annual sales of 667 units , i.e. 3333 units in next 5 years</li> <li>• Prices for SWH (150 Liter): EUR 700</li> </ul>

# Renewable energy market maturity

**FIGURE 5:** Investment volume and market maturity



**TABLE 7:** Market maturity evaluation basis

SEGMENT	REMARKS (BASIS OF PROJECTIONS)
<b>Captive power, C&amp;I</b>	Low risk profile, profitable for many C&I, but little experience of the companies
<b>RE-IPP</b>	Internationally well-established market, however future in Lesotho still uncertain; no clear specific targets and no private IPPs yet in operation; only one PPA (Neo) has been signed after a long process; each PPA must be negotiated;
<b>Isolated mini-grids</b>	Generally, high risk profile, mini-grid Regulations 2021 under review and refinement (by Get.Transform); lack of tariff-setting and grid-arrival regulations
<b>SHS</b>	Very small market, few SHS companies operating in Lesotho with little annual sales; RBF expected
<b>Clean cookstoves</b>	Only 2 companies; relative significant annual sales; finance includes carbon finance
<b>SWH/ solar geyser</b>	Several companies; selling of SWH easier than SHS acc. to companies, no incentives at all, very profitable

# Commercial lending potential for local banks



**TABLE 8:** Commercial lending potential, per segment

SEGMENT	MARKET (IN EUR MIO)	OTHER FINANCING SOURCES (IN % OF TOTAL)	COMMERCIAL LENDING POTENTIAL* (IN % OF TOTAL)	LOCAL BANK LENDING POTENTIAL (IN % OF TOTAL)	LOCAL BANK LENDING VOLUME (IN EUR MIO)
C&I	1.7	0%	70%	70%	1.19
RE-IPP	280	50% (DFIs)	50%	50%	140
SHS	0.9	50% (subsidy)	50%	25%	0.225
Clean cook stoves	4.8	50% (subsidy)	50%	25%	1.2
SWH/solar geyser	2.33	0%	70%	70%	1.63
Minigrids	1.3	70% (subsidy)	30%	0%	0

\* Including international private finance

**The total commercial lending potential by banks in Lesotho is estimated to be EUR 144 Mio.**

- In the SHS & clean cookstoves segments, parts of the investments will still be financed by grants
- Investments in mini-grids are not bankable, unless there are RBF schemes in place

# References



- African Development Bank Group, *AFRICAN ECONOMIC OUTLOOK 2024 - Driving Africa's Transformation - The Reform of the Global Financial Architecture*. [https://www.afdb.org/sites/default/files/2024/06/06/aeo\\_2024\\_-\\_country\\_notes.pdf](https://www.afdb.org/sites/default/files/2024/06/06/aeo_2024_-_country_notes.pdf). Accessed September 4, 2025.
- African Energy Commission, *AFREC – Lesotho*. <https://au-afrec.org/Lesotho>. Accessed September 4, 2025.
- EIB, 2024. *Finance in Africa - Unlocking investment in an era of digital transformation and climate transition*. <https://www.eib.org/en/publications/20240033-finance-in-Africa>. Accessed September 4, 2025.
- FIRST NATIONAL BANK OF LESOTHO LIMITED, 2024. *ANNUAL FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER 2023*. [https://www.fnb.co.ls/downloads/Lesotho/FNBLS\\_Financial\\_Statement\\_2023.pdf](https://www.fnb.co.ls/downloads/Lesotho/FNBLS_Financial_Statement_2023.pdf). Accessed September 4, 2025.
- GET.Transform, *Lesotho Country Window: Energy System Transformation Outlook (ESTO)*. <https://www.get-transform.eu/wp-content/uploads/2024/08/GET.transform-Lesotho-ESTO-Aug-2024.pdf>. Accessed September 4, 2025.
- Lesotho Electricity and Water Authority, *LEWA annual report 2022/2023*. <https://www.lewa.org.ls/annual-reports/>. Accessed September 4, 2025.
- Lesotho PostBank Limited. *Audited Annual Financial - Results For The Year Ended 31 December 2023, 2024*. <https://www.lpb.co.ls/wp-content/uploads/2024/09/LPB-Audited-Annual-Financial-Results-2023.pdf>. Accessed September 4, 2025.
- Nedbank Lesotho Limited, 2024. *Annual Financial Results for the year ended 31 December 2023*. [https://www.nedbank.co.ls/content/dam/africa/Lesotho/documents/Annual-Financial-Statements-for-year-ended-31\\_December\\_2023.pdf](https://www.nedbank.co.ls/content/dam/africa/Lesotho/documents/Annual-Financial-Statements-for-year-ended-31_December_2023.pdf). Accessed September 4, 2025.
- Standard Bank Lesotho, 2024. *STANDARD LESOTHO BANK ANNUAL FINANCIAL RESULTS - FOR THE YEAR ENDED 31 DECEMBER 2023*. [https://www.standardlesothobank.co.ls/static\\_file/Lesotho/filedownloads/2023\\_Annual\\_Financial\\_Statements.pdf](https://www.standardlesothobank.co.ls/static_file/Lesotho/filedownloads/2023_Annual_Financial_Statements.pdf). Accessed September 4, 2025.



# Thank You for Your Attention!

E-mail: [info@edge-finance.eu](mailto:info@edge-finance.eu)



[www.get-invest.eu](http://www.get-invest.eu)



[@GET.invest](https://www.linkedin.com/company/get-invest)

GET.invest is co-funded by



Ministry of Foreign Affairs of the  
Netherlands



Sweden  
Sverige

