AU AIP WATER INVESTMENT SUMMIT: PROJECT SHOWCASE TEMPLATE

PROGRAMME/ PROJECT OVERVIEW	
Project Name	Floating PV Solar Generating Facilities on Katse & Mohale Dam
Location (Country, Region, Coordinates)	Lesotho, Maseru District (Mohale Dam) and Leribe Districts (Katse Dam)
Involved countries	Lesotho
Sub-Sector	Solar Power Generation/Renewable Energy
Project description (Goals and expected outcomes)	Electricity Generation Project on existing LHWP Reservoirs aims to enhance Lesotho's clean energy portfolio through the integration of large-scale floating photovoltaic (FPV) panels. The main goal is to enhance energy security by generating 437 MW of clean solar power within the country. The expected outcomes include independence in energy production. Lesotho to become a net exporter of renewable energy.
Technological details/ innovation	State-of-the-art SCADA systems, coupled with Internet of Things (IoT) sensors, enable real-time monitoring, predictive maintenance, and optimisation of energy output (**Technology**). The dual usage of reservoirs not only increases resilience to drought but also aligns with climate adaptation strategies (**innovation**).
Governance improvements/innovation	LHDA Board of Director in consultation with the Lesotho Highlands Water Commission (LHWC) based on the Directive from the Minister.
IMPLEMENTATION & KEY PLAYERS	
Lead institution	Lesotho Highlands Development Authority (LHDA)
Implementing agent(s)	LHDA on behalf of the Government of Lesotho (GoL)
Sponsors / Investors / Contractors / Advisors	GoL, EIB Technical Advisors, NUL Energy Research Unit
PROJECT TIMELINE & DEVELOPMENT STAGE	
Year of preparation, estimated start & end dates	Year of preparation: **Ongoing** estimated start & end dates: **TBC**
Current development stage	Pre-Feasibility – complete Detailed Feasibility Studies – Development of Terms of Reference in progress
PROJECT RATIONALE & STRATEGIC IMPORTANCE	
Alignment with national/regional plans, SDGs, Agenda 2063	Alignment with SADC Protocols, SDGs, Agenda 2063 Alignment
Contribution to NDCs and alignment with NAPs / Adaptation and Mitigation	Contributes to Lesotho's energy sector GHG reduction target and enhances climate adaptation by preserving water resources and ensuring drought-resilient power supply.
Paradigm shift potential (scalability, replicability)	Modular FPV design enables phased expansion from the initial 437 MW to larger capacities as demand grows. Shifts perception of reservoirs → from single-use water storage to multi-use economic hubs.
FINANCIAL & INVESTMENT DETAILS	
Total project cost, currency	**CAPEX**: ~USD 305 million
Funding already raised (am	No Funding Raised So Far
Proposed revenue model	Power Sales Revenue, Regional Energy Trade, Carbon Credits & Climate

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	Finance
Financial metrics (IRR, Payback Period, DSCR, NPV) available? Y/N, date	**IRR**: ~18–20%. **Payback**: ~4.5 years, **DSCR**: ~2.5–3.0, **NPV**: ~USD 535 M (at 8% discount). Benefit-Cost Ratio (BCR): ~2.57 (high economic viability).
Economic performance (Benefit-Cost Ratio) Y/N	**Total Lifetime Local Economic Benefit**: ~USD 40–50M. To be improved as more information becomes available
INVESTMENT ASK & WAY FORWARD	
Remaining investment required: project component & type (Loan/Equity/Grant/Guarantee/insurance)	**Concessional Loans** - Climate/green loans from AfDB, DBSA, IFC, World Bank **Equity** - Private developer + LHDA + impact investors **Grants & Subsidies** - GCF, EU climate funds, cooperation grants **Climate Insurance** - Guarantees against extreme weather, revenue shortfall
Opportunity for bundling with other projects	**Bundling Options:** Hybrid Hydro-Solar synergy, coupling with irrigation schemes, water supply projects, and Eco-tourism. Regional SADC renewable energy corridor & carbon markets.
Next steps	Finalization of the Bankable Feasibility Study and Structuring Financing Options
TARGET GROUPS & SOCIAL IMPACT	
Direct beneficiary population per project	Estimated Direct Beneficiary Population: ~ 800 jobs during construction + ~ 70-80 permanent staff + ~. 200 households gaining access to cheaper electricity.
Social & gender impact assessment (Y/N, date)	N. Pending the Outcome of ESIA
Job creation estimate assessment (Y/N, date)	- Construction Phase: ~400–500 direct jobs, ~1,500 indirect, ~800 induced. - O&M Phase: ~50–70 direct technical jobs, ~300 indirect
SUSTAINABILITY & ENVIRONMENTAL ANALYSIS	
Environmental compliance & climate assessment (Y/N, date)	FPV systems complement hydropower capabilities during drought conditions. These systems are eligible for carbon credits, with a potential revenue generation of approximately USD 7 million annually.
EIA (Y/N, date)	N. Pending the Outcome of ESIA
ESG performance (Y/N)	N. Pending the outcome of ESIA
Safeguards & community engagement (Y/N, date)	**Safeguards:** Compliance with Lesotho Environmental Act, ORASECOM, IFC/WB ESF.
RISK MANAGEMENT	
Main risks & mitigation measures	Policy Change, Political instability, Grid Access & Tariff Risk, Cross Border Trade Limitations, Revenue shortfall. Etc
Constraints or bottlenecks to finance	Capacity & Knowledge Gaps, Institutional & Governance Bottlenecks and Macroeconomic & Policy Constraints
CONTACT INFORMATION	
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