MISSION 300
AFRICA
ENERGY
SUMMIT

NATIONAL ENERGY COMPACT FOR MALAWI



UNITY AND FREEDOM

Preamble

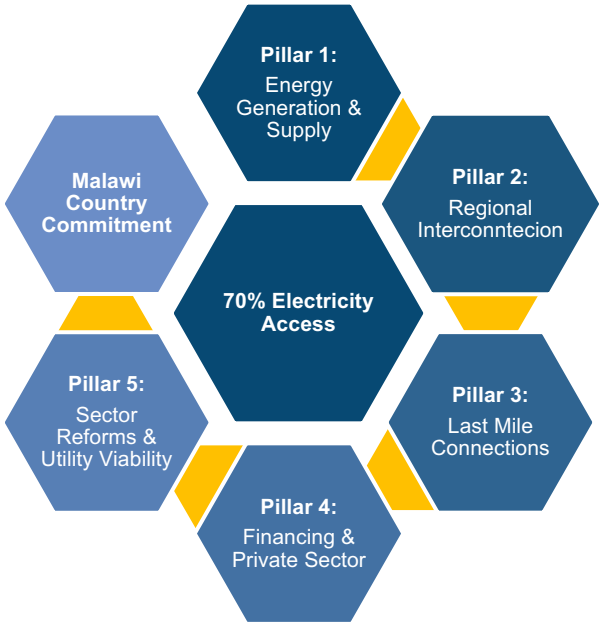
This National Compact for Malawi follows the approach in the Africa Region Energy Compact and reflects the commitment of the Government of Malawi to critical actions needed to achieve affordable, reliable, and clean energy services and substantially increase the share of renewable energy in its energy mix. The National Compact outlines the challenges in meeting the targets and presents a credible action plan to address the challenges. Details on the pillars, targets, and binary indicators are outlined in the Africa Region Energy Compact.

Linkages to the United Nations Compact

Malawi adopted the United Nations (UN) Energy Compact in 2021 with a number of commitments. This new National Compact builds on and further expands on the UN Compact, by taking a framework approach towards the two main goals of reaching universal access to electricity and clean cooking; and increasing the share of renewable energy. The National Compact also emphasises inclusivity by engaging various stakeholders, including government, the private sector, academia and civil society, to foster partnerships crucial for achieving sustainable energy access for all. The Compact also mirrors the UN's comprehensive vision by integrating energy access, efficiency, and renewable sources into its strategy.

Executive Summary of the Malawi Energy Compact

This document outlines the Government of Malawi's National Compact for Energy, developed in alignment with the Africa Region Energy Compact and the United Nations Energy Compact. It sets out Malawi's vision and commitment to increasing access to electricity, promoting clean cooking solutions, and increasing the share of renewable energy by 2030. This Compact builds upon previous national and international commitments, addressing critical challenges in the energy sector and proposing actionable strategies to overcome them.



KEY ASSUMPTIONS

- Move towards Universal Access to Electricity - By 2030, Malawi aims to increase electricity access from the current **25.9% to 70%**. This will require a total additional **1.15 million on-grid** connections and **1.55 million off-grid** connections.

- Clean Cooking -The goal is to provide cleaner cooking solutions to **75% of the households** by distributing 146,000 advanced woodstoves annually and allowing access to 117,000 LPG cookstoves, 53,000 electric cookstoves, 80,000 biogas cookstoves and 40,000 ethanol/paraffin-based cookstoves per year until 2030. This will imply migrating 38% of the population out of Tier 0 of the Multi-Tier Framework (MTF).

- Renewable Energy - The Compact aims to increase the share of renewable energy including Hydropower in the energy mix from **90% to 96% by 2030**, contributing to an increased reduction from the carbon baseline emissions from 1,000 $kTCO_2E$ to 4,090 $kTCO_2E$.

- Expanding installed generation capacity by an additional **848 MW**, through a combination of various generation technologies. This will require a significant contribution of **714 MW** from the Private Sector. The grid will need to generate at least **5,166 GWh by 2030** to meet the annual energy demand.

- Enhancing the **national grid infrastructure**, with a planned addition of **22,417 km of distribution line**, **1,940 km of transmission line** and upgrading of substation infrastructure to support the increased demand.

- Prioritising regional interconnectors with **Mozambique, Zambia, and Tanzania** to enhance power trade, strengthen the national grid and provide an opportunity for exporting power leading to Malawi becoming an active member within the Southern African Power Pool (SAPP) and East African Power Pool (EAPP).

COMPACT ENABLER

This Compact builds on past efforts while marking a significant evolution toward a sustainable and innovative energy future, underpinned by innovation, accountability, and strategic partnerships:

- **Technology-driven electrification.** The Compact adopts a cutting-edge, technology and digital-driven approach to electrification, anchored by the updated Integrated Energy Planning (IEP) tool. This geospatial-based platform, offering free and open access to private sector developers, ensures that electrification planning is grounded in cost-effective and data-driven solutions. Building on the foundation laid by ongoing government efforts, this next phase will emphasize the utilization of digital platforms and systems to significantly enhance efficiency, transparency, and scalability in electrification planning.

- **Scaling Distributed Renewable Energy (DRE) access with innovative financing.** Leveraging the success of the Ngwee Ngwee Ngwee Fund (NNNF) launched in 2023, Malawi will significantly expand off-grid energy access. The NNNF, which has effectively supported solar home system (SHS) companies, will transition into a National Energy Sector Fund under the Ministry of Energy. This institutionalized fund will broaden its scope to support both off-grid and clean cooking solutions, deploying innovative financing mechanisms such as carbon finance-based models. By fostering private sector engagement and leveraging innovative financing techniques, the Compact aims to drive the growth of off-grid solar and clean cooking technologies to meet increasing demand sustainably.

- **Strengthening accountability and governance.** The Compact is underpinned by a robust framework for accountability and governance. A National Electrification Monitoring Platform will integrate regular surveys, progress tracking, and remote monitoring technologies, ensuring comprehensive oversight and transparency. Governance reforms will clearly define roles and responsibilities within the government, enhancing accountability at all levels. Additionally, the Compact promotes integrated planning and cross-sectoral coordination, starting with a dedicated task force spanning key ministries, including energy, education, and health. This task force will align resources and efforts across sectors, addressing past fragmentation in the sector, and promoting a unified, resource-efficient strategy to achieve the Compact's targets.

DECLARATION OF COMMITMENT

1. Policy and Planning

- **Integrated Resource Plan** (IRP): The government will comply with the IRP and institutionalise regular updates to ensure integrated, least-cost planning aligned with national and regional priorities.

- **Regional Power Trade**: The government will prepare ESCOM for SAPP membership, establish a trading department, and align the current market framework to allow power exports.

- **Competitive Renewable Energy Procurement**: The government will update the 2017 IPP framework, prioritize impactful projects, and launch competitive tenders for solar and wind energy.

- **Tax and Duty Exemptions**: The government will Incentivise the private sector to scale up the adoption of renewable energy technologies through operationalisation of the regulatory environment.

- **Private Investment in Transmission**: The government will review and amend where necessary the National Energy Policy and Electricity Act to allow private participation in transmission and distribution infrastructure.

2. Infrastructure Development

- **Electrification of Key Institutions**: The government will strengthen coordination for electrifying schools, health facilities, and key sectors, aligning with the Agriculture, Tourism and Mining plus Manufacturing(ATM+M) Strategy.

- **Clean Cooking Transformation**: The government will enhance oversight in the clean cooking sector, pool donor resources, and introduce carbon financing for sustainable solutions.

- **Private Sector in Distribution**: The government will explore alternative ownership models, such as cooperatives and concessions, for private sector involvement in distribution.

- **SHS Standards and E-Waste**: The government will adopt and enforce SHS standards and implement e-waste management guidelines aligned with national policy.

3. Financial Mechanisms

- **Ngwee Ngwee Ngwee Fund**: The government will expand and institutionalize the fund to support private investments in off-grid solar and clean cooking solutions.
- **Support Strategic Private Investments**: The government will prioritize fiscal support for high-impact projects and enable dollar-denominated contracts for sectors like mining.
- **Expand Revenue Streams**: The government will establish agreements with mining companies and explore opportunities in e-mobility and electric cooking to generate new revenue streams.
- **Innovative Financing Mechanisms:** The government will promote innovative financing like carbon finance-based models to support clean energy adoption and reduce reliance on traditional funding sources.
- **Leadership and Capacity Building**: The government will invest in leadership and management capacity-building programmes to strengthen governance and decision-making within key energy institutions, while increasing vocational training for youth.

5. Institutional Reforms

- **Functional Review of ESCOM**: The government will streamline ESCOM's operations, outsource non-core functions, and build capacity for new staff.
- **Utility Digital Strategy**: The government will launch a comprehensive digitalization strategy for ESCOM, including customer databases, GIS mapping, and a real-time monitoring system.
- **Utility Viability and Sustainability**: The government will implement measures such as tariff reforms, cost-reflective pricing, Advanced Metering Infrastructure (AMI), operational restructuring, and a Tariff Stabilization Fund aimed to improve the financial performance of utilities like ESCOM and EGENCO.
- **Audited Financial Statements**: The utilities will publish audited utility financial statements within six months of the fiscal year-end to enhance transparency.

CALL FOR PARTNERSHIP

Malawi's energy transformation requires bold collaboration and significant funding, with a total financing need of USD 5.5 billion to 2030. While USD 530.8 million has been secured, a substantial funding gap of USD 4.95 billion remains. This Compact calls on partners to join forces in bridging this gap by supporting key strategies. Partnering with Malawi in this endeavour is vital to unlocking sustainable, equitable energy access and fostering long-term resilience in the energy sector.

Contents

1. COUNTRY AND SECTOR OVERVIEW 1

1.1 Country Context 2

1.2 Sectoral and Institutional Context 2

2. COMPACT TARGETS AND ACTION PLAN 4

2.1 High-Level Targets 5

2.2 Actions Needed by Pillar 8

3. CURRENT STATUS, CHALLENGES AND APPROACH TO ACHIEVING UNIVERSAL ENERGY ACCESS 12

3.1 Expand Generation and Invest into Infrastructure at Competitive Costs 13

3.2 Leverage Benefits of Increased Regional Integration 14

3.3 Embrace Grid, DRE and Clean Cooking Solutions for Affordable Last Mile Access 15

3.4 Incentivize Private Sector Participation to Unlock Additional Resources 19

3.5 Pillar V: Work Towards Financially Viable Utilities that Provide Reliable Service 21

4. ONGOING ACTIVITIES AND SUPPORT FROM DEVELOPMENT PARTNERS 25

4.1 A Geospatial Map of Malawi Identifying the Least Cost Technology Options for Electrification 26

5. SUMMARY OF TOTAL FUNDING REQUIREMENT, FINANCING COMMITTED AND THE GAP REMAINING 27

ANNEX I **EGENCO PROJECTS AND IRP LEAST COST GENERATION** **29**

ANNEX II **TRANSMISSION AND DISTRIBUTION PROJECTS** **30**

6.1 Power Transmission and Distribution Projects by ESCOM 30

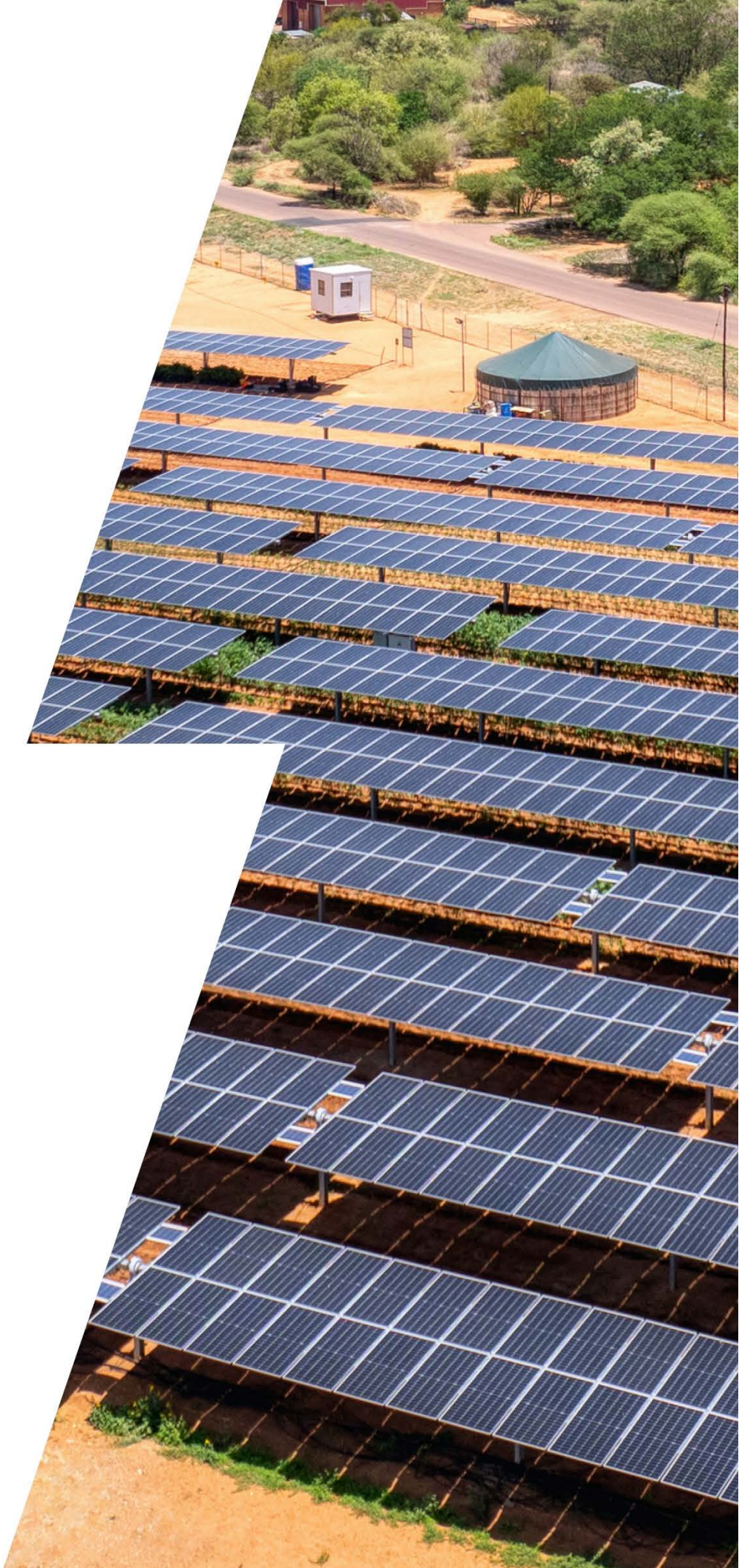
6.2 Regional Interconnection Projects 31

ANNEX III **ENERGY COMPACT PILLARS – METRICS / INDICATORS** **32**

ANNEX IV **ONGOING ACTIVITIES AND SUPPORT FROM DEVELOPMENT PARTNERS** **35**

1

Country and Sector Overview



1.1.
Country Context

Malawi's population is at approximately 20.1 million and is expected to reach 23.1 million by 2030[1]. Malawi is a fast-urbanising country with an annual urban growth rate higher than 5%[2] and an urban population of 16%[3]. The country's Gross Domestic Product (GDP) per capita stands at $642. Malawi's development perspective as expressed in the Malawi 2063[4] envisions a wealthy, self-reliant, industrialised upper-middle-income country through agriculture commercialisation, industrialisation, and urbanisation. Economic patterns show signs of positive structural change, with a renewed focus on agriculture, tourism and mining sectors and the establishment of special economic zones.

1.2.
Sectoral and Institutional Context

The energy sector is governed by the Energy Regulation Act (2004); the Electricity Act (2004) as amended in 2016 and 2024; the Rural Electrification Act (2004); the Liquid Fuels and Gas (Production and Supply) Act (2004); and the Petroleum (Exploration and Production) Act (1983).

The Electricity (Amendment) Act of 2016 allowed private sector participation in electricity generation and unbundled the Electricity Supply Corporation of Malawi (ESCOM) Limited into two entities: ESCOM which is responsible for power distribution and transmission, and the Electricity Generation Company (Malawi) Limited (EGENCO) which is responsible for power generation. *Figure 1* below provides a summary of the Malawi Power Structure

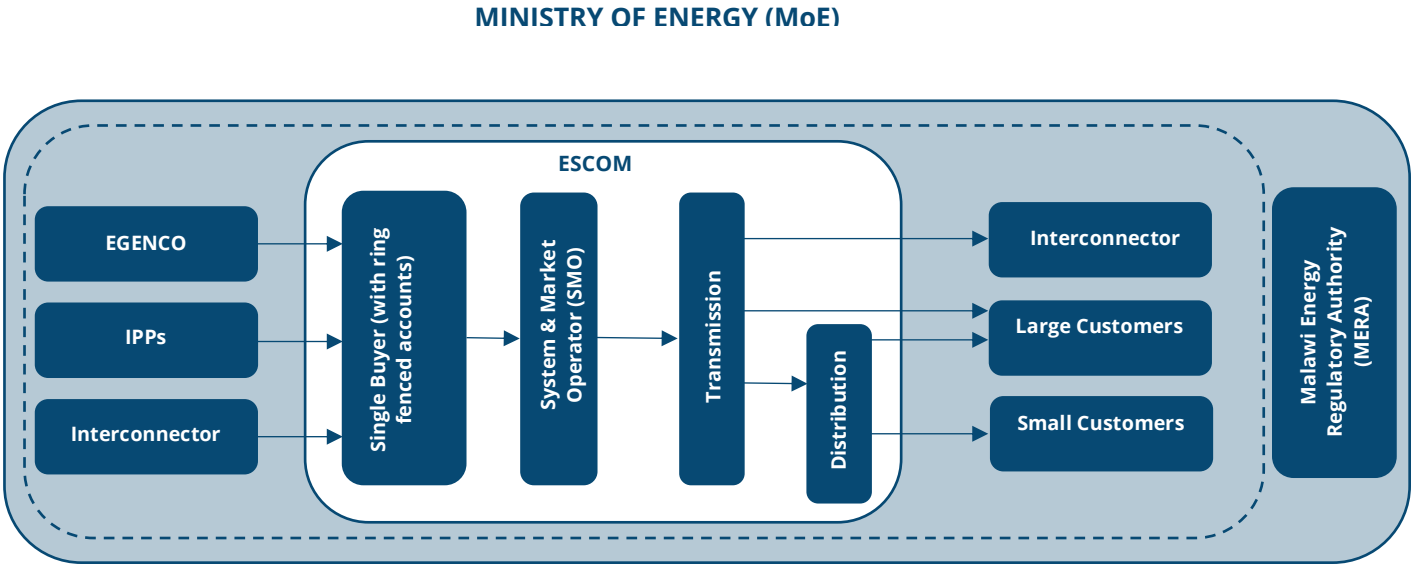


Figure 1: Structure of the Malawi Power Sector

[1] Malawi Population and Housing Census 2018: Population Projections 2018 – 2050 report
[2] https://unhabitat.org/malawi
[3] Malawi Population and Housing Census 2018
[4] https://npc.mw/wp-content/uploads/2021/02/MW2063-VISION-FINAL.pdf

Only 25.9%[5] of the Malawi population have access to electricity with 11.3% connected through the national grid and 14.6% through off-grid solutions (solar lighting systems (7%), solar lanterns (3.7%) and solar home systems (1.5%), rechargeable batteries (2.1%) and generator set (0.02%)). Around 56.5% of urban households have electricity through the national grid, compared to 3.8% of rural households. In contrast, 15.9% of the rural households rely on off-grid solutions compared to 6.5% of the urban households. Gender gaps exist in access to electricity and modern energy cooking solutions. Based on the MTF survey in 2023, 31.2% of households in Malawi were female-headed with only 18% of these households having access to electricity. On the other hand, 68.8% are male-headed with 29.4% of them having access to electricity[6].

There is an increase in the use of SHS, Pico Solar Products (PSPs) and mini-grid systems. The Energy Policy 2018 adopted the Global Tracking Framework as a method for measuring electricity access which accounted for electricity provided by SHS, mini- and micro grid as energy access.

In Malawi, clean cooking encompasses the use of improved cookstoves, electric cooking (e-cooking), biogas, Liquefied Petroleum Gas (LPG), bioethanol, and briquettes or pellets. Currently, only 2% of households utilise clean fuels for cooking. Female-headed households tend to use three-stone and traditional biomass stoves more frequently than male-headed households, which primarily rely on charcoal and cleaner stoves.

Malawi is strategically positioned as a key player in regional energy interconnection efforts. Its location makes it a potential hub for cross-border electricity trade connecting Zambia, Mozambique and possibly Tanzania. The Mozambique-Malawi Interconnector, currently under construction, is a significant step toward realising this potential and boosting regional collaboration.

Malawi has taken a pioneering role in advancing Independent Power Producers (IPPs) within the Southern African Power Pool (SAPP), successfully mobilising private capital for both power generation and off-grid access. To date, over USD 140 million has been invested in power generation alone, showcasing Malawi's track record in attracting private investment for clean energy.

[5] 2023 MTF Survey Report

[6] 2023 MTF Survey Report

2

Compact Targets and Action Plan



2.1.
High-Level Targets

Table 1: Electricity Access Targets

Indicator	Unit	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Percentage of households with access to electricity	**%**	**Data validation on going**						**25.9**	**32.2**	**38.5**	**44.8**	**51.1**	**57.4**	**63.7**	**70.0**
Grid Electrification Access	**%**							**11.3**	**14.0**	**16.7**	**19.3**	**22.0**	**24.7**	**27.4**	**30.1**
Electrification rate - Urban	**%**							**48.2**	**52.7**	**54.7**	**56.1**	**57.3**	**58.4**	**59.5**	**59.5**
Male headed households	**%**							33.2	36.3	37.6	38.6	39.4	40.2	40.9	40.9
Female headed households	**%**							15.0	16.4	17.1	17.5	17.9	18.2	18.6	18.6
Electrification rate - Rural	**%**							**8.7**	**14.2**	**16.7**	**18.7**	**20.6**	**22.4**	**24.1**	**24.1**
Male headed households	**%**							6.0	9.8	11.5	12.9	14.2	15.4	16.6	16.6
Female headed households	**%**							2.7	4.4	5.2	5.8	6.4	7.0	7.5	7.5
Off Grid Access								**14.6**	**18.2**	**21.8**	**25.5**	**29.1**	**32.7**	**36.3**	**40.0**
Mini Grid	**%**							**0.2**	**0.5**	**0.9**	**1.2**	**1.5**	**1.9**	**2.2**	**2.6**
Mini Grid - Urban	**%**							-	-	-	-	-	-	-	-
Male headed households	**%**							-	-	-	-	-	-	-	-
Female headed households	**%**							-	-	-	-	-	-	-	-
Mini Grid - Rural	**%**							**0.2**	**0.5**	**0.9**	**1.2**	**1.5**	**1.9**	**2.2**	**2.6**
Male headed households	**%**							0.1	0.4	0.6	0.8	1.1	1.3	1.5	1.8
Female headed households	**%**							0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8
Solar Systems & Others [7]	**%**							**14.4**	**17.7**	**21.0**	**24.3**	**27.5**	**30.8**	**34.1**	**37.4**
Solar Systems & Others - Urban	**%**							**2.4**	**2.9**	**3.5**	**4.0**	**4.6**	**5.2**	**5.8**	**6.3**
Male headed households	**%**							1.6	2.0	2.4	2.8	3.2	3.6	4.0	4.3
Female headed households	**%**							0.7	0.9	1.1	1.3	1.4	1.6	1.8	2.0
Solar Systems & Others - Rural	**%**							**12.0**	**14.8**	**17.5**	**20.2**	**22.9**	**25.6**	**28.4**	**31.1**
Male headed households	**%**							8.3	10.2	12.0	13.9	15.8	17.6	19.5	21.4
Female headed households	**%**							3.8	4.6	5.5	6.3	7.2	8.0	8.8	9.7

[7] Solar Systems include solar lighting systems, solar lanterns and solar home systems which are spread into 7%, 3.7% and 1.5% respectively in 2024 while Others include 2.1% rechargeable batteries and 0.02% generator set in 2024

Table 2: Clean Cooking Targets

Indicator	Unit	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Percentage of households with access to clean cooking[8]	**%**	**24.50**	**26.00**	**25.79**	**25.57**	**25.36**	**24.50**	**31.71**	**38.93**	**46.14**	**53.36**	**60.57**	**67.79**	**75.00**
LPG	**%**	**0.19**	**0.20**	**0.21**	**0.23**	**0.24**	**0.30**	**2.40**	**4.50**	**6.60**	**8.70**	**10.80**	**12.90**	**15.00**
Urban	%	0.19	0.20	0.21	0.23	0.24	0.30	2.40	4.50	6.60	8.70	10.80	12.90	15.00
Rural	%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Electric	**%**	**1.88**	**2.00**	**1.96**	**1.91**	**1.87**	**1.70**	**2.60**	**3.50**	**4.40**	**5.30**	**6.20**	**7.10**	**8.00**
Urban	%	0.03	0.04	0.03	0.03	0.03	0.03	0.05	0.06	0.08	0.10	0.12	0.13	0.15
Rural	%	1.85	1.96	1.92	1.88	1.84	1.67	2.55	3.44	4.32	5.20	6.08	6.97	7.85
Advanced Woodstoves	**%**	**22.43**	**23.80**	**23.61**	**23.43**	**23.24**	**22.50**	**24.57**	**26.64**	**28.71**	**30.79**	**32.86**	**34.93**	**37.00**
Urban	%	2.60	2.77	2.75	2.74	2.72	2.67	2.93	3.20	3.46	3.73	3.99	4.26	4.52
Rural	%	19.83	21.03	20.86	20.69	20.52	19.83	21.64	23.45	25.25	27.06	28.87	30.67	32.48
Biogas	**%**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**1.43**	**2.86**	**4.29**	**5.71**	**7.14**	**8.57**	**10.00**
Urban	%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rural	%	0.00	0.00	0.00	0.00	0.00	0.00	1.43	2.86	4.29	5.71	7.14	8.57	10.00
Ethanol/ Paraffin	**%**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.71**	**1.43**	**2.14**	**2.86**	**3.57**	**4.29**	**5.00**
Urban	%	0.00	0.00	0.00	0.00	0.00	0.00	0.71	1.43	2.14	2.86	3.57	4.29	5.00
Rural	%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Charcoal	**%**	**16.00**	**16.00**	**14.64**	**13.29**	**11.93**	**6.50**	**6.29**	**6.07**	**5.86**	**5.64**	**5.43**	**5.21**	**5.00**
Urban	%	1.74	1.75	1.60	1.45	1.31	0.72	0.70	0.68	0.66	0.64	0.62	0.59	0.57
Rural	%	14.26	14.25	13.04	11.83	10.62	5.78	5.58	5.39	5.20	5.01	4.81	4.62	4.43
Firewood	**%**	**59.50**	**58.00**	**59.57**	**61.14**	**62.71**	**69.00**	**62.00**	**55.00**	**48.00**	**41.00**	**34.00**	**27.00**	**20.00**
Urban	%	20.47	19.98	20.54	21.11	21.67	23.93	21.51	19.10	16.68	14.26	11.85	9.43	7.02
Rural	%	39.03	38.02	39.03	40.03	41.04	45.07	40.49	35.90	31.32	26.74	22.15	17.57	12.98

[8] Clean cooking includes LPG, Electric, Advanced cookstoves, biomass and ethanol or paraffin based stoves

Table 3: Renewable Energy Mix Targets

Indicator	Unit	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Share of renewable energy in the fuel mix	%	73.91	71.84	71.19	74.90	85.76	90.06	90.22	90.6	90.9	91.9	93.0	93.9	96.1

Table 4: Private Capital Targets

Indicator	Unit	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Amount of Private Capital	**USD 'million**	**-**	**-**	**62.85**	**46.00**	**-**	**31.30**	**-**	**14.7**	**42.3**	**358.4**	**209.2**	**222.6**	**1,622.8**
Grid	USD 'million			62.9	46.0		31.3		-	27.6	336.3	187.1	193.1	1,593.4
Off-grid	USD 'million								14.7	14.7	22.1	22.1	29.4	29.4
Clean cooking	USD 'million								21.1	21.1	21.1	21.1	21.1	21.1

Table 5: Carbon Emission Baseline Target Reductions

Indicator	Unit	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Amount of Carbon emission Baseline reductions	ktCO2E	786.25	858.62	877.31	974.52	1,035.28	1,007.88	1,365.73	1,596.07	2,012.74	1,853.25	1,859.09	4,132.81	4,090.75

2.2.
Actions Needed by Pillar

Table 6: Malawi Compact Action Table

Pillar	Indicator	Baseline Data (2024)	Action(s) Needed to Achieve Goal	Target Year (Timeline)
I: GENERATION EXPANSION & COST REDUCTION	Integrated Least Cost Power System Planning adopted incorporating regional resources	Yes	The Integrated Resource Plan (IRP) was established in 2017, and updates were conducted between 2022 to 2024; • Review the status of the (IRP, 2017) implementation and draw lessons learnt; • Adopt the 2022 IRP, completed in 2024 and publish it on the government's website; and • Update the IRP including demand forecast every 2 years, with the first update due in 2026. • Leverage local resources and innovations by Malawians, including youth and women	2025 2025 Bi-annual ongoing
	Implementation of Demand Side Measures and Energy Efficiency	Yes	Energy Efficiency and Demand Side Measures are a key element in the least cost plan: • Focus on Quick Payback Measures such as prioritise replacing fluorescent bulbs with LEDs, upgrading commercial water heaters to solar, and installing high-efficiency AC units to achieve immediate energy savings and CO2 reductions; • Establish Minimum Energy Efficiency Standards to ensure energy-efficient appliances and systems across residential, commercial, and industrial sectors; and • Promoting High-Impact Energy Efficiency Programs such as solar water heaters and efficient lighting through incentives, targeting the largest energy-saving opportunities.	2025-2030
	Competitive procurement policy and framework in place for private sector investment in renewable energy	Yes	IPP Framework for Malawi was in place in 2017, however, the project pipeline was dominated by unsolicited proposals: • Develop project screening tools to ensure transparent and strategic project selection; • Conduct a structured review of the IPP pipeline, emphasising the assessment of unsolicited PPAs; • Prioritise the projects that will deliver the most impact; • Update the 2017 IPP Framework to streamline and standardise the approval process; • Commit to launching a competitive tender for renewable energy (solar and wind) using a best-practice procurement process and platform; and • Utilise development partners' initiatives such as the World Bank Group Scaling Wind and Solar to help develop generation plants	2025 2025 2026 2026 2027 2025
II: REGIONAL INTEGRATION	Adopt and enforce harmonised transmission pricing within their respective power pools to facilitate power trade across borders	No	Malawi will connect to the Southern African Power Pool (SAPP) with ESCOM becoming an operational member of SAPP after the MOMA completion in 2025: • Establish a dedicated trading department within ESCOM, staffed with certified power traders; • Strengthen the capacity of ESCOM, EGENCO, MERA, and IPPs through targeted training on SAPP market rules and technical regulations; and • Review and update the current power market framework to allow power exports by IPPs.	2025 2025 2026
III: LAST MILE ACCESS	A monitoring & evaluation program adopted to track the multi-tier framework for access to electricity and clean cooking	Yes	Malawi has completed the household energy survey – MTF: • Establish a tracking system for the implementation of MTF and update the data on a bi-annual basis; • Publish MTF results with open and free access for the public;	2025 2025 2025

		• Establish a national electrification monitoring platform to track the real-time progress of electricity access activities (grid connections, mini-grids and off-grid solar); and • Strengthen coordination between private sector and government in the implementation of clean cooking solutions. • Identify and support innovative youth-led energy initiatives in communities. • Establish energy innovation fund for youth to promote youth involvement in the energy sector and development of innovative energy initiatives.	2025 Ongoing Ongoing 2026
National Electrification Strategy adopted including an updated 5-year electrification plan with a clearly defined role for the private sector	Yes	Malawi's National Electrification Strategy (NES) adopted in 2018: • Update NES to reflect the increasing role of the private sector and the off-grid-driven electrification, leveraging the national electrification monitoring platform for planning purposes; • Complete the Integrated Energy Planning (IEP) tool update, providing free and open access for private-sector developers; and • Embrace innovative financing of last mile access including electric cooperatives, bond financing, CSR, Green climate financing and energy transition accelerator.	2025-2026 2024-2025 2025
National clean cooking strategy in place	Yes	Malawi signed an Energy Compact with the UN focusing on clean cooking in 2022: • Establish a task force comprising representatives from the Ministry of Natural Resources and Climate Change and the Ministry of Energy to enhance government oversight and coordination in the clean cooking sector; • Pool resources from multiple donors for capacity-building activities focusing on carbon financing origination, negotiation and monitoring; • Drive a sectoral transformation of the cooking sector to reduce biomass demand, increase health and provide sustainable cooking solutions; • Introduce innovative financing mechanisms such as carbon credits and loans to private companies similar to the Ngwee Ngwee Ngwee fund; and • Continue providing duty waivers on cleaner cooking technologies. • Promote youth involvement in the energy sector and development of innovative energy solutions. • Introduce/increase access to vocational trainings that teach skills in energy technologies, energy management, and sustainable practices.	2025-2026 2025-2030 2025 2025 2025-2030 Ongoing 2025
Setting quality standards for Solar-Home-System (SHS)	No	Lacking formal SHS quality standard: • Adopt, publish and enforce standards set by draft Framework for Enforcing Standards for Renewable Energy Technologies in Malawi, 2024; and • Derive detailed implementation guidelines for e-waste management of off-grid solar electrification and batteries from the National E-waste Management Policy of Malawi adopted in 2024.	2025 2025
Coordination platform for the electrification of key government institutions	No	Weak intra-ministerial coordination has hindered electricity connections for public institutions: • Coordinate the implementation of energy interventions towards the electrification of schools, health facilities mining sites, agricultural sites, tourism, industry, including investment planning, sustainability, and donor alignment; and • Align school electrification with the Ministry of Education's Building Education Foundations through Innovation and Technology (BEFIT) project to support digital skills development.	2025 2025

IV: PRIVATE SECTOR PARTICIPATION	Exemption of Value-Added Tax and Import Duty from Renewable Energy Technologies	Yes	SHS and batteries are exempt from import duties: • Review tax and duty exemptions on a bi-annual basis and maintain if necessary.	Bi-annual
	Facilitate private sector participation in the transmission sector	No	Private investment in the transmission sector is not feasible: • Review the National Energy Policy and amend the Electricity Act (amended in 2024) if required to allow for private sector participation in the transmission sector; and • Initiate feasibility studies for private participation in targeted transmission lines.	2025 2025
	Facilitate private sector participation in the distribution sector	No	Private sector ownership in the distribution sector is not feasible: • Review the National Energy Policy and amend the Electricity Act (amended in 2024) to add provisions for alternative operational and ownership models in the distribution sector (e.g. cooperative and private concession).	2026
	Financial support to private sector DRE and clean cooking operators ensures affordability and viability	Yes	Malawi has established and capitalised Ngwee Ngwee Ngwee Fund supporting private SHS companies since 2023: • Strengthen the Ngwee Ngwee Ngwee Fund of the Ministry of Energy and institutionalise it to become the National Energy-Sector Fund to support investments of the private sector in off-grid solar (grants, subsidies, credit line providing access to forex, etc.); • Expand the mandate of Ngwee Ngwee Ngwee to clean cooking sector; and • Develop suitable financial support mechanisms for private-sector mini-grids developed in compliance with the Regulatory Framework for Mini-grids.	2025 2025 2025
	Prioritise government support for strategic private investment considering the limited resources	No	Macro-fiscal constraints have restricted the government's ability to issue state guarantees: • Prioritise fiscal support for high-impact, strategic energy projects; • Allow the use of dollar-denominated contracts for domestic projects on a case-by-case basis, subject to thorough assessment and alignment with national economic priorities; • Ensure that ESCOM will be permitted to trade in Foreign Currency for specific customers (particularly Mining); • Ensure that ESCOM and the Mining Companies will be exempted from the Ministry of Finance Forex Surrender Policy; • Streamline arrangements for implementation of PPP projects; • Empower private sector to engage in local manufacturing of strategic equipment and technologies; • Institute a stable and predictable policy for private sector participation; and • Build capacity of artisans, linemen and technicians through TEVETA.	2025
V: FINANCIALLY VIABLE UTILITIES	Audited annual financial statements of utilities published	No	Publication of audited financial statements was delayed from 2020-2024: • ESCOM and EGENCO to publish audited financial statements within six months after the end of the fiscal year.	Annually
	Utilities achieving at least 100 percent operational cost recovery	No	The sector achieved cost recovery in 2022-2023 before the currency depreciation • Enforce implementation of tariff schedules approved by the regulator and automatic tariff adjustment mechanism (ATAF).	2025-2027

		• ESCOM to implement operational efficiency measures including Advanced Meter Infrastructure, Zoning initiatives. • ESCOM to move to proactive approach to customer connections, based off a system plan. • ESCOM to use framework contracts to accelerate the implementation.	
Deepening the utility digital strategy to protect revenue and reduce costs	No	ESCOM's internal information systems remain underutilised: • Create a Digital Strategy that can be applied across the institution, formalising the use of digital systems; • Fully digitalise the database of current and future customers to enhance service delivery; • Launch a change management program aimed at driving the adoption and effective use of digital systems; • Overhaul the monthly management dashboard to prioritise electrification progress and performance tracking; • Implement full digitalisation of the customer metering process to strengthen revenue protection, invoicing and operational efficiency; • Implement a drone system across all the districts to help with optimisation of their procurement, usage and training; and • Complete the GIS system mapping of network assets, particularly ensuring any new meters that are installed are mapped.	2026 2027 2026 2025 2026 2026 2026
Implementation of ESCOM functional review	No	ESCOM implement the outcomes of functional review, with completion of recruitment: • Streamline core functions and outsource the rest of the functions to qualified service providers; and • Capacity building of new ESCOM staff.	2025
• Expanding revenue sources	• No	ESCOM's industry customer base has stagnated, limiting growth opportunities. • Expand supply options to emerging sectors such as e-mobility and electric cooking to tap into new demand. • Establish supply agreements with the mining sector to secure high-volume, long-term customers. • Leverage intra-day trading to optimise the use of surplus energy and enhance revenue streams. • Create an autonomous Rural Electrification Authority (REA) to work with ESCOM towards increasing connections and revenue base	2026 2026 2025 2026

3

Current Status, Challenges and Approach to Achieving Universal Energy Access



3.1. Pillar I
Expand Generation and Invest into Infrastructure at Competitive Costs

3.1.1.
Overview of Generation Capacity

Malawi is endowed with various energy sources such as hydro, solar, wind, bio-energy and geothermal. The country's current installed generation capacity is 550MW[9] comprising 398MW from hydro (73%); 101MW from solar (18%); and 52MW thermal diesel (9%). Out of the 550MW, EGENCO generates 444MW, representing 81% of the market share while Independent Power Producers (IPPs) generate 112MW.

To achieve 30.1% grid access and uninterrupted supply to industrial and large customers by 2030, the country requires a firm capacity of 774MW[10] to meet peak demand and at least 5,166 GWh to meet the energy demand according to the Integrated Resource Plan. The 2022 IRP indicates that a total of 1.49GW of energy capacity should be installed, with the majority of new power from renewables and 170MW from interconnectors. This indicates that at least 320MW of firm capacity should be installed with the remaining capacity from solar and wind (353MW). Any excess capacity will be exported once Malawi is connected to the Southern Africa Power Pool (SAPP) in 2025. **Annex** shows a list of potential pipeline projects which the additional generation capacity is expected to come from.

3.1.2.
State of Transmission and Distribution Infrastructure

3.1.2.1.
Transmission Power Overhead Lines

The transmission network currently operates at a maximum voltage of 400 kilovolts (kV) with a total route length of 2,650 kilometres (km) and a total capacity of 1,828MVA as depicted in Table 7 below. Some of the transformers have outlived their useful life and require replacement to mitigate the risk of failure.

Table 7: Summary of Existing Transmission Power Lines

Voltage (kV)	Structure Type	Route Length (km)	Number of lines	Number of Sub Stations	Number of Transformers	Total Capacity (MVA)
400	Steel	173	1	2	2	400
132	Steel	944	24	14	25	683
	Wooden	461				
66	Steel	486	34	27	55	745
	Wooden	587				
Total		**2,650**	**59**	**43**	**82**	**1,828**

3.1.2.2.
State of Distribution Infrastructure

The distribution infrastructure operates at medium voltage (33kV and 11kV) and low voltage (400V – 3 phase and 230V – single phase). The medium voltage distribution network spans 17,139 km, with 22% (3,696 km) operating at 11kV and 78% (13,444 km) at 33kV.

3.1.2.3.
Proposed Interventions for Transmission and Distribution

The 132kV Eastern Backbone Overhead Line Project and 400kV Western Backbone Overhead Line Project have been isolated as flagship projects for power transmission. Similarly, the installation of Advanced Metering

[9] 2022 Integrated resource plan

[10] 2023 Base case scenario of the Demand Forecast

Infrastructure, Mechanization, Zoning and Network Rehabilitation are isolated as flagship projects for power distribution and last-mile access. **Annex** highlights key transmission and distribution projects.

3.1.2.4. Status of Least Cost Power System Planning

The country completed the update of its Integrated Resource Plan (IRP). The demand forecast and generation, distribution transmission master plan have been completed. The IRP will guide the least-cost power system planning across the entire supply chain. All plans as part of the IRP will be adopted and published by the Ministry of Energy by December 2024 leading to the release of the 2022 IRP.

3.1.3. Status of Procurement Policy for Renewable Energy

The procurement of Renewable Energy is guided by the National Energy Policy (NEP), IPP Framework, and the Mini-Grid Regulatory Framework. The NEP and IPP Framework are currently being updated to improve the permitting process, improve efficiency and accommodate emerging issues in procuring IPPs such as renewable energy auctions. The review of the IPP Framework will also address issues of conversion date for payment of the invoice to protect the IPP against devaluation and transparency in the procurement process by introducing e-procurement and encouraging competitive open tendering processes.

Section 20B (e), (f) and (g) of the Electricity (Amendment) Act of 2016 allows for the participation of IPPs while Section 19 (2) (i) of the same Act allows for the participation of the private sector in power transmission subject to the approval of the Minister responsible for energy upon recommendation from the Single Buyer[11].

3.1.4. Key Barriers to Generation, Transmission and Distribution Infrastructure Expansion

Barrier	Proposed Action(s)
Limited sources of financing due to forex convertibility challenges and the country's credit rating	Explore alternative financing options like: • Pursuing debt restructuring programs; • Attracting philanthropy funders; • Pursuing grants and concessional loans; • Developing the 400kV eastern and western backbone projects which would catalyse the export of power to eastern and southern African regions. This will help to mitigate currency convertibility risk; and • Putting structures that support local currency debt
Non-cost reflective tariff	• Implement regulatory reforms
Limited project preparation to the bankability stage	• Carry out feasibility studies • Build capacity

3.2. Pillar II
Leverage Benefits of Increased Regional Integration

Due to a lack of regional connectivity, Malawi currently lacks flexibility, reliability, resilience and operational optimisation in the utilisation of energy resources and management of the power system. Therefore, Malawi aims to interconnect its power system with the Southern African Power Pool (SAPP) through Mozambique and Zambia; and the East African Power Pool (EAPP) through Tanzania. This will allow the country to

11 https://mera.mw/download/electricity-amendment-act-2016/?wpdmdl=1014&refresh=6711615fdd2411729192287

maximise the utilisation of the country's energy resources; share the operating reserves; adequately manage emergencies; and enhance regional integration as per the aspirations of the SADC Protocol on energy. This interconnection will also provide the much-needed system redundancy. Domestically, the 132kV Eastern and 400kV Western Backbone Overhead Line Projects will assist in bridging the interconnection of the SAPP to the EAPP. These lines will catalyse the establishment of investments in mining, manufacturing and agricultural mechanisation

3.2.1. Status of Regional Integration, Including Participation in Power Pool or Cross Border Power Trade

Construction of the 400kV Mozambique-Malawi Interconnector is underway and is expected to be completed by Q2 2025. Malawi has a bi-lateral agreement with Mozambique's national utility to import 50MW of firm power and will have the ability to export any excess power. At the distribution level, Malawi trades power with Electricidade de Moçambique (EDM) in Mozambique and Zambia Electricity Supply Corporation (ZESCO) in Zambia. However, considering the current electricity crisis in Zambia and the excess off-peak capacity in Malawi, there is an opportunity for Malawi to ramp up its energy exports to Zambia on the distribution network.

3.2.2. Proposed Interventions for Regional Integration

Apart from the 400kV Mozambique – Malawi Interconnector, the 400kV Zambia-Malawi Interconnection and 400kV Tanzania – Malawi Interconnector (including the Western backbone) are earmarked for enhancing regional interconnection. The implementation of the 400kV Tanzania – Malawi Interconnector will follow a phased approach.

Transmission and Distribution Projects provides details of the two interconnector projects.

3.2.3. Status of any Adopted and Enforced Harmonised Transmission Pricing Within SAPP to Facilitate Power Trade Across Borders

There is an older pricing methodology used within SAPP. However, a new pricing methodology has recently been developed and is awaiting approval.

3.2.4. Key Barriers and Proposed Actions

Barrier	Proposed Action(s)
Limited sources of financing	• Explore alternative financing options • Mozambique – Malawi (MOMA) Interconnector is already being financed through a concessional loan and counterpart funding (the Mozambique side has grant funding). • Zambia – Malawi (ZAMA) Interconnector has potential funding from development partners on a grant or concessional basis (EIB + EU, AfDB, World Bank)
Geopolitics	• Improve international relations

3.3. Pillar III
Embrace Grid, DRE and Clean Cooking Solutions for Affordable Last Mile Access

3.3.1.
Grid Access

Nationwide, 48.3% of households are not connected to the grid due to high connection fees. Additionally, 40.2% of households are outside the grid connection range. Some households cannot afford internal wiring costs. Out of the connected households, 45.3% cannot afford regular payment for basic electricity services, corresponding to 365 kWh per household per year.

The base case peak demand is projected at 774MW[12] by 2030 which, besides achieving 30.1% domestic supply shall also service commercial and industrial customers. In order to meet this demand, there is a need to invest in generation, transmission and distribution. To achieve 30.1% grid access[13] by 2030, the country aspires to connect an average of 230,000 households per annum.

3.3.2.
Distributed Renewable Energy (DRE) Access

In Malawi, off-grid access stands at 14.6%, half of which use Solar Lighting System (SLS). The other half is accounted for by Solar lanterns, Solar Home Systems, rechargeable batteries, Mini Grids and Generator sets. To achieve 40% off-grid access by 2030, the country aspires to connect 244,000 households per annum with SHS and 13,600 households per annum through mini-grids.

3.3.3.
Electrification of key sectors

Achieving the objectives of Malawi's Energy Compact requires seamless alignment across government sectors to ensure that energy acts as a catalyst for national development. Energy is not only a standalone priority but an enabler for transformative progress in key areas such as education, healthcare, agriculture, manufacturing, mining, and tourism. Coordinated efforts among ministries, such as energy, finance, education, health, and trade, are essential to design and implement projects that leverage energy access for economic diversification, industrialisation, and improved livelihoods.

Implementation of the Government's strategic development agenda as encapsulated in Vision 2063 is anchored by the Agriculture, Tourism and Mining Plus Manufacturing (ATM + M) Strategy. The purpose of the ATM+M Strategy is to prioritise these four high-potential sectors to bring the Government back on track to fulfilling the first implementation plan of the Malawi 2063. The energy sector will play a critical role in powering agricultural mechanisation and commercialisation; tourism; and operationalisation of large-scale mining. The government has packaged some project proposals to develop transmission infrastructure such as the 132kV Eastern and the 400kV Western Backbone Overhead Line Projects.

Malawi's mining sector is expected to experience a significant increase in energy demand to approximately 140MW over the next five years, driven by the development of major projects such as Kasiya, Malingunde, Songwe Hill, and Kayelekera. These projects, which focus on high-value commodities like graphite, rare earth elements, and uranium, have projected energy needs ranging from 10 MW for smaller-scale operations to over 60 MW for larger, multi-phase developments.

There are 1,050 health facilities in Malawi with fixed infrastructure and permanent staff. 83% of these facilities are connected to the national grid but experience power interruptions due to load shedding and inability to pay. Furthermore, 50% of the facilities have either standalone solar PV or a hybrid system with the grid. Most solar PV systems only provide electricity to a limited number of appliances and are also associated with concerns over their long-term maintenance. Over 900 rural health posts are expected to be constructed by 2030[14]. This highlights the Government's commitment to ensuring equitable access to electricity among both urban and rural populations. About 177 health facilities will be electrified through stand-alone Solar PV as in Table 8 below.

Similarly, there are 8,728 schools in Malawi with only 33% connected to the national grid. There is precedent for solar PV electrification in schools with mixed results. A significant number of new schools are planned for construction without concrete plans for energy supply. According to the Integrated Energy Plan (2022), standalone solar PV could be the primary source of power for approximately 3,300 schools in Table 8 below.

Table 8: Least Cost Options for Universal Electrification of Public Institutions by 2030

Public Institution	Already connected to the grid	Grid extension	Stand-alone Solar PV	Total

[12] Demand Forecast Model, 2023
[13] For access to electricity, only direct connections, and not inferred or indirect connections, are to be considered.
[14] Health Sector Strategic Plan III

Hospital	109	0	0	109
Health Centre	692	32	62	786
Health Post	65	71	115	251
Subtotal	**866**	**103**	**177**	**1,146**
Primary School	1,669	2,175	3,110	6,954
Secondary School	1,189	782	203	2,174
Subtotal	**2,858**	**2,957**	**3,313**	**9,128**
Grand Total	**3,724**	**3,060**	**3,490**	**10,274**

Approximately USD 72 million will be required to meet the capital costs of electrifying 3,500 public facilities including health facilities and schools through standalone Solar PV. On the other hand, USD 2.9 million last mile connection costs and additional grid extension will be required to connect about 3,060 Public facilities through the grid.

3.3.4.
Status of Cleaner Cooking Sector

Over 98% of all domestic energy comes from biomass and supports cooking needs. Much of this biomass is unsustainably sourced. By 2021, forest cover had decreased by 37% relative to its level in 1990. If this trend continues, Malawi could lose its entire forest cover within the next 50 years.

This reliance on unsustainable biomass contributes to the negative global impacts of climate change, which are increasing the severity and frequency of extreme weather events, as well as negative local impacts of such weather (particularly droughts, flooding and landslides), causing humanitarian crises in the country yearly and disrupting the national grid's large share of hydroelectric generation. A transition to cleaner cooking solutions is vital to the environmental, economic and social stability of the country.

The vast majority of the nation's households fit into two broad categories: those who gather biomass (mainly firewood) for free from their local environment - 66.9% of all households are largely located in rural areas; and those who purchase unsustainably harvested biomass (mainly charcoal) - 26.5% of all households which are largely concentrated in urban areas. These two segments of the population require different strategies to realise a transition to cleaner cooking solutions.

In rural Malawi, 99% of the households use biomass for cooking and 80% gather their biomass for free (72.8% firewood and 6.8% crop residue) meaning that willingness to pay for cleaner cooking solutions is low and demonstrated by the adoption of improved or clean stoves being just 24.5%; many of which are likely to have been distributed for free or at heavily discounted prices by development projects. The majority of the rural population, which relies almost entirely on subsistence farming for income, has an exceptionally low ability and willingness to pay for cooking energy, and will therefore rely on freely collected biomass as its primary cooking fuel for at least the next 10-20 years.

Urban households rely heavily on illegal, unsustainably sourced charcoal (58% - 82%) – a trend which has been increasing over the last 10 years. The census data from 2010 – 2019 shows that the share of urban households primarily using charcoal for cooking increased from 46% to 78%, with detrimental effects on forest degradation. However, more recent urban studies have shown that between 2020 and 2022 the percentage of urban households using charcoal as their primary source of cooking energy reduced from 86% to 82% thanks to targeted efforts.

The increase in charcoal consumption has largely been driven by urban households, who previously primarily used purchased firewood or electricity for cooking switching to charcoal. This is despite increases in the cost of charcoal which is accelerating - more than doubling between 2020 and 2022 and showing no signs of slowing. In fact, today cooking with clean solutions may cost as little as a quarter of cooking with charcoal. Reasons for not switching to more sustainable alternatives include their perceived higher cost both upfront (to purchase the cooking device) and in the long term (the ongoing cost of the energy source), a lack of awareness and availability of alternatives and cultural barriers to behaviour change. Reduced (even if still harmful) exposure to air pollution from charcoal compared to wood (and reduced health impacts) could also be a factor in the growth of charcoal demand relative to wood.

To achieve 75% access to clean cooking by 2030, the country aspires to provide cleaner cooking solutions to 100,000 households in urban areas and 490,000 households in rural areas annually. This will move 38% of the households from Tier 0 of the MTF from the current 10%. The Compact proposes innovative

solutions to achieve this clean cooking aspiration, including:

- The establishment of a dedicated clean cooking loan window under the Ngwee Ngwee Ngwee Fund to support small and medium-sized enterprises (SMEs) offering higher-tier modern energy cooking solutions; and

- Technical assistance to create an enabling environment for modern cooking solutions.

3.3.5. Status of Policy and Regulatory Frameworks

Malawi adopted the MTF[15] for measuring energy access for both electricity and modern cooking energy in the 2018 National Energy Policy. In order to accelerate electrification and transition to clean cooking, the country developed the following instruments: National Electrification Strategy (NES); Malawi Renewable Energy Strategy; Malawi Rural Electrification Masterplan; Mini-Grid Regulatory Framework; Integrated Resource Plan; E-cooking Roadmap; Malawi Clean Cooking Compact-UN of 2021; and IPP Framework.

The country is also subscribed to the Sustainable Energy for All (SEforAll) Initiative whose overall goal is to achieve universal access to affordable, reliable, sustainable, efficient, and modern energy services.

3.3.6. Affordability Levels and Steps Taken to Increase Affordability

Affordability to electrification remains a critical barrier, especially for low-income households. To address these affordability issues, the Malawi Government is implementing various strategies which include free and subsidised connections; grid densification through the *Ndawala* Initiative, provision of ready boards, and on-bill financing initiatives; improving the efficiency of ESCOM and service delivery, through implementation of advanced metering technologies; rural electrification efforts to both households and public institutions; tariff reforms; and public-private partnerships. It has been estimated that 2,100 sites will be electrified under MAREP by 2030. This will cost about USD 126 million. Similarly, 3 Mini-grids will be developed by 2030 costing about USD 3 million and 57,000 will be supported with house wiring under Ndawala at a cost of USD 13.6 million. Therefore, a total of USD 142.3 million is expected to be contributed by Government mainly through the Rural Electrification Levy.

Several development agencies have initiatives relating to the electrification of health facilities while being active in the construction of schools but not in their energy supply. The private sector has also been typically involved in Engineering, Procurement and Construction (EPC) and operation and maintenance (O&M) contracts. Others are also proactively developing business models for Energy-as-a-Service (EaaS) for public facilities, communities and businesses. Furthermore, the Government has developed a least-cost masterplan to ensure increased affordability for grid connections. Under this compact, the design of the MV and LV networks is also grounded in IEP Geospatial planning, which promotes cost-effective solutions, particularly in rural areas. For instance, the use of smaller conductor sizes. On the other hand, the Government plans to increase the affordability of off-grid access through the implementation of Solar Home Systems. The government is expected to contribute about USD 1.5 million towards the provision of SHS to 10,000 less privileged households.

The following are additional strategies aimed at increasing service reliability for on-grid access by ESCOM Limited: implementation of Advanced Metering Infrastructure (AMI), mechanization, and zoning; implementation of reforms on financial and risk management; implementation of resilience framework; and rehabilitation and modernisation of aged infrastructure. To increase reliability for off-grid access, the Government will scale up capacity-building initiatives through TEVET artisan programs such as installations, wiring and maintenance of off-grid systems.

Similarly, the affordability of clean cooking technologies in Malawi remains a significant challenge due to the high upfront costs of clean cookstoves and sustainable fuels, and limited access to financing. To address these issues, the Government intends to establish a Malawi Clean Cooking Fund and provide alternative financing options for clean cooking. The Clean Cooking Fund will be established and capitalised in collaboration with a variety of development partners. The Government of Malawi (GOM) will establish a task force with representatives from the Ministries of Natural Resources, Climate Change, and Energy to enhance oversight and coordination in the

sector. The Government will pool resources from multiple donors for capacity-building in carbon financing and to introduce innovative financing mechanisms, such as

[15] https://impact-r.org/reports/apide/html/electricity/mtf.html

carbon credits and private sector loans, inspired by the Ngwee Ngwee Ngwee fund, to drive a transformative impact on the cooking sector.

Additionally, leveraging existing logistics, distribution, and marketing structures is essential for expanding clean cooking initiatives and creating livelihoods[16] [17].

3.3.7. Key Barriers and Proposed Actions

Barrier	Proposed Action(s)
Reluctance to adopt DRE and clean cooking solutions	• Conduct regular awareness campaigns • Regularly update information dissemination platforms • Strengthen incentives for private-led, solar-powered mini-grids
Low household income levels	• Introduce innovative financing models and incentives
Overreliance on imported goods	• Incentivise local manufacturing • Build capacity of local manufacturers
Inadequate implemexntation capacity	• Introduce procurement reforms such as outsourcing • Use a hybrid implementation approach (EPC mixed with the current pool of existing experts).
Sparsely populated and low-density areas	• Provide incentives for private sector participation • Provide SHS in low-density rural areas and Mini-grids in high-density rural areas
Limited market access to clean cooking and DRE technologies	• Promote market penetration and retention strategies
Limited district-level energy planning	• Devolve some energy sector management functions to the district-level

3.4. Pillar IV
Incentivize Private Sector Participation to Unlock Additional Resources

The Government has been working to create a conducive environment for private sector participation in the energy sector to increase electricity generation and access across the country through promotion of PPPs and IPPs; and improvement of the regulatory environment.

3.4.1. Macroeconomic conditions within Malawi

It is important to acknowledge that the country has been experiencing macroeconomic shocks and challenges that have hindered growth and development, the currency crisis, foreign exchange shortages, unsustainable sovereign debt, and rising inflation.

Malawi has taken significant steps to address these challenges through fiscal consolidation, contractionary monetary policy, external debt restructuring and public financial management reform. This has been under the supervision of the International Monetary Fund (IMF). Such

16 https://africa.iclei.org/elementor-47709/

17 https://conrema.org/2020/11/20/malawi-clean-cooking-fund-financing-a-sustainable-cleaner-cooking-future/

reforms were a prerequisite for the extended credit facility (approved on November 15, 2023) and the staff monitoring programme[18]. This structural reform will lead to the macroeconomic stability necessary for private sector development and will create more fiscal space for national investment.

However, it has hampered GOM in offering certain mechanisms that support IPP project bankability, such as Sovereign Guarantees (SG), and foreign exchange convertibility guarantees. The government has been working closely with the Private Sector, clearly stating the current constraints. A number of IPPs have indicated that they can work within the current environment and the government is supporting them as they develop their projects.

The GOM is working on certain initiatives to help offset these risks such as a renewed focus on Forex generating sectors such as agriculture, tourism, and mining. Additionally, due to the contingent liability of SG, the GOM has to prioritise projects that are high impact to ensure it is in compliance with the IMF program. The government will partner with development partners on initiatives such as Scaling Solar and Wind to help offset the private sector risks. Additionally, the Government will ensure that ESCOM will be permitted to trade in Foreign Currency for specific customers (particularly Mining); and that ESCOM and the Mining Companies will be exempted from the Ministry of Finance Forex Surrender Policy.

3.4.2.
State of Private Sector Participation for On-Grid and Off-Grid Access

The existing policy and regulatory frameworks provide for private sector participation in on-grid power generation and transmission except for distribution and access. Currently, the private sector is only participating in power generation and off-grid electrification. Out of the total installed generation capacity of 550MW, the private sector contributes 112MW comprising 101MW from solar and 11MW from hydro. The policy and regulatory frameworks intend to further facilitate the private sector participation in DRE, especially by providing off-grid solutions through SHS.

3.4.3.
Status of Mobilizing Private Capital (Disaggregated by Generation, Transmission, Distribution and Access)

The Government has successfully attracted private capital through open tendering for energy projects in the generation sector, resulting in the commissioning of five power plants generating a total of 112MW with an investment of USD 140 million. The government is also partnering with the private sector to develop the 358.5 MW Mpatamanga Hydropower peaking plant valued at USD 1.47 billion. The GOM is supporting the development of the private sector.

Private capital in the off-grid space is mostly dominated by SHS providers in both rural and urban areas. The Mini-grid sector currently does not have as much private capital investment as most mini-grids are either donor-funded or government-supported. The feasibility studies so far have shown that the development of the mini-grids are less attractive for the private sector in terms of economic and financial returns. Recognising the private sector's crucial role in mobilising the needed resources to incentivise its participation in the energy sector (both on-grid and off-grid), and unlock additional resources, the government is committed to developing a streamlined review and approval process for developer-led mini-grids and sites selected by mini-grid developers. The government will also fully operationalise the Rural Electrification Act to enter into concessional agreements with mini-grid developers to cushion against losses.

3.4.4.
Greenhouse Gas Emissions and Carbon Financing

The latest national inventory data estimate total greenhouse gas (GHG) emissions from the energy sector contributed to 2.34 million tonnes of carbon dioxide equivalent (tCO2e) representing 25% of total emissions. Out of this, fossil fuel use in the transport sector contributed about 1.03 million tCO2e[19]. in the business-as-usual scenario, Malawi's GHG emissions are projected to reach 8.18 million tCO2e by 2030. Implementation of various interventions to move towards universal energy access as proposed in this Compact is expected to reduce carbon emissions by 4.09 million tCO2e.

In order to reduce carbon emissions from the use of fossil fuels in the transport sector, which is currently contributing

[18] IMF article 4 and associated documents

19 https://unfccc.int/sites/default/files/NDC/2022-06/Malawi%20Updated%20NDC%20July%202021%20submitted.pdf

50% of total emissions in the energy sector, the Government would like to scale up the adoption of electric vehicles (EVs). Currently, import duties on EVs were waived in the 2024/25 financial year.

3.4.5.
Key Barriers and Proposed Actions

Barrier	Proposed Action(s)
Regulatory and policy barriers	• Carry out policy and regulatory reforms • Develop and implement legal instruments for the use of EVs • Develop and implement net metering guidelines
Economic dispatch risk	• Carry out market reforms
High-cost of capital	• Engage developers to finance the construction of transmission lines to their project sites • Carry out market reforms • Enhance private sector capacity for manufacturing electricity equipment and materials
Foreign currency shortage and exchange fluctuations	• Prioritise provision of forex to IPPs
Inadequate private sector participation in rural electrification	• Establish a Rural Electrification Agency • Strengthen incentives for private-led, solar-powered mini-grids • Fully operationalise the Rural Electrification Act to enter into concessional agreements with mini-grid developers to cushion against losses • Encourage productive use of energy to enhance the economic viability of off-grid solutions and ensure that energy access fosters local economic development.

3.5.
Pillar V: Work Towards Financially Viable Utilities that Provide Reliable Service

3.5.1.
State of Recent Improvements to Operational Performance

ESCOM acquired and implemented the Management Information System (MIS) to improve the efficiency and effectiveness of ESCOM business processes, the management of information, and customer service. The platform has integrated most of the business processes procurement commitments and contracts, resulting from inadequate internal coordination over procurements.

into a single point of reference and management. It has enabled ESCOM to align its business processes and information systems to industry best practices.

ESCOM has also significantly addressed issues of mis-procurement and over-procurement of materials; operational downtime; non-adherence to financial laws, policies, and regulations; and weak enforcement of mandatory public financial management requirements prior to

Moving ahead, ESCOM commits to carrying out the following reforms to further improve operational performance:

- Seek technical assistance to assist in development of a loss calculation methodology and quantifying identified losses;

- Seek technical assistance to assist in development and acquisition of AMI as part of a Loss Reduction Project and Revenue enhancement project;
- Implement Feeder and transformer metering, and three phase and Maximum Demand Post-paid transition;
- Implement a sustainable tariff structure and PPAs with EGENCO and IPPs;
- Sign and implement MAREP cost recovery concession agreements;
- Scale up mechanisation to streamline operational processes; and
- Establish satellite and zoning offices across the country

3.5.2.
Status of Technical/Commercial Losses

ESCOM commenced a programme aimed at reducing revenue leakages through migration of customers from post to prepaid supply. Upon completion of the programme in January 2025, ESCOM revenues will increase while collection costs are expected to go down.

3.5.3.
State of Governance, Network Reliability, Reduction in Excessive Operating Costs and Overall Reduction in the Aggregate Technical and Commercial Losses

ESCOM has addressed persistent governance issues which include failure to fully implement board decisions; non-adherence to approved plans and budgets; inadequate operational procedures; inadequate system to mitigate political interference in view of the ESCOM vulnerabilities; and non-adherence to institutional-ethical standards.

Government remains committed to ensure that ESCOM adheres to the best practices and intends to implement various reforms to improve sector governance and network reliability and reduce operating costs and overall technical and commercial losses. Some of the reforms include market liberalisation involving the reconfiguration of the existing monopoly purchasing and sales market model in use, and the creation of an autonomous Rural Electrification Authority (REA) to work with ESCOM towards increasing connections and revenue base.

A Loss Reduction Roadmap[20] was also developed in 2023 with a total of 34 initiatives with differing complexity, budget, duration, and impact on losses. ESCOM has already started implementing specific initiatives with an investment of USD 10.5 million which will result in realisation of USD 34.8 million in revenue.

3.5.4.
State of the Utilities and Financial Performance Analysis

3.5.4.1.
ESCOM Historical Analysis-Financial Summary 2017-2023 Trends

Table 9 below presents a summary of the financial performance for ESCOM period covering 2017 through 2023.

Table 9: ESCOM Financial Performance Trend (2017 – 2023)

Ratios	2017	2018	2019	2020	2021	2022	2023
Revenue Collection Efficiency	91%	91%	92%	90%	91%	91%	93%
Gross Profit Margin	42%	28.8%	26%	38%	44%	46%	53%
Net Profit Margin	-9%	-7.5%	-23%	-6%	18%	6%	13%
Return on RAB	-15%	-11%	-5%	-9%	-3%	4%	6%
Cost Recovery Ratio	68%	58%	84%	80%	89%	103%	87%
Operating Costs/Sales	57%	75%	56%	45%	50%	44%	69%

[20] Section 7 of the Demand Forecast, Loss Reduction and Energy Efficiency Strategies Final Report

The table illustrates that revenue collection efficiency has been stable in ESCOM, ranging from 90% to 93% over the years. Similarly, both the gross profit margin and net profit margin have recovered from negative values indicating improved financial performance. The cost recovery ratio fluctuated over the years, peaking at 103% in 2022 and dropped to 87% in 2023. The drop in 2023 reflects the impact of currency devaluation and rising costs that were not matched by tariff adjustments. Therefore, non-implementation of Automatic Tariff Adjustment Formula (ATAF) affects the company's ability to recover operational costs.

3.5.4.2. EGENCO Historical Analysis-Financial Summary 2017-2023 Trends

Table 10 below summarizes key financial ratios that define EGENCO's financial performance for the period 2017 to 2023.

Table 10: EGENCO Financial Performance Trend (2017 – 2023)

	Financial Year						
Ratios	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**
Gross Profit Margin	52%	60%	49%	52%	50%	31%	22%
Net Profit Margin	19%	26%	27%	-9%	-35%	15%	17%
Return on RAB	13%	5%	7%	-2%	-10%	3%	4%
Cost Recovery Ratio	39%	51%	34%	3%	-25%	7%	-1%
Operating Costs/Sales	61%	68%	74%	97%	133%	93%	101%

The Gross Profit Margin is positive and significant for the entire reporting period indicating that the business is viable. The Net Profit Margin is positive, except in 2020 and 2021, but a bit constrained in subsequent years due to high operating costs.

3.5.5. State of Regular Audited Financial Statements of Utilities

ESCOM's financial statements for the year ended 31st March 2022 have been issued with an unqualified opinion. The financial statements for the financial year ended 31st March 2023 have been presented by the Auditor with an unqualified opinion and approved by the ESCOM Board of Directors. The audit for the year ended 31st March 2024 financial year is in progress and will be published by December 2024.

Accounts for EGENCO have been published up to 2020 with an unqualified opinion. EGENCO plans to publish the outstanding audited financial statements by 31st December 2024.

3.5.6. Status of Achieving Operational Cost Recovery

The 2018 to 2022 base tariff approval allowed licensees to index assets to enable full operational cost recovery. The current approval 2023 to 2027 reverted to historical cost treatment of the Regulatory Asset Base supported by ATAF and Price Stabilisation Fund. Enforcement of ATAF and price stabilisation remains a challenge and as such, licensees are unable to recover costs. The following reforms will be implemented to ensure cost recovery and financial sustainability:

- Secure a cost-reflective tariff for the next four years;
- Agree on procedures for operationalisation of ATAF, stabilisation fund and mechanism for generation pass-through cost;
- Implement 100% prepaid meters for domestic and non-residential customers;
- Operationalize already installed pre-paid meters on MDAs including the offer to split meters for state residences and security institutions; and

- Recover historic bills with Government Ministries, Departments and Agencies and agree on a sustainable payment plan with Blantyre Water Board.

3.5.7.
Key Barriers and Proposed Actions

Barrier	Proposed Action(s)
Non-cost reflective base tariff	• Implement regulatory reforms to allocate responsibility to relevant stakeholders • Enforce implementation of cost-reflective tariff Enforce implementation of ATAF • Operationalise the Tariff Stabilisation Fund
Currency devaluation and failure to fully implement ATAF	• Enforce implementation of ATAF
High operational losses	• Implement Advanced Meter Infrastructure (AMI), Mechanization, Zoning and Network Rehabilitation
	• Implement reforms on financial and risk management
Climatic shocks	• Implement a resilience framework
Aged generation, transmission and distribution infrastructure	• Rehabilitate and modernise the aged infrastructure

4

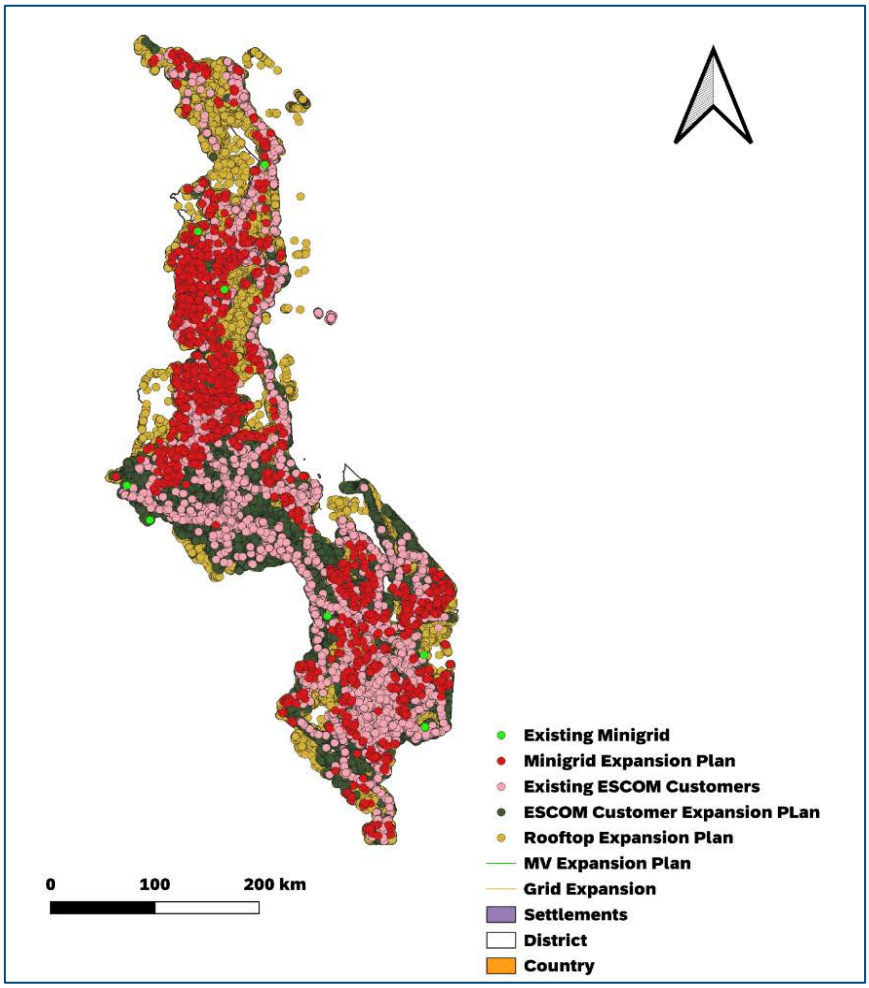
Ongoing Activities and Support from Development Partners



Malawi receives support from various bilateral and multilateral development partners. Currently, USD 2.1 billion is committed towards the energy sector. Some of the notable partners include the World Bank, AfDB, GIZ, EU, UNDP, GEAPP, JICA, Netherlands, Norway, Switzerland, Swedfund, Dutch Directorate-General for International Cooperation (DGIS) Embassy of Iceland to Malawi and FCDO. The list of ongoing activities and support from development partners is attached in Annex 4.

4.1.
A Geospatial Map of Malawi Identifying the Least Cost Technology Options for Electrification

Malawi carried out a least-cost planning for moving towards universal electrification by 2030 using the Integrated Energy Planning Tool. Figure 2 presents geospatial least-cost electrification options by modality to achieve 70% energy access by 2030.



5

Summary of Total Funding Requirement, Financing Committed and the Gap Remaining



Pillar	Focus Area	Funding Requirement (USD million)	Financing Committed (USD million)		Funding Gap (USD million)	Potential Financing Mechanisms
			Internal Source	External Source		
I: GENERATION EXPANSION & COST REDUCTION	**Generation**	**2,743**	**13**	**0**	**2,730**	
	EGENCO	405	13	0	392	PPP / EPC+F / Grants / Loans
	IPPs	2,338	0	0	2338	IPP / PPP / Development Banks
	Transmission	**435**	**30**	**120**	**285**	
	Eastern backbone	120	0	120	0	EU, EIB and AfDB
	Transmission Overhead lines	183	18	0	165	PPP / EPC+F / Grants / Loans
	Transmission SSs	132	12	0	120	PPP / EPC+F / Grants / Loans
	Distribution	**156**	**13**	**0**	**143**	
	11kV Extension	45	3	0	42	PPP / EPC+F / Grants / Loans
	33kV Extension	111	10	0	101	PPP / EPC+F / Grants / Loans
II: REGIONAL INTEGRATION	**Interconnection Infrastructure**	**510**	**0**	**25**	**485**	
	MOMA	25	0	25	0	World Bank, KfW, Norway
	ZAMA	85	0	0	85	EIB / World Bank / Grants / Loans
	TAMA/Western Backbone	400	0	0	400	PPP / EPC+F / Grants / Loans
III: LAST MILE ACCESS	**Electricity Access**	**1,114.00**	**30**	**261**	**823**	
	Grid (last mile connections)	631	20	170	441	Base Tariff / Levy / Grants / Loans
	Mini-grid	183	10	0	173	Levy / Grants / Loans / Cooperatives
	SHS	300	0	91	209	Tax Exemptions / Grants / Loans
	Clean Cooking	**177**	**0**	**10**	**167**	**PPP / Grants / Loans**
V: FINANCIALLY VIABLE UTILITIES	**Internal Reforms**	**345**	**18**	**10.8**	**316.2**	
	Advanced Metering Infrastructure	25	1	0	24	Base Tariff / Grants / Loans
	Mechanisation	65	3	0	62	Base Tariff / Grants / Loans
	Zoning	40	4	0	36	Base Tariff / Grants / Loans
	Network Rehabilitation	75	4	0	71	Base Tariff / Grants / Loans
	MD Meters Migration to Prepaid meters	40	2	0	38	Base Tariff / Grants / Loans
	Rehabilitation & Modernisation	80	4	0	76	Base Tariff / Grants / Loans
	Technical Assistance & Capacity Building	20	0	10.8	9.2	Grants / Loans
Grand Total		**5,480**	**104**	**426.8**	**4,949**	

Annex I
EGENCO projects and IRP Least Cost generation

Power Generation by EGENCO Limited

Name of Project	Location	Status	Capacity	Funding Requirement (USD ' Million)	Timeline
Salima Solar PV	Salima	Implementation of initial 10MW in progress. Groundbreaking ceremony was held, and construction is underway. PPA was approved for signing	50.0	65.00	2024 – 2025
Wovwe HEP Expansion Project	Rumphi	Feasibility done. PPA to be submitted to MERA for approval and Sourcing funding	4.5	12.20	2026 - 2028
Chasombo and Chizuma HEP Projects	Kasungu	Feasibility study in progress	80.0	328.00	2026 - 2030
Total			**134.5**	**405.20**	

IRP Least Cost Generation (including EGENCO)

Technology	2024 Installed	2030 Capacity (MW)	2030 Capacity Gap (MW)	Funding Requirement (USD Million)
Hydro	398	843	445	1,825
Solar	101	287	186	223
Wind	0	167	167	404
Diesel	52	52	0	0
Biomass	0	50	50	292
Sub Total	**551**	**1,399**	**848**	**2,744**

Annex II
Transmission and Distribution Projects

6.1.
Power Transmission and Distribution Projects by ESCOM

Name of Project	Location	Description	Status	Funding Requirement (USD Million)	Timeline
132kV Eastern Backbone Overhead Line Project	Salima, Nkhotakota, Nkhatabay, Mzimba, Rumphi	To upgrade the existing Transmission network from Nanjoka Substation in Salima to Bwengu Substation in Rumphi via Chintheche Substation in Nkhatabay	Financial close reached	120.00	2025 - 2028
400kV Western Backbone Overhead Line Project	Lilongwe, Kasungu, Mzimba, Rumphi	To construct a new Transmission network from Nkhoma Substation in Lilongwe to Bwengu Substation in Rumphi via Chinkhoma substation in Kasungu	Concept stage	186.00	2025 - 2029
Transmission Substations to strengthen distribution capacity for last mine connections	Across Malawi	Construct 674 km of 132kV and 192 km of 66kV power lines and substations with a capacity of 538MVA	Concept stage – proposed to be developed jointly with the private sector	145.00	2025 – 2029
ESCOM (AMI - USD 25 million, Mechanisation - USD65 million, Zoning – USD40 million, Network Rehabilitation – USD 75 million)	Across Malawi	Implementation of interventions to improve last mile connections	Concept stage	205.00	2025 - 2028
Project to improve access to electricity in peri-urban areas within cities in Malawi	Lilongwe, Blantyre, Mzuzu and Zomba	To increase access to electricity in 482 peri-urban areas within Lilongwe, Blantyre, Mzuzu and Zomba	Concept stage	20.00	2025-2027
MV Extension	Across Malawi	Construct 6,000 km of 33kV and 1,631 km of 11kV power lines.	Concept stage	155.00	2025-2030
LV Extension	Across Malawi	Construct 30,000 km of 400V power lines	Concept stage	225.00	2025-2030
Service Transformer Upgrade	Across Malawi	Upgrade 2,161 distribution transformers	Concept stage	25.00	2025-2030
Total				**1,056.00**	

6.2.
Regional Interconnection Projects

Name of Project	Location	Description	Status	Funding Requirement (USD ' Million)	Timeline
400kV Zambia-Malawi Interconnection	Nkhoma Substation in Lilongwe to Chipata West in Chipata	Construct a 400kV power line from the 400/132kV Nkhoma Substation in Lilongwe - Malawi to the existing Chipata West 330/132kV substation in Zambia.	Feasibility and ESIA Studies underway Funding for Construction Works yet to be identified	100.00	2025 - 2028
400kV Tanzania - Malawi Interconnector- Western backbone	Nkhoma Substation in Lilongwe to Mbeya in Tanzania	Construction of the following: 400 kV line, 174.77 km length from Nkhoma Substation in the Central Region to Kasungu Substation. 400 kV line, 150 km length from Kasungu Substation to New Mzimba Substation. 400 kV line, 122 km length from New Mzimba Substation to New Bwengu Substation. 400 kV line, 207 km length from New Bwengu Substation and terminating at Songwe HPP on the northern border of Malawi. Associated new 400/132/66/33kV substations and/or substation extensions at Nkhoma, Kasungu, Mzimba, Bwengu and Songwe	Feasibility Study for the western back bone done up to Bwengu Requires financing for the project to take off	214.00	TBC
Total for Regional Interconnection				**314.00**	

Annex III
Energy Compact Pillars – Metrics / Indicators

Pillars	Metrics /Indicators	Data (latest available)
Pillar I: Expand Generation and T&D Networks	Generation Capacity Installed / Available (MWs)	550MW/ 469MW
	% Thermal, % Renewable (including BESS)	9.27% Thermal, 90.63% Renewable 18.22% Variable Renewable
	Average annual growth rate (%) (of last 3 years)	10.83% in 2021 3.61% in 2022 3.79% in 2023, and 0.00% in 2024
	Energy Produced Annually (MWhrs) – Total	2,195,007.19 MWh in 2021, 1,697,519.51 MWh in 2022 and 1,972,625.56 MWh in 2023 2,344,926.07 MWh in 2024
	% Thermal, % Renewable (including VRE/BESS)	2.88% Thermal, 7.68% Renewable in 2024
	Average annual growth rate (%) (of last 3 years)	-22.66% in 2021, 16.21% in 2022, and 18.87% in 2023
	Average Cost per kWhr – Thermal, Renewable	SMO
	Energy Imported Annually (MWhrs) – Total	66,523.28MWh
	Average annual growth rate (%) (of last 3 years)	-4.52% in 2021, 24.02% in 2022, and 28.03% in 2023
	Average cost per kWhr (USD)	SB
	Energy Exported Annually (MWhrs) – Total	SB
	Average annual growth rate (%) (of last 3 years)	SB
	Total revenue (USD)	SB
	Transmission Network (HV, MV), Total: Length (KM); Voltage (KV): Transfer Capacity – MW/MVA	172.6km 400kV 1404.82km 132kV 1072.79 66kV 2021.5MVA
	Rehabilitation:	Transmission
	Expansion:	Transmission
	Distribution Network (LV), Total: Length (KM); Voltage (KV): Transfer Capacity – MW/MVA	3695.6km, 11kV 9829km, 33kV
	Rehabilitation:	6841.2 km
	Expansion:	33kV - 2854.93km, 11kV – 1282.08km
	Access to energy (electricity and clean cooking)	

Pillars	Metrics /Indicators	Data (latest available)
	Number of new on-grid connections (by customer type)	

Customer Type	2022	2023	2024	2025	2026	2027	2028	2029	2030
Households	26,329	18,987	56,985	90,000	209,950	209,950	209,950	209,950	209,950
Industries	-5	28	79	5	50	50	50	50	50
Commercial	5,321	5,720	12,363	15,000	20,000	20,000	20,000	20,000	20,000

Number of new households and public institutions accessing Cleaner Cooking

Customer Type	2022	2023	2024	2025	v2026	2027	2028	2029	2030
Households	3,005,815	1,428,128	1,941,807	2,482,271	3,050,235	3,595,178	4,219,052	4,872,415	5,555,761
Public Institutions									

Pillar II: Regional integration	**Transmission Interconnectors** (HV), Total: Length (KM); Voltage (KV): Transfer Capacity – MW/MVA	N/A
	Energy traded in Bi-lateral Power Purchase Agreements / MOU:	N/A
	Energy Traded in Power Pool:	N/A
	Transmission Wheeling Charges (USD per kWhr)	N/A
	Payables (arrears) / Receivables (USD)	N/A
Pillar III: DRE / Clean Cooking	Number of new mini-grid connections (by customer type) (last 3 years, if possible)	
	Number of Solar Home Systems (last 3 years, if possible)	
	Number of Clean Cooking Connections / Appliances	
	Total (Private) investment needs by 2030 (USD, percentage) -split (by Grid, mini-grid, off-grid) and clean cooking); spilt (by generation, transmission, distribution and access) (Domestic and International)	See Section 5.2
Pillar V: Sector Reforms and Sustainable Utilities	Utility financial profitability (per audited accounts) – Net income/loss (USD amount and USD/kWh) for Discos, Transcos, Gencos	USD 12,928,689
	(Regulator) Tariff policy, average end-user tariffs (per Kwhr) and trajectory to full cost reflectivity (current % of recovered costs to achieve 2030 target)	USD 0.09/Kwhr Current recovered costs are 77%
	Total Subsidy Amount (USD)[1]; Path/Timelines to full cost reflectivity[2] (estimate);	Cost Recovery Rate is 77% Cost Reflective Tariff is USD 0.12
	Aggregate Technical Commercial & Collection (ATCC) Losses: % reduction targets per year.	20.73% Target per year = 17%
	Number of metered / unmetered customers	655,656 / 128
	Number of prepayment meters	630,033
	Level of Debt – Payables to Government, IPPs, other vendors.	**Govt** = MK nil **IPPs =** MK32,857,171,118 Other vendors = MK23,078,049,760

Pillars	Metrics /Indicators	Data (latest available)
	Level of arrears – Receivables from Government / Public entities (any pre-payment meters).	MK39,874,030,137
	Revenues by breakdown of customer types (e.g. from households, industries, commercial, mines, imports, etc).	Monthly revenues **Households =** MK8,195,814,186 Industrial + Commercial = MK20,004,973,693 **Imports =** MK32,875,590
	Capital restructuring plan (yes/no)	No
	Load shedding (e.g. average number of hours per day and/or estimated lost MWhrs per annum).	SMO
Additional - Cross-Cutting for consideration	Capacity Building requirements (USD) (at all levels)	$1,000,000
	Alignment of Power Sector Least Cost Expansion Plans to country Long Term Strategies and NDCs /Paris Agreement – Yes/No	
	Household Affordability (i.e. % level of household disposable income available to be spent on energy services and/or % of Households Receiving Energy Subsidies)	
	Jobs or gender % in energy sector	

Annex IV
Ongoing Activities and Support from Development Partners

					Contribution to Compact Targets			
Development Partner	**Project Name**	**Timeline**	**Project Description**	**Funding (USD)**	**Access to Electricity**	**Access to Clean Cooking**	**Renewable Energy installed**	**Binary & Numerical Targets**
World Bank	Malawi Electricity Access Project	2019-2025	The project aims:					
			1. To Provide power to 180,000 households through the grid connections	100,000,000.00	180,000 Grid Connections			
			2. To connect 200,000 households through Off-Grid solutions		200,000 off-Grid connections			
	Mpatamanga Hydro Power Project	2018-2029	To increase the security and reliability of electricity supply for the country through the Construction of 309 MW Main Dam and a 41MW Regulating Dam. The project also aims to construct a 64km 400kV Transmission line to Phombeya substation and a 7.3km 132kV Transmission Line connecting Kapichira-Tedzani Transmission Line	-			350MW of Hydro Power installed	
	Malawi-Mozambique Interconnector	2019-2025	The project aims to interconnect Malawi and Mozambique's power transmission systems at 400KV through a transmission line constructed from Matambo Substation in Mozambique to Phombeya Substation in Malawi	130,000,000.00	Construct 296KMs of a transmission line.			
					218Kms in Mozambique and 76 Kms in Malawi			
	Kapichira Dam Rehabilitation and Strengthening	2022 to 2028	The project aims to rehabilitate and strengthen Kapichira Dam structure following damage from Tropical Storm Ana.	44,700,000.00	Rehabilitation will make available 129.6MW of capacity, which was otherwise lost due to partial damage to the dam infrastructure, thereby improving availability and reliability. Additionally, strengthening of Kapichira Dam will optimise the dispatch of Solar Energy on the grid.			
	Accelerating Sustainable and Clean Energy Access Transformation in Malawi (ASCENT) Project	2025-2030	The Project seeks to increase clean and sustainable energy access in Malawi, aligning with ASCENT's Program Development Objective (PrDO) of increasing clean and sustainable energy access in Eastern and Southern Africa.	250,800,000	(a) 4,400,000 People provided with direct access to electricity through new connections and 3,400,000 People provided with access to electricity through off-grid solar connections (b) 1,280 Health and educational facilities provided with access to electricity	645,000 People provided with access to clean cooking		

					Contribution to Compact Targets			
Development Partner	**Project Name**	**Timeline**	**Project Description**	**Funding (USD)**	**Access to Electricity**	**Access to Clean Cooking**	**Renewable Energy installed**	**Binary & Numerical Targets**
UNDP	Access to Clean and Renewable Energy (ACRE)	2019-2025	The project seeks to construct Mini-Grids in areas where connection to the main grid may not be feasible	4,931,776.00	Construction of 3 Mini-Grids potentially connecting 10,000 households to electricity		Construction of 3 Mini-Grids	
	Africa Mini Grid Program	2021-2025	The project in Malawi aims to enhance energy access with low-carbon minigrids, supporting policy development, innovative business models, and increased stakeholder awareness.	3,740,520.00	appropriate policies and regulations addressing policy, institutional, regulatory and technical barriers to investment in RE minigrids			
USAID	Southern Africa Energy Program (SAEP)	2017-2024	SAEP, a Power Africa Initiative, has been working with the Government of Malawi, utilities (ESCOM, EGENCO, MERA) and the private sector to advance key energy generation and access projects and strengthen the enabling environment for public and private sector investment in the power industry	13,000,000	Access to electricity: USAID supported the Electricity Generation Company of Malawi (EGENCO) to operationalise its Strategic Plan by developing a maintenance plan resulting in the addition of 33 megawatts to the grid. USAID supported independent power producers such as JCM Power with technical and financial support and has added 80 megawatts of solar power to the grid. USAID is providing transaction advisory services to the Government of Malawi for the Mpatamanga hydro power project which will add 358 megawatts to the grid. USAID supported ESCOM in training its planning and operations staff on relevant engineering principles and study methodologies for variable renewable energy integration and ESCOM has enhanced its capacity to independently undertake similar studies in future. USAID supported the launch of the solar home system initiative by providing financial and technical support to private sector solar home system companies to scale operations and sales in urban and rural communities and has contributed to 477,871 households and businesses being connected to electricity			
	Empower Southern Africa	2024-2028	Empower Southern Africa is a new five-year Power Africa initiative that will connect more homes, businesses and institutions in Southern Africa to reliable electricity, reduce greenhouse gas emissions and increase energy sector investment. The $60 million regional	60,000,000.00	Support the development of large-scale renewable energy projects and expanding off-grid energy access, Building the capacity of energy sector stakeholders, Improving infrastructure for electricity transmission and distribution and Fostering public-private partnerships.			

					Contribution to Compact Targets			
Development Partner	**Project Name**	**Timeline**	**Project Description**	**Funding (USD)**	**Access to Electricity**	**Access to Clean Cooking**	**Renewable Energy installed**	**Binary & Numerical Targets**
			investment will allow for greater collaboration with Southern African governments to improve the enabling environment for the energy sector and support private sector participation.					
	Malawi Clean Energy Cooperatives Program	2023-2028	This program aims to increase Malawi's self-reliance and economic self-governance through support to rural clean energy cooperatives that promote increased productivity and health outcomes.	5,159,251	Support the development of rural clean energy cooperatives, Support the development of business planning and access to financing, Provision of capacity building.			
EU **(Team Europe – Global Gateway strategy)**	WALA Malawi		The project aims to modernize Malawi's energy sector through technical assistance, institutional capacity building, grants, and promoting renewable energy use.	10,500,000.00	Improve electricity Access		Improve inefficiencies in Energy generation and transmission. Promotion of private sector investment	
AfDB/EU/EIB **(Team Europe – Global Gateway strategy)**	132kV Eastern Backbone Overhead Line Project	Jan 2025 to June 2027	To upgrade the existing Transmission network which carries power from the Southern to the Central and Northern Regions on wooden structures by constructing a 132kV overhead line on steel lattice structures with twin-bundled conductors for increased power transfer capacity and improved power supply quality and reliability.	95,176,950.00	The project will increase transmission power line capacity. This will support last mile connections thereby increasing access to electricity in the central & northern region. In addition, the project will enhance quality and reliability of power supply in these regions			
Swedfund **(Team Europe – Global Gateway strategy)**	Feasibility study for Nkula B and Kapichira I Power Stations Rehabilitation and Modernisation	May 2024 to October 2024	The project aims at rehabilitating and modernizing Nkula B HEP and Kapichira I HEP with an installed capacity of 100MW and 64.8MW respectively	565,827.18	Rehabilitation and modernisation of Kapichira and Nkula B Power Stations will improve availability and reliability of generation plant.			
GIZ **(Team Europe – Global Gateway strategy)**	Enabling Energy Access through Demand-Side Subsidies (DSS)	08/2022 - 09/2025	Piloting innovative DSS mechanisms to facilitate access to modern energy services for low-income and/or displaced populations who are not currently reached by commercial markets.	5,439,000.00	Energy access for up to 200,000 people in Malawi			

					Contribution to Compact Targets			
Development Partner	**Project Name**	**Timeline**	**Project Description**	**Funding (USD)**	**Access to Electricity**	**Access to Clean Cooking**	**Renewable Energy installed**	**Binary & Numerical Targets**
	EnDev Malawi	12/2012-12/2024	Provision of improved cook stoves (Chitetezo Mbaula)	16,050,600.00		The project provided improved Cookstoves (Chititezo Mbaula (CM)		
FCDO	Modern Cooking for Healthy Forests (MCHF)	2018 to 2026	Developing inclusive and sustainable market systems across alternative energy, sustainable charcoal, and forestry value chains	24,100,000.00		30% of households in urban areas have adopted alternative cooking energy sources and fuel-efficient cooking technologies 75% of households in or around targeted forest reserves have adopted alternative or fuel-efficient cooking technologies 50% increase in annual conviction rate for illegal charcoal and other forestry crimes $10M of investment mobilized for sustainable landscapes 11,000 tons of sustainable charcoal produced 16,000 hectares of degraded landscapes under improved natural resource management as a result of USG assistance		
Dutch Directorate-General for International	Demand-side Interventions	08/2022-09/2025	Address the affordability barrier to off-grid solar (OGS) products and improved cooking stoves (ICS) for people in ultra-poor, vulnerable settings, who otherwise would not be reached by commercial	5,328,000.00		Poorer and poorest households – as per UBR deifinition - from 4 Districts, namely Balaka, Dedza,		

					Contribution to Compact Targets			
Development Partner	**Project Name**	**Timeline**	**Project Description**	**Funding (USD)**	**Access to Electricity**	**Access to Clean Cooking**	**Renewable Energy installed**	**Binary & Numerical Targets**
Cooperation (DGIS) **(Team Europe – Global Gateway strategy)**			markets or existing public initiatives, with a view to scale up in collaboration with World Bank.			Nkhatabay and Salima.		
JICA	Project for Improvement of Substations in Lilongwe	June 2022 – June 2024	To rehabilitate and upgrade Kanengo (Lilongwe B) and old town (Lilongwe A) transmission substations in the Central Region	20,110,000.00	The project added 64.5 MVA Primary Substation Capacity. This will support 107000 last mile connections thereby increasing access to electricity.			
GEAPP	Utility Usage of Battery Energy Storage System Project	2023 - 2025	To design, procurement, installation, and commissioning of a BESS facility to be used primarily for frequency control, ancillary services, and other grid support applications	20,450,000.00	The project will improve quality of power supply			
Netherlands, Norway, Switzerland and Germany	Improved Cookstoves ICS	12/2012-12/2024	A tailor-made, country-wide supply and demand-driven market approach to promote the production and supply of fuel-efficient biomass stoves.	10,722,600.00		Technologies promoted: Improved Cookstoves (Chitetezo Mbaula (CM), Zipolopolo, Mayankho Fixed Institutional, and Ken Steel Portable Rocket Institutional)		
Embassy of Iceland to Malawi	EnergICE	02/2023 - 01/2025	Improved Cookstoves (Chitofu3in1) and Solar PV Systems (tier 0 – tier 1)	1,110,000.00		By the end of 2022, the following results were achieved: 7,235 solar products and 21,318 improved cookstoves sold. 8 SI (4 schools and 4 health centres By the end of 2022, the following results were achieved: 7,235 solar products and 21,318 improved cookstoves sold. 8 SI (4 schools and 4 health centres) in MH solarized.		

					Contribution to Compact Targets			
Development Partner	**Project Name**	**Timeline**	**Project Description**	**Funding (USD)**	**Access to Electricity**	**Access to Clean Cooking**	**Renewable Energy installed**	**Binary & Numerical Targets**
						6 institutional stoves renovated. 7 guardian cooking shelters constructed and equipped with Chitetezo Mbaula stoves at 4 health centres, 2 hospitals and 1 maternity wing. stoves constructed.		
				821,884,524.18				

LET'S CONNECT 300M PEOPLE IN AFRICA TO ENERGY BY 2030

MISSION300
#PoweringAfrica

MISSION 300
AFRICA
ENERGY
SUMMIT

