

Energise Mozambique: Unlocking Investment for Inclusive Energy Growth

Joint side event UNDP, UNICEF, SNV



Scaling Renewable Energy Investments for Inclusive Growth and Service Delivery

Energy in the UNDP Country Programme Document (CPD) - 2027- 2030



Beyond Energy Access

Energy as a platform for:

- Productive transformation
- Climate resilience
- Private sector engagement

Focus on:

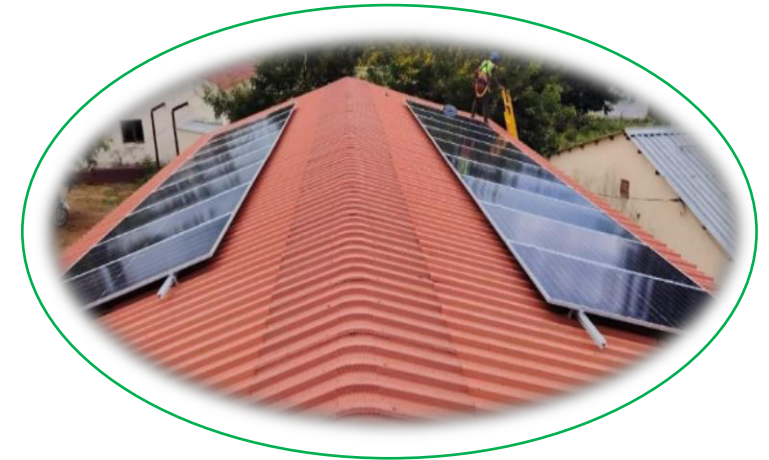
- Investment readiness
- Scalable implementation
- Sustainable delivery models

Shift from:

- Stand-alone projects
- Integrated development portfolios

Energy as a driver of:

- Inclusive economic growth
- Social inclusion
- Resilient public services



UNDP Integrated Energy Portfolio

From Access to Development Impact



Energy for Growth

Investment pipelines & productive transformation

Energy for Inclusion

Women's economic empowerment

Smart Health Systems

Resilient and digitally enabled health facilities

Cross-cutting:

Climate resilience; Digitalization; Local ownership



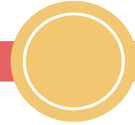
Energy for Growth (E4G) in Africa

The process



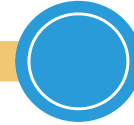
Clean energy project origination and development:

Development of clean energy pipelines aligned with national strategies



Project Appraisal:

Assessment of projects' financial, technical, and environmental viability to determine bankability, investment readiness, and required technical support.



Access to technical assistance facilities:

Support for feasibility studies, project structuring, and environmental and social assessments to strengthen project bankability.



Investment mobilization:

Connects project developers to international financiers, including DFIs and private investors.

Key Results



- 14 projects across 5 African countries
- Over USD 2 billion in identified clean energy
- More than 560 MW of planned capacity
- 3-9 million HH connected/year (300-100kWh/yr)
- Over 5K jobs created/year
- Avoids ~0.44–1.18 MtCO₂/year, depending on grid displacement



investments



- 4 projects secured TA funding to improve bankability
- 10+ projects in Zambia, Kenya, Mozambique engaged DFIs and impact lenders
- Potential to unlock over \$1 billion in debt

Women & Economic Development (GEN3)



Empowering Women through Clean Energy

Objective

Expand women's economic participation through renewable energy and productive use opportunities.

Type of Intervention

- Solar-powered productive hubs for women-led associations
- Land rights, savings groups, and revolving funds
- Entrepreneurship, financial literacy, and gender training
- Institutional capacity building for MIREME and FUNAE

Strategic Relevance

- Increases women's incomes and productivity
- Strengthens climate-resilient agriculture
- Expands access to finance and productive assets
- Advances gender equality in the energy sector
- Builds an investment-ready pipeline for Solar Hubs



Progress & Scale – up Readiness

- ✓ 895 women reached
- ✓ 6 Solar Hub sites identified and prepared
- ✓ 10 associations supported
- ✓ 4 revolving funds and management committees established

Smart Health Systems for Resilient Service Delivery

Objective

Strengthen health system resilience and continuity of essential services through reliable, climate-resilient, and digitally enabled energy systems

Type of Intervention

- Hybrid solar systems
- Digital monitoring and smart energy management
- Improved facility connectivity, and real-time data visibility
- Lifecycle- based implementation model

Strategic Relevance

- Improves quality and continuity of healthcare
- Enhances climate resilience and sustainability
- Enhances data-driven management and operational efficiency
- Creates an investment- ready scale-up pipeline

Progress & Scale – up Readiness

- ✓ 16 facilities under implementation
- ✓ 84 facilities prioritized for expansion
- ✓ Energy audits and business cases completed



Cross-Cutting Learnings & Pathways for Scale



What Is Needed to Scale

Financing & Investment Readiness

- Bankable projects pipelines
- Blended finance and risk- sharing
- Lifecycle financing approaches
- Productive-use financing for women-led enterprises

Scalable Implementation

- From pilots to programmatic approaches
- Aggregated and replicable models



Sustainable Delivery Models

Energy –as-a-Service approaches
Stronger O&M systems and local capacity
Gender-responsive service delivery models

Partnerships & Enabling Ecosystems

Governments, Private sector, DFIs and financial institutions, development partners, communities and local institutions



Innovative Service-Based Energy Solutions for Resilient and Inclusive Social Services

Renewable energy solutions for the water,
health, and education sectors



UNICEF Mozambique

50 yrs

Present in Mozambique
since 1975

290

staff across 1 country
office and 4 field offices

US \$100m+

UNICEF Mozambique
typically implements \$100m+
of programming annually



Energy Access in Mozambique

75%

of Mozambicans
live in rural areas

<36%

National electricity
access rate; rural under
10%

81%

of 13,020 schools
lack any electricity

22%

of health facilities
have no electricity



Why Solar Energy is Critical for Children in Mozambique



Health facilities cannot function without reliable power. 22% have no electricity and outages average 4–18 hours — disrupting cold chains, diagnostics, and maternity services. Solar is the most viable solution for the 78% of off-grid and under-served facilities across Mozambique.



81% of schools have no electricity — a direct barrier to learning outcomes. Solar enables digital tools, consistent lighting and skills training programmes, turning off-grid schools into functional learning environments, and creating a pipeline of trained local solar technicians.

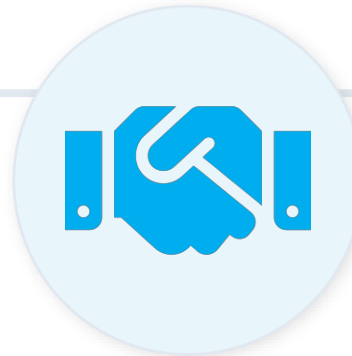


Solar-powered water systems outperform diesel across cost, reliability and maintenance. Fuel dependency is one of the main reasons water pumps fail in remote areas, and grid energy is often unreliable and vulnerable to climate shocks such as cyclones. Solar removes that risk, lowers operating costs, and delivers consistent water access to communities and health facilities alike.

A Partnership Built on Complementary Strengths



- ✓ **Technical Assistance**
Sector expertise across WASH, health and education
- ✓ **Provincial Offices**
Existing presence in remote areas across Mozambique
- ✓ **Field Experience**
Consultants and staff embedded in remote communities
- ✓ **Sustainability & M&E**
Long-term monitoring and evaluation agreements
- ✓ **Learning-to-Earning Programme**
Skilling local youth for solar operations careers
- ✓ **SCR & Supply Chain**
Project frameworks and procurement expertise



PARTNERSHIP



PRIVATE SECTOR

- ✓ **Technical Expertise**
Specialised knowledge in solar system design and delivery
- ✓ **Engineering Development**
Design, installation and commissioning capabilities
- ✓ **Maintenance Know-How**
Preventive and corrective O&M systems and protocols
- ✓ **Efficient Equipment**
Access to quality solar technology and components
- ✓ **Supply Chain**
Logistics and procurement networks for deployment at scale
- ✓ **Strategic UNICEF Collaboration**
Become a long-term partner anchored by UNICEF demand portfolios

From One-Off Installs to Service-Based Growth



THE PROBLEM

Why Traditional Solar Fails

One-off installations break down without long-term funding or maintenance — leaving schools, health care facilities and communities without reliable power.



PRIVATE SECTOR BENEFIT

Stable, Predictable Returns

Long-term service contracts provide scalable revenue from rural markets, anchored by UNICEF-backed demand portfolios.



THE SHIFT

Energy-as-a-Service Model

An **Energy-as-a-Service** model contracts private firms (ESCOs) for reliable, ongoing power delivery — not just hardware.



MULTI-STAKEHOLDER FINANCE

Blending Capital at Scale

Public, concessional and private capital through **bank and micro-financing partnerships** to de-risk investment and enable scale.



UNICEF Solar Programmes Across Three Sectors



WASH

Solar Powered Water Supply Solutions

- ✓ Solar-powered water supply systems delivering clean water to underserved communities
- ✓ Reduced dependence on grid electricity and fuel-powered generators – increased climate resilience
- ✓ 4 provinces covered — installations across the country. Thousands of people reached with reliable clean water access
- ✓ Private operators for O&M and tariff collection



Health

Cold Chain & Digital Health Tools

- ✓ CCEP Project: 544 solar systems for cold chain refrigerators in 544 Health Centres (6 M USD)
- ✓ Solar powering 15 health facilities in Cabo Delgado
- ✓ 20 Health Centers in Gaza including solar energy
- ✓ upSCALE: solar-charged digital tools for community health workers (APEs)



Education

Digital Learning & Skills Development

- ✓ Solar energy enabling digital education in off-grid schools
- ✓ Learning-to-earning solutions linked to solar skills development
- ✓ Local youth trained as solar technicians — installation, preventive and corrective maintenance
- ✓ Building permanent local workforce for long-term system sustainability

Building Local Capacity and Lasting Resilience



Local youth trained in installation, preventive and corrective maintenance — moving beyond one-off delivery to build a skilled, permanent local workforce.



Leveraging UNICEF procurement processes and multi-stakeholder partner networks to institutionalise training programmes and ensure sustainable long-term operation.



A self-sustaining ecosystem where local solar expertise keeps schools, health clinics and community centres operational — driving economic growth for years to come.

Local youth skills development creates a ripple effect — expanding the solar market while ensuring critical infrastructure never goes dark.

Obrigada/o Thank you!





BRILHO ENERGY ACCESS Mozambique

*Transforming the local
off-grid renewable
energy market*





Financed by:



Implemented by:



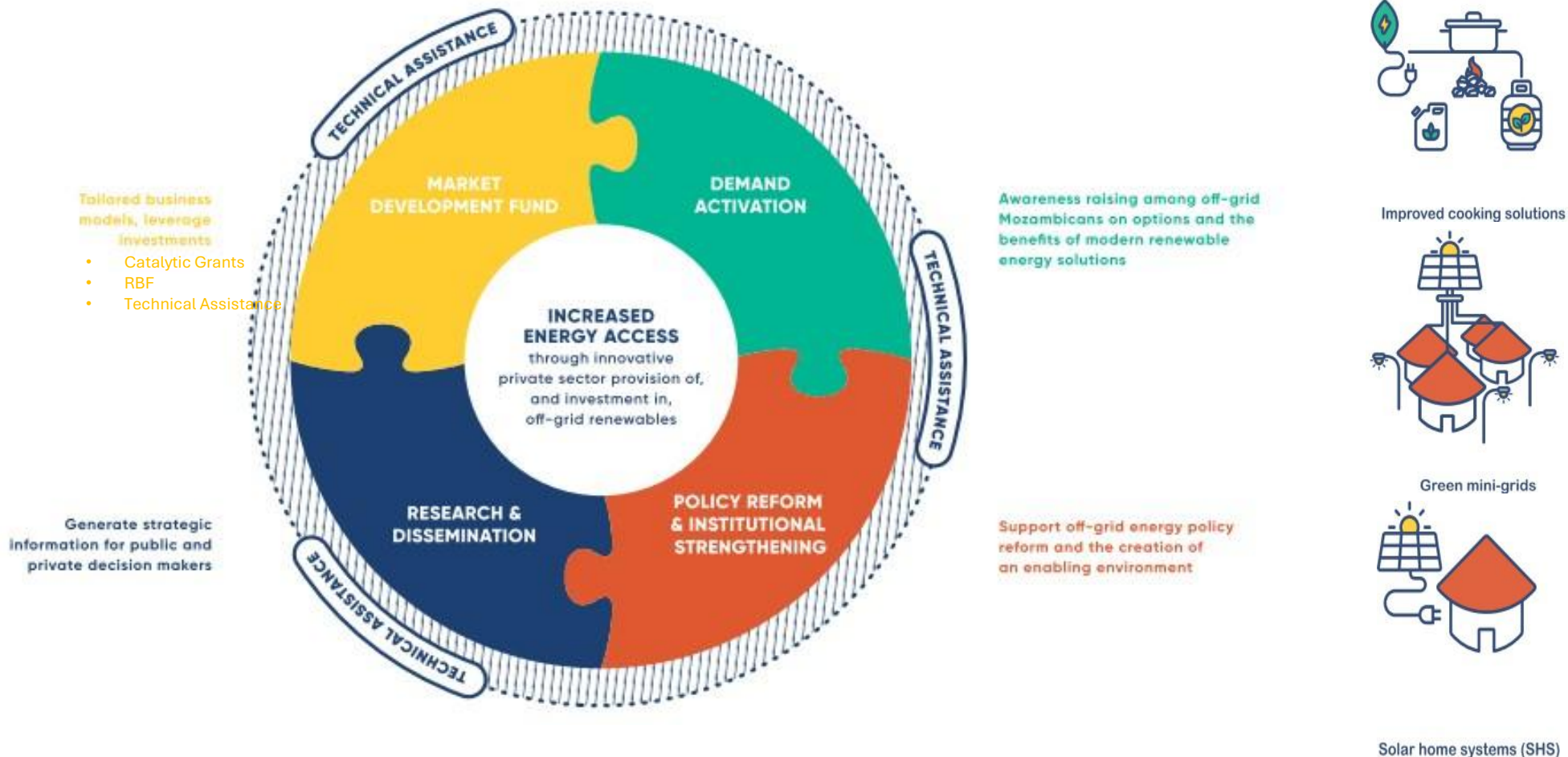
In collaboration with:



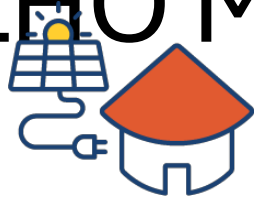


BRILHO: Mandate and approach

BRILHO is a seven-year (2019-2026) programme that aims to accelerate Mozambique's off-grid energy market in order to provide clean and affordable energy solutions to the country's off-grid population. Total size: £38 million.



BRILHO MDF Portfolio



Solar Home Systems



Green Mini-Grids



Improved Cooking Solutions

Grey boxes indicate previous MDF companies



Demand activation



ESCOLA DO AGRICULTOR
ALCANÇA NÚMEROS CRESCENTES
APRESENTANDO POTENCIAL PARA ATINGIR
8 MILHÕES DE MOÇAMBICANOS A CADA NOVO EPISÓDIO

IV TEMPORADA

TVM NACIONAL
RTP ÁFRICA
MAIS DE 1 MILHÃO
DE TELESPECTADORES
POR EPISÓDIO

REDES SOCIAIS
FACEBOOK
E YOUTUBE
60 MIL SEGUIDORES
INTERACTIVOS

RÁDIO
MOÇAMBICANA
MAIS DE 200 MIL
OUVINTES
POR EPISÓDIO
EM TODO O PAÍS

LINHA
GRATUITA
84 321
MÉDIA DE 12 MIL
LIGAÇÕES POR MÊS

34 RÁDIOS COMUNITÁRIAS
EM TODAS AS PROVÍNCIAS
MAIS DE 20 MIL OUVINTES
POR EPISÓDIO
TRANSMITIDOS EM EMAKUA
CISSENA E CHANGANA

BOLETIM MENSAL
60 EDIÇÕES DISTRIBUÍDAS
ENTRE AGRICULTORES,
EMPRESAS E UNIVERSIDADES,
TÉCNICOS E PRODUTORES

PROMOTORES
PARANÁVEIO MZ
AQI

PARCEIROS
BRILHO
UKaid
SNV
Sweden Sverige

MOSTRA QUE CONHECES A MINHA HISTÓRIA

**O QUE A JANETE FEZ
PARA PODER FINANCIAR
A COMPRA DE UM FOGÃO?**

A ADERIU A UM XITIQUE **B** FEZ UM EMPRÉSTIMO NUM MICROCRÉDITO **C** AUMENTOU AS VENDAS

SE FORS A PRIMEIRA PESSOA A DAR A RESPOSTA CERTA,
GANHAS UMA RECARGA DE 200 MTS.

JANETE
NADA É IMPOSSÍVEL



Mantenha as crianças longe do fumo enquanto cozinha.



Cozinhe num espaço bem ventilado.

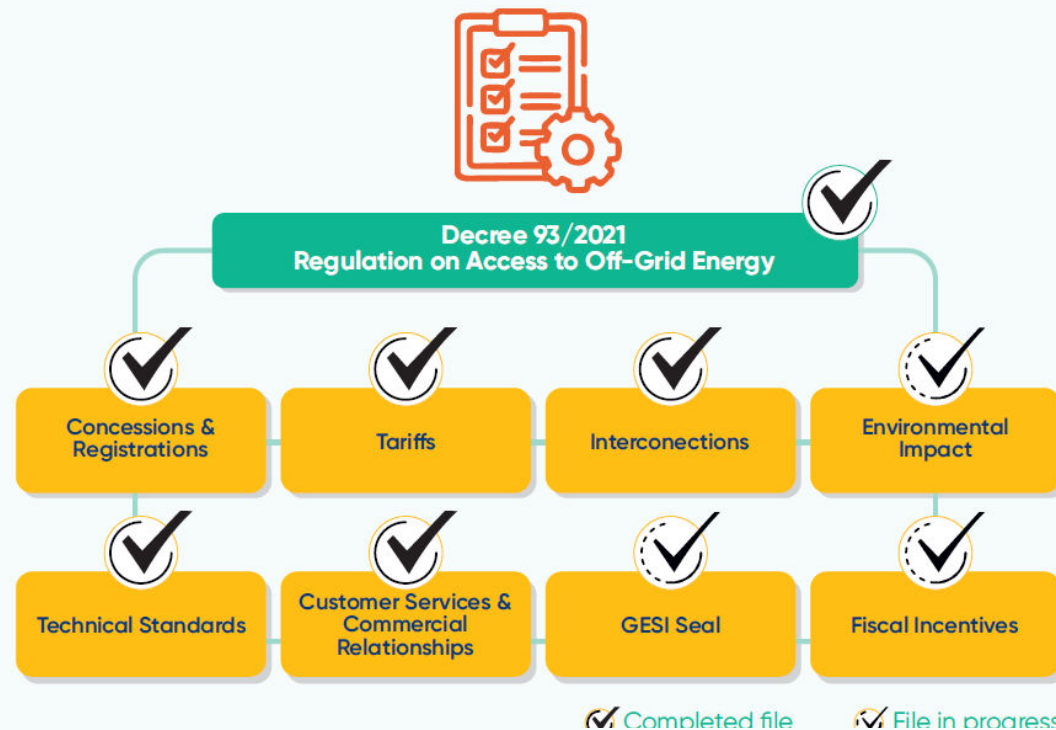


Poupe investindo num fogão melhorado

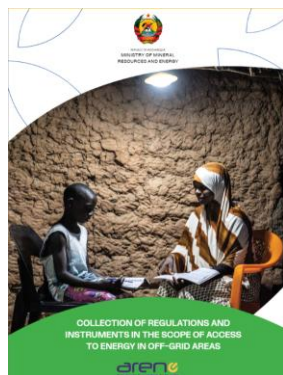


Policy reform

SNV-BRILHO supported the GoM in the development of the first Regulation on Access to Off-Grid Energy in Mozambique. Approved by the President and Council of Ministers through a national decree on 14 September 2021: Decree 93/2021

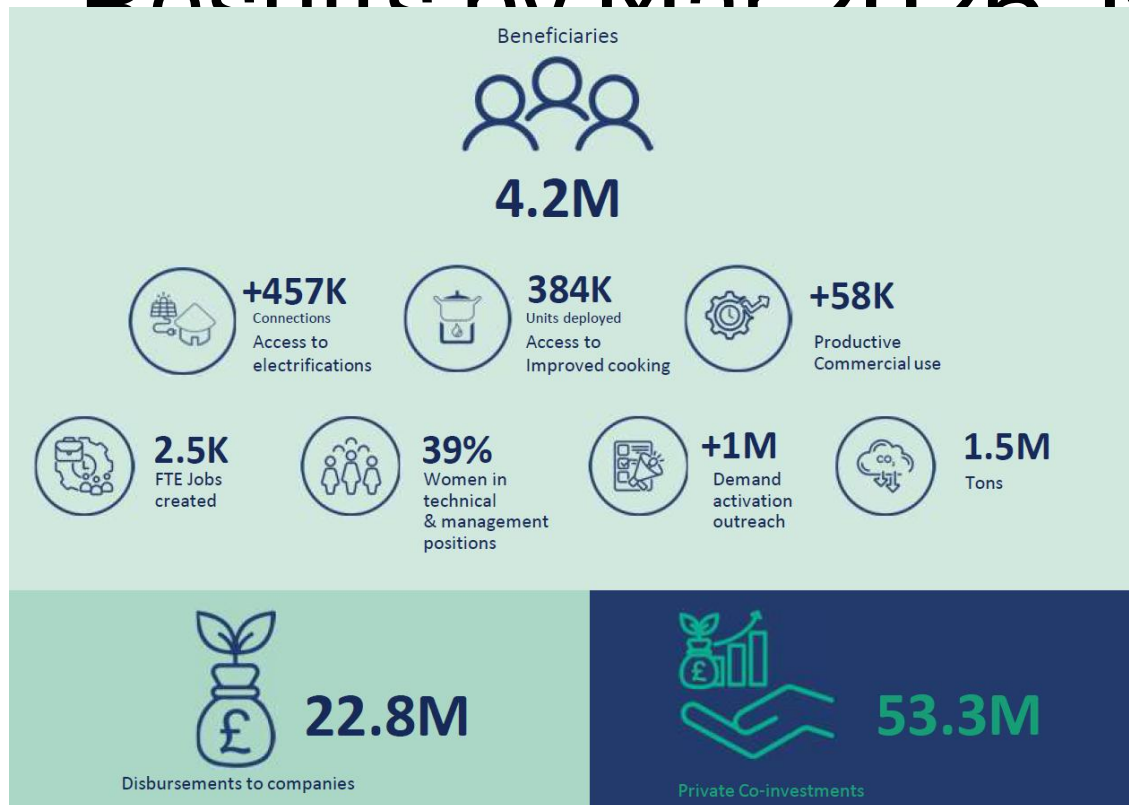


Supported the GoM (MIREME, ARENE, FUNAE) in the development of the off-grid regulatory framework





Results by Mar 2026 • MDF

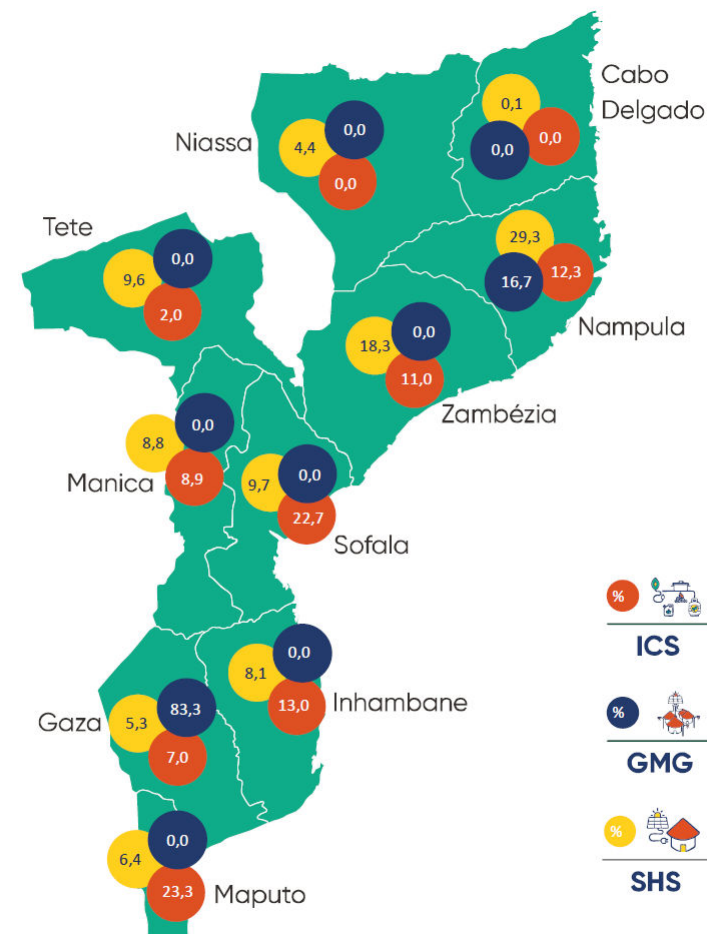


Awards



A+

for the last 4 annual reviews





Mini-Grid Project

Maqueze GMG: 1st Off-grid GMG Concession Issued


REPÚBLICA DE MOÇAMBIQUE
MINISTÉRIO DOS RECURSOS MINERAIS E ENERGIA

CONTRATO DE CONCESSÃO PARA AS ACTIVIDADES DE FORNECIMENTO PARA O ACESSO À ENERGIA NAS ZONAS FORA DA REDE
CELEBRADO ENTRE
O GOVERNO DA REPÚBLICA DE MOÇAMBIQUE, REPRESENTADO NESTE ACTO PELO MINISTRO DOS RECURSOS MINERAIS E ENERGIA (AUTORIDADE CONCEDENTE),
E
MOTSE, SA, SOCIEDADE ANÓNIMA CONSTITUÍDA AO ABRIGO DA LEI MOÇAMBIQUANA, MATRICULADA NA CONSERVATORIA DO REGISTO DAS ENTIDADES LEGAIS DE MAPUTO SOB O NÚM.: 100483882, COM NÚT.: 400520240, SITA NA RUA DOS DESPORTISTAS, EDIFÍCIO JAT 5 - 1, 4.º ANDAR - CIDADE DE MAPUTO, MOÇAMBIQUE (CONCESSIONÁRIO), COM OS SEQUENTES TERMOS E CONDIÇÕES:

CONCESSÃO Nº: CADASTRO ENERGÉTICO Nº: 83ARENE/CSEB/2024

CAPACIDADE INSTALADA: 50 kW até 150 kW

CATEGORIA DA MINI-REDE: 03

LOCALIZAÇÃO DA ÁREA DE CONCESSÃO: POVOADO DE MAQUEZE, LOCALIDADE DE MAQUEZE, POSTO ADMINISTRATIVO DE ALTO-CHANGANE, DISTRITO DE CHIBUTO, PROVÍNCIA DE GAZA

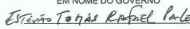
ACTIVIDADES ABRANGIDAS: PRODUÇÃO, ARMAZENAMENTO, DISTRIBUIÇÃO E COMERCIALIZAÇÃO DE ENERGIA ELÉCTRICA

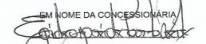
FONTE DE GERAÇÃO: ENERGIA SOLAR

DATA EFECTIVA: DATA DA ASSINATURA DO CONTRATO DE CONCESSÃO

VALIDADE:

DATA DE INÍCIO DE OPERAÇÃO COMERCIAL: 27 DE SETEMBRO DE 2023

EM NOME DO GOVERNO

ESTEVÃO TOMÁS RAFAEL PALE
MINISTRO DOS RECURSOS MINERAIS E ENERGIA

EM NOME DA CONCESSIONÁRIA

EGÍDIO JOSÉ DE FAUSTO LEITE
PRESIDENTE DO CONSELHO DE ADMINISTRAÇÃO
MOTSE, SA
(Rua dos Desportistas, n.º 433
Edifício JAT 5-1, 4.º Andar
Maputo - Moçambique)
NÚT.: 400520240

Number of HH connections: 322

Productive Use of Energy Clients: 25

Public Institutions: 2 (Primary School and Health center)

Production Capacity: 41 kW

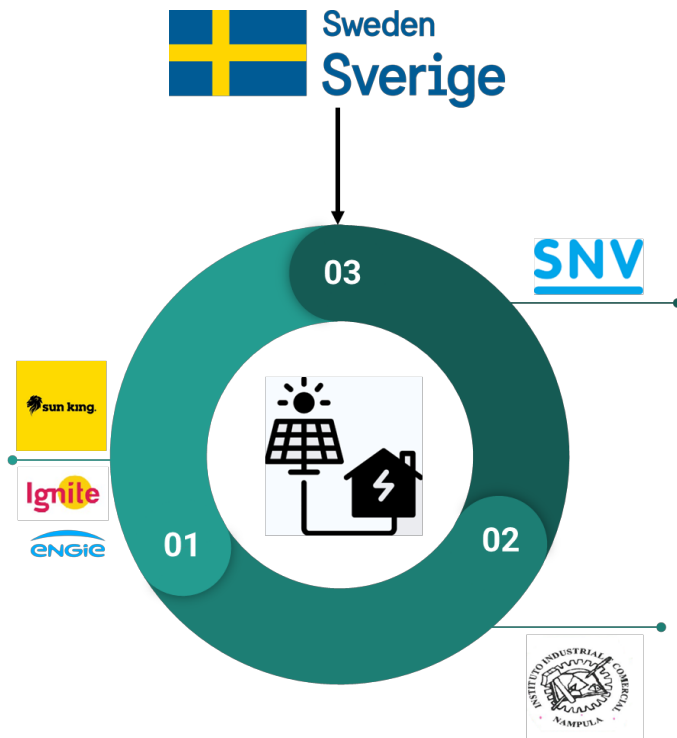


BRILHO: Acceleration and innovations

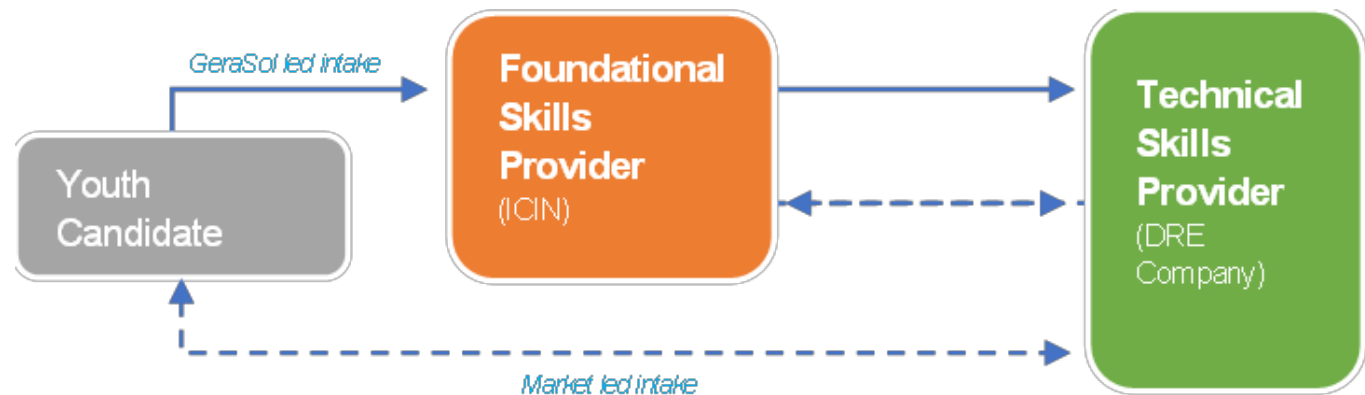


GeraSol

Supporting young people to develop market aligned skills and access green job opportunities. Contribute to growth of the Distributed Renewable Energy (DRE) sector and lowering the risk of recruitment by non-state violent actors (NSVA) in Northern Mozambique



Train 3,000 youth in soft and solar technical skills and matchmake them with job opportunities for at least 2,000 positions in Nampula, Niassa and Cabo Delgado provinces.





Reflections on the journey

- **Market maturity:** Can we say that the Mozambican energy market is fully developed, or are there still critical gaps to address?
- **Sustainability and inclusivity:** How can we pursue sustainable business models that truly ensure no one is left behind - *Sustainable access Vs Universal Access*?
- **Beyond Access:** How do we recognize that first-time energy access is essential, yet only through income-generating activities can we foster lasting social development?
- What key lessons from Brilho's implementation experience can guide future inclusive energy programs in Mozambique?

Obrigado!

Pedro Moleirinho

