Paving the way for a clean energy transition with decentralised renewable energy (PWCET) Series

EU – Africa Business Forum
20 April 2021
15:00 – 16:30 CEST
Paving the way for a Clean Energy Transition with Decentralised Renewable Energy

BMZ Initiative „Green People’s Energy for Africa“

EU Africa Business Forum, Side Event, 20. April 2021

Bärbel Höhn

BMZ Special Representative for Energy in Africa
Guidlines for our Actions

- **Paris Agreement**: 1.5 °C goal, reduction of CO2 emission
- **Energy sector** is one of the main drivers of climate change
  (73% Emission; electricity, heat and transport)

- **COVID-19** has hit hard developing economics, they run the risk of falling behind.
Green Recovery

- EU climate and energy cooperation with Africa;
- Supply rural Africa with sustainable energy to archive the 2030 Agenda through the
  - EU Commission’s **Green Energy Initiative**:  
    - Deepening the existing Africa-EU Energy Partnership (AEEP);
    - Launching an ambitious innovative package as part of the Africa Investment Offensive;
  - German’s Initiative e.g.:
    - Green People’s Energy for Africa
    - Energy Self-Sufficient Villages
- Decentralised Renewable Energy are helpful in the COVID-19 Pandemic
Green People’s Energy for Africa
An initiative of Dr. Gerd Müller, the Federal Minister of Economic Cooperation and Development (BMZ)

This initiative Green People’s Energy for Africa

- Promotes the expansion of renewable energies in Sub-Saharan Africa,
- Relies on the broad participation of small and medium-sized enterprises, municipalities, cooperatives, public associations and citizens and
- Encourages renewable energy projects of common benefit across countries and strengthens partnerships between actors in Europe and Africa

Jointly implemented by

On behalf of

[Logo of respective organizations]
Advantage of Decentralised Renewable Energy (DRE)

- Cheaper
- Installed faster
- More flexible
- More jobs
- More independence
- Women-specific benefits
- Climate friendly
- Improve local development
Experiences from Germany

- Cross-political party
- Sector coupling
- Involvement and empowerment of the local population
- Energy Cooperatives

Source: nproxx
What do we need to be successful?

- Political will: regulation, security for invested private capital, strengthening the domestic market

- Sustainable solutions: quality standards, train and motivate the local population, sustainable operator model

- Funding models: result based financing, crowdfunding, tender models
Thank you for your attention!

Bärbel Höhn
BMZ Special Representative for Energy in Africa

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Photos
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EU Africa Business Forum (EABF)

Jens Jaeger
Policy & Business Development Manager
Alliance for Rural Electrification (ARE)
The Alliance for Rural Electrification (ARE) is an independent international business association with the aim to promote a sustainable decentralised renewable energy industry for the 21st century, activating markets for affordable energy services, and creating local jobs and inclusive economies.

#1 Global decentralised renewable energy association

175+ Members

50+ Countries

3 Continents

For more details, see ARE Matchmaking Platform
ARE Members
ARE Members Regional Focus & Expertise

**ARE Members' Regional Focus**
- 55% Asia Pacific
- 86% Africa
- 39% LatAm & Caribbean

**Technologies**
- 23% Bioenergy
- 25% Hydro
- 27% Wind
- 42% Power Components
- 67% Energy Storage
- 79% PV

**Systems**
- 75% Standalone
- 87% Mini-grid
Opportunities with ARE

- With 15 years of rich experience ARE has been at the center-stage of the DRE sector providing support to its Members in three folds:
  - Market Intelligence & Business Development
  - Policy & Advocacy Support
  - Communications & Marketing
Successful Partnerships

Building on the aggregated opinion of Members, ARE influences global policy & development agendas to support market development and de-risking access to finance for projects at the programme and sector level. ARE the strategic national, regional, and international partnerships that ARE has forged over the years e.g. cooperation with UNIDO, GET.invest, and many others.

Example:

ARE COVID-19 Campaign

Roadmap for the DRE sector to survive and flourish in the wake of the COVID-19 crisis

**Objective:** unlock the necessary financial, technical and regulatory support for the DRE sector to respond effectively to the COVID-19 pandemic and to flourish in its aftermath

**Industry partners:** associations, public sector, international funding partners, private companies, investors and civil society

**Selected key actions:**
- Industry consultation survey
- CtA with five actionable recommendations for governments, funders and philanthropies (150 signatories!)
- Position paper
- Best practices publication + two webinars on health care electrification with DRE
- Roundtable on GET.invest Support Instruments for the DRE Sector
- Energy Access COVID-19 Relief Summit
- Input on recovery mechanisms i.e. AfDB CRP, Energy Access Relief Fund and IRENA CfA
- Mass outreach and mobilisation: ARE Newsletter (12.5k readers), social media (19k followers), ARE website (5,500 visitors/month), ARE weekly alert (600+ readers)
ARE’s Green Recovery Country Programme

**Objective:** This programme aims to support the development of a sustainable decentralised renewable energy industry at national levels, activating markets for affordable and reliable energy services, combat climate change and power green jobs.

**Proposed activities:** The proposed programme has six components, which combined will help accelerate the development of a sustainable and private-sector driven DRE market.

**Timeline:** Initial three-year programme with the possible extension on a needs basis.
Contact information

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EU Africa Business Forum (EABF)

ACCESS SA
ENERGY, WATER AND ENVIRONMENT

Paving the way for a Clean Energy Transition with Decentralised Renewable Energy

Ibrahim Togola
Chairman and Co-Founder, ACCESS SA

20 April 2021
Without considerable investment, energy poverty and its profound economic consequences will continue to be a challenge for west Africa in 2030 (vilar 2012). The region with a total population in excess of 340 million has one of the lowest modern electricity consumption rates in the world among which Mali has some of the lowest electrification rates in the region, 19% according to the Malian Rural Electrification Agency, and this has a negative impact on quality of life and is a barrier to improving economic development for rural and peri-urban people. Access to Renewable Energy is a key tool to increase the resilience of vulnerable communities to the impacts of climate change in the Sahel Region

Key challenges for energy access west Africa and particularly in Mali

Financing,

Affordability: Dispute over tariff as the national grid is subsidized and the rural electrification lacks it.

Energy Security

Reliance on traditional biomass

Lack of technical expertise/Education - Vocational training

Climate change and insecurity - conflict zones
There are major implications on the political side and institutions to revitalize the dynamism of energy access in Mali and Wes Africa. Some initiatives have been put in place:

- Creation of government agency in Mali AMADER - Agence Malienne pour le Développement de l’Energie Domestique et de l’Electrification rural to promote and leads energy access in Mali, same in Senegal, Niger, Benin, Burkina Faso, etc.

- Exoneration on entrance custom duties for renewable energy equipment (over 30%)

- Private sector both national and international presence

- NGO’s supporting communities and training young to stimulate the energy access

- Promoting renewable energy in the sector of Agriculture

- Digitalization process

- Promotion of training institutions
ACCESS SA is a dynamic and an innovative enterprise with more than 12 years of experience in the energy sector and focused on sustainable rural electrification using solar hybrid systems to provide clean energy services to rural populations.

As the leading mini-grid operator in Mali, ACCESS SA has strong capacity to provide the following services:

- Project development of a hybrid solar mini-grid system
- Engineering, procurement and construction EPC
- Operation and Maintenance
- Distribution network LV and MV design and installation
- Solar Energy and Electrical Products, Solar Home System, Pico solar lantern
- Rural electrification Management
- Training
Most of ACCESS’s projects have been with individual village capacity from 33 kWp to 200 kWp, now moving from kWp to MW size installations is concretely and practically achievable in terms of ACCESS’s manage capacity. ACCESS has installed projects over 10 MWp:

- Five (5) villages Project SABER funded by UEMOA (Monetary Union)
- Six (6) villages Project SHER Funded by the World Bank
- Ten (10) Project PERSHY funded by Abu Dhabi Development Fund
ACCESS SA moving from kWp to MWp

Project Development of a hybrid Solar minigrid System
- Feasibility study
- Sizing
- Environment impact assessment
- Licence acquisition
- Load consumption forecasting

Engineering Procurement and Construction
- Civil Work
- Procurement of world class equipment: solar panel, SMA inverter, Hoppecke batteries, Genset (Deutz)
- Installations Electrical components

Distribution Network Design
- LV transmission lines
- MV transmission lines

ACCESS SA provide electricity to 24 villages and provide Operation and Maintenance services:
- Solar system
- Distribution Network
- End-User consumption and management
Digitalization Perspective to reduce O&M

Commercial Loads
- Welders
- Threshers
- Grain mills

Residential Loads
- Lights
- Fans & TVs
- Refrigerators

Payments
- Cash
- Mobile
- ACCESS POS

Single phase Metering Data

3-phase Metering Data

Site Operation Data

Power Plant

Solar Hybrid Power Plant

Remote Monitoring & Management

Clients & Operations Management
ACCESS’s solar project implementation in different sites in Mali
Thank You

www.accessenergie.com
Minigrids Focus on Zambia

Paving the way for a Clean Energy Transition with Decentralised Renewable Energy

EU Africa Business Forum (EABF)

20th April 2021
Mukabanji Mutanuka
Head of Mini-Grids, ENGIE Energy Access, Zambia
Leader in Africa’s access to energy market

With ENGIE Energy Access, ENGIE is now the leading off-grid, Pay-As-You-Go (PAYGo) and Mini-grid solutions provider in Africa.

We offer the best and most affordable Solar Home System and Mini-grid solution tailored to meet customers’ requirements.

Our advanced product engineering and customer-centric credit model ensure long-term satisfaction.
The mini-grids strategy is axed around development of income generating activities and productive usages as a key enabler of economic growth and welfare in rural areas in Africa. This anchor load forms a cornerstone of financial sustainability of minigrids.

Over 90% of customers declare increased income and improved quality of life due to longer operating hours, more efficient operations, new/better services and more customers.
Mini-grids: the union of technology and services

**TECHNOLOGY** supporting **SERVICES** to serve all community **USERS**

**GENERATION & STORAGE**
- Solar PV
- Battery Lithium
- Clean, affordable and reliable energy

**DISTRIBUTION**
- AC voltage
- Mono or triphase
- Smart meter
- Appliances on lease to own

**DIGITAL**
- Mobile Pay as You Go
- Remote monitoring
- Data analysis
- Energy services

- Small industries and workshops
- Services (shops & restaurants)
- Public services (schools, clinics)
- Families and individuals
Zambia Focus on Mini-grids

Chitandika Highlights
- Successful Technical and Commercial operation of 1 Minigrid since May 2019.
- 28.35kW PV peak and 96kWh of battery storage
- 154 customer connections, 24 IGA’s, 5 large Productive uses, 3 Public institutions (2 Schools + 1 Rural Health Centre)
- Good HSSE and ZERO track record of High potential events
- Well established partnerships and synergies in Capex, Appliance synergies and key actors in Energy and Agri-business
Mini-grids: Key Enablers

Economic Development: Enabler of Businesses

As development occurs, electricity demand rises.

Operational Reliability & Scale up # of Mini-grids

Selling Appliances

Developing Productive Uses

Developing New Services
Thankyou for your attention!

https://engie-powercorner.com
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**Moderator**

Mrs. Dorothea Otremba, Senior Advisor, GIZ

**Panellists**

Mrs. Bärbel Höhn, Special Representative for Energy in Africa, The Federal Ministry for Economic Cooperation & Development (BMZ) and former member of the German Bundestag

Ms. Mukabanji Mutanuka, Head of Mini-grids, ENGIE Energy Access

Mr. Jens Jaeger, Policy & Business Development Manager, ARE

Mr. Ibrahim Togola, Chairman and Co-Founder, ACCESS SA
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Thank You