Policy development for solar PV deployment in sub-Saharan Africa – the case of ECOVAS

Eder Semedo – Project Officer, 09 July 2021
Establishment of ECREEE

Established on the 23\textsuperscript{rd} of November to promote the development of sustainable energy markets

Secretariat is based in Praia, Cape Verde with National Focal Institutions (NFIs) across all 15 ECOWAS countries

Officially inaugurated on the 6th July 2010

Assigned by the ECOWAS Energy Ministers as the SE4ALL Focal Point for West Africa
THE ECOWAS REGION

- **Area**: 5,115,000 km²
- **Population**: 334 Million
- **GDP per capita**: US$ 2,097
- **Access to Electricity**: ~53% (2018)
- **Renewable Energy Installed capacity**: 6.5 GW (26%)
- **Electricity Production from Renewables**: 55.4 TWh (32%)
In 2018, 53% of the ECOWAS population had access to electricity provided by the national grid or mini-grids. This makes a concrete case for the rapid deployment of off-grid systems such as CEMGs and stand-alone technologies, in order to attain the 65% regional access target by 2020.
12 REGIONAL PROGRAMS
TO SUPPORT THE IMPLEMENTATION OF THE REGIONAL RE AND EE POLICIES –
TOWARDS SUSTAINABLE ENERGY IN ECOWAS

Sustainable Energy Policy Program
SEforALL Program
Capacity Building and Knowledge Management
Rural Electrification Program

Energy Efficiency Program
Project Development and Finance Program
Bioenergy Program
Solar Thermal Program

West Africa Clean Cooking Program
Gender Mainstreaming in Energy Access Program
Climate Change Program
Small Hydro Power Program
ECOWAS RE & EE Policies

• Adopted by the ECOWAS Authority of Heads of State and Government, in July 2013, Abuja

• ECREEE is coordinating the implementation of the RE and EE Policies

• ECREEE is the SE4ALL Focal Institution for ECOWAS

• Sustainable Energy Country Action Plans developed across the 15 Member States

• Investment Prospectus to operationalize the National Action Plans developed.
Sustainable Energy Country Action plans developed across the 15 Member States

Energy Access Action Plans

National Energy Efficiency Action Plans (NEEAP)

National Renewable Energy Action Plans (NREAP)

Conventional Power Plant
Rural Electrification
Grid Extension
Gender Mainstreaming

Clean cooking
EE Lighting
EE Building
EE Standards
Electricity Distribution

Small Hydro Power
Bio Energy
PV & Thermal
Wind

TRANSPLATES INTO REGIONAL TARGETS
ECOWAS Investment prospectus framework

Structured into four pipelines and the enabling environment

Pipeline 1
Generation, transmission and distribution (on-grid)

Pipeline 2
Off-grid (Mini-Grids and standalone systems)

Pipeline 3
Bioenergy and Cooking Projects

Pipeline 4
Energy Efficiency
ECOWAS Regional Objectives

ENERGY ACCESS / RENEWABLE ENERGY

Ensure universal access to sustainable energy services by 2030

- The share of renewable energy (incl. large hydro) of the overall electricity mix will increase to 35% by 2020 and 48% by 2030
- The share of new renewable energy such as wind, solar, small scale hydro and bioelectricity (excl. large hydro) will increase to 10% (19%) in 2020 (2030)
- Provide access to clean cooking energy to 100% (60%) of the population by 2030 (2020), including 26% (20%) of LPG users
- Promoting 60,000 mini-grids and 2.6 million stand-alone systems across the region by 2020
- By 2020 (2030), 6.8% (5%) of generation capacity worth 634 MW (2000 MW) from biomass residues or dedicated plantations
- The share of ethanol/biodiesel in transport fuels will increase to 5% (15%) in 2020 (2030)
Regional Progress Monitoring Framework

• The Regional Monitoring Framework is a pragmatic methodology for monitoring the progress made by each member states towards achieving the targets set forth in regional RE and EE Policy

• It was adopted at the 11th Meeting of the ECOWAS Energy Ministers held in Conakry, in December 2016

• ECREEE publishes yearly report based on the data and information provided by the member states.

• It is shared with partners including IRENA (statistics unit), REN21, IEA, Africa Energy Portal (AfDB), World Bank, etc.
Ambitious RE Targets in the Member States are based on Abundant Resources

Geographical distribution of RE resources permits the exploit of complementarity on a regional perspective
Priority Projects – ECREEE 2017 – 2021 Strategic Plan

• The West Africa Clean Energy Corridors
• Regional Mini-Grid Program
• Regional Off-Grid Electrification Project (ROGEP)
• Regional Solar PV water-pumping project for Agriculture
The West Africa Clean Energy Corridor (WACEC)
**The West Africa Clean Energy Corridor (WACEC)**

- The West Africa Clean Energy Corridor (WACEC) Initiative was created by ECREEE in collaboration with multiple stakeholders including; IRENA, WAPP, ERERA;

- Four (4) renewable energy corridors – solar, wind, hydropower and biomass energy;

- Takes into consideration the synergies and complementarities between the different sources of energy;

- The ECOWAS Corridor of Hydro projects (8 GW by 2020; 15 GW by 2030)

- The ECOWAS Solar Corridor (2 GW by 2020; 10 GW by 2030)

- The ECOWAS Solar Corridor aims at meeting a significant share of the region’s demand for electricity with solar energy by making use of the high solar irradiation in the region.
Concepts of ECOWAS Solar Corridor

• A lower cost of generation can be achieved in certain countries / regions;

• Large solar procurement, taking advantage of economies of scale will ensure the lowest possible prices;

• The need to adopt a regional perspective in power planning and procurement and exploit options to import solar power from neighboring countries where and when it makes sense;

• The need to create additional transmission infrastructure and to continue the efforts for facilitating regional power trade;

• The possibility of using hydro as storage solution for balancing intermittency of generation from solar (and wind) and its implications for operation of hydropower plants.
Objectives of PAC-SOLAR:

1. Address the sector’s overdependence on the irregular nature of the climate for agricultural irrigation through rainfall.

2. Support agricultural businesses to produce more by harnessing the region’s abundant renewable energy resources towards providing a stable supply of water for irrigation and other agricultural purposes.

3. Optimise the entire agricultural value chain by supporting activities that improve production, processing, storage and transportation of agricultural produce.

ECREEE launched a call for project proposals in 2020 and received over 100 proposals.

The pilot phase of PAC–SOLAR is being supported by AECID, ADA, GIZ.
ECOWAS Project Development and Financing Initiative

- Technical and legal advise to Member States in auction and bidding processes and PPAs negotiation
- Project preparatory activities and transaction advise
- Record of medium to large scale RE projects in a regional pipeline
- Match-making and investment facilitation:
  - Annual organization of investments Forums
  - Transaction accelerator/ virtual market place
- Financing and de-risking instruments mapping
- Private promoters mentorship
Regulatory Policies: Support Mechanisms

• Feed-in-tariff / premium payment
  • Ghana, Nigeria, Senegal, Burkina Faso

• Electric utility quota obligation
  • Ghana, Nigeria, Senegal

• Net metering/billing
  • Cabo Verde, Ghana, Senegal, Mali, Niger

• Tendering
  • Benin, Burkina Faso, Cabo Verde, Côte d’Ivoire, the Gambia, Ghana, Guinea-Bissau, Nigeria, Senegal, Mali
THANK YOU !!!
MERCI BEAUCOUP !!!
MUITO OBRIGADO !!!

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