African Union | AUDA-NEPAD AFRICAN UNION DEVELOPMENT AGENCY | GOVERNO DE ANGOLA

III LUANDA FINANCING SUMMIT FOR AFRICA'S INFRASTRUCTURE DEVELOPMENT

Investment Prospectus – Malawi-Zambia Interconnection 400 kV Transmission Line

PROJECT SUMMARY	
Project Name	Malawi-Zambia Interconnection 400 kV Transmission Line
Location	Eastern and Southern Africa: Malawi (Nkhoma Substation to border) and Zambia (border to Chipata West Substation) | Cross-border transmission infrastructure connecting Malawi to Zambia within Southern African Power Pool (SAPP) requiring bilateral coordination and harmonized power sector regulatory frameworks
Sector	Energy
Sub-Sector	Transmission Infrastructure | High-voltage transmission infrastructure establishing 400 kV double circuit interconnection for regional electricity trade and power pool integration within SAPP
Development Stage	S2B: Structuring | Structuring stage (S2B) with line route studied, revised and fine-tuned considering technical, environmental and social aspects, requiring finalization of institutional, regulatory, and financing frameworks for investment readiness
Project Sponsor	Electricity Supply Commission of Malawi (ESCOM) and ZESCO Zambia | Bilateral sponsorship through Electricity Supply Commission of Malawi (ESCOM) and ZESCO (Zambia Electricity Supply Corporation) with government support from Malawi and Zambia for cross-border transmission infrastructure implementation
Project Cost	Total CAPEX US$ 134 million | Total capital expenditure of USD 134 million for 400 kV double circuit overhead

	transmission line and extension of terminal substations in Malawi (Nkhoma) and Zambia (Chipata West)
Funding Requirement	Total CAPEX US$ 134 million | Total funding requirement of USD 134 million for complete 400 kV transmission line infrastructure across Malawi and Zambia segments
Funding Gap	US$22.4 Million | Funding gap of USD 22.4 million for project development and construction
Expected Commercial Operation Date	Expected CoD: 2028 | Expected Commercial Operation Date in 2028 subject to completion of structuring phase, financing mobilization, and construction of both Malawi and Zambia transmission segments

FINANCIAL OVERVIEW	
Total Project Cost	US$22.4 million (funding gap), Total CAPEX US$ 134 million | Total capital expenditure of USD 134 million for 400 kV double circuit transmission line infrastructure including 145.6 km Malawi segment (Nkhoma Substation to border) and 46.6 km Zambia segment (border to Chipata West Substation) with USD 22.4 million funding gap for project development and construction
Capital Structure	To be determined during structuring phase | Capital structure and financing arrangements to be determined during S2B structuring phase with expected blended financing combining development finance institutions support (AfDB, World Bank), bilateral donor support (SWED FUND, EU), and government contributions
Financial Metrics	To be determined during structuring phase | Financial performance indicators including Internal Rate of Return (IRR), payback period, and Debt Service Coverage Ratio (DSCR) to be determined during structuring phase aligned with regional transmission infrastructure investment standards
Revenue Model	To be determined during structuring phase | Revenue generation model to be defined during structuring phase with expected wheeling charges for cross-border electricity trade, capacity charges from SAPP power pool, and bilateral power purchase agreements between Malawi and Zambia utilities
Market Demand	Improve power supply security and enable efficient cross-border electricity trade, optimizing the use of available energy resources while promoting the integration of renewable energy sources into the grid to reduce reliance on thermal generation. | Strong regional market drivers including improved power supply security for Malawi and

	Zambia, efficient cross-border electricity trade facilitation, optimization of available energy resources, promotion of renewable energy integration to reduce reliance on thermal generation, contribution to SAPP power pool stability and reliability, enhanced access to affordable and reliable electricity supporting economic development

SUSTAINABILITY AND IMPACT	
Social Impact	To be assessed during structuring phase | Social impact assessment to be conducted during structuring phase with expected benefits including improved electricity access, enhanced regional economic integration, job creation during construction and operation, strengthened cross-border cooperation, and improved access to affordable and reliable electricity for both countries supporting economic development
Environmental Impact	The line route has been studied, revised, fine-tuned in consideration of technical, environmental and social aspects | Environmental considerations integrated through line route study, revision and fine-tuning process addressing technical, environmental and social aspects, with detailed Environmental and Social Impact Assessment (ESIA) to be completed during structuring phase addressing compliance with regional environmental regulations and international safeguards frameworks
Strategic Importance	Establish a robust energy link. Improve power supply security and enable efficient cross-border electricity trade, optimizing the use of available energy resources while promoting the integration of renewable energy sources into the grid to reduce reliance on thermal generation. Contributing to the overall stability and reliability of the Southern African Power Pool (SAPP), supporting economic development by improving access to affordable and reliable electricity for both countries. | Critical strategic importance for SAPP regional power pool integration through establishment of robust energy link between Malawi and Zambia, improved power supply security and reliability, efficient cross-border electricity trade facilitation, optimization of energy resources utilization, promotion of renewable energy integration reducing thermal generation dependence, contribution to SAPP power pool overall stability and reliability, support for economic development through enhanced electricity access and affordability
SDG and Agenda 2063 Alignment	To be detailed during structuring phase | Alignment with Sustainable Development Goal 7 (Affordable and Clean Energy), SDG 9 (Industry, Innovation, and Infrastructure),

	SDG 13 (Climate Action through renewable energy integration), SDG 17 (Partnerships for the Goals), African Union Agenda 2063 Aspiration 1 (Prosperous Africa) and Goal 10 (World-class Infrastructure), SAPP regional power pool development plans supporting regional integration and energy access

TECHNICAL DETAILS	
Project Description	The proposed interconnection from Malawi to Zambia entails the construction of a 400kV double circuit overhead line, and the extension of terminal substations in Malawi and Zambia. The line route has been studied, revised, fine-tuned in consideration of technical, environmental and social aspects and has an overall length of 192.2km, out of which 145.6km in Malawi (Nkhoma Substation – border stretch) and 46.6km in Zambia (border - Chipata West Substation). | Cross-border transmission infrastructure comprising 400 kV double circuit overhead transmission line with total length of 192.2 km including 145.6 km Malawi segment (Nkhoma Substation to border) and 46.6 km Zambia segment (border to Chipata West Substation), extension of terminal substations at Nkhoma (Malawi) and Chipata West (Zambia), line route studied, revised and fine-tuned considering technical, environmental and social aspects for optimal alignment
Technology & Design	400kV double circuit overhead line | Advanced technical specifications including 400 kV double circuit overhead transmission line technology, compliance with SAPP regional transmission system standards and interconnection codes, substation infrastructure extension at Nkhoma (Malawi) and Chipata West (Zambia), technical specifications refined through route optimization studies
Capacity/Size	Total length 192.2 km (145.6 km Malawi + 46.6 km Zambia) | Infrastructure capacity including total transmission line length of 192.2 km comprising 145.6 km Malawi segment (Nkhoma to border) and 46.6 km Zambia segment (border to Chipata West), transmission capacity and power transfer capability to be confirmed during structuring phase
Construction Timeline	Expected CoD: 2028 | Construction timeline with expected Commercial Operation Date in 2028 subject to completion of structuring phase (2025-2026), financing mobilization (2026), and phased construction of Malawi segment and Zambia segment (2026-2028)
Route Optimization	The line route has been studied, revised, fine-tuned in consideration of technical, environmental and social aspects | Comprehensive route optimization process including technical feasibility studies, environmental considerations,

	social impact assessments, route revisions and fine-tuning to minimize environmental and social impacts while ensuring technical viability

RISK MANAGEMENT	
Risk Assessment	The project depends on the completion of both sections in Malawi and Zambia. Some risks include financial uncertainties related to energy demand as well as regulatory changes that could impact implementation. Technical challenges may arise during construction and integration with existing systems, while environmental and social risks include habitat degradation and health impacts on local communities due to workforce influx. | Comprehensive risk management including implementation risk mitigation addressing dependency on completion of both Malawi and Zambia transmission segments, financial risk mitigation addressing energy demand uncertainties and financing mobilization, regulatory risk mitigation addressing potential regulatory changes impacting implementation, technical risk mitigation for construction challenges and integration with existing power systems, environmental and social risk mitigation addressing habitat degradation and health impacts on local communities from workforce influx
Regulatory Risks	Engagement of governmental bodies of Malawi and Zambia to finalise institutional, regulatory, and financing frameworks | Regulatory challenges addressed through engagement of governmental bodies of Malawi and Zambia for finalization of institutional frameworks (bilateral agreements), regulatory frameworks (cross-border wheeling tariffs, interconnection agreements), and financing frameworks (cost-sharing arrangements, revenue allocation mechanisms) during structuring phase
Environmental and Social Safeguards	The line route has been studied, revised, fine-tuned in consideration of technical, environmental and social aspects. Environmental and social risks include habitat degradation and health impacts on local communities due to workforce influx. | Environmental and Social Impact Assessment (ESIA) to be completed during structuring phase addressing line route environmental and social optimization, mitigation of habitat degradation risks, management of health impacts on local communities from workforce influx, compliance with Malawi and Zambia environmental regulations, international safeguards frameworks (AfDB, World Bank standards), community engagement requirements, and sustainable transmission infrastructure development practices

KEY STAKEHOLDERS	
Sponsors	Electricity Supply Commission of Malawi (ESCOM) and ZESCO Zambia | Bilateral sponsorship through Electricity Supply Commission of Malawi (ESCOM) and ZESCO (Zambia Electricity Supply Corporation) with government support from Ministries of Energy in Malawi and Zambia for cross-border transmission infrastructure implementation
Current Partners	SWED FUND / EU, Government of Malawi and Zambia | Current project partners including SWED FUND (Swedish International Development Cooperation Agency) and European Union for project preparation support, Government of Malawi and Government of Zambia for institutional coordination and regulatory framework development
Potential Investors	AfDB, WB | Potential investor base including African Development Bank (AfDB), World Bank (WB), and additional development finance institutions for blended financing structure supporting cross-border transmission infrastructure development
Contractors & Operators	To be selected via international tender | Technical contractors and operational partners to be identified through international competitive tendering process following completion of structuring phase, with expected operation by ESCOM and ZESCO under bilateral operation and maintenance agreement
Legal and Financial Advisors	To be appointed during structuring phase | Professional advisory services to be engaged during structuring phase to support bilateral contractual structuring, cross-border regulatory compliance, financing negotiations, and transaction advisory for Malawi-Zambia transmission interconnector project

WAY FORWARD	
Investment Ask	Total CAPEX US$ 134 million, Funding Gap US$22.4 Million | Investment requirement of USD 134 million total capital expenditure including USD 22.4 million funding gap for project development and construction
Next Steps	Engagement of governmental bodies of Malawi and Zambia to finalise institutional, regulatory, and financing frameworks, and scouting development finance institutions to secure funds for the Malawi and Zambia sections. | Strategic implementation pathway including engagement of governmental bodies of Malawi and Zambia for finalization of institutional, regulatory, and financing frameworks, scouting

	development finance institutions (AfDB, World Bank) to secure USD 22.4 million funding gap, leveraging support from SWED FUND and European Union, completion of structuring phase for financial and technical finalization
Implementation Timeline	2025-2028 | Systematic implementation timeline with structuring phase completion (2025-2026), financing mobilization (2026), construction of Malawi and Zambia segments (2026-2028), and expected Commercial Operation Date in 2028
Contact Information	AUDA-NEPAD (Infrastructure and Energy Division) / ESCOM Malawi / ZESCO Zambia