



Government of Malawi



POWER MARKET LTD
—powering growth—




INVESTMENT OPPORTUNITIES IN THE MALAWI POWER SECTOR

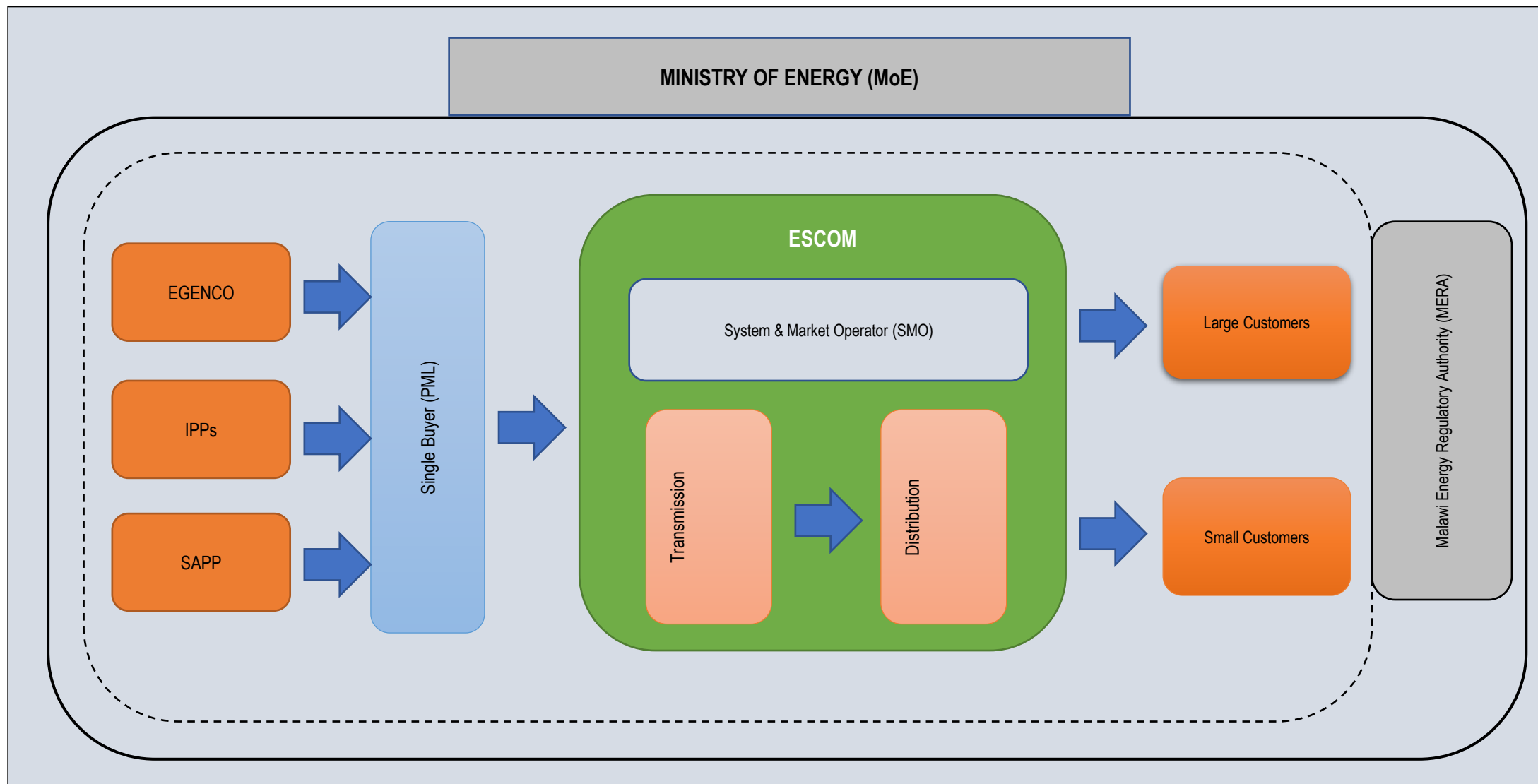
POWER SECTOR PROFILE

- The Government of Malawi (GoM) realizes that the industrial and socio-economic development of the country depends on access to modern, reliable and sufficient energy.
- As such, it has designated the energy sector as a priority in its National Development Agenda.
- Electricity access is at 19% of which 12.4% is from grid connections and 6.6% off-grid systems. In rural areas, where 80% of the population resides, only 2% have access to grid electricity.
- Malawi has a total installed capacity of **567.01MW** of which **399.95MW** is run-of-river hydropower, **105.76MW** is from diesel power generation, and **61.30MW** is solar PV.
- Ministry of Energy provides direction and guidance on policy issues, while Malawi Energy Regulatory Authority (MERA) regulates the market.

POWER SECTOR REFORMS

- Malawi's power market was previously vertically integrated
 - Electricity (Amendment) Act of 2016, restructured the power market to improve efficiency and facilitate private sector participation.
 - The reforms resulted in unbundling of ESCOM; registering EGENCO in 2016 and Power Market Limited (PML) as a single buyer in 2018.
 - Power trading agreements remain between the Single Buyer (PML) and all other market players, that include generators (EGENCO, IPP and SAPP), System and Market Operator, Transmission Licensee, and the Distribution Licensee.
 - Single Buyer is responsible for purchasing and selling all-electric power as an independent entity.
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CURRENT POWER MARKET STRUCTURE



LEGAL, REGULATION AND POLICY FRAMEWORK



LEGAL AND REGULATORY FRAMEWORK

- The Energy Regulation Act 2004
- The Electricity Act, 2004 (as amended)
- Electricity Bylaws 2012 (as amended)
- Liquid Fuels And Gas (Production And Supply) Act, 2004
- The Rural Electrification Act, 2004
- The Integrated Resource Plan
- Independent Power Producers (IPP) Framework

THE NATIONAL ENERGY POLICY

- The National Energy Policy (2018) provides policy direction and guidance to all stakeholders in implementing energy interventions to increase access to affordable, reliable, sustainable, efficient and modern energy in the country.
- The Policy emphasises the importance of private sector participation. It provides an environment conducive to such involvement, be it a direct investment, PPPs, IPPs or other participation vehicles.
- Several sources have been identified as part of Malawi's energy supply mix as follows:
 - Biomass
 - Liquid Fuels and Bio-fuels
 - LPG, Biogas, and Natural Gas
 - Electricity from Renewable Sources
 - Electricity from Non-Renewable Sources
 - Coal


MALAWI VISION 2063

- The energy sector is guided by the aspirations of the people of Malawi as enshrined in the Malawi Vision 2063, the country's overarching long-term development vision.
- The vision aims to transform the country into a wealthy and self-reliant industrialized upper-middle-income country by 2063. Malawi Vision 2063 recognizes energy as one of the critical enablers for attaining this vision of sustainable and inclusive wealth creation and self-reliance.
- The country aims to attain a diversified range of affordable energy sources that will increase energy supply and ensure reliability.

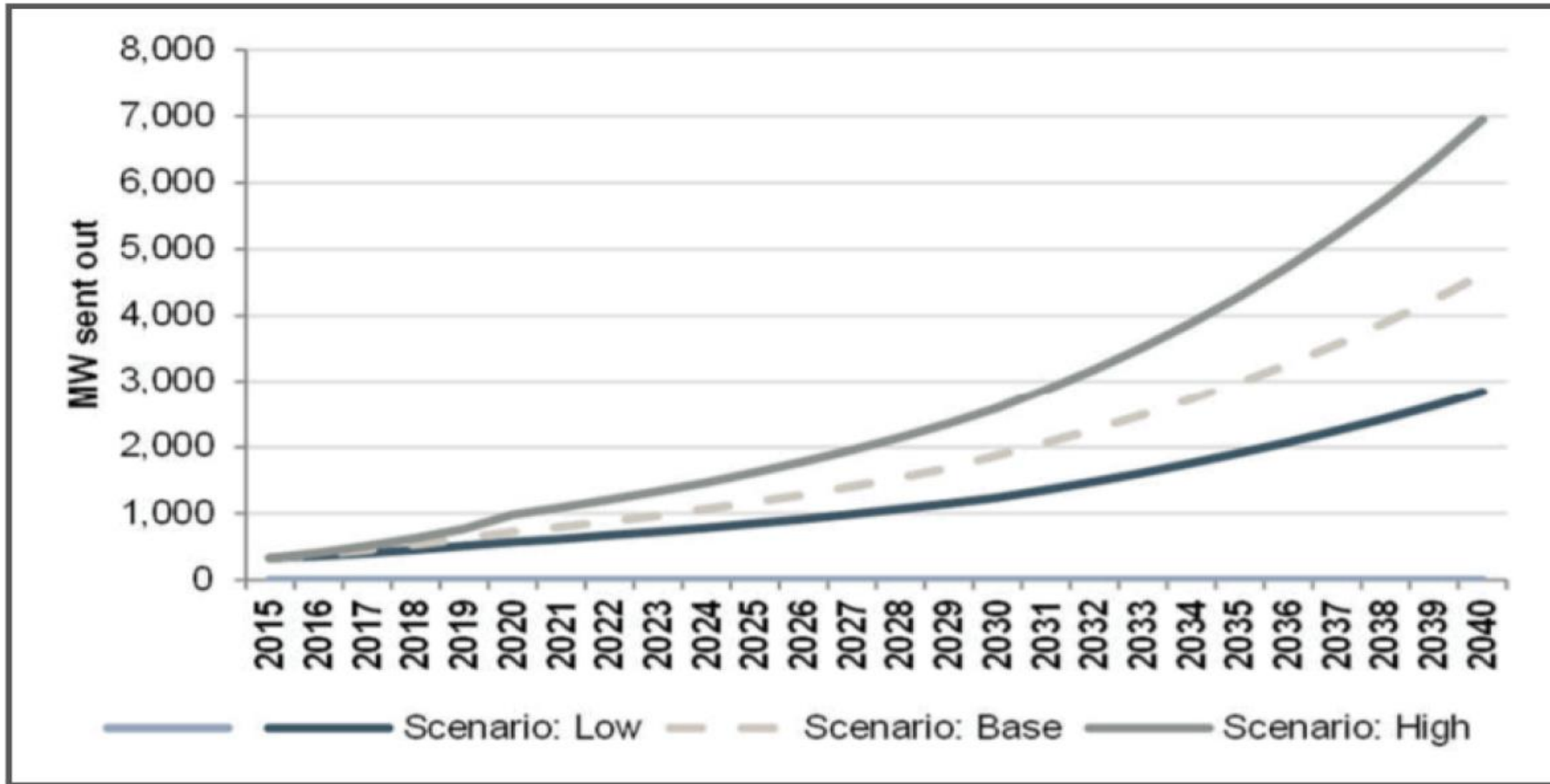
INVESTMENT OPPORTUNITIES




WHY INVEST IN MALAWI POWER SECTOR

- Stand alone Single Buyer that ensures efficiency in the power sector.
 - Untapped Power Generation resources from diversified energy sources.
 - Huge demand for Power in Malawi, which is projected to grow to **1,873MW** by 2030, **3566MW** by 2037 and **4,620MW** by 2063.
 - Low levels of electricity access and power shortages that provide an opportunity for investment.
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OPPORTUNITIES FOR INVESTORS IN THE MALAWI POWER SECTOR

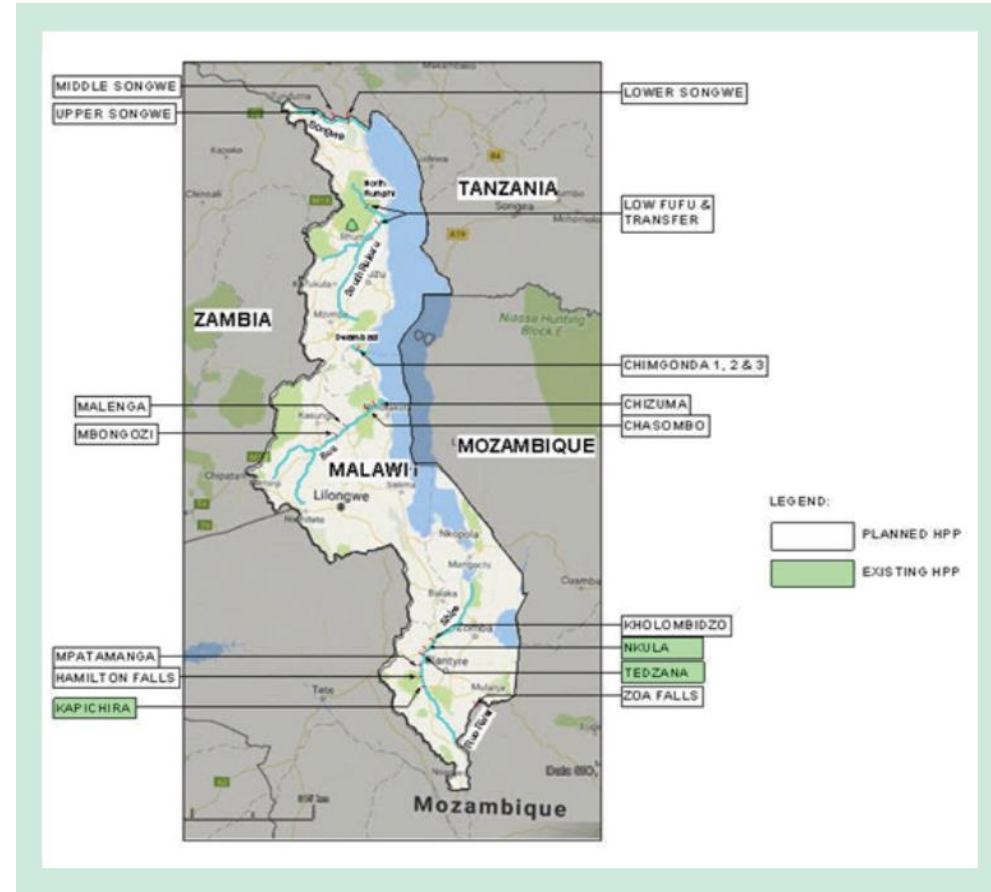


OPPORTUNITIES FOR INVESTORS IN THE MALAWI POWER SECTOR

- The Government is promoting a balanced mix of renewable energy sources to address problems relating to over-dependence on hydropower.
 - Different technologies are being explored to complement and diversify the power source. The presence of year-round sunlight and strong winds present opportunities to invest in solar and wind energy.
 - Geological reports indicate the presence of gas, coal and geothermal resources that can also be used for generating electricity.
 - The availability of waste in the main cities of the country presents another opportunity for waste to energy generation.
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HYDRO POWER POTENTIAL

- Hydroelectric power is the major source of baseload power in Malawi.
- It accounts for 76% of the total power generated.
- Over 95% of the hydro power plants are on the Shire River
- Over 10 sites have been identified with an estimated of generation capacity of over **1000 MW**



COAL SITES

Northern Coal Basin

- Ngana And Napulang in Rumphu District
- Livingstonia in Rumphu District
- North Rukuru in Rumphu District
- Nthalire Basin in Chitipa District
- Lufira Basin in Karonga District
- Mwenewenya-sekwa in Karonga District
- Kibwe in Chitipa District

Southern Coal Basin

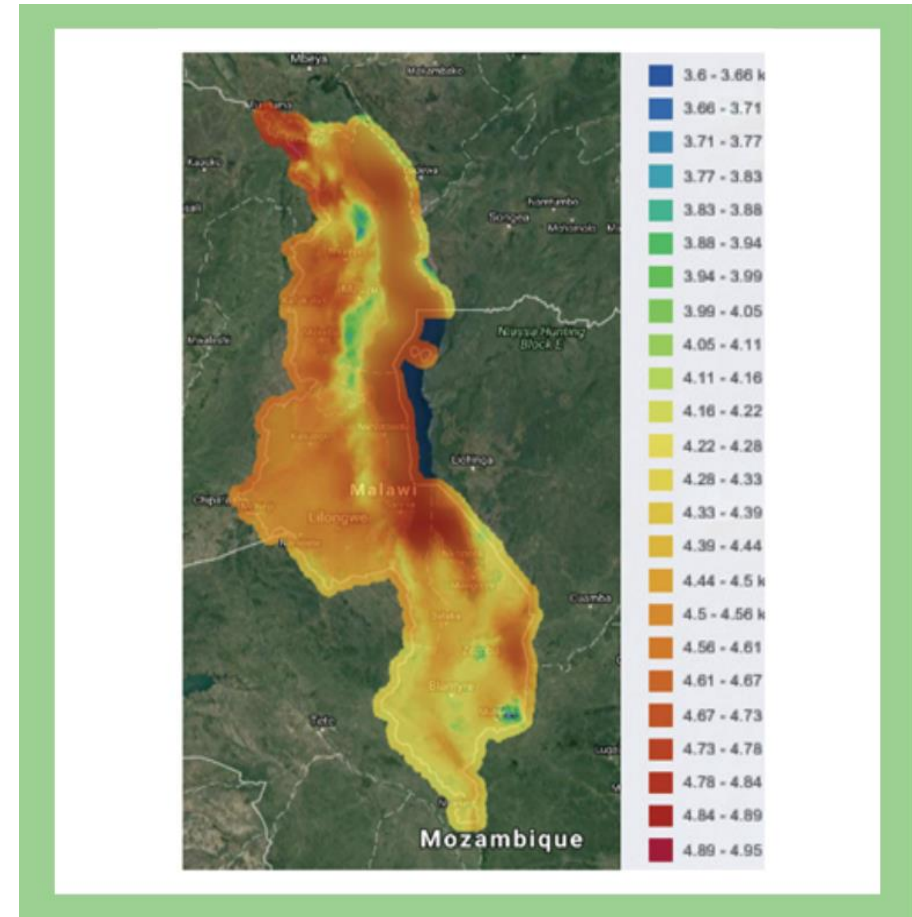
- Lengwe Coal Basin in Chikwawa.And Nsanje



Northern Coal Basin

SOLAR PV POWER POTENTIAL

- Five projects are under implementation with a combined generation capacity of **171MW**.
- Solar power projects can be implemented in most parts of the country
- Solar PV projects that are supported with battery storage technology are preferred.



COAL POWER POTENTIAL

- There are a total of 13 coal fields identified in the Northern and Southern regions of the country.
- Probable reserves for the north and south coal fields are estimated to be over 800 Million tons.

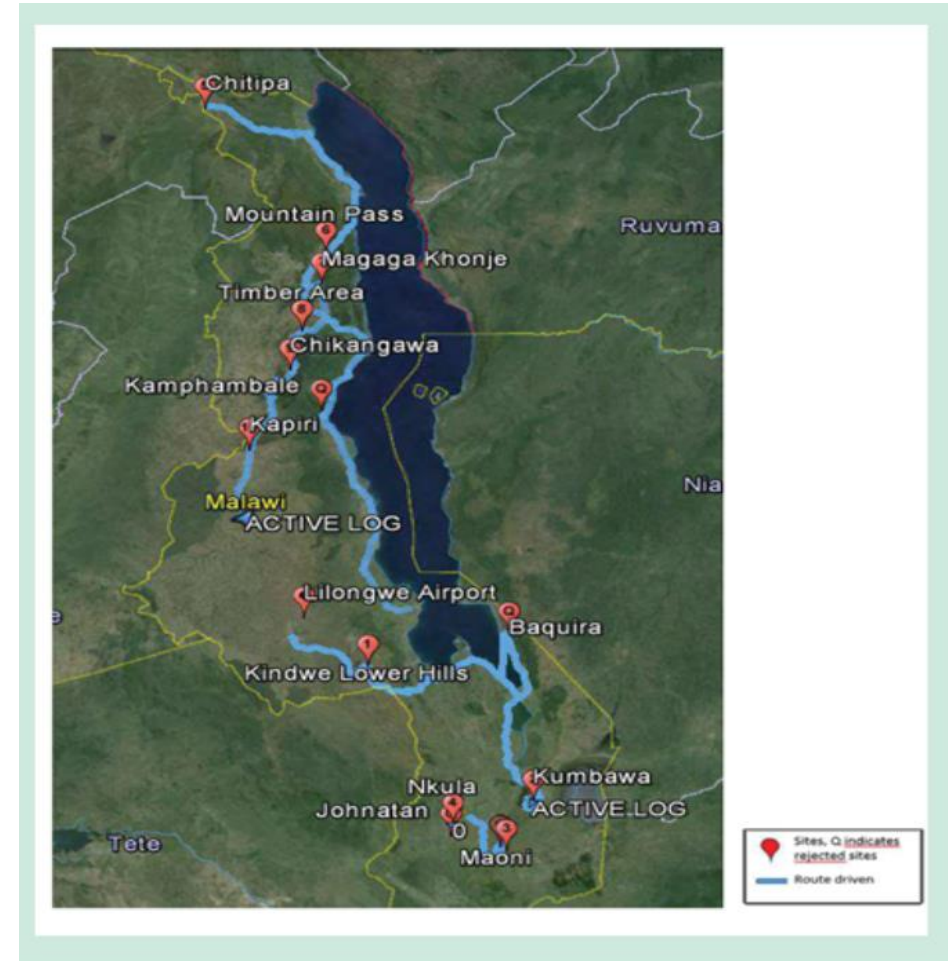


WIND POWER POTENTIAL



WIND POWER POTENTIAL

- A total of 10 wind sites have been identified across the country
 - Maoni
 - Lilongwe
 - Kindwe Lower Hills
 - Chikangawa
 - Magaga
 - Chitipa
 - Kapiri
 - Kumbawa
 - Kamphambale
 - Jonnathan
 - Nkula

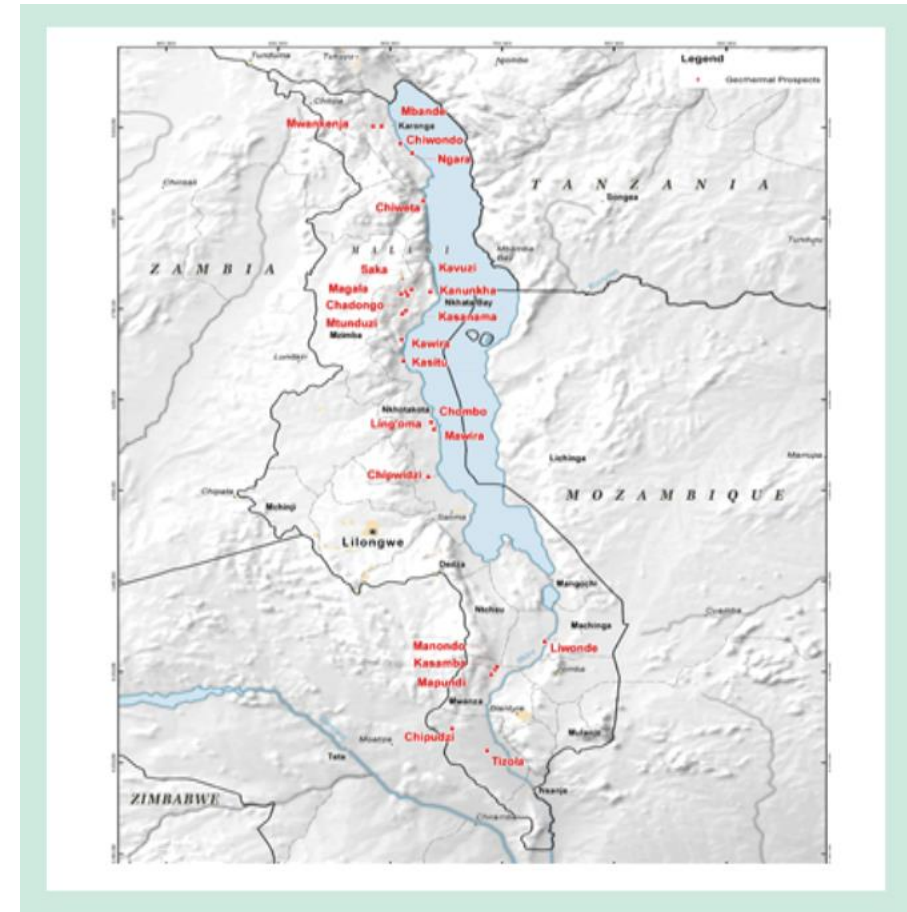


GEOHERMAL POWER POTENTIAL



GEOTHERMAL POWER POTENTIAL

- The Geothermal technology in the country has not been explored.
- Malawi has untapped Geothermal opportunities for IPPs to explore.
- The country has identified 51 sites to generate geothermal power.



GEOTHERMAL POWER POTENTIAL

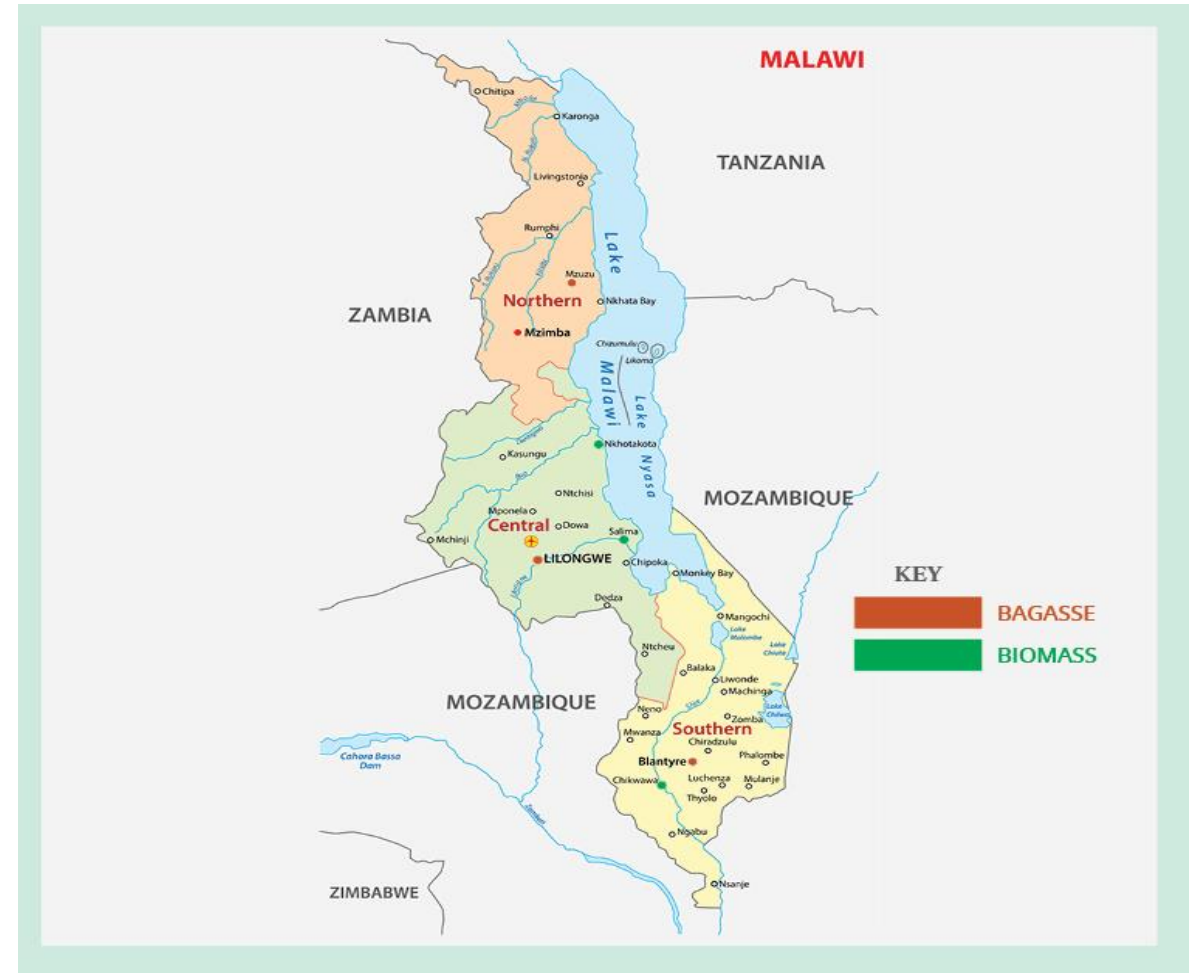
- **Chiweta** geothermal prospect site is in the northern portion of the Malawi Great Rift Valley, Rumphu ($10^{\circ}41'6.732''$ S $34^{\circ}11'4.415''$ E)
- **Kasitu** geothermal prospect site is in Nkhotakota District Central Region ($12^{\circ}16'43.176''$ S $34^{\circ}1'53.724''$ E)
- **Mawira** geothermal prospect site is in Nkhotakota District Central Region ($12^{\circ}56'45.888''$ S $34^{\circ}17'38.021''$ E)
- **Kasanama** geothermal prospect site is in Nkhatabay District ($11^{\circ}46'49.475''$ S $34^{\circ}2'54.006''$ E)
- **Kanunkha** geothermal prospect site is in Nkhatabay District ($12^{\circ}4'11.184''$ S $34^{\circ}0'54.72''$ E)
- **Chipudzi** geothermal prospect site is in Chikwawa District ($15^{\circ}56'7.793''$ S $34^{\circ}26'43.997''$ E)



Mawira Geo-Thermal Site

BAGASSE AND BIOMASS POTENTIAL

- There are three main potential sites earmarked for these projects namely: Nkhotakota, Salima and Chikwawa, where large sugar companies are located.
- The country is also endowed with biomass potential from sawmills and agricultural waste.



GAS-POWER POTENTIAL

- Geological studies indicate Malawi has natural gas deposits along the great rift valley that stretches from the North to the South of the country
- Mpatasa Njoka in Salima, lies on the Great Rift Valley and has a natural (13°45'44.124" S 34°33'53.237" E)



Mpatasa Njoka Gas Site

WASTE TO ENERGY SITES



Mzedi Dump Site -Blantyre

WASTE TO ENERGY SITES

- Three sites of waste-to-energy projects are Blantyre, Lilongwe and Mzuzu
- **Blantyre** ($15^{\circ}46'56.676''$ S $35^{\circ}6'0.569''$ E)
- **Lilongwe** ($14^{\circ}3'7.721''$ S $33^{\circ}48'38.963''$ E)
- **Mzuzu** ($11^{\circ}24'41.489''$ S $33^{\circ}57'37.872''$ E)



Mzuzu City Dump site

OTHER TECHNOLOGIES

- Malawi is open to new generation technologies that have been tested and are successfully being implemented in other countries, including but not limited to hybrid solutions, hydrogen and battery storage.



IPP PROJECTS IN THE PIPELINE

- 50MW Bwengu PV Solar Project, Mzimba
- 50MW Droege Wind Farm Project, Mzimba
- 151MW Kindwe Wind Farm Power, Dedza
- 40MW Dwangwa Dzuwa Limited,
Nkhotakota

POWER PROJECTS UNDER CONSTRUCTION

- Serengeti Energy Nkhotakota Solar 26mwp/21mwac project, Promoted By Serengeti Energy Nkhotakota Ltd.



OPERATIONAL IPP PROJECTS

- 60MW JCM Salima Solar PV power plant is the first and largest solar project in Malawi, located in Salima District.
- 20MW JCM Golomoti Solar PV + BESS located in Dedza District



Salima Solar Project

OPERATIONAL IPP PROJECTS

- 8.5MW Mulanje Hydropower plant located on Ruo River in Mulanje.
- 3.06MW Muloza Hydropower plant located on Muloza River in Mulanje.



Muloza River in Mulanje

GOVERNMENT FLAGSHIP PROJECTS



MPATAMANGA HYDRO POWER PROJECT

The Government of Malawi is currently negotiating Power Purchase Agreement - **Mpatamanga Hydropower Project**, located in Blantyre District which will be producing a total of 350MW.

- The hydro plant will have a regulating dam.
- The project cost is about US\$1.1 billion and is being implemented through a Public Private Partnership (PPP) arrangement.



Mpatamanga Hydro Power Project Site

KHOLOMBIDZO HYDRO POWER PROJECT

- **210MW Kholombidzo Hydro-Power Project** (HPP) is a run-of-river type with a concrete gravity small dam 16.8m high.
- It has natural head of approximately 55m.
- The Kholombidzo project is on Shire River in Balaka District, Southern Region.



Kholombidzo Hydro Project Site

LOWER FUFU HYDRO POWER PROJECT

- Lower Fufu project is designed as a storage power plant through the reservoir formed by a 114m high Roller Compacted Concrete dam with a capacity is 261MW.
- The project is located on South Rukuru River in Rumphi District with a Bankable feasibility cost for the project is US\$702.5 million



FUFU Hydro Project Site

SONGWE DAM AND HYDRO POWER PROJECT

- The **180MW** hydro power project will be co-owned by governments of Malawi and Tanzania.
- The Lower Songwe Dam and Hydropower Plant is located in Tanzania (Ileje District) and Malawi (Chitipa and Karonga districts) at the boundary.



Songwe Hydro Project Site

KAM'MWAMBA COAL FIRED POWER PLANT

- 1,000MW Coal Fired Power Plant located at Kam'mwamba in Neno District, Southern Malawi.
- The project cost is estimated US\$800 million.



POWER PROCUREMENT PROCESSES IN MALAWI



ENTERING MALAWI'S POWER SECTOR

- The Independent Power Producer (IPP) Framework provides for processes and structures for both solicited and unsolicited IPP procurement processes.
- The IPP solicitation process is done in line with the Integrated Resource Plan (IRP) as well as the annual Generation Procurement Plan prepared by the Single Buyer (SB).
- The IPP procurement process is consistent with Malawi's Public Procurement Act of 2017.
- Solicited procurements by international competitive bidding is a default procurement approach for Malawi's power sector.
- The IPP Framework includes a process to execute unsolicited procurements in the event such an approach is warranted so that such projects are beneficial to the public.

INCENTIVES FOR IPPs



FISCAL INCENTIVES FOR IPPs

PRIORITY INDUSTRY STATUS (TAX HOLIDAY OF UP TO 10 YEARS)

The Malawi Government, through the Taxation (Priority Industries) Regulations 2013, designated power generation as a priority sector.

- 0% Corporate Income Tax rates for a period not exceeding 10 years. Applicable to companies incorporated after 1st July 2013.
- Exemption of Duty on Importation of capital goods and building materials under the Taxation (Priority Industries) Regulation, 2013.
- Applicable to investments of minimum of US\$30 million.

ENERGY SECTOR-SPECIFIC INCENTIVES

For the energy sector, the following tax incentives are available to investors:

- Duty-free importation but VAT payable at 16.5% on Electricity Generation equipment .
- Duty-free importation but VAT payable at 16.5% on energy saver bulbs, solar batteries, solar battery chargers, energy lamps, generators and inverters.



POWER MARKET LIMITED

The Single buyer



— powering growth —

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The background is a solid green color with a complex, abstract pattern of thin, light green lines and dots. The lines are curved and intersect, creating a sense of a network or a globe. The dots are small and scattered throughout the pattern.

The end!

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