
REGULATORY POLICY AND GAP ANALYSIS

Barriers to and
Opportunities for
Accelerated
Renewable Energy
Deployment
in Mozambique



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GLOSSARY

AFD	<i>Agence Française de Développement</i> – French Development Agency supporting renewable energy and infrastructure projects.
AFDB	<i>African Development Bank</i>
ARENE	<i>Autoridade Reguladora de Energia</i> – Energy Regulatory Authority
BGFA	<i>Beyond the Grid Fund for Africa</i>
CCUS	<i>Carbon Capture, Utilisation, and Storage</i> – a technology for capturing and reusing or storing carbon dioxide emissions.
CO2	<i>Carbon Dioxide</i>
Constitution	<i>Constitution of the Republic of Mozambique</i>
COP	<i>Conference of the Parties</i> – annual meeting organized by the United Nations to address climate change and climate actions.
CSR	<i>Corporate Social Responsibility</i> – a company's commitment to sustainable development and community benefit-sharing.
CTRG	<i>Central Térmica de Ressano Garcia</i> – Ressano Garcia Thermal Power Plant
CTB	<i>Central Térmica de Beleluane</i> – Beluluane Thermal Power Plant
CTT	<i>Central Térmica de Temane</i> – Temane Thermal Power Plant
DNE	<i>Direcção Nacional de Energia</i> – National Directorate of Energy, responsible for national energy policy and planning.
DUAT	<i>Direito de Uso e Aproveitamento da Terra</i> – legal right to use and benefit from land (land-use right).

EDM	<i>Electricidade de Moçambique</i> – Mozambique’s national electricity utility.
EIA	<i>Environmental Impact Assessments</i> – process of evaluating environmental consequences of proposed projects.
ESIA	<i>Environmental and Social Impact Assessments</i>
EU	<i>European Union</i>
FPIC	<i>Free, Prior and Informed Consent</i> – principle recognising communities’ right to approve projects affecting their land.
FUNAE	<i>Fundo de Energia</i> – Energy Fund, promoting renewable energy and rural electrification.
GoM	<i>Government of Mozambique</i>
GWh	<i>Gigawatt-hour</i> – a unit of energy representing one billion watt-hours.
HCB	<i>Hidroeléctrica de Cahora Bassa</i> – Hydroelectric of Cahora Bassa, Mozambique’s major hydroelectric power producer.
HFO	Heavy fuel oil
IPP	<i>Independent Power Producer</i> – a private entity that generates and sells electricity.
JETS	<i>Just Energy Transition Strategy</i> – Mozambique national framework for achieving an equitable renewable energy transition.
Km	<i>Kilometre</i> – unit of length equal to 1,000 metres.
KW	Kilowatts
LDA	<i>Local Development Agreement</i> – legally binding contract between a project developer and local communities.
LNG	<i>Liquefied Natural Gas</i>
MIREME	<i>Ministério dos Recursos Minerais e Energia</i> – Ministry of Mineral Resources and Energy

MAAP	<i>Ministério da Agricultura, Ambiente e Pescas – Ministry of Agriculture, Environment and Fishery</i>
MTA	<i>Ministério da Terra e Ambiente – Ministry of Land and Environment (no longer in existence)</i>
MTCO_{2e}	Metric Tons of Carbon Dioxide Equivalent
MW	<i>Megawatt – a unit of power equal to one million watts.</i>
NDC	<i>Nationally Determined Contribution – Mozambique’s climate commitments under the Paris Agreement.</i>
Nefco	<i>Nordic Environment Finance Corporation</i>
PPA	<i>Power Purchase Agreement – contract between an electricity generator and a buyer outlining terms for sale and purchase of power.</i>
PPP	<i>Public-Private Partnership – long-term contract between government and private sector partner.</i>
PV	<i>Photovoltaic Panel</i>
RE	<i>Renewable Energy</i>
REN	<i>Rede Eléctrica Nacional – National Electricity Grid</i>
SADC	<i>Southern African Development Community – regional intergovernmental organization in Southern Africa.</i>
SAPP	<i>Southern African Power Pool – regional electricity cooperation platform of SADC.</i>
Sida	<i>Swedish International Development Cooperation Agency</i>
SNV	<i>Swedish Government and Netherlands Development Organisation</i>
UNDP	<i>United Nations Development Programme</i>
WB	<i>World Bank</i>

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EXECUTIVE SUMMARY

Mozambique stands at a critical juncture in its energy transition. Despite abundant renewable resources — solar, hydro, wind, and biomass — only 36% of the population has access to electricity,¹ revealing deep and ongoing inequalities in energy access and opportunity. This reflects energy poverty and limited grid expansion. Much of the electricity produced is exported — particularly from *Hidroeléctrica de Cahora Bassa (HCB)* to other countries, including South Africa. The national utility, *Electricidade de Moçambique (EDM)* operates with tariffs that continue to cause it to face financial strain, undermining its financial sustainability. Limited private sector participation, coupled with a centralised electricity market, restricts access and affordability.

The Government of Mozambique (**GoM**) has made progress towards addressing these structural challenges through the adoption of the *Electricity Law (2022)*, *Renewable Energy Code (2023)*, and the *Just Energy Transition Strategy (2023)*. However, to be effective, these frameworks require implementation across energy laws. Their main objectives are to increase solar, wind, and hydroelectric energy but also place a big focus on liquefied natural gas (**LNG**) projects, which are problematically cited as being central to energy policy while overlooking their environmental and social impacts and the risk of stranded assets. These legal frameworks rightfully argue that renewable energy projects should decarbonise the energy sector and set certain goals in this regard. They also endorse ideals of promoting energy access and energy justice.

Incorporating gender and energy justice into the Just Energy Transition Strategy (**JETS**) and related frameworks will be critical for equitable progress. Women in rural areas are disproportionately affected by energy poverty, yet their participation in the sector remains minimal. Targeted policies and funding can unlock women's leadership and entrepreneurship in renewable energy value chains, ensuring the benefits of the transition are widely shared.

¹ World Bank. (2023). Access to electricity (% of population) – Mozambique. The World Bank Group. Retrieved from <https://data.worldbank.org/indicator/EG.ELC.ACCS.ZS?locations=MZ>



Key gaps persist within Mozambique's policy and regulatory framework:

- There is no clear, dedicated *Renewable Energy Law* consolidating incentives, licensing, and community participation mechanisms.
- The current tariff regime discourages private investment and does not guarantee affordability for low-income users.
- Public participation and benefit-sharing processes remain inconsistent, with communities and women often excluded from meaningful decision-making.
- Overlapping mandates among *Ministério dos Recursos Minerais e Energia (MIREME)*, *Autoridade Reguladora de Energia (ARENE)*, *Fundo de Energia (FUNAE)*, and **EDM** create confusion, slow approvals, and limit accountability.
- Energy justice and gender equality are not yet integrated into implementation strategies or monitoring frameworks.

Though private energy producers, including small scale and community owned projects, should be a priority, it must come with government control to **implement justice through:**

- (1) **Clear tariff parameters**, including least cost and affordability for low-income consumers;
- (2) **Robust and transparent public participation processes**, including meaningful involvement of all in national and local energy planning;
- (3) **Fair and transparent compensation mechanisms** for communities affected by energy projects; and
- (4) **Secure land tenure** including respect of Free, Prior and Informed Consent (**FPIC**) for communities.

Government's roles and obligations in terms of clean, renewable energy must be more specific with well-defined goals.

These goals need to be monitored and enforceable should they not be met. However, goals and initiatives as set out in law, and more so policy, seem to be more of an ambition than an enforceable obligation. There is also no clear remedy to enforce these obligations for communities.

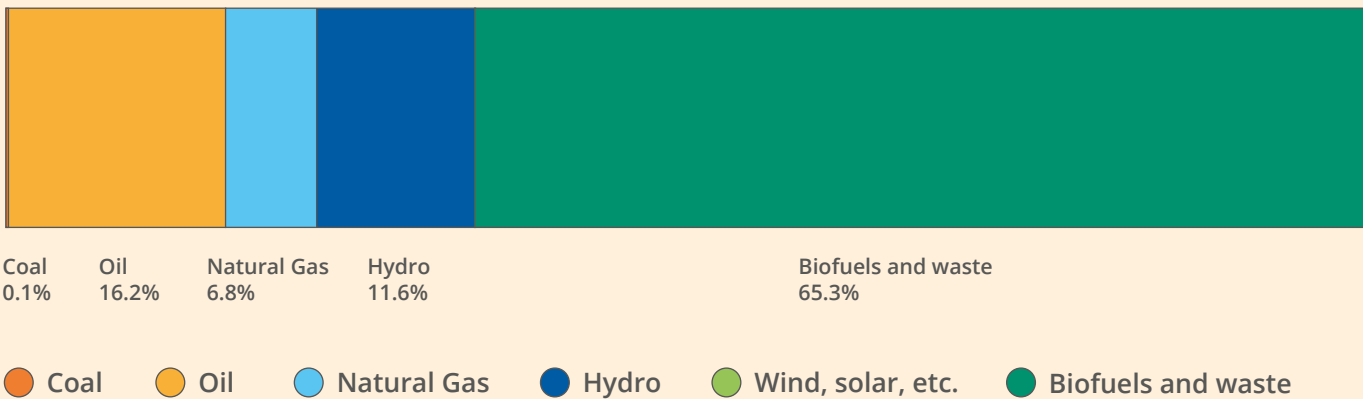
Safeguards are essential to ensure policies and laws are effectively implemented to make clean and affordable energy access a right for all Mozambicans. This may require the state to provide free or subsidised electricity to expand access and stimulate the growth of renewable energy markets, while recognising its constitutional obligation to deliver basic services, including electricity. Local authorities must also be empowered to develop and implement energy solutions together with communities to ensure that the roll out is cost-effective, environmentally friendly, and socially inclusive.

A just energy transition in Mozambique will, therefore, require not only technical solutions but also social and regulatory transformation. By aligning legislation, improving institutional governance, and embedding equity and participation in implementation, Mozambique can turn its renewable energy potential into a driver of inclusive and sustainable development.

The current energy usage mix in Mozambique is predominantly biomass, with high levels of energy poverty and lack of access to energy. Reasons for this include that people in Mozambique are unable to access the grid,² either because there is simply no physical grid access, or the connection fees are unaffordable.³ Owing to the lack of access to the grid, “demand” is seemingly low resulting in almost 30% of the energy produced by EDM in 2022, including from HCB, exported.⁴

According to the International Energy Agency, in 2021, Mozambique’s total energy-related CO2 emissions were 7 Mt CO2, with the energy supply from biofuels and waste (65.3%), oil (16.2%), hydropower (11.6%), and natural gas (6.8%).⁵ Although electricity generation in Mozambique is dominated by hydropower (82%), followed by natural gas (16.1%), oil (0.9%), biofuels (0.6%), and solar PV (0.3%), energy supply for internal use in Mozambique is dominated by biofuels, as shown in the figure below.⁶ Currently, wind energy does not play a part in the energy mix, although it was reported in May 2024 that construction of a 120 MW Wind Power Plant would begin in the second half of 2024, though there is no confirmation of this. There is good wind potential estimated at 4.5 GW.⁷

Total Energy Supply, Mozambique, 2021



Source: International Energy Agency. Licence: CC BY 4.0

In 2019, electricity generated from renewable resources was 7,089 GWh — this included 3,651 GWh from HCB, 2,491 GWh from other Independent Power Producers (IPPs), 710 GWh from thermal, 163 GWh from other hydro plants, and 74 GWh from imports.⁸ The total installed capacity by the end of 2022 was 2,799 MW from hydropower, gas, heavy fuel oil and solar.

² Energypedia. (n.d.). Mozambique energy situation. Retrieved from https://energypedia.info/wiki/Mozambique_Energy_Situation
³ Energypedia. (n.d.). Mozambique energy situation. Retrieved from https://energypedia.info/wiki/Mozambique_Energy_Situation
⁴ Green Building Africa. (2023, February 17). Mozambique exported 30% of energy production in 2022. Retrieved from <https://www.greenbuildingafrica.co.za/mozambique-exported-30-of-energy-production-in-2022/>
⁵ International Energy Agency. (n.d.). Mozambique: Energy mix. Retrieved from <https://www.iea.org/countries/mozambique/energy-mix>
⁶ International Energy Agency. (2021). Mozambique: Electricity. Retrieved from <https://www.iea.org/countries/mozambique/electricity>
⁷ Club of Mozambique. (2023, March 2). Mozambique: Globeleq to start building wind power plant in Namaacha. Retrieved from <https://clubofmozambique.com/news/mozambique-globeleq-to-start-building-wind-power-plant-in-namaacha-257991/>
⁸ See FN 3.

The GoM has a target of providing clean energy to all Mozambicans by 2030.⁹ The Electricity Law defines renewable energy as electrical energy produced from renewable sources like solar, geothermal, tidal, wave, ocean, hydro, biomass, landfill gas, gases from wastewater treatment plants, biogas and hydrogen. However there is no definition for clean energy.

The Energy Fund (**FUNAE**) led an exhaustive Renewable Atlas survey process for Mozambique between 2011 and 2013,

providing the most recent evaluation of Mozambique's renewables. The results are available online.¹⁰ Mozambique has good potential for solar, biomass, hydropower, geothermal, maritime and wind resources. This potential is estimated to be 23,000 GW of solar, 19 GW of hydro, 4.5 GW of wind and 2 GW of biomass. The Atlas identified priority projects comprising of 5.6 GW of hydro, 1.1 GW of wind, 0.6 GW of solar, 0.13 GW of biomass and 20 GW of geothermal.¹¹ These GW values should be used as a reference point for the potential of renewable energy.



⁹ Freischlager, L. (2022, May 18). *Opinion: A just energy transition for Mozambique – and Mozambicans*. Club of Mozambique. Retrieved from <https://clubofmozambique.com/news/opinion-a-just-energy-transition-for-mozambique-and-mozambicans-by-lothar-freischlager-228112/>

¹⁰ Fundo de Energia (FUNAE). (n.d.). *Resources*. Retrieved from <https://storymaps.arcgis.com/stories/cf1e942ad27048f1947b2a5d0368ef02>. Gesto Energy Consulting. *Projects Renewable Energy Atlas of Mozambique*. Retrieved from <https://gestoenergy.com/project/renewable-energy-atlas-of-mozambique/>

¹¹ Development Bank of Southern Africa (DBSA). (2017, September). *Renewable energy opportunities for DBSA in SADC: Growing a focused sustainable and developmental DBSA* (p. 41). Retrieved from <https://www.dbsa.org/sites/default/files/media/documents/2022-11/Renewable%20Energy%20Opportunities%20for%20DBSA%20in%20SADC%20-%20Sep%202017.pdf>

Energy Export and Regional Dynamics

The HCB is 85% owned by the state, 7.5% by the Portuguese company Redes Energeticas Nacionais, 4% by Mozambican citizens, companies and institutions and 3.5% of the shares are retained.¹² It is the largest hydroelectric power generation company in Southern Africa.¹³ Operating as an IPP, it supplies energy to EDM and others.¹⁴ It has an installed capacity of 2,075 MW and has a Power Purchase Agreement (PPA) with South Africa until 2029.¹⁵ Under this agreement, most of its electricity is exported to South Africa via a 1,420 km high voltage line (starting in Songo and terminating at the Apollo converter station in Gauteng Province, South Africa).¹⁶ The remainder

of the HCB-generated power is sold to the northern regions of Mozambique and to neighbouring countries.¹⁷

The Cahora Bassa dam has an enduring colonial legacy.¹⁸ According to Isaacman and Morton, the dam — completed a year before the end of Portuguese rule — was catastrophic for the approximately half-million people who depended on the river and the delta for their livelihoods.¹⁹ Tens of thousands of people were forced to relocate when the dam was constructed, and the scheme's flow management regime, which is designed to maximize export of electricity to South Africa, destroys dry-season crops and drastically reduces fishing.²⁰



¹² Club of Mozambique. *Mozambique: HCB has contributed two billion dollars to state coffers from 2007 to 2025 – AIM Report*. Retrieved from <https://clubofmozambique.com/news/mozambique-hcb-has-contributed-two-billion-dollars-to-state-coffers-from-2007-to-2025-aim-report/>.

¹³ Gebreslassie, M. G., Cuvilas, C., Zalengera, C., & others. (2022). *Delivering an off-grid transition to sustainable energy in Ethiopia and Mozambique*. *Energy, Sustainability and Society*, 12(23). <https://doi.org/10.1186/s13705-022-00348-2>

¹⁴ Ibid.

¹⁵ Power Technology. (n.d.). *Power plant profile: Cahora Bassa, Mozambique*. Retrieved from <https://www.power-technology.com/data-insights/power-plant-profile-cahoro-bassa-mozambique/>

¹⁶ Creamer, T. (2017, November 13). *As Mozambique marks historic Cahora Bassa transfer, attention shifts to big capex plan*. *Engineering News*. Retrieved from <https://www.engineeringnews.co.za/article/as-mozambique-marks-historic-cahoro-bassa-transfer-attention-shifts-to-big-capex-plan-2017-11-13>

¹⁷ Santos Cruz, C., Mendes, T. A., & Cardoso, A. C. (2023). *Energy laws and regulations 2023: Mozambique*. *Global Legal Insights*. Retrieved from <https://www.globallegalinsights.com/practice-areas/energy-laws-and-regulations/mozambique>

¹⁸ Isaacman, A. F., & Sneddon, C. (2003). *Portuguese colonial intervention, regional conflict and post-colonial amnesia: Cahora Bassa dam, Mozambique, 1965–2002*. *Portuguese Studies Review*, 11, 207–236.

¹⁹ Isaacman, A. F., & Morton, D. (2012). *Harnessing the Zambezi: How Mozambique's planned Mphanda Nkuwa dam perpetuates the colonial past*. *The International Journal of African Historical Studies*, 45(2), 157–190. Retrieved from <https://2012congressomz.wordpress.com/wp-content/uploads/2013/08/t11c05.pdf>

²⁰ Ibid.

Mozambique intends to expand its hydroelectric power generation capacity, but analysts are sceptical as to whether the projects will get off the ground. A proposed 1,500 MW hydroelectric project, the Mphanda Nkuwa dam, will be located approximately 60 km downstream of the existing Cahora Bassa dam, near the city of Tete.²¹ The project is supported by the World Bank (**WB**) and the African Development Bank (**AFDB**), despite it being controversial for several reasons, including that it will not elevate energy access, it will negatively impact the environment and communities, relocation of people will be required, and it will contribute to climate change.²²

It is implied in the JETS that hydroelectric power from the Cahora Bassa and Mphanda Nkuwa dams will be supplied internally for development and green industrialisation. The Cahora Bassa hydroelectric project power will become available from 2030 due to the agreement to export power to South Africa potentially coming to an end.²³ The Mphanda Nkuwa hydroelectric project is still supported and is expected to be commissioned in 2031.

Mozambique has both offshore and onshore gas resources. The bulk of Mozambique's offshore gas is destined for European and Asian markets. Onshore, Mozambique hosts two major gas-fired power plants at Ressano Garcia, a border city to South Africa. These are the Gigawatt Power Plant and the *Central Térmica de Ressano Garcia* (**CTRG**). Together, they provide over 300 MW of installed capacity and are strategically positioned to export power to South Africa through the Southern African Power Pool (**SAPP**). Both facilities are joint ventures between EDM and private investors. Although they contribute to regional energy security, their impact on domestic electricity access remains limited.

In the near future, electricity generated from the Beluluane gas-fired power plant will be sold to EDM under a PPA, meaning a portion of this power is expected to benefit domestic consumers.²⁴ In contrast, electricity from the Central Térmica de Temane (CTT) gas-fired plant, located near Temane and Pande in the southern province of Inhambane, is likely to primarily supply the South African markets,²⁵ with limited direct benefit to Mozambican households.



²¹ Wikipedia. (n.d.). *Mphanda Nkuwa Dam*. Retrieved from https://en.wikipedia.org/wiki/Mphanda_Nkuwa_Dam

²² Climate Home News. (2023, March 6). *World Bank backs mega dam threatening to displace thousands in Mozambique*. Retrieved from <https://www.climatechangenews.com/2023/03/06/world-bank-backs-mega-dam-threatening-to-displace-thousands-in-mozambique/>

²³ Daily Maverick. (2025, July 27). *Mozambique's Cahora Bassa Dam expansion plan offers a fresh clean energy option*. Retrieved from <https://www.dailymaverick.co.za/article/2025-07-27-mozambique-s-cahara-bassa-dam-expansion-plan-offers-eskom-a-fresh-clean-energy-option/>

²⁴ International Trade Administration. (2023). *Oil and gas: Mozambique country commercial guide*. Retrieved from <https://www.trade.gov/country-commercial-guides/mozambique-oil-gas-0>

²⁵ Engineering News. (2024, April 16). *R-LNG via the ROMPCO pipeline a viable alternative for SA industrial customers*. Retrieved from <https://www.engineeringnews.co.za/article/r-lng-via-the-rompco-pipeline-a-viable-alternative-for-sa-industrial-customers-2024-04-16>

INSTITUTIONAL FRAMEWORK

Energy



The **Ministry of Mineral Resources and Energy (MIREME)** is responsible for mineral and energy policy formulation and implementation, which includes development and expansion of infrastructure for energy supply, natural gas and petroleum products.²⁶ It coordinates the Energy for All programme (2019) which seeks to supply quality, affordable and sustainable electricity to all Mozambicans by 2030.²⁷

The **National Directorate of Energy (DNE)**, under MIREME, is “responsible for planning the national energy strategy and policy and supervising the operation and development of the energy sector”.²⁸ The DNE also ensures coherence among regulatory, institutional, and operational actors such as EDM, ARENE, and FUNAE.



The **Energy Regulatory Authority (ARENE)** is Mozambique’s energy regulator. Established in 2017, it supervises electricity, natural gas, and liquid fuels. One of its mandates is to create alignment in the energy sector with best international practices.²⁹ It functions as a regulator for generation, transmission, and sale of electricity.³⁰ It makes the final decision on tariffs but shares decision-making of licensing and disputes with the Minister of Energy.³¹



The **Electricidade de Moçambique (EDM)**, a national public utility, manages the national grid. The EDM is a vertically integrated structure.³² It is also responsible for generation, procurement, transmission, distribution and sale of electricity. In terms of distribution, EDM is the sole national concessionaire.³³ It is also the manager of the National Electricity Transmission Network.



The **Mozambique Women of Energy (MWE)** is a Mozambican civil society organisation that promotes gender inclusion and women’s empowerment within the entire energy sector.³⁴ The MWE focuses on increasing women’s participation across the energy value chain, including at technical, managerial, and policy-making levels. The organisation advocates for gender-responsive energy policies and facilitates capacity-building, mentorship, and networking opportunities for women professionals and entrepreneurs in the sector. Through its initiatives, it contributes to strengthening social equity and advancing an inclusive and sustainable energy transition.

²⁶ Devex. (n.d.). About: Ministry of Mineral Resources and Energy (MIREME), Mozambique. Retrieved from <https://www.devex.com/organizations/ministry-of-mineral-resources-and-energy-mireme-mozambique-120848>

²⁷ AfDB. (November 2025). Environmental and Social Systems Assessment for the Mozambique Energy for All Project. (Page 5). Retrieved from <https://www.afdb.org/sites/default/files/p-mz-fa0-023-mozambique-mozambique-energy-for-all-program-essa-report-p-mz-fa0-023.pdf29>

²⁸ EDM National Dispatch and Control Center (NCC) Under Mozambique Energy for All Project. (Page 9). Retrieved from https://ewsdata.rightsindevelopment.org/files/documents/21/AFDB-P-MZ-FA0-021_6g9Sbrj.pdf

²⁹ Autoridade Reguladora de Energia (ARENE). (n.d.). About us. Retrieved from <https://arene.org.mz/sobre-nos/quem-somos/>

³⁰ United Nations Economic Commission for Africa. Regulatory Review of the Electricity Market on Mozambique. (Page 27). Retrieved from <https://res4africa.org/wp-content/uploads/2023/04/RegulatoryReviewofElectricityMarketinMozambique.pdf>

³¹ Africa Energy Portal. (n.d.). Mozambique. Retrieved from <https://africa-energy-portal.org/eri/country/mozambique>

³² United Nations Economic Commission for Africa (UNECA). (2023). Regulatory review of the electricity market in Mozambique. Retrieved from <https://res4africa.org/wp-content/uploads/2023/04/RegulatoryReviewofElectricityMarketinMozambique.pdf>

³³ Ibid. p. 9.

³⁴ Mozambique Women of Energy. (n.d.). About us. Retrieved from <https://www.mozambiquewomenofenergy.com/about-us>

Renewable Energy



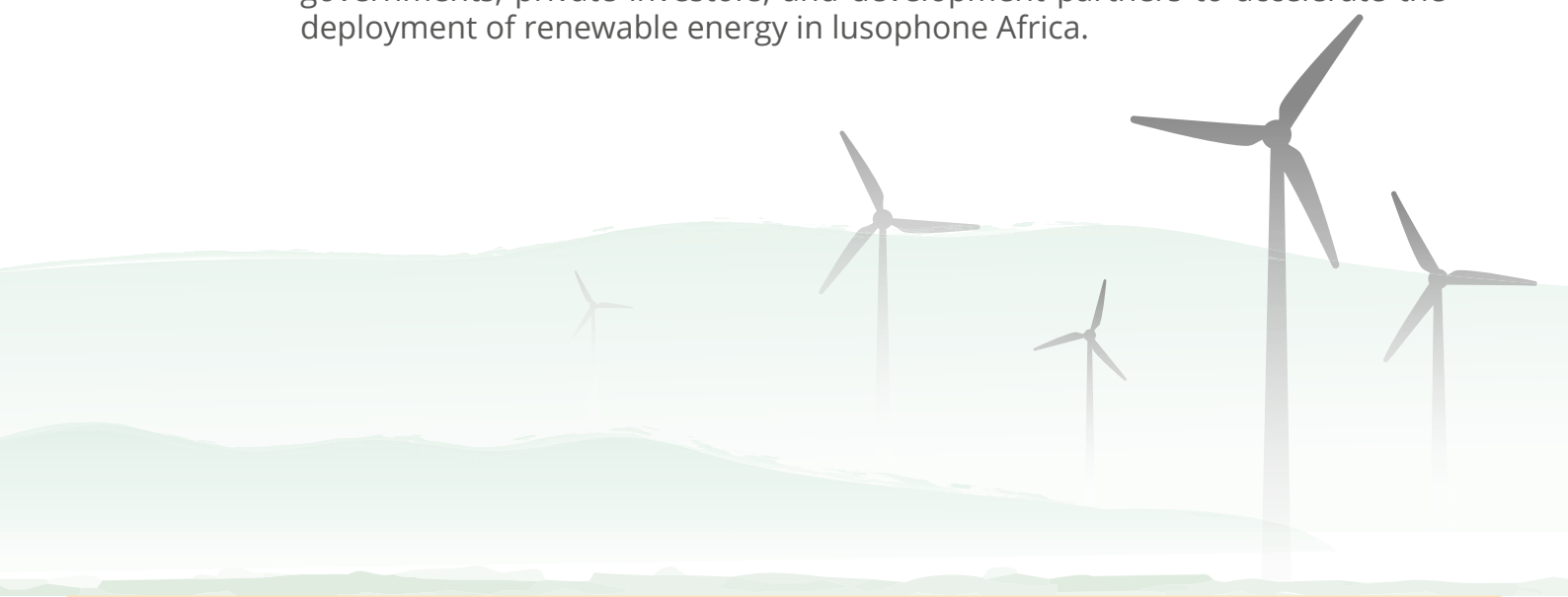
The **Energy Fund (FUNAE)** was created in late 1997, through Decree No. 24/97 with the main objective to finance and implement renewable energy (**RE**) projects to increase energy access in rural areas.³⁵ Its legal status was amended in 2002 through Decree No. 23/2002, expanding its mandate to promote the development, production, and use of various low-cost forms of energy for supply to rural and urban low income populations.³⁶ It implements off-grid projects and functions under MIREME's authority. Predominantly, FUNAE installs solar power systems in schools, administrative offices, and health centres, with a smaller share directed to households.³⁷



The **Mozambican Renewable Energy Association (AMER)** is a non-governmental, non-profit association that represents the interests of private sector actors in Mozambique's renewable energy industry. It promotes investment, policy dialogue, and information sharing on renewable energy, with a particular focus on off-grid and decentralised energy solutions.³⁸ Regular events are held by AMER for private investment opportunities. In addition, AMER provides information on current renewable energy law. The role of AMER seems to be to share information relating to renewable energy in Mozambique, with a focus on off-grid, private, renewable energy solutions.



The **Lusophone Renewable Energy Association (ALER)** is a non-profit organisation that promotes renewable energy cooperation among Portuguese-speaking countries. Work done by ALER includes mobilising investment, sharing knowledge, and strengthening policy frameworks across its member states, including Mozambique. It collaborates closely with national associations such as AMER and international partners to support market development, regulatory alignment, and capacity building in the renewable energy sector. Through its publications and regional initiatives, ALER facilitates dialogue between governments, private investors, and development partners to accelerate the deployment of renewable energy in lusophone Africa.



³⁵ Fundo de Energia. (n.d.). *Sobre nós* [About us]. *Fundo de Energia*. Retrieved from <https://funae.co.mz/en/sobre-nos/>

³⁶ African Development Bank. (2021). *Country priority plan and diagnostic of the electricity sector: Mozambique* (p. 33). Abidjan, Côte d'Ivoire: African Development Bank. Retrieved from <https://www.afdb.org/sites/default/files/2021/11/22/mozambique.pdf>

³⁷ United Nations Capital Development Fund (UNCDF) & United Nations Development Programme (UNDP). (2022). *Energy and the poor: Unpacking the investment case for clean energy*. Retrieved from <https://www.undp.org/africa/publications/energy-and-poor-unpacking-investment-case-clean-energy>

³⁸ Associação Moçambicana de Energias Renováveis. (n.d.). *Who we are*. Retrieved from <https://www.amer.org.mz/en/about-us-9>

Environment



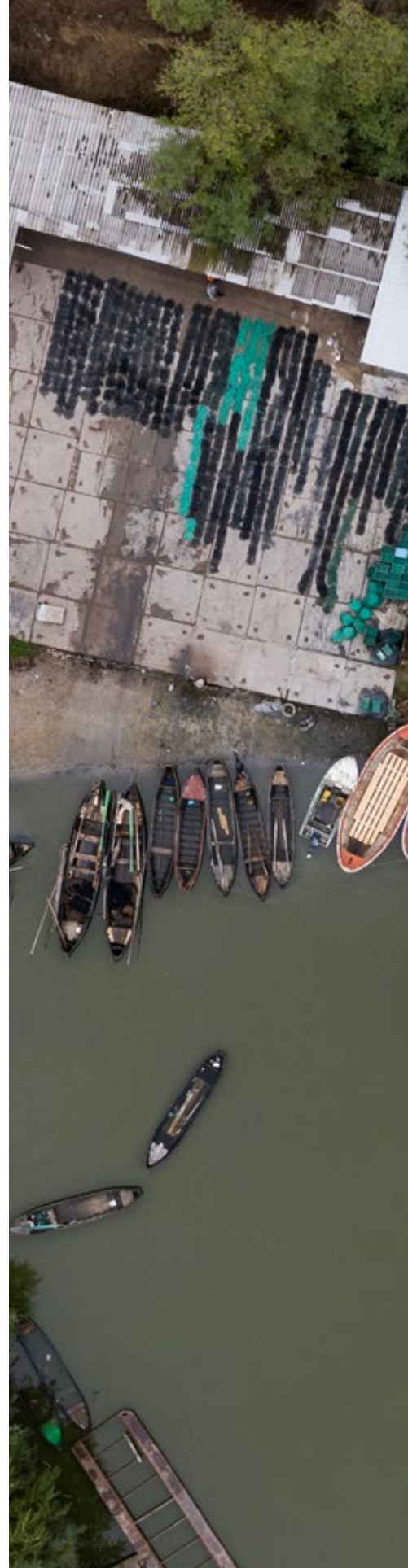
The **Ministry of Land and Environment (MTA)** is responsible for ensuring the preservation and responsible use of natural resources. It also coordinates environmental activities and does environmental licensing.³⁹

To strengthen the co-ordination and implementation of climate change actions, the GoM established the MTA in 2020. The MTA's mandate is to promote and coordinate implementation of commitments in the **Nationally Determined Contribution (NDC)**, thus including measures to increase renewable energy, and propose the enactment of legislation, policies, development strategies, and plans to reduce vulnerability and build resilience and adaptive capacity to climate change.⁴⁰

In January 2025, the MTA was restructured and renamed the **Ministry of Agriculture, Environment and Fisheries (MAAP)**. This renaming reflects the government's objective to improve policy integration across agriculture, natural resources, and environmental management.



The **National Agency for Environmental Quality Control (AQUA)**, created through Decree No. 80/2010,⁴¹ operates under the MAAP and plays a central role in regulating the environmental performance of the energy sector. AQUA is responsible for inspection and compliance monitoring of Environmental Impact Assessments (EIAs). AQUA conducts environmental audits and collaborates with MIREME, ARENE, and local authorities to strengthen oversight and minimise the environmental impacts of energy investments. MAAP issues environmental licences for energy generation, transmission, and extraction projects, including renewables, hydrocarbons, and large-scale infrastructure. It monitors compliance with environmental standards and mitigation plans throughout project lifecycles, ensuring that developments in the energy sector adhere to national legislation and environmental sustainability principles.



³⁹ Centre for Human Rights. University of Pretoria. (2009). *Legal framework for environmental licensing in Mozambique*. Retrieved from https://www.chr.up.ac.za/images/researchunits/bhr/files/extractive_industries_database/mozambique/laws_legal_guides/Legal%20Framework%20for%20Environmental%20Licensing%20in%20Mozambique.pdf

⁴⁰ Government of Mozambique. (2021). *Mozambique first nationally determined contribution (updated submission)* (p. 55). Retrieved from https://climate-laws.org/documents/mozambique-first-ndc-updated-submission_1d12?id=mozambique-first-ndc-updated-submission_3191

⁴¹ Government of Mozambique. (2010). *Decree No. 80/2010: Creating National Agency for Environmental Quality [Decree]*. Law and Environment Assistance Platform (LEAP) – UNEP. Retrieved from <https://leap.unep.org/en/countries/mz/national-legislation/decree-no-802010-creating-national-agency-environmental-quality>

REGULATORY AND LEGAL FRAMEWORKS

Mozambique's legal and policy framework for the energy sector has undergone significant reform in recent years. The **Electricity Law** (Law No. 12/2022)⁴² promotes renewable energy generation and private sector participation, while the **Renewable Energy Code** (Ministerial Diploma No. 119/2023)⁴³ establishes the technical basis for renewable energy development. Complementary instruments such as Decree No. 60/2021 on licensing and Decree No. 58/2014 on tariff regulation further operationalise this framework. Together, these instruments demonstrate Mozambique's commitment to expanding renewable energy access, though implementation and enforcement remain limited.

Mozambique has a plethora of policies which speak to universal energy access, goals for clean energy expansion, gradual phasing-out of fossil fuels, and the establishment of cost-reflective tariffs that account for environmental and social impacts. However, despite their ambition, most of these policies remain at the strategic or programmatic level and have not been fully legislated into law or operationalised, limiting their enforceability and practical impact.

Electricity Law

Law No. 12/2022 repealed the 1997 framework and introduced a more comprehensive legal regime intended to modernise Mozambique's electricity sector. This reform reflects the country's commitment to diversifying its energy mix and expanding renewable generation, while maintaining flexibility for natural gas and other transitional sources, putting "emphasis on renewables and the reduction of the use of fossil sources".⁴⁴ The 2022 law applies broadly to all aspects of the electricity value chain, including the production, storage, transmission, distribution, marketing, consumption, and import and export of electricity.⁴⁵



⁴² Assembleia da República de Moçambique. (2022, July 11). *Lei da Eletricidade (Lei No. 12/2022, de 11 de Julho)* [Electricity Law (Law No. 12/2022, of 11 July)] [PDF]. <https://arene.org.mz/wp-content/uploads/2022/08/Lei-de-Eletricidade-2022.pdf>

⁴³ Ministério dos Recursos Minerais e Energia. (2023, November 14). *Diploma Ministerial No. 119/2023: Aprova o Código de Energias Renováveis* [Ministerial Diploma No. 119/2023: Approving the Renewable Energy Code] [PDF]. https://www.aler-renovaveis.org/contents/files/dm-119_2023-codigo-de-energias-renovaveis.pdf

⁴⁴ See FN 42. Article 5 of the Electricity Law No. 12/2022.

⁴⁵ See FN 42. Article 2 of the Electricity Law No. 12/2022.

One of the significant updates under the 2022 law is the explicit recognition of renewable energy as a national priority, reflecting Mozambique's commitment to diversify its energy mix. The 2022 law promotes access to electricity and participation of private actors through concessions and public-private partnerships (**PPP**).⁴⁶ It also brings electricity storage into regulation for the first time — a step forward for solar and wind integration — though it leaves ambiguities regarding standalone storage concessions. The 2022 law introduces an Energy Registry to centralise data on concessions and impact assessments,⁴⁷ although access to this information is subject to the general Law on Access to Information and may remain limited in practice.

The 2022 law creates the new institutional role of a National Electricity System Manager, which is tasked with preparing and updating the Integrated Master Plan of Electricity Infrastructure and other strategic documents; up-to-date mapping of energy potential; conducting technical and economic feasibility studies (including socio-environmental studies); and establishing partnerships, cooperation agreements, and other institutions responsible for planning.⁴⁸ The National Electricity System Manager is a critical tool for integrating renewable energy into national planning and long-term infrastructure investment.

Article 10.1 of the 2022 law outlines detailed criteria for granting concessions.⁴⁹ The pricing of tariffs is regulated by Articles 39, 40, and 41 with the production selling price and network tariffs being established in the concession contract and approved by ARENE.

Despite all the positive developments supported by the 2022 law, it has several features that create the risk of continued fossil fuel dominance. Notably, exceptions to the public tender process (Article 12.3) allow for direct allocation of concessions under loosely defined conditions — such as when a tender is deserted or when the electricity is produced using assets not in the public domain. These clauses appear to favour existing fossil fuel infrastructure, particularly gas-to-power projects, which are more likely to qualify under such exceptions. Article 50 further entrenches fossil fuel pathways by deferring the regulation of gas, coal, and oil to separate sectoral legislation, leaving gaps in coherence and potentially undermining cross-sector renewable integration.

The 2022 law places all power generation projects under the requirements set out in the Mega Projects Law 15/2011. The latter law specifies profit sharing and local participation requirements.

Renewable Energy Code

The code, enacted through Ministerial Diploma No. 119/2023 of 14 November, establishes the technical and regulatory framework for the development and integration of renewable energy in Mozambique.⁵⁰ It operationalises the provisions of the Electricity Law by defining procedures for the planning, licensing, construction, and operation of renewable energy projects. The Code aims to promote transparency, attract private investment, and ensure the efficient connection of renewable energy facilities to the national grid. It covers generation from solar, wind, hydro, and biomass sources, setting standards for environmental compliance, project registration, and grid interconnection. While it provides greater regulatory clarity for investors, its effectiveness will depend on institutional coordination among MIREME, ARENE, and EDM, as well as the adoption of secondary regulations and implementation guidelines.

⁴⁶ See FN 42. Article 4 of the Electricity Law No. 12/2022. | ⁴⁷ See FN 42. Article 9 of the Electricity Law No. 12/2022. | ⁴⁸ See FN 42. Article 8 of the Electricity Law No. 12/2022.

⁴⁹ See FN 42. Article 10.1 of the Electricity Law No. 12/2022.

⁵⁰ Ministério dos Recursos Minerais e Energia. (2023, November 14). *Diploma Ministerial No. 119/2023: Código de Energias Renováveis* [Renewable Energy Code] [PDF]. Governo de Moçambique. Retrieved from https://mocambique.lerenovaveis.org/contents/lerpublication/dm-119_2023-codigo-de-energias-renovaveis.pdf

Feed-in Tariff Regulation

The regulation, approved through Decree No. 58/2014 of 17 October, establishes a tariff regime for renewable energy generation. It applies to biomass, wind, small hydro, and solar projects from 10 kW to 10 MW, with electricity to be sold to the EDM. Although the decree provides the legal foundation for a feed-in tariff system, its implementation has remained incomplete, as the detailed tariff structures and technical guidelines required for operationalisation have not been issued.

Energy Access in Off-Grid Areas Regulations

The Energy Access in Off-Grid Regulation, approved through Decree No. 93/2021 of 10 December,⁵¹ aims to facilitate energy access in areas not served by the National Electricity Grid (**REN**), specifically through the development of mini-grids of up to 10 MW and related energy services. These services include the supply, financing, installation, operation, and maintenance of electrical equipment and installations, with a preference for renewable energy systems. Article 2 of the regulation establishes that off-grid energy projects are deemed to be of public interest and of a social nature, laying the foundation for public-private collaboration in this domain.

A core feature of the regulation is its recognition of the private sector's role in off-grid electrification. Energy service providers can obtain a certificate of registration from the ARENE, which allows them to operate off-grid services legally and access certain tax benefits (Article 5.2).

The **Regulation for the Award of Mini-Grids Concessions**, approved through Ministerial Diploma No. 68/2023⁵² of 31 May, sets out the procedures to perform the supply activities for access to energy through mini-grids in terms of Article 10, Section 1 of the Regulation on Access to Energy in Off-Grid Areas. Mini grids between 151 kW and 10 MW will require an establishment license and operating license. However, this is extremely restricted at the low levels of energy being regulated.

The **Regulation on the Interconnection of Mini-Grids** was approved through the Normative Resolution No. 2/ARENE-CA/2022 of 19 December.⁵³ It provides for circumstances when a mini-grid is connected to the electrical grid.

Public-Private Partnership Framework

The PPP framework was adopted in 2010, followed by the enactment of the Public-Private Partnership Law (Law No. 16/2012).⁵⁴ The Public-Private Partnership Law establishes the legal basis for private generators to sell electricity to the EDM under contract negotiated tariffs. However, in practice, most PPPs have primarily supported large-scale resource extraction and infrastructure projects rather than advancing renewable energy development or decentralised access. As a result, the potential of PPPs to accelerate a just and inclusive energy transition remains largely untapped.⁵⁵

⁵¹ Governo de Moçambique. (2021, December 10). *Decreto No. 93/2021: Regulamento de Acesso à Energia nas Zonas Fora da Rede* [Decree No. 93/2021: Regulation on Access to Energy in Off-Grid Areas] [PDF]. Boletim da República, I Série. <https://arene.org.mz/wp-content/uploads/2023/06/Regulamento-de-Acesso-a-Energia-nas-Zonas-Fora-da-Rede-Decreto-932021.pdf>

⁵² Ministério dos Recursos Minerais e Energia. (2023, May 31). *Diploma Ministerial No. 68/2023: Regulamento para Atribuição de Concessões para Mini-redes* [Ministerial Diploma No. 68/2023: Regulation for the Award of Mini-grid Concessions] [PDF]. Governo de Moçambique. Retrieved from <https://brilhomoz.com/documents/Resources/Regulamento-para-Atribui%C3%A7%C3%A3o-de-Concess%C3%B5es-para-Mini-redes-Diploma-Minist.-002.pdf>

⁵³ Autoridade Reguladora de Energia. (2022, December 19). *Resolução Normativa No. 2/ARENE-CA/2022: Regulamento de Interligação de Mini-redes* [Normative Resolution No. 2/ARENE-CA/2022: Regulation on the Interconnection of Mini-grids] [PDF]. Retrieved from <https://arene.org.mz/wp-content/uploads/2023/05/Regulamento-de-Interligacao-de-Mini-Redes.pdf>

⁵⁴ See FN 13. | ⁵⁵ See FN 13 p. 7.

POLICY AND PLANNING FRAMEWORKS

Energy Strategy

The strategy, adopted through Resolution No. 10/2009 of 4 July that repeals Resolution No. 24/2000,⁵⁶ is based on principles including deployment of new and renewable energy, energy-matrix diversification, integrated planning of energy, the sustainable development and protection of the environment, a tariff regime which reflects real costs of energy including environmental impacts, and energy efficiency. Contrary to these principles, the strategy pushes for natural gas.

Development Policy on New and Renewable Energy

The policy, adopted through Resolution No. 62/2009,⁵⁷ establishes a broad framework for promoting renewable energy to meet the country's development needs. The policy is rooted in the principles of economic efficiency, equity, and sustainability, and it aims to deliver quality renewable energy services at affordable prices, particularly in rural areas. Despite its ambitious scope, one of the policy's key weaknesses is the non-implementation of its fiscal incentives. The policy is based on three principles, namely economic efficiency, equity, and sustainability. Regarding economic efficiency, it advises the removal of energy market distortions like taxes and subsidies. In section 6.1 of the policy, it is stated that to assess the economic costs of energy supply, there needs to be an assessment of energy market distortions such as subsidies and externalities like the costs from the different stages of energy supply and the supply chain, including the cost of environmental impacts.

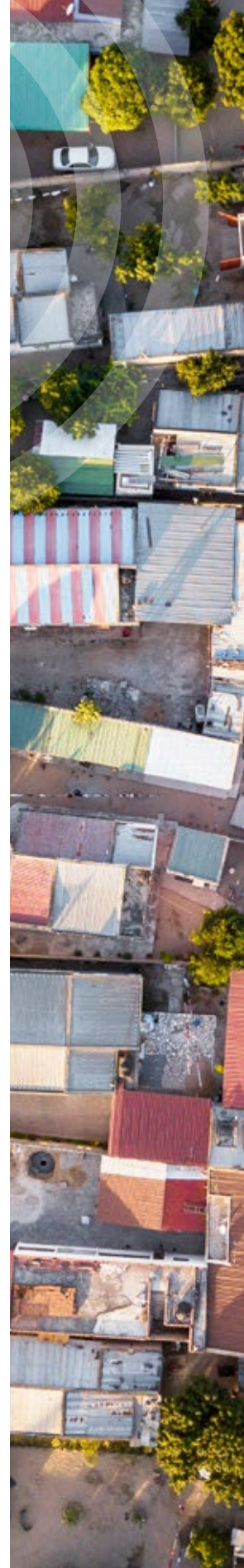
Integrated Master Plan for Electricity Infrastructure 2018 – 2043

The master plan, adopted through Resolution No. 48/2018 of 3 December,⁵⁸ is the main policy in energy supply. This plan is a comprehensive 25-year national electricity infrastructure development plan that makes it possible for governmental agencies to access the technical information on the planning of power generation, transmission, and distribution. It includes a demand forecast and targets for increasing installed capacity and connections. The investment needs in the Master Plan total approximately USD 34 billion. The master plan includes recommendations for the financial management of the sector (including a 30% increase in power tariffs, implemented in 2019) and environmental and social considerations. The latter integrates considerations relating to EIAs, CO2 emissions, and land acquisition and settlement, among others.

⁵⁶ Governo de Moçambique. (2009, April 4). *Resolução No. 10/2009: Estratégia de Energia e revoga a Resolução No. 24/2000* [Resolution No. 10/2009: Energy Strategy repeals Resolution No. 24/2000] [PDF]. Retrieved from <https://mireme.gov.mz/wp-content/uploads/2022/03/Resolucao-10-2009-do-Conselho-de-Ministros-Estrategia-de-energia-1.pdf>

⁵⁷ Government of Mozambique. (2009). *Policy on the development of new and renewable energy* (Resolution No. 62/2009). Retrieved from https://climate-laws.org/document/policy-on-the-development-of-new-and-renewable-energy-resolution-62-2009_a4d1

⁵⁸ Governo de Moçambique. (2018, October 23). *Resolução No. 48/2018: Aprova o Plano Director Integrado de Infra-estruturas de Electricidade 2018–2043* [Resolution No. 48/2018: Approves the Integrated Master Plan for Electricity Infrastructure 2018–2043] [PDF]. Retrieved from https://www.terenovaveis.org/contents/lerpublicacao/plano-director-integrado-de-infra-estruturas-de-electricidade-resolucao-48_2018.pdf



National Electrification Strategy 2018 – 2030

The strategy, approved through Resolution No. 49/2018 on 31 December,⁵⁹ establishes a framework for achieving universal access to electricity by 2030. The public utility, EDM, plays a central role in its implementation, focusing primarily on on-grid expansion while complementing it with off-grid solutions in remote and rural areas.⁶⁰ The strategy sets out clear roles for MIREME, EDM, and FUNAE. It addresses three strategic priorities and five actions for success. The priorities include ensuring regional access to electricity by 2030, positioning Mozambique as a regional energy hub, and fostering the development of sustainable human capital within the energy sector. The five actions for success focus on increasing generation and power supply, improving operational efficiency and professionalism, implementing cost-reflective tariffs, promoting infrastructure development, and clearly defining EDM's role in achieving universal access. In alignment with this framework, EDM has also developed its own strategy for the same period, which focuses on achieving universal access to electricity within Mozambique, consolidating the country's position as a regional energy hub in Southern Africa, and developing a sustainable and skilled workforce capable of supporting long-term growth in the energy sector.

Just Energy Transition Strategy

The JETS, approved by Resolution No. 61/2023 on 29 December under the functions listed in Section 203(1) of the Constitution, is a strategy which seeks \$80 billion in funding by 2050 to achieve an energy transition.⁶¹ The comprehensive strategy aims to propel the nation towards a more sustainable future by enhancing renewable energy capabilities and ensuring wider electricity availability. It was presented at COP28.

The JETS speaks to economic and industrial growth through low carbon fuel supply, significant renewable energy potential, and export of low carbon fuels and green products. It sets out expansion of the grid needed for universal access to energy.⁶² Problematically, energy assets include gas reserves, as well as renewable energy potential — hydroelectric, solar, and wind energy. The target underneath this program is to promote the use of clean and renewable energy in the LNG's sector by 2040. This includes decarbonisation via carbon capture and storage. The program is divided into phases. The first phase involves having clean

energy sources for LNG until 2028. Phase 2 involves the Temane Thermal Power Station implementing carbon reduction solutions and the Rovuma LNG production plant using only clean energy sources by 2035. All other LNG production is to use clean energy sources from 2040.

The JETS has the following strategic objectives: (1) support national development through access to clean energy sources; (2) become a regional energy hub through supply of low carbon energy to SADC countries; and (3) export natural gas and green products to become a global energy exporter.

The JETS is based on a number of important principles. The JETS must contribute to economic diversification and ensure universal access to energy that is affordable and reliable. It must prioritise renewable energy when available and economically viable, and traditional biomass must be reduced through cleaner solutions. Natural gas must be seen as an energy transition fuel and coal impacts must be minimised.

⁵⁹ Governo de Moçambique. (2018). *Estratégia Nacional de Electrificação 2018–2030* [National Electrification Strategy 2018–2030] [PDF]. Ministério dos Recursos Minerais e Energia. Retrieved from <https://www.lerenovaveis.org/contents/lerpublication/estrategia-nacional-de-electrificacao-2018-2030.pdf>

⁶⁰ Electricidade de Moçambique (EDM). (2018). *Electricidade de Moçambique strategy 2018–2028* [PDF]. Retrieved from <https://pcsedm.wordpress.com/wp-content/uploads/2018/08/estrategia-edm-2018-2028-ingles.pdf>

⁶¹ Africanews. (2023, November 28). *Mozambique unveils ambitious \$80 billion energy transition plan*. Retrieved from <https://www.africanews.com/2023/11/28/mozambique-unveils-ambitious-80-billion-energy-transition-plan/>

⁶² Club of Mozambique. (2023, February 10). *Mozambique: Universal energy access forecast for 2030*. Retrieved from <https://clubofmozambique.com/news/mozambique-universal-energy-access-forecast-for-2030-253921/>

Clean energy for national supply must be prioritised and the supply of clean energy to large consumers should not result in higher tariffs. The private sector must play a role in the energy transition. In addition, there must be cross-sectoral planning and coordination, incorporation of local value raw materials, and tariffs that reflect real costs. The JETS must be implemented fairly and with equity and this must all be done through consultations with all stakeholders and dialogue with international partners.

The JETS is based on four pillars that define its priorities until 2030. These are: basing modern energy systems on renewable energy, building green industrialisation, providing universal energy access, and using clean energy in the transport sector.

The strategic direction of the JETS includes regulating the Electricity Law (amended in 2022), facilitating private investment into renewable energy with simplification of processes, and accelerating deadlines. It also includes building on the Renewable Energy Auction Programme (**PROLER**), including price optimisation and acceleration of expansion of wind and solar capacity (based off South African solar expansion). Further, the strategy includes having LNG export projects invest in large scale renewable energy generation to decarbonise the operations.

As part of the JETS, a number of short-term initiatives are to be undertaken by the MIREME, ARENE, and EDM. They must promote regulatory reforms that reduce the cost of developing solar and wind energy, including allocating areas for projects, and they must expand the PROLER programme, which to date has only had four projects. They must also legislate and regulate power purchase agreements with renewable energy developers and provide compensation for tariff deficits caused by cross subsidisation via general taxation. They must also take responsibility for the design and construction of solar for domestic supply,

including 320 MW of planned projects (Cuamba, Pemba, Zitundo, and Nicoadala), the development of an e-waste disposal programme, and the design and construction of planned wind power projects of 210 MW (Inhambane, Lagoa Pathi, Namaacha, and Calanga Wind).

Implementation of the JETS will be done through the Implementation Coordination Office. For implementation to take place, there will need to be regular updating of the sectoral policy priorities and legislation and the priority investment plan.

The goal is to have 85% renewable energy in the electricity generation mix by 2050. This goal is based on the recognition that should additional measures not be taken, GHG emissions will triple from the energy sector, mainly due to the use of biomass and fossil fuels. The JETS will be updated every 10 years from 2023 and reviewed every 5 years.



Mozambique Nationally Determined Contribution

Mozambique is a party to the Paris Agreement and submitted an updated NDC in November 2021. If the measures proposed in the NDC are not implemented, it is estimated that Mozambique's emissions will increase to 54 MtCO₂e by 2025. With the measures in place, the cumulative emissions reduction for the period 2020 – 2025 will be 40 MtCO₂e (an average reduction of 8 MtCO₂e per annum over the course of the NDC period).⁶³ However, all of Mozambique's mitigation ambition is dependent on international climate financial-, technological-, and capacity-building support.⁶⁴ The NDC speaks to hydro, wind, and solar resources, but also promotes thermal gas for low carbonisation (such as the 450 MW gas-fired plant at Temane, and massification of Liquefied Petroleum Gas (LPG) for cooking).⁶⁵



⁶³ Mozambique NDC, at 50 Retrieved from https://unfccc.int/sites/default/files/NDC/2022-06/NDC_EN_Final.pdf

⁶⁴ See FN 63 at 73. | ⁶⁵ See FN 63 at 78.

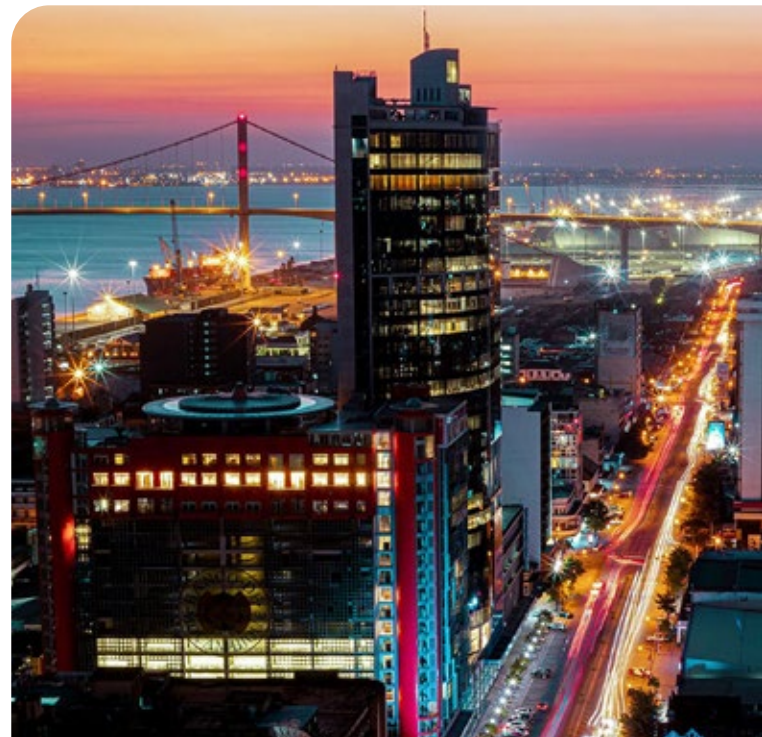
Grid Connected

The **Renewable Energy Auction Programme (PROLER)**, is the on-grid flagship initiative developed by MIREME with the technical and financial support of the European Union (EU) and the Agence Française de Développement (AFD). It is a central instrument for accelerating renewable energy deployment through transparent, competitive procurement processes. The programme allows for increased competitiveness through awarding tenders rather than via direct awards, and is grounded in the principles of transparency, competition, and sustainability. Thus, it seeks to offer a robust legal, financial, and technical framework for renewable energy tenders.

Notable operational projects developed under this framework include (1) the 40 MW Mocuba solar power plant, developed by the Norwegian solar power company, Scatec Solar, the EDM, and the Norwegian KPL Norfund Investments, the subsidiary of the investment fund, Norfund, and (2) the 40 MW Metoro solar power plant in Cabo Delgado, developed by the French renewable company, Neoen and the EDM. These projects have set important precedents for the country's ability to integrate utility-scale solar energy into its national grid.

The programme is designed to implement four grid-connected renewable energy projects — three solar PV and one wind — with unit capacities ranging between 30 and 50 MW and a total expected capacity of approximately 160 MW. The selected sites are Dondo, Manje, and Chimbunila for the solar projects, and Jangamo for the wind development. The pilot auction for the Dondo Solar Plant (30–40 MW) was awarded to the French renewable energy

company, Total Eren SA. Construction of the Dondo and Chimbunila projects was scheduled for 2024, and the Manje project for 2025. Development of the Jangamo plant remains at the pre-feasibility stage without an announced timeline for award or construction.



The GET FiT Mozambique Programme is under development and aims to promote competitive tenders for grid-connected solar PV projects with battery storage and small hydropower plants. Meanwhile, other developers have launched independent initiatives: Ncondezi Energy began feasibility work on a 300 MW solar-plus-storage facility in Tete Province, while Solarcentury Africa and SunMoz are collaborating on a 100 MW solar project in Chimuara. These developments complement the broader auction framework and demonstrate increasing IPP interest in Mozambique's energy transition.

Off-Grid and Energy Access

The ProEnergia – Energy for All Programme (2019 – 2030) is the off-grid flagship initiative to achieve universal energy access by 2030. This programme is being implemented by the EDM and FUNAE with support from the WB, AfDB, EU, and other partners. The program supports the expansion of access to energy in peri-urban and rural areas across Mozambique, leveraging and expanding the existing national electricity grid and deploying solar-based mini-grids in areas not covered by the REN.⁶⁶

The Beyond the Grid Fund for Africa (BGFA) – Mozambique window is a results-based financing programme designed to expand access to affordable and sustainable off-grid energy. Managed by the Nordic Environment Finance Corporation (Nefco) and funded by the Swedish International Development Cooperation Agency (Sida) and the EU, the programme provides financial incentives to private companies delivering solar home systems, mini-grids, and clean cooking solutions in underserved rural areas. In Mozambique, the BGFA supports the growth of the decentralised energy market by de-risking private investment and promoting commercially viable models for last-mile electrification.⁶⁷

The +SOL Mini-Grid Facility is a market-driven programme, launched by the Swedish Government and Netherlands Development Organisation (SNV), and designed to incentivise private companies to invest in the mini-grid sector, enabling them to construct mini-grids and connect rural households. The programme is implemented in close collaboration with FUNAE and ARENE.⁶⁸

The **BRILHO Energy Africa Programme** is a market-driven programme, funded by the UK Foreign, Commonwealth & Development Office (FCDO) and Sida and implemented by the SNV, that supports the growth of Mozambique's off-grid energy and clean-cooking sectors. The programme aims to increase access to affordable, reliable, and sustainable energy for households, businesses, and social institutions in rural and peri-urban areas.⁶⁹

Recently, to support the Mission 300 and ambitions of 100% electrification, Mozambique has prepared the National Energy Compact for Mozambique.⁷⁰ Mission 300 is an initiative supported by the WB and the AfDB. It aims to connect 300 million people across Africa to electricity by 2030.⁷¹ The Mozambique compact pushes for increases in renewable energy and includes increases in gas production citing the use of gas for electricity and clean cooking. By 2028 it sees the creation of an electricity market. It looks at gender in energy with the need to develop a national gender strategy. As with all projects, for the compact to be successful, there will need to be implementation and enforceable laws.



⁶⁶ Ministério dos Recursos Minerais e Energia. (2019). *Programa ProEnergia – Energia para Todos 2019–2030* [ProEnergia – Energy for All Programme 2019–2030] [PDF]. Governo de Moçambique. Retrieved from <https://mireme.gov.mz>

⁶⁷ Nordic Environment Finance Corporation (NEFCO). (2023). *Beyond the Grid Fund for Africa (BGFA) – Mozambique window*. Nefco. Retrieved from <https://beyondthegrid.africa/countries/mozambique/>

⁶⁸ SNV Netherlands Development Organisation. (2023). *Mozambique off-grid electrification accelerator (+SOL Mini-Grid Facility)*. SNV. Retrieved from <https://www.snv.org/project/mozambique-off-grid-electrification-accelerator>

⁶⁹ SNV Netherlands Development Organisation. (2023). *BRILHO – Energy Africa Programme*. SNV. Retrieved from <https://www.snv.org/project/brilho-energy-africa-programme>

⁷⁰ Mission 300. (2021). *National Energy Compact for Mozambique* [PDF]. World Bank. Retrieved from <https://thedocs.worldbank.org/en/doc/b76f3a9fec333443d451560f9b35d24c-0010012025/original/Mozambique-National-Energy-Compact-Mission-300.pdf>

⁷¹ World Bank Group. (n.d.). *Mission 300*. Retrieved from <https://www.worldbank.org/en/programs/energizing-africa>

BENEFIT SHARING, HUMAN RIGHTS, AND LAND RIGHTS CONSIDERATIONS

Mozambique's legal framework does not explicitly recognise indigenous peoples but refers to “vulnerable groups” and “ethnolinguistic minorities.” All land is owned by the state, with citizens granted, under the Land Law, the Right of Land Use and Benefit (**DUAT**), which may be acquired through customary norms, good-faith occupation, or formal application. For Mozambican citizens and local communities, DUATs are held without time limit, whereas legal entities and foreign investors receive DUATs for renewable 50-year terms. Community consultation is a legal prerequisite for land allocation and project development, and the process is regulated to ensure local input, particularly when land is granted for energy or extractive projects.

Where projects lead to displacement, resettlement is governed by dedicated laws that require not just relocation but restoration, or improvement, of affected communities' living standards, access to infrastructure and livelihoods, asset transport, and active participation throughout the process. Compensation must also include fair payment, community development, and cultural heritage preservation.

The Local Development Agreement (**LDA**) is a legally binding contract between a project developer and the affected or host community. It is grounded in the PPP Law, which require concessionaires of large-scale projects to implement local development programmes. The LDA is designed to formalise community benefit-sharing by defining social, economic, and environmental commitments, including the establishment of Local Development Funds, the delivery of community infrastructure, and mechanisms for community participation in decision-making. When effectively implemented, the LDA serves as a bridge between national investment frameworks and community rights, ensuring that large-scale energy and extractive projects contribute directly to local well-being and to a just energy transition. However, in practice, implementation remains inconsistent and enforcement mechanisms are weak, limiting the potential of LDAs to promote equitable development outcomes.

Mozambique's laws and policies incorporate principles of Free, Prior and Informed Consent (**FPIC**) through mandatory community consultations and public participation in EIAs. Additionally, benefit-sharing mechanisms are established through Corporate Social Responsibility (**CSR**) policies, LDAs, and statutory provisions in mining and energy contracts. These include financial contributions to communities, local hiring, training programs, and infrastructure development.



The JETS embeds social justice by promoting equitable job creation, gender inclusion, capacity building, access to energy, and strong community participation in decision-making. It anticipates future legislation to operationalise these goals, aiming to ensure that the energy transition delivers tangible benefits while safeguarding human and land rights.

While there is protection in law, examples like the Mphanda Nkuwa project show that this is being poorly implemented. Consultations are often superficial, and relocations rarely improve livelihoods. The DUAT, FPIC, LDA and CSR above are all soft law with no enforcement mechanisms, should the above not be followed.

In terms of the rights of humans to a healthy environment, the Constitution, under Article

90, states that, “every citizen has the right to a safe and balanced environment.” It also establishes that the state must fulfil the right to a safe and balanced environment and guarantees the rational use of natural resources while safeguarding their capacity for renewal, ecological stability, and the rights of future generations (Art. 117/2, d). This falls into arguments around what the cost of carbon is and whether it should include the costs of intragenerational and intergenerational rights.⁷² Economic damage should be measured with environmental damage and what capital (environment or minerals) is extracted. In terms of this right, and its international obligations, the GoM has an obligation to ensure that the energy produced in and for the country has minimal negative impacts on communities, future generations, the environment, and the climate.

To summarise, renewable energy from solar and wind is an excellent, and largely untapped, opportunity for Mozambique to address energy poverty and meet its constitutional and international obligations.



⁷² CADTM. (2021, May 10). 'Unequal ecological exchange' worsens across time and space, creating growing Northern environmental liabilities. CADTM.org. Retrieved from <https://www.cadtm.org/Unequal-ecological-exchange-worsens-across-time-and-space-creating-growing>

GENDER AND ENERGY JUSTICE IN MOZAMBIQUE

Mozambique's transition towards renewable energy offers a critical opportunity to promote not only decarbonisation and access to clean power, but also gender equality and social inclusion. Yet, the existing energy landscape continues to reflect deep structural inequalities that disproportionately affect women and marginalised groups, especially in rural areas. Integrating gender and energy justice into national energy planning is, therefore, essential to ensure that the benefits of the transition are shared equitably and that no one is left behind.

Gendered Dimensions of Energy Poverty

Women in Mozambique bear the heaviest burden of energy poverty. Over 80% of rural households rely on firewood for cooking.⁷³ This dependency contributes to health risks from indoor air pollution, time poverty from fuel collection, and exposure to insecurity and violence when travelling long distances to gather firewood. Because women and girls are primarily responsible for household energy use, they experience the greatest constraints when energy systems fail to provide reliable, affordable, and safe alternatives.

Expanding access to clean, decentralised energy directly contributes to women's empowerment. It reduces unpaid labour, frees time for education and economic participation, and improves health outcomes. Therefore, energy policies must be explicitly designed to address gendered energy needs and outcomes.

⁷³ Energypedia. (2023). *Energy access in Mozambique*. Energypedia.info. Retrieved from https://energypedia.info/wiki/Energy_Access_in_Mozambique





Barriers to Women's Participation in the Energy Sector

Women remain underrepresented across all levels of Mozambique's energy value chain, from technical training and employment to policy leadership and entrepreneurship. Despite growing renewable energy initiatives, most programmes lack gender-disaggregated targets or indicators. Institutional structures such as the EDM, ARENE, and FUNAE have yet to fully mainstream gender in recruitment, planning, and stakeholder engagement.

Key barriers include limited access to finance for women-led renewable energy enterprises, lack of training and mentorship in technical fields, and cultural norms that restrict women's participation in community decision-making. Addressing these barriers requires deliberate policy action, budget allocations, and measurable targets for gender inclusion.



Gender Mainstreaming in the Just Energy Transition

Mozambique's JETS provides a framework to promote fairness and inclusivity but currently lacks explicit gender provisions. To ensure that women benefit equitably from the energy transition, gender-responsive approaches must be embedded in the design, implementation, and monitoring of JETS and related policies.

This includes: (1) Integrating gender analysis in all stages of energy project planning and assessment; (2) Requiring gender action plans and gender-disaggregated indicators for donor and government-funded projects; (3) Ensuring that consultation processes under the FPIC framework meaningfully include women and other marginalised groups; and (4) Encouraging women's leadership and participation in decision-making bodies within the energy sector.

By linking gender equity to measurable results, Mozambique can transform the JETS from a policy ambition into a rights-based framework for equitable energy access.

Establishing a National Gender and Energy Framework would provide coherence and accountability across these initiatives, aligning them with JETS and Mozambique's broader commitments to gender equality under the Constitution and international treaties such as Convention on the Elimination of All Forms of Discrimination Against Women (**CEDAW**)⁷⁴ and the African Union's Agenda 2063.⁷⁵

To achieve a truly just and inclusive energy transition, Mozambique should:

1. Adopt a Gender and Energy Justice Policy that sets clear goals for women's participation, benefit-sharing, and access across the energy sector.
2. Institutionalise gender-responsive budgeting within MIREME, EDM, ARENE, and FUNAE.
3. Mandate gender impact assessments and public reporting for all large-scale energy projects.
4. Support capacity building and mentorship programmes for women in technical, leadership, and entrepreneurial roles.
5. Promote gender-disaggregated data collection and transparency in all national energy statistics and monitoring systems.

To summarise, the integration of gender and energy justice within Mozambique's policy and regulatory framework is essential to achieving a fair and inclusive transition. Addressing gendered barriers, improving access for vulnerable groups, and strengthening accountability for equitable outcomes will help to transform national energy policies into instruments of social justice.

⁷⁴ United Nations. (1979). *Convention on the Elimination of All Forms of Discrimination against Women*. United Nations Treaty Series, 1249, 13. Retrieved from <https://www.un.org/womenwatch/daw/cedaw/>

⁷⁵ African Union Commission. (2015). *Agenda 2063: The Africa we want*. Addis Ababa, Ethiopia: African Union Commission. Retrieved from <https://au.int/en/agenda2063>

REGULATORY GAP ANALYSIS AND RECOMMENDATIONS

Mozambique's ambition to transition to renewable energy is articulated in its JETS and other policy documents. However, multiple regulatory, institutional, and practical gaps currently undermine the realisation of a just and inclusive energy transition. Below is a consolidated analysis of these gaps and corresponding recommendations.

1. Lack of Clear Legal Definitions

Gap: There is no legal definition for “clean energy” in Mozambique's legislation. This hinders coherent policy design, alignment of incentives, and investor confidence. This has been reiterated in the JETS.

Recommendation: Amend the Electricity Law and related legislation to define “clean energy,” “renewable energy,” and “transition fuels” explicitly. Ensure consistency with regional and international definitions while contextualising to Mozambique's needs.

2. Weak Legal Foundation for Renewable Energy Deployment

Gap: Mozambique lacks a dedicated, comprehensive law governing renewable energy, particularly for small-scale and off-grid projects. Current legal provisions are piecemeal and largely dependent on donor-driven initiatives.

Recommendation: Enact a Renewable Energy Law providing clear guidelines for licensing, tariffs, community benefit-sharing, off-grid electrification, and energy cooperatives. Include simplified frameworks for small-scale developers and industrial self-consumers.

3. Inadequate Benefit-Sharing and Community Participation Mechanisms

Gap: Although some legal frameworks provide for FPIC, community consultations, and compensation, they are inconsistently implemented. Benefit-sharing obligations under CSR policies and extractives contracts are vague and non-binding.

Recommendation: Create enforceable obligations for community benefit-sharing in energy projects. Mandate LDA for all large-scale projects, with meaningful participation of affected communities throughout project planning, implementation, and benefit distribution.

4. Continued Promotion of Fossil Fuels Without a Phase-Out Plan

Gap: Despite its stated just transition ambitions, Mozambique continues to promote coal and gas projects. Natural gas is positioned as a “transition fuel” without any binding decarbonisation timelines. Plans for new coal-fired plants remain under discussion, and concessions continue to be awarded for oil and gas exploration. In 2024, the GoM established the Sovereign Wealth Fund to manage and secure revenues generated from gas reserves.⁷⁶

Recommendation: Develop a fossil fuel phase-out strategy aligned with global climate goals and NDC targets. New coal infrastructure approvals should be halted, and the use of heavy fuel oil (HFO) should be banned. Introduce legislation requiring lifecycle emissions assessments for gas projects and avoid reliance on unproven carbon capture, utilisation, and storage (CCUS) technology as a justification for continued fossil investment. Conduct Strategic Environmental Assessments to understand the environmental, social, and economic impacts of proposed energy developments. Revenues of the Sovereign Wealth Fund should be ring-fenced to finance renewable energy expansion, support local community projects, and build green economic opportunities that reduce reliance on fossil fuels. Finally, transparency must be ensured through public disclosure of all fund sources, allocations, and expenditures, accompanied by meaningful public consultation.

5. Low Energy Access and Unequal Distribution

Gap: Mozambique has among the lowest electrification rates in the region, particularly in rural provinces like Zambézia, Cabo Delgado, and Tete. Large-scale energy infrastructure projects (hydro and natural gas) have not translated into improved access for local communities.

Recommendation: Prioritise decentralised, community-led renewable energy solutions to close the energy access gap. Expand public investment in rural electrification and incentivise local mini-grids and PayGo models, supported by mobile money and microfinance. Ensure that projects serving export or industrial markets include clear domestic energy access obligations.

6. Electricity Pricing and Financial Unsustainability

Gap: Electricity tariffs are not cost-reflective. The EDM has reported profits in the last few years; however, it has large debts with it carrying fiscal risks and large past losses.⁷⁷ The EDM has high subsidies for retail clients and inadequate cost recovery from new connections. This undermines financial sustainability and deters private investment.

Recommendation: Gradually reform tariffs while maintaining protection for low-income users. Consider introducing cross-subsidies, green levies, or donor-backed social tariffs. Enable blended finance mechanisms and incentivise energy access finance through low-interest microloans.

⁷⁶ Sarmento, E. (2024, March 4). *The establishment of a sovereign wealth fund in Mozambique*. IMF Public Financial Management Blog. Retrieved from <https://blog-pfm.imf.org/en/pfmblog/2024/03/the-establishment-of-a-sovereign-wealth-fund-in-mozambique>

⁷⁷ International Monetary Fund. *State-Owned Enterprises in Mozambique: Current Situation and Policy Options*. (2024). Retrieved from https://www.imf.org/en/-/media/files/publications/selected-issues-papers/2024/english/sipea2024032.pdf?utm_source=chatgpt.com

7. Uncoordinated Institutional and Governance Landscape

Gap: There is insufficient coordination among national, provincial, and municipal authorities, leading to unclear roles, overlapping mandates, and slow decision-making. Governments at the local level are not clearly mandated to make decisions about the electricity system or to make plans to meet local energy needs through entering PPAs or by developing their own energy systems.. The Electricity Law refers only to competent authorities and does not clearly set out responsibilities and roles. These need to be addressed through clear rules and regulations specific to municipalities as per the Constitution, Article 262.

Recommendation: Establish a *Just Energy Transition Taskforce* to coordinate ministries, sectors, and local government. Strengthen municipal-level capacity to influence national energy planning. Clarify institutional responsibilities in law and ensure decentralised participation in energy governance. Under Article 262(2) of the Constitution, local state bodies shall promote the use of available resources, ensuring there is active participation of citizens, and encouraging local initiative in solving problems within communities. This would cover energy solutions at the local level to address energy poverty. Communities should be encouraged to engage with local state authorities.

8. Transmission and Grid Infrastructure Constraints

Gap: Mozambique's transmission and distribution infrastructure remains underdeveloped, outdated, and largely non-smart, especially in central and northern regions. These constraints limit the integration of RE projects, increase transmission losses, and reduce the reliability of supply for both households and industry.

Recommendation: Prioritise public and concessional investment in the rehabilitation, extension, and modernisation of the national grid, incorporating smart-grid technologies. Special attention should be given to regions with low electrification rates. In parallel, facilitate private sector participation in transmission through targeted regulatory reform and well-structured PPPs, ensuring that investments support RE integration and equitable access to electricity for all.

9. Missing Incentives and Fiscal Support for Clean Energy

Gap: Mozambique lacks a comprehensive regime of import incentives, tax benefits, and subsidies tailored to renewable energy. Existing fiscal policies continue to favour fossil fuels, with coal and petroleum gas, along with other gaseous hydrocarbons, remaining among the country's largest exports. This imbalance discourages diversification of the energy mix and limits the competitiveness of renewable energy investments.

Recommendation: Introduce tax holidays, import duty exemptions, and improved feed-in tariffs for renewable energy. Phase out fossil fuel subsidies and redirect fiscal support to clean energy innovation and access.

10. Limited Integration of Gender and Energy Justice Principles

Gap: Mozambique's energy laws and policies make only limited reference to gender equality, social inclusion, or energy justice, despite their recognition in the JETS. Existing frameworks, including the Electricity Law and Renewable Energy Code, do not require gender impact assessments, community participation quotas, or inclusion of women and marginalised groups in energy governance, project design, and benefit-sharing mechanisms. As a result, women and vulnerable populations remain underrepresented in energy decision-making and continue to bear disproportionate impacts from energy poverty and displacement.

Recommendation: Mainstream gender equality and energy justice across all levels of energy planning, regulation, and implementation. This should include:

- (1) Legal provisions mandating gender and social inclusion analyses in EIAs and project licensing;
- (2) Requirements for gender-balanced representation in regulatory bodies and project consultation processes;
- (3) Dedicated funding mechanisms to support women-led renewable energy enterprises and capacity-building for female professionals in the sector; and
- (4) Integration of gender and social equity indicators into monitoring and evaluation frameworks under the JETS and Renewable Energy Code.

11. Lack of Direction for Green Hydrogen and Emerging Technologies

Gap: Mozambique has expressed intent to become a major hydrogen producer but has yet to clarify whether this will be green hydrogen or how it will fit into regional markets already led by countries like Namibia and South Africa. Moreover, hydrogen production remains highly energy-intensive and costly, which underscores the need for careful financial planning and targeted investment incentives.

Recommendation: Finalise and publish a *Green Hydrogen Strategy* with clear sustainability criteria, infrastructure plans, and export/domestic use balance. Align it with JETS objectives and integrate benefit-sharing and just transition principles from the outset. Coordination across sectors, particularly energy, industry, and transport, will be essential to ensure that hydrogen development contributes to Mozambique's broader goals of economic diversification and a just, low-carbon transition.



12. No Binding Targets or Monitoring Mechanisms

Gap: Current strategies and plans lack binding, time-bound targets for renewable energy development, emissions reduction, or universal access. There is also limited public reporting or accountability. This top-down approach often overlooks the realities faced by local governments and communities, resulting in uneven implementation and persistent gaps in rural electrification and access.

Recommendation: Establish statutory, time-bound targets for renewable energy capacity, energy access, and emissions reduction, supported by clear enforcement and accountability mechanisms. These targets should be ground in a bottom-up approach, ensuring that provincial and municipal authorities, along with local communities, play an active role in defining priorities and tracking progress. Emphasis should be placed on last-mile connections to ensure electrification efforts reach the most remote and underserved areas. Mandate regular reporting and independent monitoring of JETS implementation, including equity and participation metrics.

13. Cross-Cutting Recommendations

A. Anchor the Just Energy Transition in Law

Mozambique should adopt a Just Energy Transition (JET) Framework that goes beyond the energy sector and establishes a comprehensive, intersectoral approach. It should consolidate principles, institutional roles, financing mechanisms, benefit-sharing, arrangements, participatory processes, and environmental safeguards across all relevant sectors. This broader approach would strengthen the implementation of the JETS by aligning policies and institutions at national, provincial, and local levels, ensuring coherence and legal accountability for a fair, inclusive, and socially grounded transition.

B. Application of the United Nations Universal Declaration of Human Rights and the African Union Charter on Human and Peoples' Rights

In Article 43 of the Constitution, it states that all constitutional principles for fundamental rights shall be interpreted and integrated with the **Universal Declaration of Human Rights**⁷⁸ and the **African Charter of Human and Peoples' Rights**.⁷⁹ In terms of access to energy, Article 22 of the African Charter speaks to this in that all people should have the right to their economic, social, and cultural development with states having the duty to ensure the exercise of this right of development. In terms of the modern world, energy is a necessity for development. Article 25 of the United Nations expresses that everyone has a standard of living adequate for the health and wellbeing of him/herself. This would cover not using sources of energy, like firewood or coal, which are harmful, and having access to energy for a standard of living.

Both Articles 22 and 25 need to be implemented by the state as a priority, and the right to be supplied clean and affordable energy, by the state, must be placed in legal frameworks within Mozambique.

⁷⁸ United Nations. (1948, December 10). *Universal Declaration of Human Rights [Declaration]*. United Nations. Retrieved from <https://www.un.org/en/about-us/universal-declaration-of-human-rights>

⁷⁹ Organization of African Unity. (1981, June 27). *African Charter on Human and Peoples' Rights [Treaty]*. African Commission on Human and Peoples' Rights. Retrieved November 12, 2025, from <https://achpr.au.int/en/charter/african-charter-human-and-peoples-rights/>

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