

KINGDOM OF LESOTHO

Renewable Energy & Energy Transformation

Policy Landscape, Institutions, Energy Storage Status & Priority Projects



Country Status Briefing – Regional Knowledge Exchange with KIER & Participating Experts

10-Minute Country Briefing

Structured to give partners a fast, complete read on Lesotho's energy transformation journey.

MIN 0–5

Policy & Institutions

National energy, climate & development policies — and the bodies that implement them (LEGCo, LEWA, LEC).

MIN 5–10

Projects & Pilots

Solar, hydro, wind and battery storage pipeline; ongoing programs, trials and research partnerships.

A Small, Resource-Rich Highland Kingdom

104.7 MW

Total installed capacity

99.6%

Share of installed capacity that is renewable

53%

National electrification rate

71% / 11%

Urban vs. rural electrification

209 MW

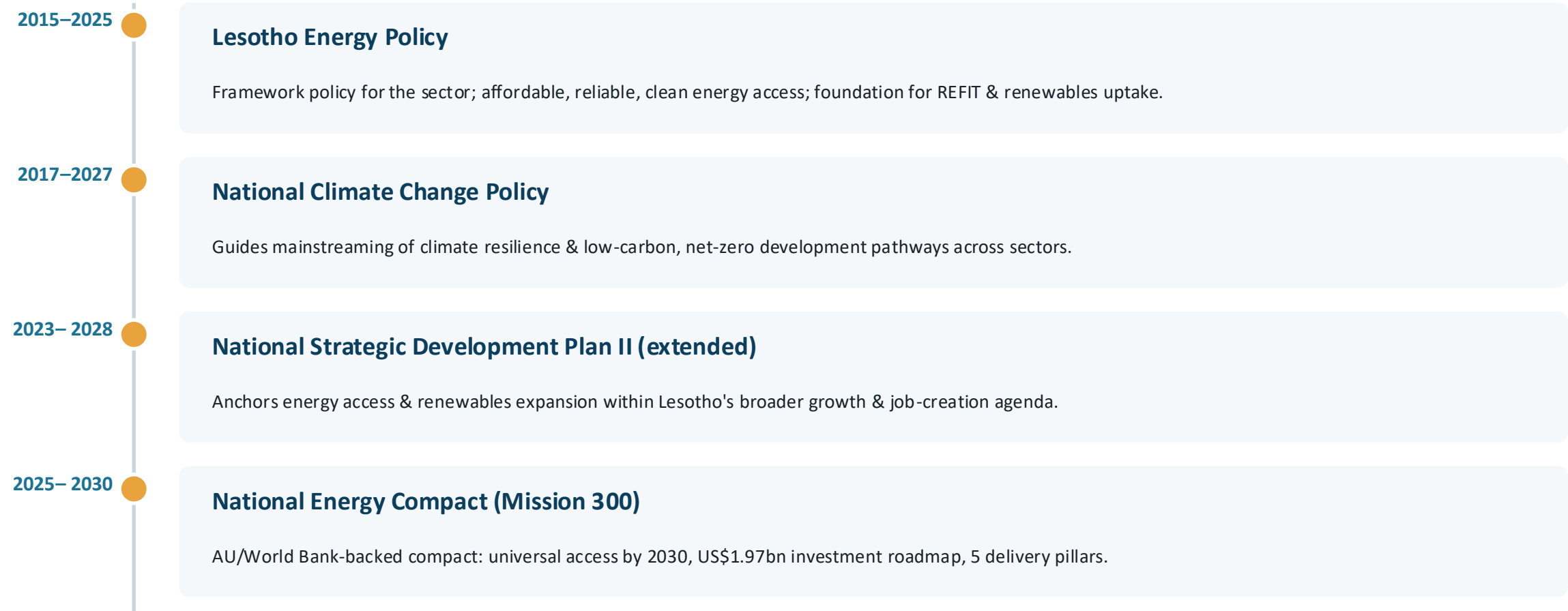
Peak demand (2023/24)

~50%

Of demand met via imports (RSA & Mozambique)

Generation mix: Muela hydro 72 MW · Ramarothole solar PV 30 MW · Mants'onyane mini-hydro 2 MW · Moshoeshoe I Airport solar 0.3 MW · Semonkong diesel 0.4 MW

The Policy & Planning Stack



Lesotho Energy Policy 2015–2025

Aligned to Vision 2020 & NSDP — sets strategic direction for affordable, reliable, environmentally-friendly energy.

Core Objectives

- Institutional & regulatory framework for managing and developing the energy sector
- Sustainable bioenergy supply and improved access to renewable technologies
- Energy efficiency practices promoted across all economic sectors
- Security of electricity supply and a reliable, efficient transmission network

Instruments & Direction of Travel

- Renewable Energy Feed-in-Tariff (REFIT) programme to attract IPP investment
- Electrification targets progressively raised toward universal access
- Currently under review — successor Energy Policy 2026–2036 to be adopted (Dec 2025)
- Companion Energy Bill will create the Energy Commission, Energy Fund & Rural Energy Agency

Climate Change Policy 2017–2027 & NSDP II

National Climate Change Policy 2017–2027

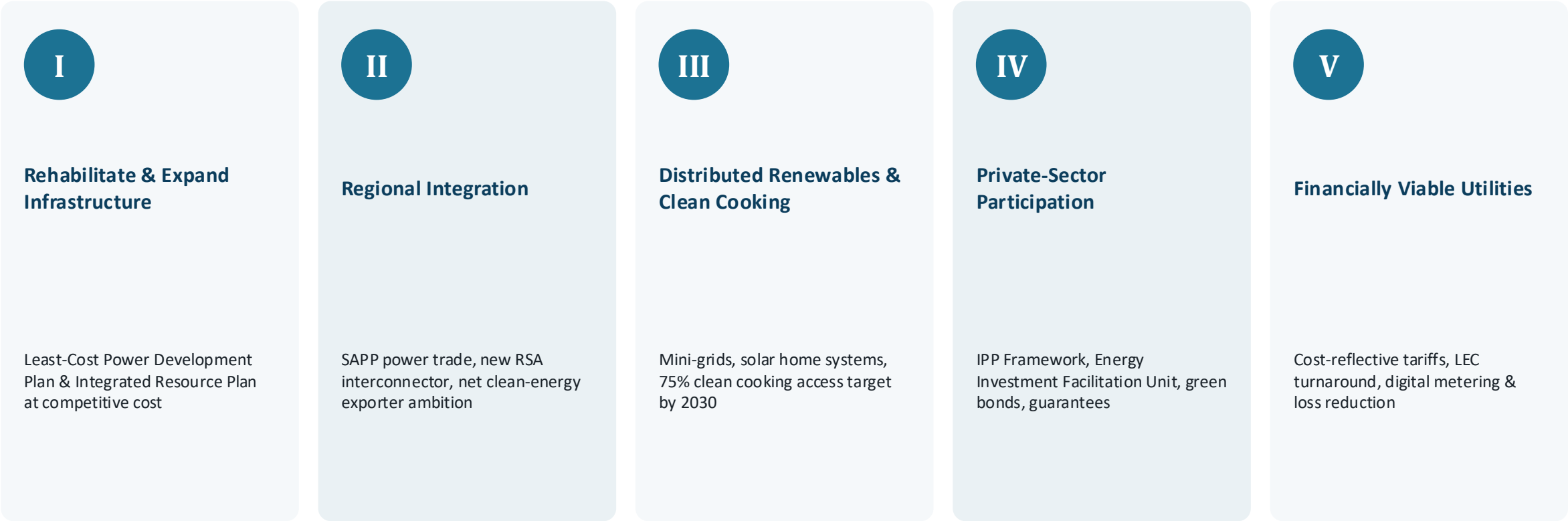
- Mainstreams climate resilience & low-carbon development into national, district & local planning
- Targets a socially inclusive, environmentally sustainable, net-zero emissions economy
- Implemented via the Climate Change Policy Implementation Strategy (CCPIS)
- Directly linked to Lesotho's NDC — renewable power generation as a core mitigation lever
- Lesotho is highly climate-vulnerable: severe winters, droughts, floods — energy resilience is a survival issue, not just a target

Extended NSDP II

- National Strategic Development Plan II is Lesotho's overarching growth strategy
- Energy access & renewables expansion positioned as an enabler of industrialisation, jobs & export diversification
- Provides the domestic policy anchor referenced by donor programmes (EU, World Bank, UNDP, AfDB) supporting the sector
- Frames energy as cross-cutting: health, education, agro-processing & digital services all depend on reliable power

National Energy Compact — 5 Delivery Pillars

Government commitment: universal access by 2030 · US\$1.97bn mobilisation need (US\$1.47bn private)



Who Does What: LEGCo, LEWA & LEC

MoE / DoE	Ministry of Energy / Department of Energy	Policy development, planning & sector coordination; to become the Energy Commission once the Energy Bill is enacted.
LEGCo	Lesotho Electricity Generation Company	Operates & maintains the Ramarothole Solar Power Plant (90 MW planned); coordinates generation and supports IPPs rather than competing with them.
LEWA	Lesotho Electricity and Water Authority	Independent regulator for electricity, water & sanitation — tariffs, licensing, mini-grid regulation, technical & economic oversight.
LEC	Lesotho Electricity Company	Transmission, distribution, supply & procurement utility; power imports from Eskom/EDM; undergoing a Performance Improvement Plan & turnaround.

Also active in the sector: LHDA (Muela hydro O&M), Rural Electrification Unit → Rural Energy Agency, and the Petroleum Fund.

Does Lesotho Have an ESS? — Status: Emerging

TODAY

No utility-scale battery energy storage system (BESS) is yet operational in Lesotho.

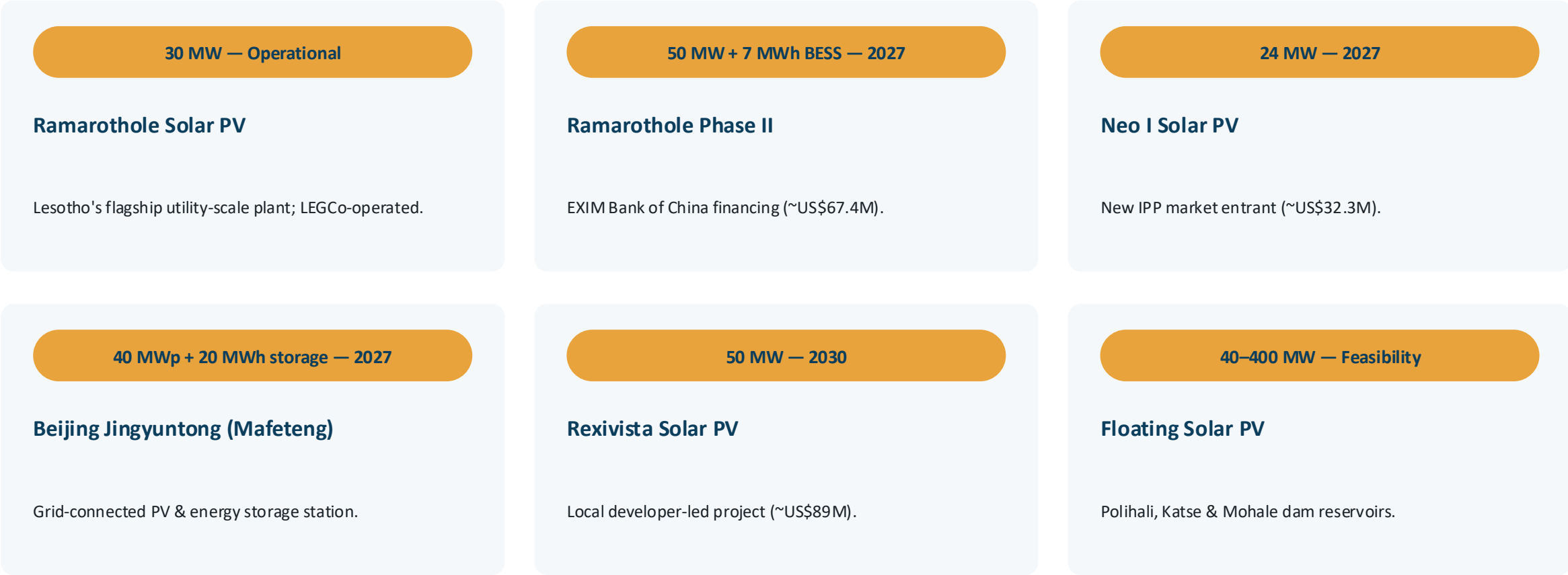
- Grid stability currently relies on strong interconnection with the South African (Eskom) network
- No load-shedding nationally — except Qacha's Nek & Mokhotlong, still pending grid connection
- Storage has entered the pipeline only through new IPP solar projects now in development

PIPELINE BY 2027

600 MWh grid-charged BESS committed under the National Energy Compact

- 600 MWh standalone BESS — sized on 2-hr peak from 300 MW generation (~US\$47.5M)
- 7 MWh battery — bundled with Ramarothole Solar Phase II (50 MW)
- 20 MWh storage — bundled with the 40 MWp Beijing Jingyuntong solar project (Mafeteng)
- 1,200 MW Kobong pumped-storage hydropower — long-duration storage, feasibility stage

Solar: From First Utility Plant to a Diversified Pipeline



Hydropower Backbone & Emerging Wind

HYDROPOWER

- **Muela Hydropower Plant** 72 MW — Operational (LHDA)
- **Katse Rehabilitation** 1.1 MW — JICA-funded, 2026
- **Oxbow Hydropower (LHWP II)** 90 MW — Under development, 2032
- **Senqu River B, C & D** 122 MW combined — Feasibility
- **Kobong Pumped Storage** 1,200 MW — Feasibility
- **Small hydro portfolio** Muela expansion, Jordan, Quthing, 11 small HPPs — ~180 MW potential

WIND

Hirundo Wind Power Plant

60 MW — Targeted 2028 (~US\$89.9M)

Highland regions identified as particularly viable for wind; developed by an Independent Power Producer under the IPP Framework.

Resource Potential

Technical renewable potential across hydro, solar & wind is estimated at ~2,300 MW, capable of generating ~5,900 GWh/year — several multiples of current peak demand.

Live Programmes Driving the Transition



Renewable Lesotho (EU Global Gateway)

EU/Germany/Ireland/UNDP-backed initiative for clean generation, efficiency & sector leadership; includes LETSEMA and technical assistance via GET.transform.



LREEAP (World Bank / SREP)

2022–2027 grid extension, mini-grid rehabilitation & PPP mini-grid development, plus Results-Based Financing for the private sector.



Mini-grid & Solar Home System Rollout

11 mini-grids operating (9 private, 2 community); 10 more under WB-supported procurement; PAYGO/solar home systems for last-mile access.



HMK Letsie III Just Energy Transition Fund

Royal-backed fund mobilising blended co-investment to de-risk large renewable & storage projects.



E-Mobility & Medical Drone Pilots

Under the Renewable Lesotho umbrella — electric transport pilots and drone delivery of vaccines to rural areas, displacing fossil transport fuel.



Carbon Finance (Paris Agreement Article 6)

Lesotho is exploring bilateral Article 6.2/6.4 cooperation to attract forward investment for verified mitigation — a national carbon finance strategy is emerging.

From Hydro-Dependent to a Diversified, Storage-Ready Grid

- Policy stack in place and being refreshed: Energy Policy → 2026–2036, new Energy Bill, updated Electrification Strategy
- 99.6% of current generation is already renewable — the frontier is scale, storage and grid firmness, not the energy source
- First utility-scale BESS (600 MWh) and pumped storage (Kobong, 1,200 MW) are in the pipeline, not yet delivered
- US\$1.97bn investment ask under the National Energy Compact is an open door for regional & international partners

Thank you — open to questions and to comparing notes with KIER and fellow country delegations.

