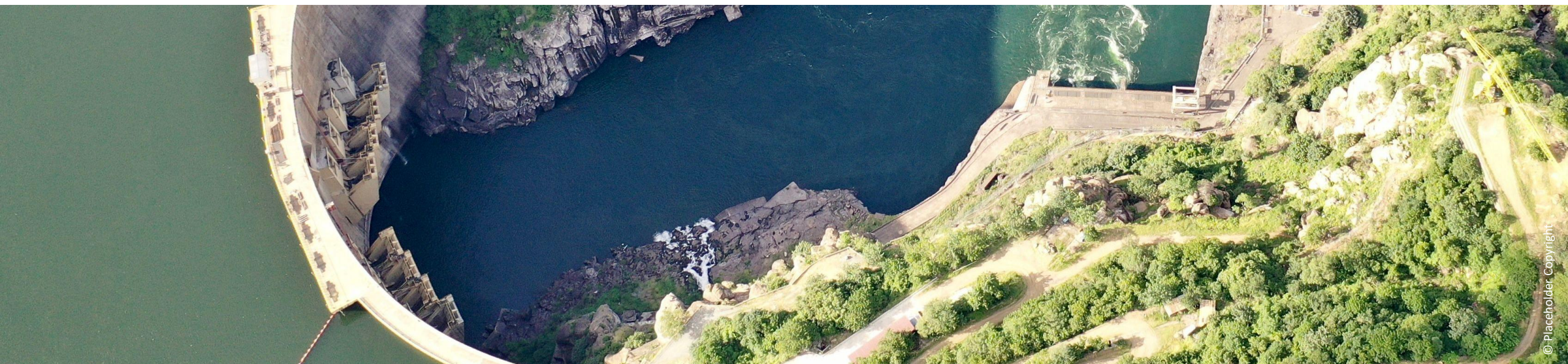




# Mozambique Country Window

*Energy System Transformation Outlook (ESTO)*



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11 August 2025



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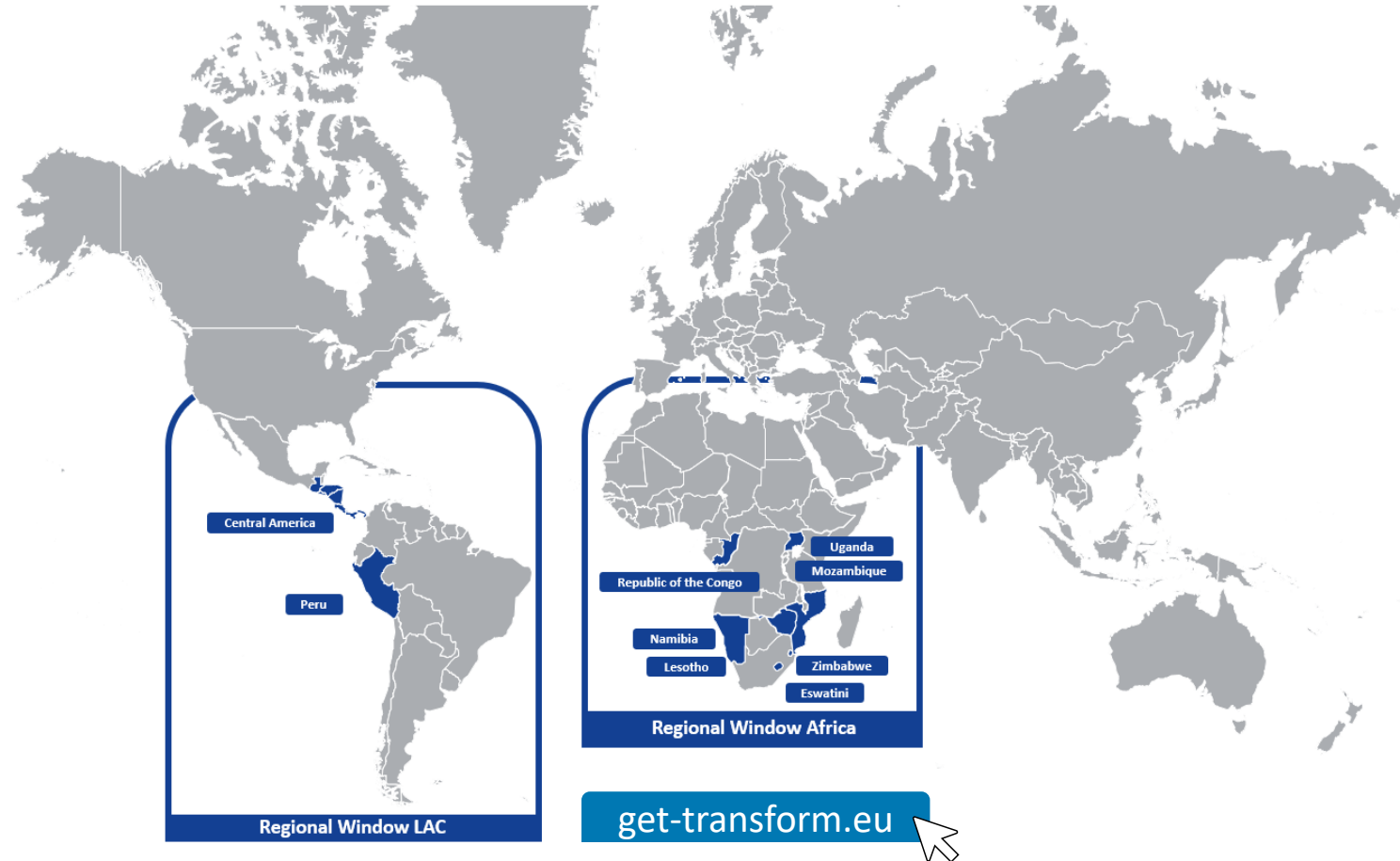
1

# ABOUT GET.transform



# What is GET.transform?

- Technical assistance (TA) and capacity building for the **public sector** to establish conducive policy and investment frameworks for the transition of the energy sector
- Hub of expertise with > 50 renowned (inter)national energy experts
- Implementation through **regional** and **country windows** with expert staff on the ground incl. secondments
- **Scaling across countries** through collaboration with regional institutions and other TA initiatives



# GET.transform Workstreams



## LONG TERM ENERGY PLANNING

Developing **integrated energy and power system investment plans**, outlining development paths for energy sector transformation



## RENEWABLE ENERGY GRID INTEGRATION

Updating of **technical power system planning and operational procedures** that enable the operation of renewable energy dominated power systems



## ON-GRID REGULATION & MARKET DEVELOPMENT

Supporting **institutional reforms** that allow for new market actors and renewable energy participation: market model design, non-discriminatory grid access, cost-reflective services

Design and management of **solicited auctions** as well as **market-driven mechanisms** for procuring on-grid energy



## OFF-GRID REGULATION & MARKET DEVELOPMENT

Supporting **off-grid electrification planning** and data management frameworks

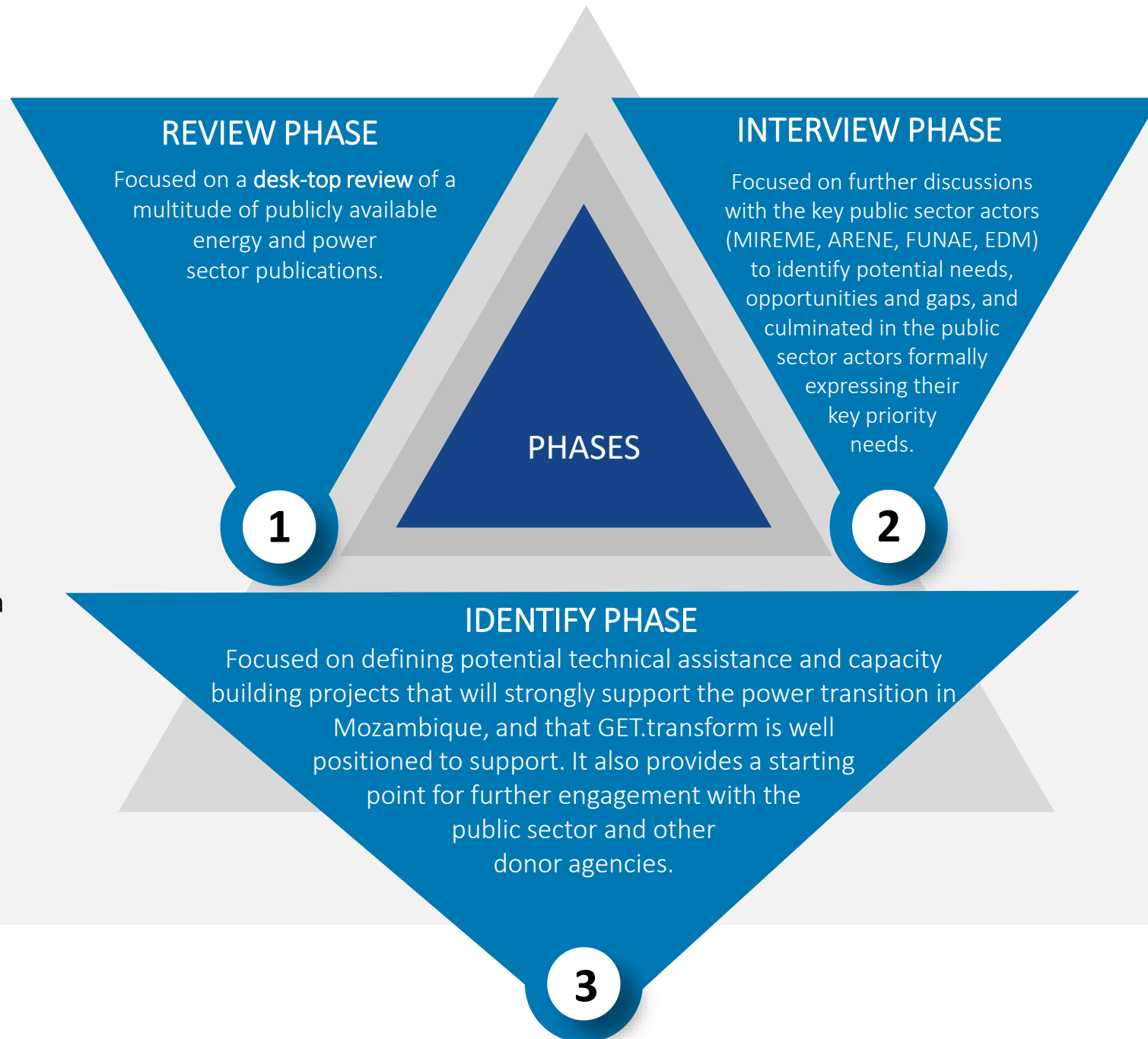
Developing mini-grid **regulatory frameworks** and technical standards and designing award mechanisms for **procuring off-grid energy**

2

# MOZAMBIQUE ESTO

# Foreword

The purpose of the Energy System Transformation Outlook (ESTO) is to document a **high-level summary of the electricity landscape** in Mozambique and to present the outcome of a high-level overview and assessment that followed a 'review, interview, identify' approach.

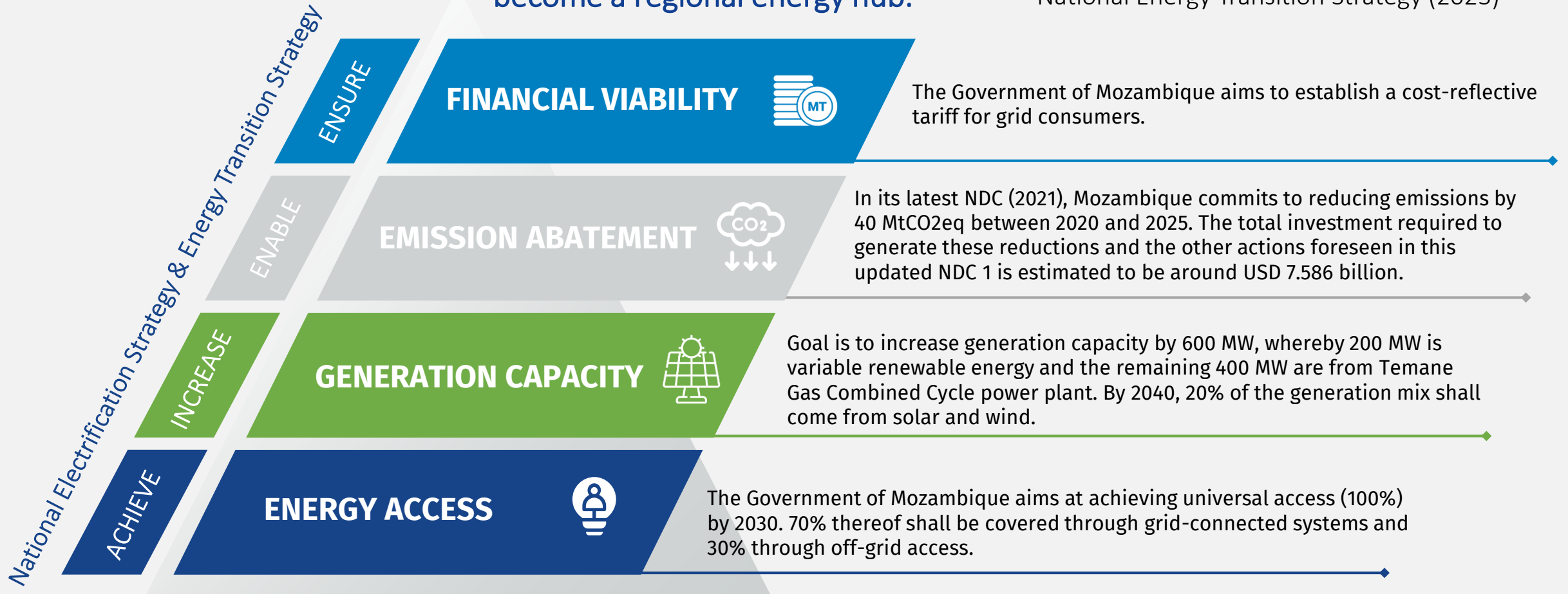


The ESTO is not a formula of what should be done by the country or the public sector actors.

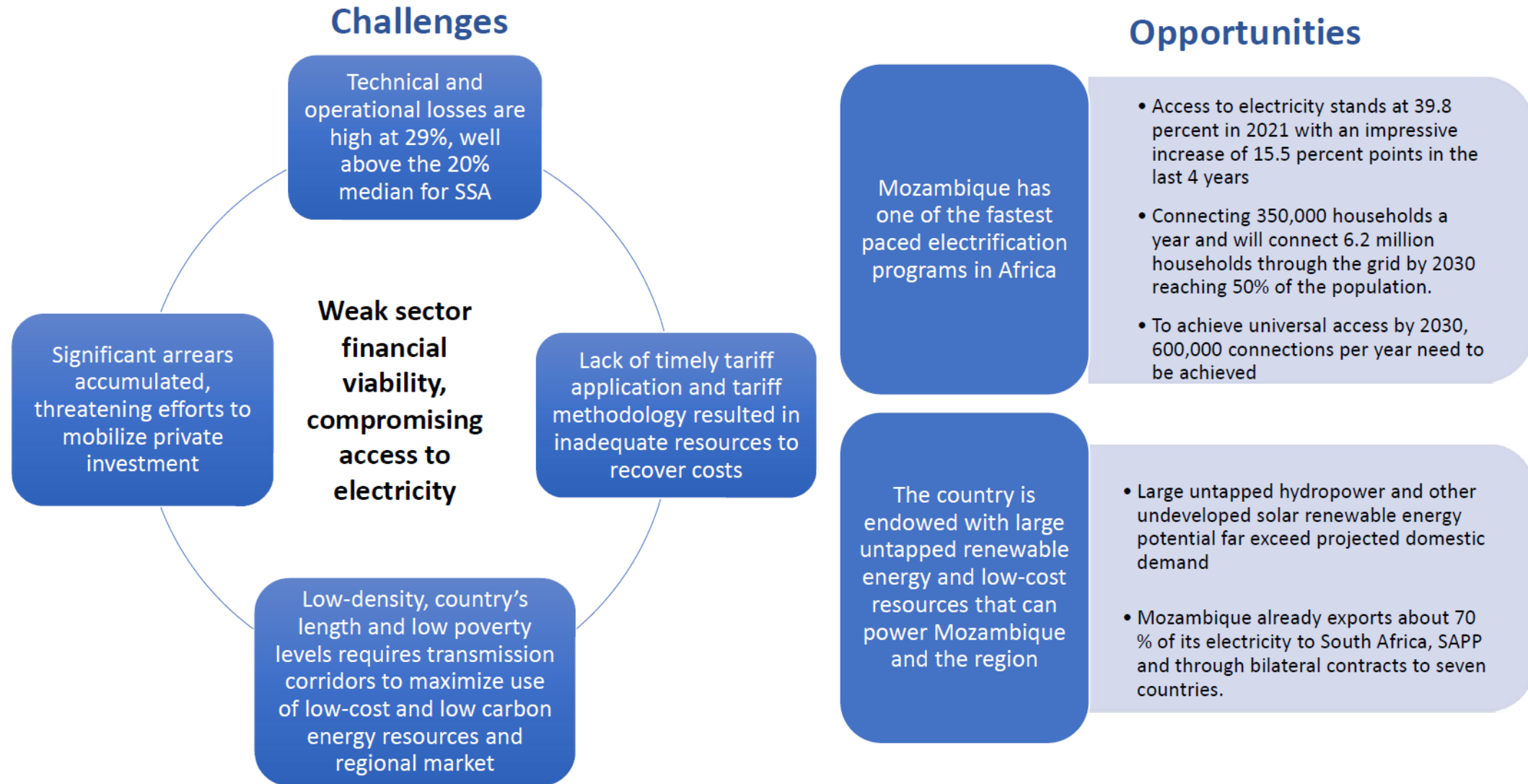
The ESTO is a means of obtaining feedback to enrich our understanding of the power sector in Mozambique and to identify support activities and synergies with other donor and development agencies.

# Mozambique's Energy Vision

Mozambique has the goal to achieve universal energy access by 2030, and become a regional energy hub. National Energy Transition Strategy (2023)



# Challenges and Opportunities



Source: World Bank, 2022

# Status of Energy Sector Transformation in Mozambique

Mozambique has the largest power generation potential in Southern Africa and is a leading electricity exporter in the region.

Total installed capacity stands at 2.8 GW and is estimated to reach 6 GW over the next 20 years. The largest power generation plant in the country is the Cahora Bassa hydro dam, operated by the government-owned Hidroeléctrica de Cahora Bassa (HCB). HCB sells 65% of its generation to South Africa, and the remaining 35% is sold to the Northern regions of Mozambique and to Zimbabwe.

Currently, 78% of electricity generated come from Hydro, 16% from natural gas, 4% from fuel oil and 2% from solar. According to the integrated Master Plan for the power sector, Mozambique has the ambition to integrate 30% of its generation from renewables such as wind and solar in the next 20 years.

According to government data the national electrification rate is currently at 60.1% (9.6% secured by SHS), and by 2030 it is expected that universal coverage is reached with 68% grid connected households, 19% via Solar Home Systems and 13% via mini-grids. The recent reform of the sector laws and regulations such as the new electricity law (approved 2022) and Regulation for Access to Energy in Off-Grid Sites (2021) have created an enabling environment for private sector participation in electrification efforts.

Challenges continue to exist related to the underdeveloped transmission and distribution network, the lack of fiscal incentives, lack of access to commercial financing at favorable rates as well as last mile distribution difficulties.

The country works in cooperation with development partners through financial and technical assistance programmes to support electrification efforts by both public and private entities.

The first Independent Power Projects (IPPs) in Mozambique came online in 2015. These projects have paved the way for future IPP negotiations and auction mechanisms such as PROLER and GET FiT. A total of 575 MW from 16 RE IPP projects are either developed or in pipeline for execution.

Current gaps that have been identified as the power sector transforms, include:

- mechanisms to reduce off-taker risk for IPPs, planning and monitoring capacity for the government (specifically to define off-grid, on-grid and new generation sites),
- lack of distributed generation legal framework to foster development in this new market segment,
- solicited standardised bid mechanisms for off-grid generation (similar to on-grid processes such as PROLER and GET FiT), as well as
- the update of the Integrated Energy Masterplan of 2018 (ongoing) and the implementation rollout of the Energy Transition Strategy (2023).

# Status of Power Sector Transformation in Mozambique: the Government's Programme

Achieving universal access by 2030 and becoming a regional energy hub

## Accelerating access to electricity

On-going and scale up of grid & off-grid connections

Clean Cooking

## Transmission

Achieving a strong and smart grid with national reach and coverage to propel growth and development

## Reliable power to industrialize Mozambique

Solar energy auctions (+275 MW)

Development of **hydropower** for Mozambique and the region (+1500 MW)

**Gas** to power to provide quality electricity service (+530 MW)

## Regional powerhouse

To develop large indigenous resources economically, an aggregated demand is required, and regional trade would be critical

## Improve operational and financial performance

Sector Financial Modelling

Financial Strengthening Plan

Revenue Protection Program

Least-cost Planning

## Long-term Sector Reforms

- Tariff Reform
- Soft-unbundling
- Creation of an Independent System Operator (ISO)

## Current GET.transform TA Support on Long-Term Sectoral Reforms

*On- & Off-Grid Regulation and Market Development*

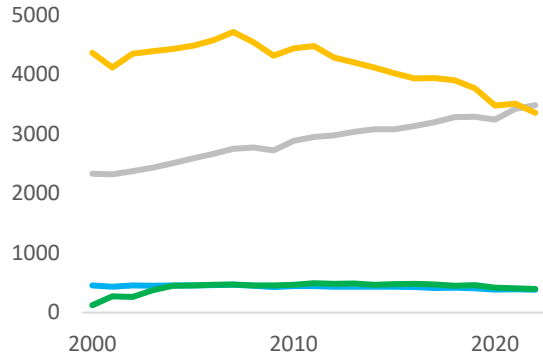
- New Electricity Law and its regulation
- Mini-grid regulatory framework and sub-regulations
- Tariff reform for off-grid
- Mini-grid tendering mechanism
- Distributed Generation
- Energy Transition Strategy
- Contribution to sectoral planning and coordination
- Capacity development

Source: World Bank, 2022

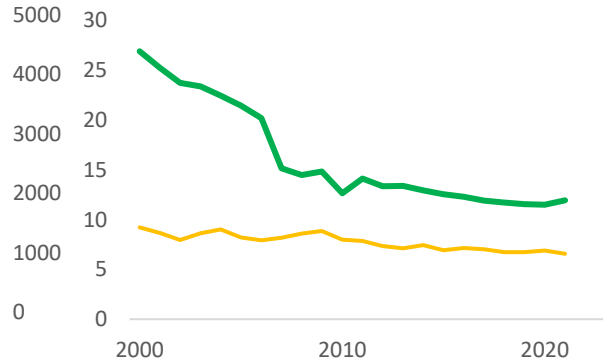
# Energy Snapshot

Sub-Saharan Africa World  
Mozambique South Africa

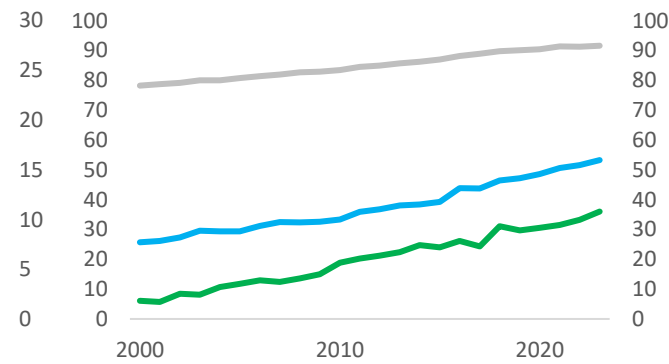
Per capita electricity consumption (kWh/person)



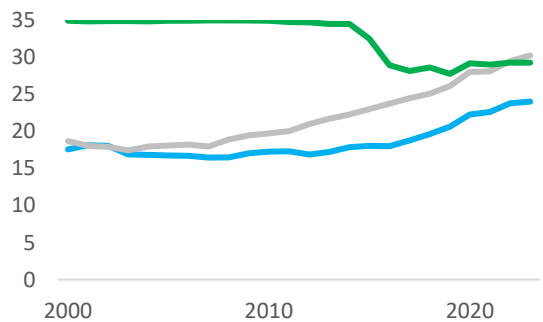
Energy intensity level MJ USD 2017



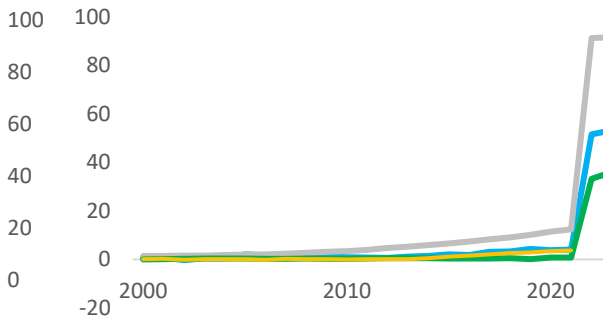
Access to electricity (%)



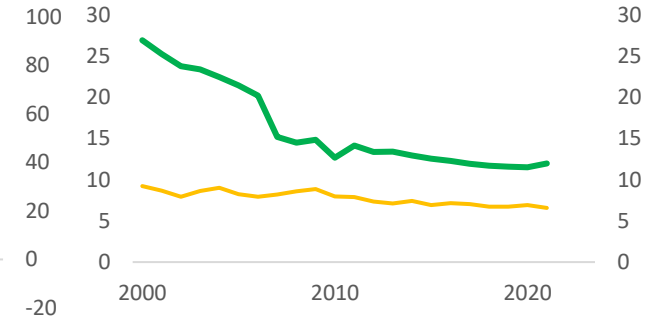
Share of electricity production from renewables (%)



Electricity production from renewable source/excl. hydro



Energy intensity level MJ USD 2017



Source: OurWorldInData.org ,data.worldbank.org and aler-energia.org

(\*) difference depends on whether number of people or areas/districts are considered.

## Key Figures

### Economy

Population: 34.63 million (2024)

GDP per capita (current US\$): 647.3 (2024)

GDP growth: 1.85% (2024)

### Environmental

CO2 emissions: 0.29 metric tons per capita (2023) – excl. LULUCF

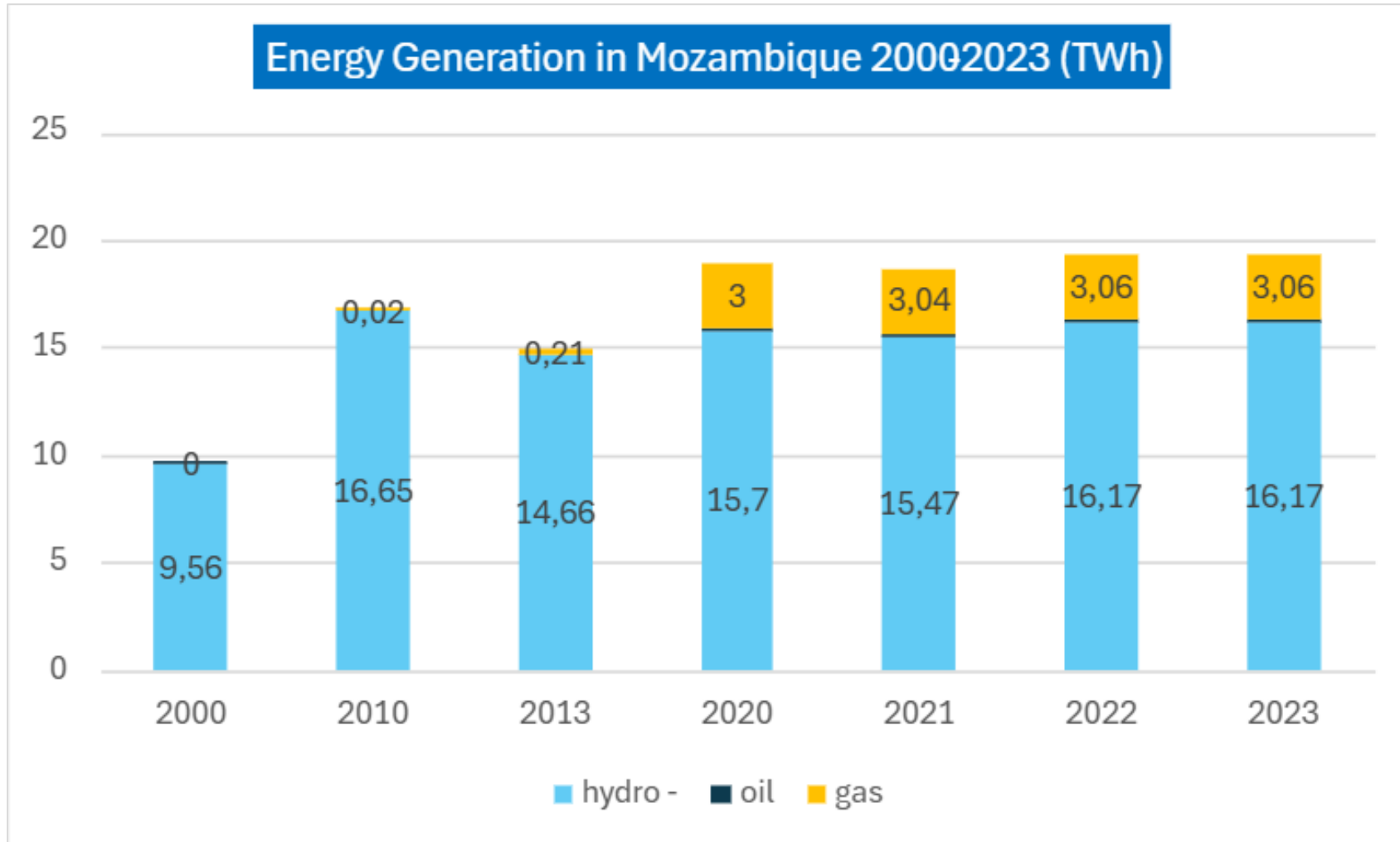
Electricity carbon intensity: 221 grams of CO2eq. per kWh (calculated on basis of 2023 data)

### Energy

Per capita electricity consumption (kWh/person): 207 kWh/person (2024)

Access to electricity (\*): 60,1% (2024, EDM), 36.0% (2023, WB)

# Generation Mix & Installed Capacity



Source: own elaboration based on OurWorldInData.org

## Key Statistics for Mozambique (2023)

Total installed capacity: 2,841 MW

Installed capacity by source:

- Hydro: 2,192 MW
- Gas: 442 MW
- HFO: 132 MW
- Solar: 75 MW

## Energy generated (2023):


- Hydro – 16.17 TWh
- Gas – 3.06 TWh
- Oil – 130 GWh
- Solar – 7 GWh
- Bioenergy – 130 GWh

Source: OurWorldInData.org and www.aler-energia.org

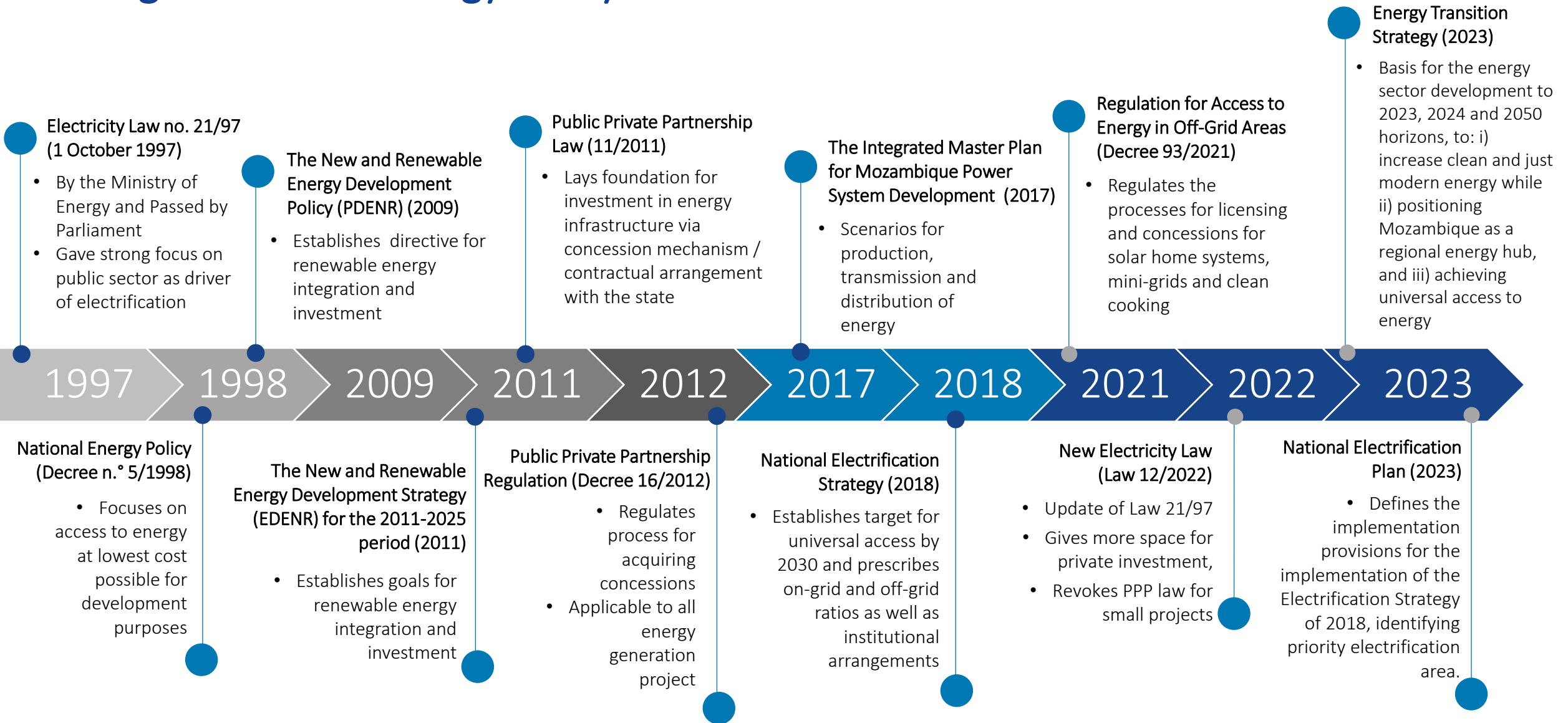
# Key Stakeholders in Current Power Supply Market

Institution	Description
Ministry of Mineral Resources and Energy ( <a href="#">MIREME</a> )	<div data-bbox="568 325 792 615" data-label="Image"> </div> <p>MIREME is the Government ministerial entity with oversight of the petroleum, electrical energy and mineral resource sectors including the development and setting of policies and strategies as well as oversight of public companies (such as ENH, EP, EDM, EP) and public regulatory institutions, including INP (Petroleum), ARENE (electricity and petroleum products) and INAMI (mineral resources).</p> <p><a href="#">DNE</a> (National Directorate of Energy); <a href="#">DPC</a> (Directorate for Planning and Cooperation); <a href="#">DNCH</a> (Directorate for Coal and Hydrocarbons);  <a href="#">DNPO</a> (Directorate for Planning and Budget, under Ministry for Economy and Finance)            UIPCE (Integrated Unit for Planning and Coordination)</p>
Energy Regulatory Authority ( <a href="#">ARENE</a> )	<div data-bbox="473 725 889 836" data-label="Image"> </div> <p>ARENE is the regulatory authority which supervises, regulates, and sanctions electricity supply activity, sets/approves tariffs and prices for electricity, fuels and cooking gas as well as the administration of tenders in these sectors including the tenders under the PROLER and other donor programmes.</p>
Fundo de Energia ( <a href="#">FUNAE</a> )	<div data-bbox="614 882 728 993" data-label="Image"> </div> <p>FUNAE is the public agency responsible for promoting and implementing off-grid energy access and fuels distribution, with a focus on renewable energy.</p>
Electricidade de Moçambique, EP ( <a href="#">EDM</a> )	<div data-bbox="542 1018 800 1229" data-label="Image"> </div> <p>EDM is the national vertically integrated public power utility, responsible for generation, transmission distribution and commercialisation of electricity in Mozambique.</p> <p>EDM is also responsible for the electrification programme of Mozambique and for the operation, dispatch and management of the National Transmission Network (RNT). EDM is subjected to the supervision of MIREME.</p>

# Key Stakeholders in Current Power Supply Market

Institution	Description
Hidroelectrica de Cahora Bassa ( <a href="#">HCB</a> ) 	Mozambique has three transmission systems for electric energy. HCB (Hidroelectrica de Cahora Bassa): The Northern system is fed from Cahora Bassa (Hidroelétrica de Cahora Bassa, HCB). Manica in the center. Gabinete de Implementacao do Projecto Hirdoelectrico de Mphanda Nkuwa (GMNK)
Gestor do Sistema Eléctrico Nacional (GSEN)	GSEN is the Manager of the National Electricity System. The institution was created under Law 21/22 (Electricity Law), pending formal constitution via approval by Council of Ministers. It is the first step towards unbundling EDM which so far performs GSEN's functions including market operation.
Renewable Energy Associations ( <a href="#">AMER</a> & <a href="#">ALER</a> ) 	<p>AMER (Associação Moçambicana de Energias Renováveis) is a national renewal energy association and ALER (Associação Lusófona de Energias Renováveis) is a lusophone renewable energy association who are both key actors in the renewable energy sector in Mozambique.</p> <p>AMER is a non-profit association whose mission is to promote renewable energy in Mozambique. ALER is a non-governmental development organisation with the mission to promote renewable energies in Portuguese-speaking countries. The association facilitates business opportunities by supporting the private sector and attracting financing and investment, by liaising with national and international authorities to create a favourable regulatory framework, and by coordinating all stakeholders, acting as a cooperation platform and the common voice of renewable energies in Portuguese-speaking countries.</p>
Private Sector  Self-Generators and/or IPP's	Key Private Sector Players:  Mini-grid Developers, RE businesses, Project developers, Financial Institutions and private financiers/investors, PAYGo companies, end users (PUE)

# Regulation and Energy Policy Instruments

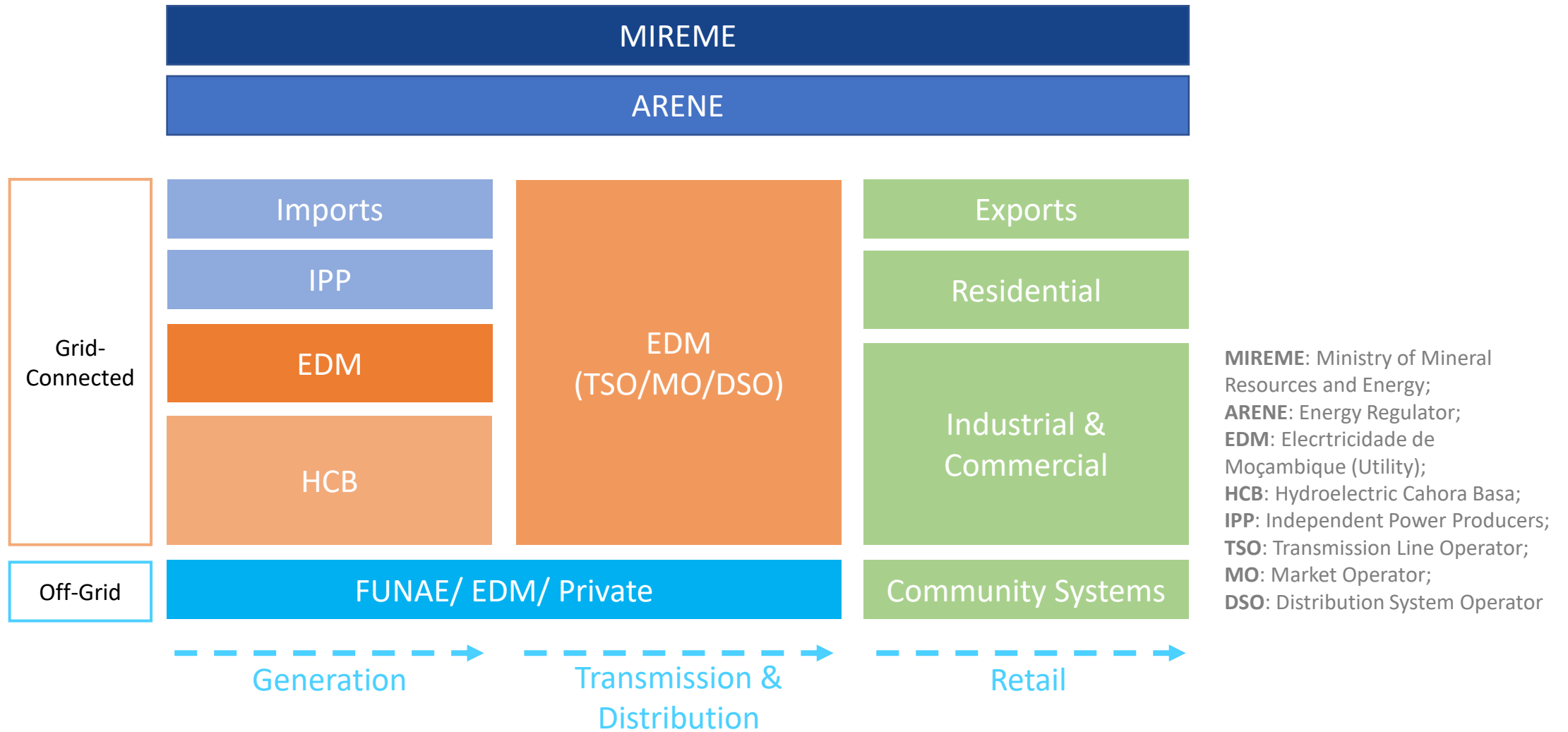


# Regulation and energy policy instruments

## Key Takeaways

- The energy sector in Mozambique has been transforming from a public investment-oriented sector (emphasised by the Electricity Law of 1997) to gradually promoting for private investment in generation for both on-grid and off-grid projects.
- Large-scale power generation investments are encouraged to follow a public-private partnership structure (via the PPP law and regulation), while smaller generation projects (such as mini-grids) are now exempt from the application of the PPP law as highlighted in the off-grid energy regulation and the new Electricity Law approved in 2022 (Law n. 12/2022).
- The regulatory framework puts a strong emphasis on the diversification of the energy matrix via new and renewable energy sources.
- Several specific regulations related to mini-grids were approved:
  - Regulation on concessions;
  - Regulation on tariffs,
  - Regulation on interconnection with main grid;
  - Norms and standards as well as environmental and social guidelines.
- Currently, the regulation for the application of the (new) Electricity Law of 2022 is being finalised.
- A framework for standardised RE tendering/auctions is needed.

# Institutional and market structure



Source: National Electrification Strategy & Plan for Universal Access to Energy by 2030

# Institutional and market structure

## Key Takeaways

- The energy sector in Mozambique is supervised by the Ministry of Mineral Resources and Energy. Current efforts towards enhanced governance and electrification planning shall guide the sector development to implement and achieve the objectives of the Energy Transition Strategy (2023).
- The Energy Regulator ARENE's functions extend to Economic Regulation (Tariff-Setting), Technical regulation (Quality of Service), and driving public procurement process for energy concessions.
- The national utility EDM acts as the Transmission Line Operator, the Market Operator as well as the Distribution Systems Operator. Power is acquired from imports, IPPS, own production and the largest generator Cahora Bassa Hydro Eclectic Dam. Electricity is retailed to end users or exported in the SADC region.
- IPPs have developed projects via solicited bids (such as the PROLER program) or unsolicited application for concessions.
- For off-grid, the Energy Fund (FUNAE) has largely been responsible for investing and operating public mini-grids (97 to date) as well as some stand-alone systems. EDM too has an off-grid directorate, however no projects have been developed to date. Private sector has worked mostly in the solar home system space, with around 5 PAYG operators. With the new off-grid energy regulation there is an enabling environment for private operators of Mini-Grids.
- The first public tender for mini-grid projects is currently ongoing with financial support by KfW. Other financiers/donors are a setting up mini-grid funding.

# GET.transform Advisory Services



LONG TERM  
ENERGY PLANNING



RENEWABLE ENERGY  
GRID INTEGRATION



ON-GRID REGULATION &  
MARKET DEVELOPMENT



OFF-GRID REGULATION &  
MARKET DEVELOPMENT

Overarching  
Activities

Capacity Building

Technical Assistance

Key Topics

Governance and Consultation

Grid Codes

Power Sector Strategy

Integrated Electrification  
Planning

Scenarios and Modelling

Transmission System  
Planning and Operation

Governance

Mini-Grid Framework

Adoption and Communication

Distribution System  
Planning and Operation

Market Mechanisms

Public Mini-Grid Incentives

# State of Play: Long Term Energy Planning 1/2



## LONG TERM ENERGY PLANNING

**Energy Transition Strategy (2023-2050)**, adopted by Council of Ministers in 2023 focuses on achieving universal access while positioning Mozambique as a green energy hub for the region. The strategy builds on four pillars: i. modern energy system based on renewable energy sources; ii. Green industrialization via industrial corridor; iii. universal energy access to modern energy; and iv. adoption of clean energy for transport. Implementation roadmaps are being elaborated.

**Integrated Energy Masterplan (2018-2043)** A 25-year national energy plan requiring US\$34bn investment will expand capacity from 2.6 GW to 17.7 GW. The 15 GW of new capacity will be primarily gas-fired (8.5 GW), with hydro (4.3 GW), coal (1.4 GW), solar (530 MW) and wind (150 MW) comprising the remainder. An updated version of this document has been initiated.

### Electrification Planning:

- i. On the basis of **National Electrification Strategy**, the National Electrification Plan was adopted in 2023.
- ii. Currently, the exercise of the **Least-Cost Electrification Planning** is underway, which will determine the on-grid and off-grid areas and establish pipeline for viable and bankable projects.
- iii. The **off-grid electrification plan** approved in 2023 aims to achieve universal energy access in Mozambique by 2030. It is estimated an investment of USD 2.5B (1-2B for mini-grids and 500 million for solar home systems). 13% (1.3 million) of households in the country are expected to be connected via mini-grids and 19% (2 million) via solar home systems.



## RENEWABLE ENERGY GRID INTEGRATION



## ON-GRID REGULATION & MARKET DEVELOPMENT



## OFF-GRID REGULATION & MARKET DEVELOPMENT

- There is a need to **strengthen the planning capacity of MIREME**. The ministry has a lack of integrated planning and coordination; lack of criteria for prioritizing projects; and a need **to better coordinate activities between EDM and FUNAE**. This can be delivered via short term trainings, embedded support or software to facilitate planning and forecast energy needs/projects and priorities.
- There is a need to perform a **strategic environmental assessment** of the energy sector as a means to prioritize projects and develop a **clear strategy for development of the sector** (environmental integrity).
- The off-grid energy roadmap focuses most analysis on SHS. There is a need **to assess the investment requirement and investment plan for mini-grids** as well.

# State of Play: Long Term Energy Planning 2/2



LONG TERM  
ENERGY PLANNING



RENEWABLE ENERGY  
GRID INTEGRATION



ON-GRID REGULATION &  
MARKET DEVELOPMENT



OFF-GRID REGULATION &  
MARKET DEVELOPMENT

## CHALLENGES AND OPPORTUNITIES

- Several programmes are supporting MIREME with **long-term energy planning**; however capacity gaps are still a challenge.
- Opportunity to develop **synergies with existing programmes** to provide short term technical assistance in specific outputs needed for **long-term planning** (update of Integrated **Energy Masterplan**; a strategic **Environmental Assessment for the energy sector**, etc).
- Support MIREME in the implementation of the national **Energy Transition Strategy** for a just green and resilient energy system transformation, and development of pipeline of viable bankable projects.
- The **Least-Cost Electrification Planning (LCEP)** is currently underway however, its successful implementation would require a clear governance blueprint, which for the moment remains lacking, creating challenges for the sector.

# State of Play: Renewable Energy Grid Integration



## LONG TERM ENERGY PLANNING



## RENEWABLE ENERGY GRID INTEGRATION

According to the “Integrated Master Plan Mozambique Power System Development”, of the 6,000 MW additionally installed capacities over the next 25 years, 30% that are generated come from RE such as solar and wind (10% for domestic power supply = 600 MW; 20% for regional consumption = 1,200 MW). Hydro energy will continue to play a leading role with existing Cahora Basa installed capacity and new generation from Mphanda Nkuwa, Cahora Bassa North, Lupata and Boroma (totaling 3,600 MW). The rest is projected to be fed by nationally explored natural gas.

EDM has a directorate for RE and energy efficiency in order to dedicate itself exclusively to topics related to renewable energies. It is currently leading the renewable energy auction program (PROLER) launching 3 solar IPPs and 1 wind project as a means to integrate renewables into the grid. Similarly, the GET FIT program is to provide a top-up finance mechanism to plug in additional RE generation capacity.

The National Energy Control and Dispatch Center (NCC) financed by KfW and Sweden will further contribute to the integration of RE into the grid due to automatic balancing of energy supply and demand.



## ON-GRID REGULATION & MARKET DEVELOPMENT



## OFF-GRID REGULATION & MARKET DEVELOPMENT

- **Develop a standard for grid integration** for Embedded Generation (EG).
- Develop regulatory framework for **Energy Storage Systems**.
- **Build capacity on Renewable Energy Integration**.
- Capacitation on **combined demand/load forecasting** with generation.
- Establish the VRE (solar and wind) power **forecasting system**.
- Establish a **power system operator** and a clear **regulatory framework on transmission** for increased RE power evacuation.

## CHALLENGES AND OPPORTUNITIES

- Collaboration with EDM is essential.
- Synergies with the National Control Center (NCC) project and build capacity will be important.
- Collaboration with Norway and other partners on RE power forecasting capacity building.

# State of Play: On Grid Regulation & Market Development



## LONG TERM ENERGY PLANNING



## RENEWABLE ENERGY GRID INTEGRATION



## ON-GRID REGULATION & MARKET DEVELOPMENT



## OFF-GRID REGULATION & MARKET DEVELOPMENT

**THE NEW ELECTRICITY LAW (NEL):** The NEL's objective is to accelerate universal access and to promote competitiveness, efficiency and sustainability of and investment in power supply activities. The law takes account of the need to adjust the legal framework for the Mozambican power sector to the technological and financial evolution and the new sources of energy. It addresses the constraints and barriers regarding private investment and refers new policy and strategy documents prepared by the Government of Mozambique (GoM) such as the National Electrification Strategy. Among other reforms the NEL:

- (i) Revokes the application of the PPP law to smaller energy sector projects with the aim of reducing the period required for getting concessions and licenses significantly
- (ii) Simplifies the private investment procedures and clarifies taxes in order to make the Law coherent with NES
- (iii) Covers all needed regulations and administrative procedures in order to guarantee competitiveness, transparency, non-discrimination and predictability for private investment into power generation
- (iv) Caters for the restructuring of the power sector by underlining EDM's responsibility for transmission and distribution and the significance of independent power producers (IPPs) for power generation.

- There is a need to clearly **define fiscal incentives for IPPs, and simplify investment procedures** for developers (including exchange control and repatriation of funds)
- Continuous **support for government to** evaluate both solicited and unsolicited **proposals for IPP concessions**, as well as to develop more efficient **procurement processes**.
- **Distributed Generation is not yet regulated** in Mozambique. It features in the NEL as a sub-sector which still needs to be regulated.
- **Support the utility and regulator with tariff setting** study as a means to reach objective of cost reflective tariffs
- **Support EDM with a regional trade strategy** (SAPP energy market trade optimization)
- Assessment on quality of **service performance of the utility** to develop a **quality of service** strategy /regulation (EDM / ARENE)
- Develop a quality of service **code for on-grid** (EDM / ARENE)

## CHALLENGES AND OPPORTUNITIES

- Several programmes are already supporting on-grid markets and regulations such as EU, AFD (via PROLER), AfDB via SEFA and KfW, SIDA (via NCC).
- Pilot and support the sector in **materialising the Distributed Generation (DG) framework developed with support of GET.transform**, no other programme currently covers this topic. DG is referenced in the NEL **and is a priority to regulate (incl. viability studies)** - regulation currently under development.
- Implement standardised competitive **tender processes, transactional advisory services, and contract management/QAQC**.

# State of Play: Off Grid Regulation & Market Development 1/2



## LONG TERM ENERGY PLANNING



## RENEWABLE ENERGY GRID INTEGRATION

**Regulation for access to energy in off-grid areas (decree 93/21)** aims to create a positive environment for development of the off-grid energy projects such as mini-grids and solar-home systems. The regulation gives clear procedures for private investment in the sector. The main regulation is supported by more specific regulations that cover tariffs, interconnections with the national grid, norms and standards, environmental and social aspects, concessions, and registration of mini-grids and energy services.

**First national public tender for mini-grid projects** is ongoing with support of KfW (GET FIT), currently in the pre-qualification phase. The international competitive process will allow to install a total capacity of up to 3 MW in the Nampula province by developing four lots of mini-grids of 25 kWp and 100 kWp capacity and BESS.



## ON-GRID REGULATION & MARKET DEVELOPMENT



## OFF-GRID REGULATION & MARKET DEVELOPMENT

- Support with **geospatial mapping of off-grid location and priority projects** is important. This information is critical for off-grid electrification planning purposes and attracting investment;
- The regulatory framework has already been established; however, it is important to **support the government in the implementation of this framework** (granting concessions, revising proposals and tariffs, monitoring of projects, etc)
- To reach targets of 13% of population electrified by mini-grids, it is necessary to **launch an ambitious procurement program** to attract investment for priority sites. The government requires a similar process used in on-grid projects (PROLER) which can be applicable to the context of off-grid.
- Support is required for **assessing the initial viability of selected off-grid locations** for mini-grid projects. This requires pre-feasibility studies to understand which needs to be the installed capacity, number of connections, types of connections (commercial, domestic, industrial) and estimated investment cost. This information is used **to prepare a possible tender** for the selected sites.
- Building on the LCEP site identification, pre-feasibility support will enable **pipeline of bankable projects for off-grid**.
- **E-waste management strategy and supporting regulation for off-grid sector** (specifically focused on SHS components) is essential and not yet developed.

# State of play: Off Grid Regulation & Market Development 1/2



LONG TERM  
ENERGY PLANNING



RENEWABLE ENERGY  
GRID INTEGRATION



ON-GRID REGULATION &  
MARKET DEVELOPMENT



OFF-GRID REGULATION &  
MARKET DEVELOPMENT

## CHALLENGES AND OPPORTUNITIES

- ARENE is still in the process of **establishing a standardised tender process** for mini-grid and the digitalisation of e-tendering alongside the Ministry of Finance.
- Continue **developing a mini-grid tender mechanism** → ongoing TA support by GET.transform, two-phased approach: i. design, ii. implementation (via piloting) supported by the **operationalisation of e-tendering**.
- **Continued technical assistance with the mini-grid tariff modeling** (tool developed by GET.transform) will be needed as proposals (whether solicited or unsolicited) for mini-grids are received by ARENE.
- Support the government with technical **assistance to implement the practical administrative steps** as per the new regulation for access to energy in off-grid areas.
- Opportunity to **enhance FUNAE's capacity** to deliver on electrification by consolidating its mandate and streamlining functions.

# Technical Assistance (TA) options



## LONG TERM ENERGY PLANNING

Support the Least-Cost Electrification planning by providing modeling and data input through MV distribution grid mapping (also for power system planning and O&M)

Build capacity in Long Term Energy planning

Support the implementation of energy transition strategy

Review the power system planning procedures

Integrate climate resilience into power system planning infrastructure and investment planning

Support to elaborate on energy sector NDCs

Support site identification and site development planning via digital platform for off-grid and on-grid project mapping, monitoring and planning purposes

Support with energy efficiency regulation, training and capacity building

Support with the update of the Integrated Energy Masterplan



## RENEWABLE ENERGY GRID INTEGRATION

Conduct VRE grid integration assessment to support increased RE penetration according to energy transition strategy

Enhance VRE power forecasting capacity



## ON-GRID REGULATION & MARKET DEVELOPMENT

Define strategic access modalities to SAPP market

Implement simplified licensing for Distributed Generation.

Standardisation of RE public procurement processes.

Support to participate in international exchange with peer utilities to learn from best practices.

Support regulatory provisions for the implementation of the Electricity Law (IPP and DG)

Support with Distributed Generation framework development, training and capacity building

Development of energy storage regulatory framework



## OFF-GRID REGULATION & MARKET DEVELOPMENT

Support to develop and implement a Mini-Grid Tender Mechanism to be used by ARENE

Operationalise e-tendering for mini-grid public tenders

Continue adapting/calibration of mini-grid tariff tool and training

Strengthens FUNAE's mandate and build capacity in the function of Fund Manager and support the development of subsidy manual

Provide technical assistance to FUNAE on pre-feasibility studies of off-grid projects

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## COUNTRY WINDOW SET-UP



# Country Window Set-Up

## Country

- 1 x Country Window Coordinator
- 1 x Energy Advisor
- Synergy is ensured with the GET.invest Country Window, and the programmes PCTE and EnDev.
- The Mozambique Country Window is implemented in coordination with the GIZ Energy Cluster Mozambique in Maputo.

## GET.transform HQ

- 1 x Africa Partnerships Coordinator for overarching CW strategy support.
- 1 x Advisory Services Focal Point for Long-Term Energy Planning and Renewable Energy Grid Integration.
- 1 x Advisory Services Focal Point for On- and Off-Grid Regulation and Market Development.

## Technical Assistance Partners

- Expert Consulting Pool for Long-Term Energy Planning and Renewable Energy Grid Integration.
- Expert Consulting Pool for On- and Off-Grid Regulation and Market Development.
- Local Consulting Experts.
- International Partner Organisations.

# Interaction with GIZ Mozambique energy portfolio

GET.TRANSFORM	GET.INVEST	ENERGISING DEVELOPMENT (ENDEV)	GREEN PEOPLE'S ENERGY (GBE)	SUPPORTING CLIMATE POLICY AND ENERGY TRANSITION
Power Sector Transformation	Mobilising Investment in Renewable Energy	PtX Market Development	Rural Electrification, Productive Use and Capacity Development	Strengthen Institutional Capacities for Climate Policy
<p>Long-Term Energy Planning</p> <ul style="list-style-type: none"> <li>Support to MIREME on Energy Transition Strategy</li> </ul> <p>Renewable Energy Grid Integration</p> <ul style="list-style-type: none"> <li>Scaling Distributed Generation, focus on C&amp;I</li> </ul> <p>On-Grid Regulation &amp; Market Development</p> <ul style="list-style-type: none"> <li>Scaling Distributed Generation, focus on C&amp;I</li> </ul> <p>Off-Grid Regulation &amp; Market Development</p> <ul style="list-style-type: none"> <li>Development of Mini-Grid Regulations and Mini-Grid Tendering Mechanism</li> </ul>	<p>Private sector mobilisation</p> <p>Project pipeline development</p> <p>Capacity strengthening of public actors for market development</p> <p>Interoperability of digital tools aiding sector development.</p>	<p>Supporting sustainable market development for renewable energies (PV, ICS, MHP)</p> <p>Increasing the connection rate of low-income households to the electricity grid</p> <p>Strengthening education and training opportunities for renewable energies</p>	<p>Creation of decentralised energy supply to strengthen social institutions and productive use</p> <p>Strengthening education and training opportunities for RE</p> <p>Mobilising private investment and boosting demand for decentralised RE</p>	<p>Dialogue/exchange for evidence-based climate policy</p> <p>Energy balances and climate data evaluation</p> <p>Nationally determined contributions (NDC) reporting</p>

# Alignment with other Development Partners

EU-SUPPORTED				
GET.TRANSFORM	ERC/EU-TAF/PROLER	OFF-GRID FUNDING PROGRAMMES	WORLD BANK	AFDB
Power Sector Transformation	Renewable Energy, Rural Electrification, Resilience of Energy Systems	Renewable Energy, Rural Electrification: Mini-Grid Funding Windows	Renewable Energy, Expanding Energy Access	Renewable Energy, On & Off-Grid Electrification, Upgrading Energy Infrastructure
Long-Term Energy Planning <ul style="list-style-type: none"> <li>Support to MIREME on Energy Transition Strategy</li> </ul>	Support through ERC on Energy Efficiency, Energy Planning and information system, standardisation of financial models, RE strategy and vRE study	<b>KfW / GET FiT:</b> technical/financial support to MIREME for rural electrification, with 10-15 mini-grids projects, TA on PPA/PPF	Support to energy reform and access, including TA to unbundle EDM and accelerate the use of electricity for economic growth, and social services	Design of mini-grid funding window SEFA with potential collaboration on future tendering cycles
Renewable Energy Grid Integration <ul style="list-style-type: none"> <li>Scaling Distributed Generation, focus on C&amp;I (in collaboration with GET.invest)</li> </ul>	Energy access action being scoped by EU-TAF to support implementation of national electrification strategy (based on least-cost approach)	<b>BRILHO/+Sol:</b> funding of mini-grids, SHS, TA on regulatory issues and feasibility. TA to companies.	Support on energy access via grid densification and off-grid electrification ProEnergia	Technical Assistance through AMAP (Africa Mini-Grid Acceleration Programme)
On-Grid and Off-Grid Regulation & Market Development <ul style="list-style-type: none"> <li>Development of Mini-Grid Regulations and Mini-Grid Tendering Mechanisms</li> </ul>	On-grid: support to auction processes for RE generation projects through the PROLER Programme	<b>BGFA:</b> mini-grid funding with a focus on PUE, institutional support services for increased private sector participation and site selection	Policy and planning support: support to MIREME on National Electrification Strategy, support to EDM to update the Integrated Masterplan (2018-2043)	Improve generation, transmission, and distribution of power supply networks and energy efficiency – support to implement the Mozambique Renewable Energy Integration Program (MREP)

GET.transform chairing ESWG (Energy Sector Working Group) – Enhanced TA coordination, policy & regulation priority checklist tool

# Thank You for Your Attention



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