

THE ECREEE VISION

Current and Future Trends

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THE ECOWAS REGION

- 15 countries with a land area of 5 million m²
- Climate from semi-arid to humid tropical
- Population of with 300 million people
- 60% of population live in rural areas
- 11 of the 15 countries are LDCS and HIPIC
- Almost 176 million people have no access to electricity (52%)

CABO VERDE

THE GAMBIA
GUINEA-BISSAU

SIERRA LEONE

LIBERIA

SENEGAL

GUINEA

CÔTE
D'IVOIRE

GHANA

TOGO

BENIN

BURKINA FASO

MALI

NIGER

NIGERIA

ENERGY SITUATION IN WEST AFRICA

- **Interrelated challenges of energy poverty, energy security and climate change mitigation and adaptation**
- **Low Access to modern energy service**
 - ✓ One of the lowest energy consumption rates in the world;
 - ✓ The poor spend more of their income on low quality energy services;
 - ✓ Rural areas rely mainly on traditional biomass to meet their energy requirements;
 - ✓ Household access to electricity services is only around 20% (40% in urban and 6-8% in rural areas);
- **Energy security concerns**
 - ✓ High vulnerability to fossil fuel price volatility (60 % of electricity generation from oil)
 - ✓ Gap between rising urban energy demand, available generation capacities and limited investment capital;
 - ✓ High losses in the energy systems (e.g. high energy intensity and low demand and supply side efficiency);
- **Climate change concerns**
 - ✓ Increasing energy related GHG emissions (new investments determine GHGs for the next 20 - 30 years)
 - ✓ Climate change impacts vulnerable West African energy systems (e.g. water flows, extreme weather events)

RE & EE POTENTIALS IN WEST AFRICA

RE & EE play an important role in simultaneously addressing the energy challenges in West Africa

RE potentials so far unexploited

- ✓ 23,000 MW of feasible **large and small hydropower potential** (16% exploited);
- ✓ Huge potential for **all forms of bioenergy** (e.g. biomass, biogas, biofuel);
- ✓ Average **solar radiation of 5-6 kWh/m²** per day throughout the year;
- ✓ Considerable **wind power potential** in some countries;
- ✓ RETs are particularly effective in combination with EE measures;

EE potentials so far unexploited

- ✓ Wide range of options to improve **supply and demand side efficiency** (including energy saving)
- ✓ e.g. **Equipment labeling and building standards**;
- ✓ e.g. **Cleaner production** in industry (e.g. process heat);
- ✓ e.g. **Technical and commercial losses** in the electricity system;

CONSTRAINTS & BARRIERS

- **Financial/Economics:**

- ✓ High upfront costs of solar or wind compared with smaller scale conventional systems even where competitive;
- ✓ Lack of large scale projects at regional level to take advantage of higher solar or wind resource endowments and economies of scale;
- ✓ Lack of innovative financing mechanisms.

- **Policy and Institutional Issues:**

- ✓ Absence of political targets for renewable energy in general and solar/wind in particular, in many countries;
- ✓ Non-existent or weak policy measures for level playing field in many countries;
- ✓ Weak national agencies with unclear responsibility for solar/wind in many countries.

- **Capacity Building & Technology Transfer**

- ✓ Inadequate skilled technical manpower in many countries.
- ✓ Limited or no local manufacturing due to small national markets.
- ✓ Limited R&D with little or no linkages to entrepreneurial/ manufacturing sector.

ESTABLISHMENT OF ECREEE

- ECREEE: Economic Community for West African States (ECOWAS) Centre For Renewable Energy And Energy Efficiency
- Established by Regulation C/REG. 23/11/08 of the 61st Session of the ECOWAS Council of Ministers on November 23, 2008. as the ECOWAS agency with the mandate to promote RE&EE markets
- Secretariat is based in Praia, Cape Verde with National Focal Institutions (NFIs) among all ECOWAS countries
- Established with support of core partners:



- Official Inauguration of the Centre on 6th July 2010
- Governance Structure: Executive Board/Technical Committee
- ECREEE Business Plan with long-term vision by 2016
- Annual Work Programmes: 2015 edition under execution
- Also the SE4ALL Focal Point for West Africa

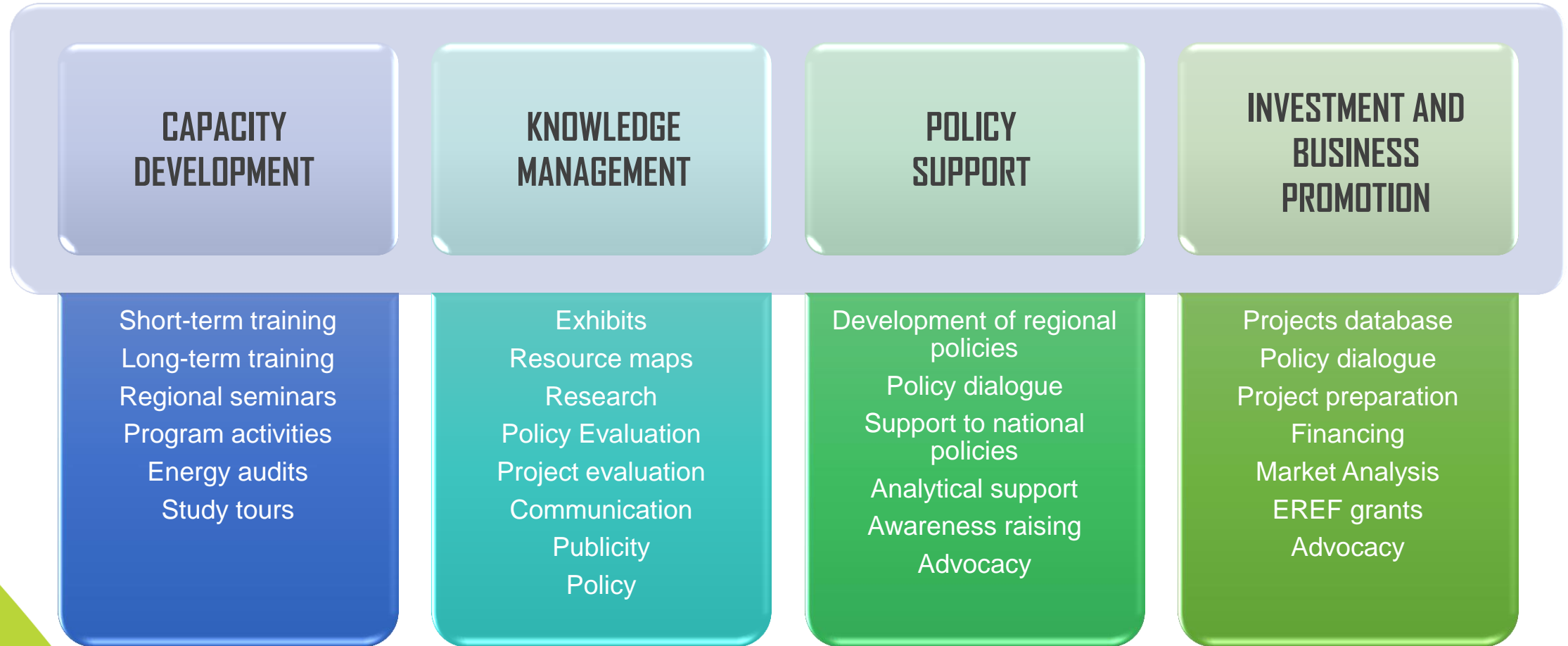
ECREEE OFFICIAL INAUGURATION 6th JULY 2010



ECREEE RESULT AREAS

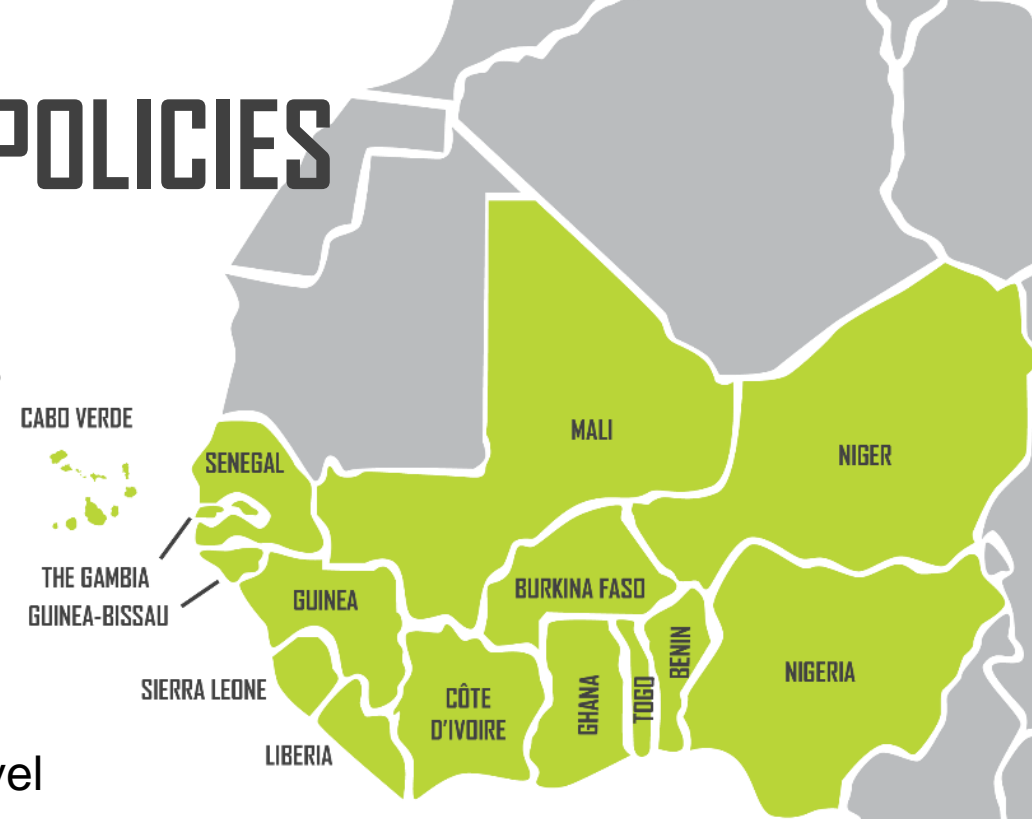


ECREEE FOUR MAIN PILLARS



REGIONAL SUSTAINABLE ENERGY POLICIES

- ECOWAS Renewable Energy Policy (EREP) and ECOWAS Energy Efficiency Policy (EEEP) developed with support of UNIDO, EU, Austria, Spain and GEF
- Validated by ECOWAS Experts Group Meeting, June 2012, Dakar
- Adopted by ECOWAS Energy Ministers during the High-Level Energy Forum, Oct 2012, Accra
- Adopted by the ECOWAS Council of Ministers, June 2013, Abidjan
- Adopted by the ECOWAS Authority of Heads of State and Government, July 2013, Abuja
- Regional policies represent a voluntary contribution of ECOWAS to the SE4ALL Initiative



ECOWAS RE POLICY TARGETS BY 2020/2030

Grid-Connected RE Targets	2020	2030
RE share in total ECOWAS electricity mix (incl. large hydro)	35%	48%
RE share in total ECOWAS generation capacity (excl. large hydro)	10% 2.425 MW	19% 7.606 MW

Rural RE Targets	2020	2030
Rural population supplied by mini-grids and stand-alone system	22%	25%
Mini-Grids to be installed	60,000 3,600 MW	128,000 7,680 MW
Population served with improved stoves	60%	100%
Population with access to LPG	17%	32%

THE ECOWAS EE POLICY TARGETS

- The overall objective of the Regional EE policy is to improve by 2020, the energy efficiency of the ECOWAS region so as to attain levels comparable to those of world leaders
- The specific target of the regional policy is to double the rate of energy efficiency by implementing efficiency measures that free-up 2000 MW of power generation capacity by 2020
 - ✓ phase out inefficient incandescent lamps by 2020;
 - ✓ ensure the entire ECOWAS population have access to efficient, sustainable and modern cooking fuels and equipment by 2030;
 - ✓ reduce average losses in electricity distribution from the current level of about 40% to the world standard levels of below 10% by 2020;
 - ✓ adopt region-wide standards and labels for major energy equipment by end of 2020;
 - ✓ create instruments for financing sustainable energy, including carbon finance, by the end of 2020;

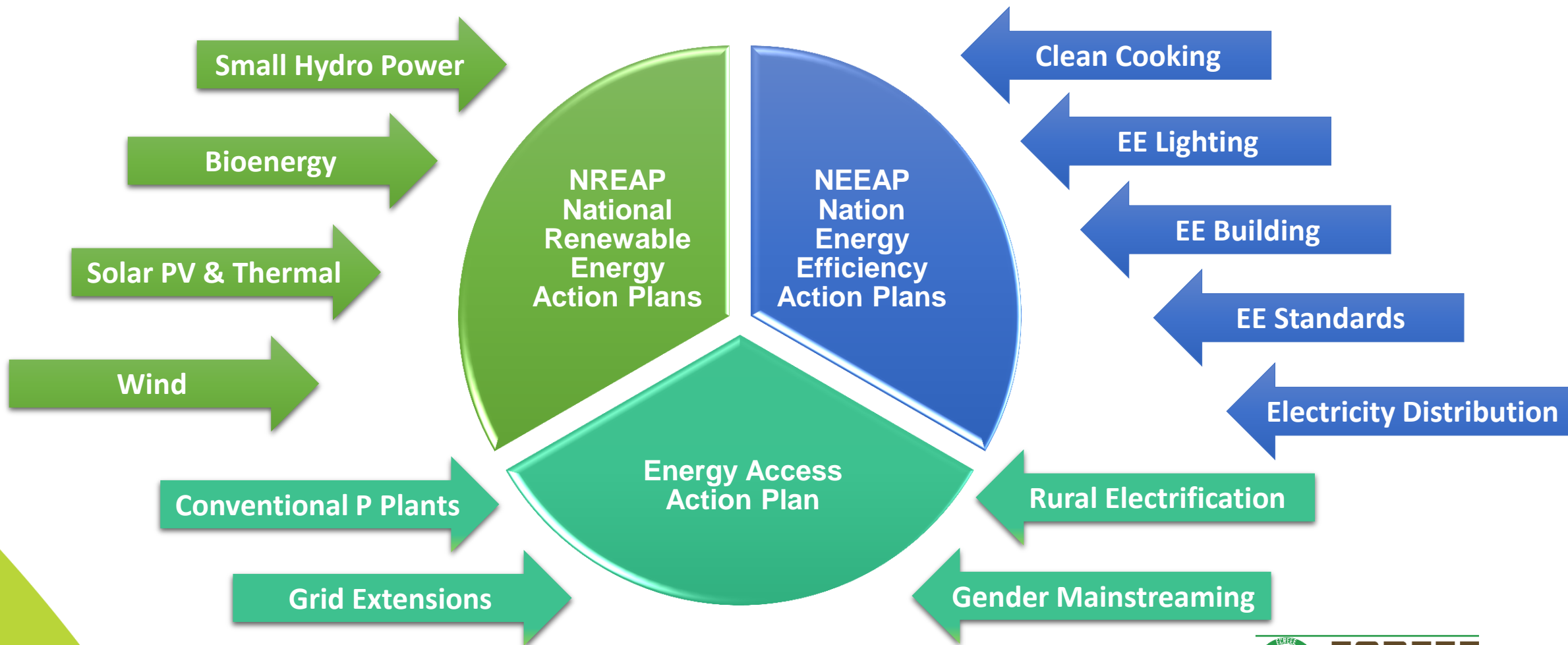
SUSTAINABLE ENERGY POLICY & ENABLING ENVIRONMENT PROGRAM

Regional RE and EE Policies and SE4ALL

National Action Plans and Policy Framework

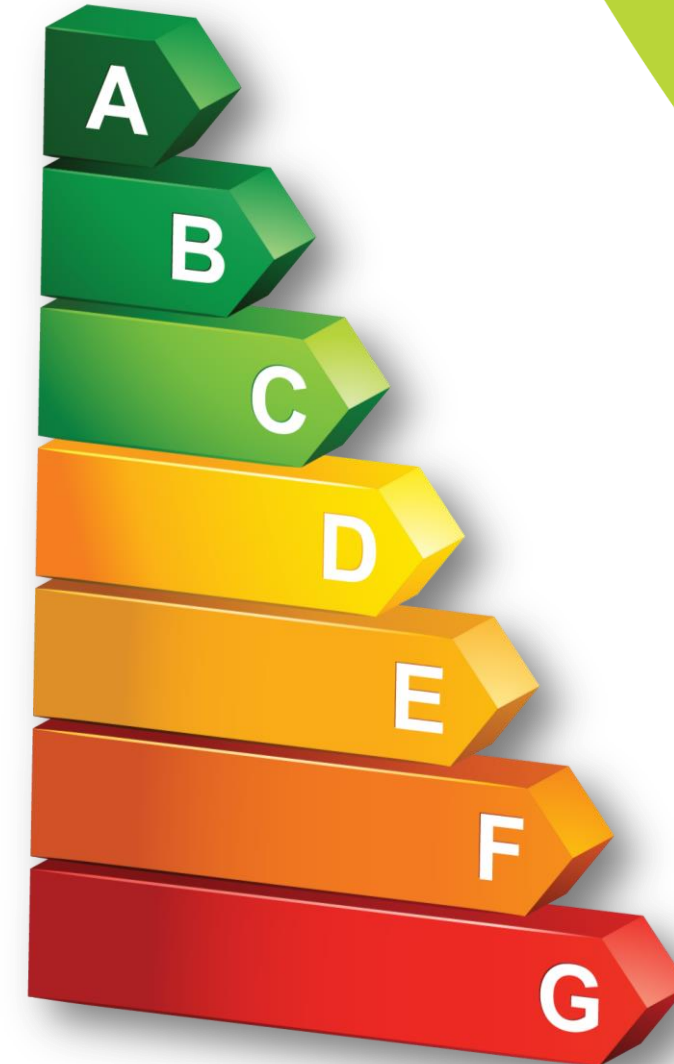
Transposition to legal and Institutional frameworks (laws, regulations etc)

REGIONAL HUB FOR THE SUSTAINABLE ENERGY FOR ALL INITIATIVE (SE4ALL)



ENERGY EFFICIENT PROGRAM

- **The energy efficiency programme aims to implement the ECOWAS Energy Efficiency Policy through six (6) priority initiatives:**
 - Efficient Lighting,
 - High performance of Distribution of Electricity,
 - Standards & Labeling,
 - Energy Efficiency in Buildings,
 - Sustainable and Clean Cooking,
 - Energy efficiency in Industry
- **On the national Level, the implementation starts with the development of National Energy Efficiency Action Plans (NEEAPs)**



ECOWAS OBSERVATORY FOR RE&EE

- RE&EE market data for investors and developers
- GIS Maps on RE potentials, and other planning data (e.g. lines, roads, existing and planned stations and systems)
- Ongoing Initiatives (e.g. GEF, ACP-EU Facility, ECREEE)
- Country profiles and statistics
- Document library (e.g. studies, policies, project documents) <http://www.ecowrex.org>



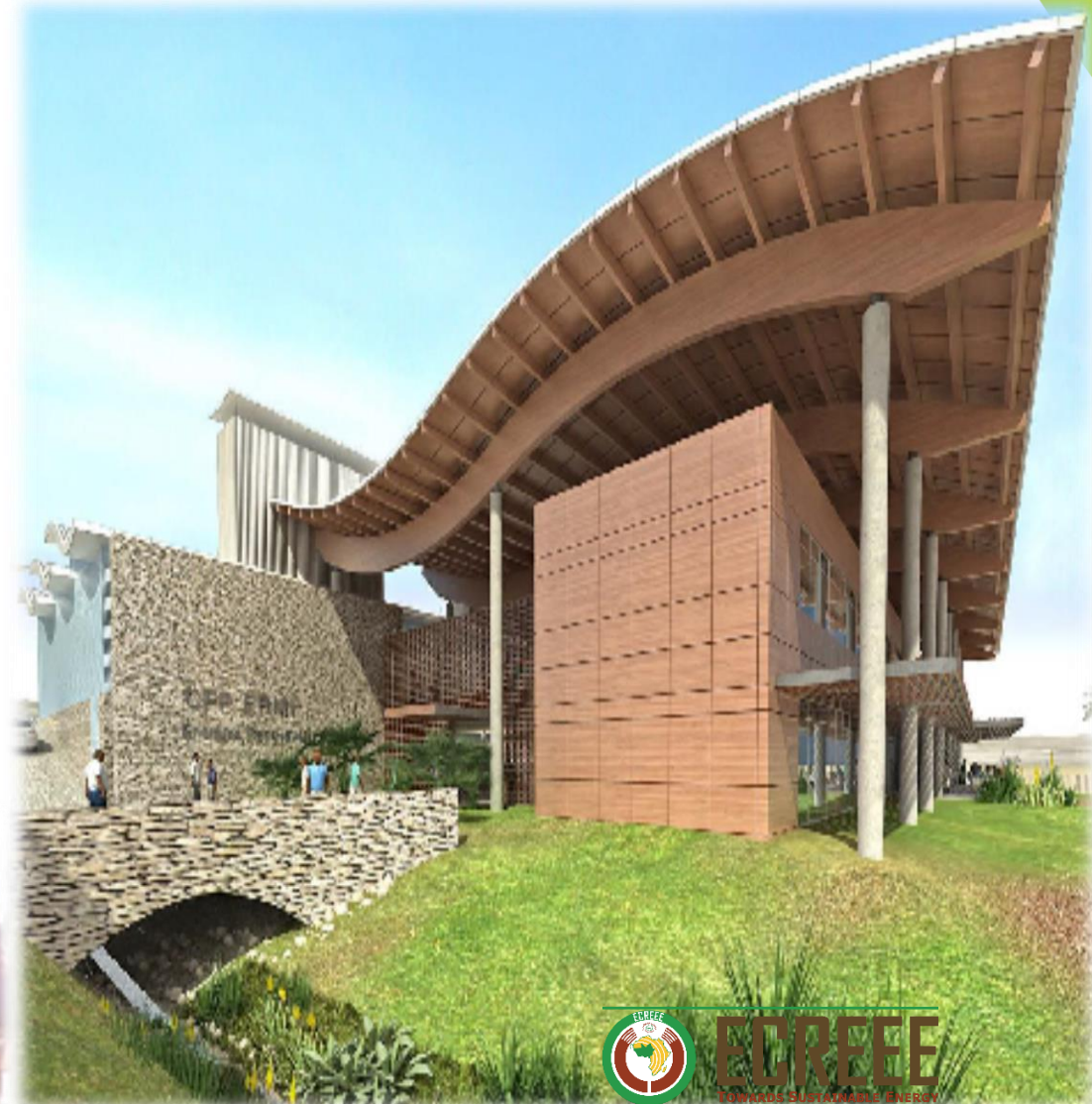
ECOWAS CAPACITY BUILDING PROGRAM

The target groups for the Capacity Building Programme are:

- **Decision makers** – Awareness raising on the importance of RE&EE as it relates to their respective countries, the ECOWAS region and the international situation of RE&EE and climate change;
- **Investors / National and local banks** – Knowledge about investment risks peculiar to RE&EE projects and programs. Examples from existing financing mechanisms to be followed or replicated.
- **Technicians / Utilities / Energy industries and companies** – Training on operation and maintenance, management schemes. Technology transfer;
- **End Users** – Awareness raising for a rational use of energy (energy efficiency) and promotion of access to modern energy. Promotion of local energy business and productive uses of energy systems.

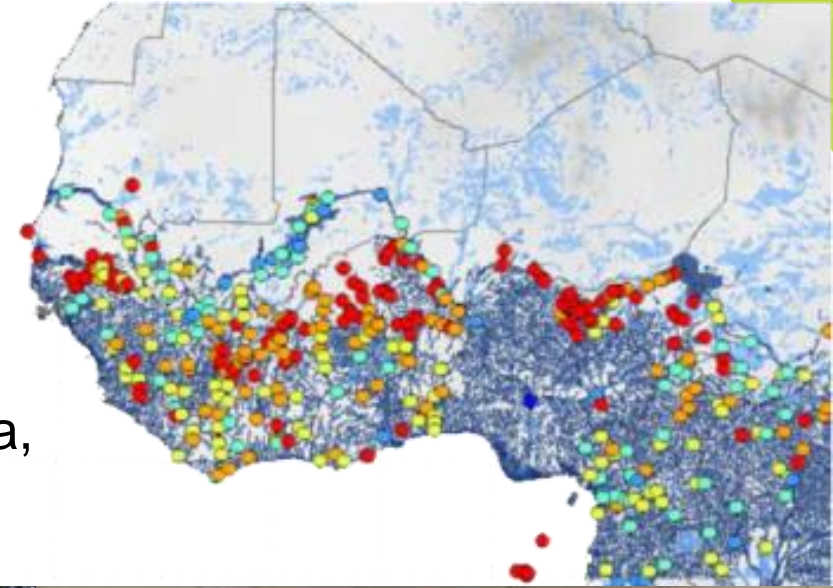


ECOWAS CAPACITY BUILDING PROGRAM



ECOWAS SMALL SCALE HYDRO POWER PROGRAM

- Regional workshop from 16 to 20 April 2012, in Monrovia, Liberia, with assistance of UNIDO and ESMAP
- The Five- Year SSHP Program Proposal with a volume of 15m Euro was validated by 80 ECOWAS experts
- Adopted by Ministers at the ECOWAS High Level Meeting in Accra, Ghana



ECOWAS Regional Workshop on SMALL SCALE HYDRO POWER

Atelier Regional de la CEDEAO sur la
PETITE HYDROELECTRICITE



ECOWAS BIOENERGY PROGRAM

- Regional Forum held 19 to 21 March in Bamako in 2012, Mali with assistance of GBEP Partners: UNDO, USA UNIDO, UNEP and GACC
- Regional Bioenergy Strategy Framework was elaborated & validated
- Adopted by Ministers at the ECOWAS High Level Meeting in Accra, Ghana in 2012
- Capacity building started end of 2012 and on-going
- ECOWAS Bioenergy policy drafted and pending validation

The overall objective of the ECOWAS Bioenergy Strategy is to improve food and energy security through the deployment of sustainability criteria in the production, transformation and utilization of biomass resources to contribute to the Sustainable Energy for All (SE4ALL) Initiative.

Complements the West Africa Clean Cooking Alliance (WACCA) launched in Oct. 2012



ECOWAS PROGRAMME OF GENDER MAINSTREAMING IN ENERGY ACCESS (ECOWGEN)

ECOWGEN was established against the background that women's potential as producers and suppliers of energy services is under-utilized and that empowering women and men to drive energy development in the region is necessary for achieving universal energy access in West Africa.

Overall objective: To contribute towards increased access to modern, affordable, and reliable energy services, energy security and environmental sustainability by tailoring national and regional policies, projects and program to the energy needs of men and women.

Specific objectives:

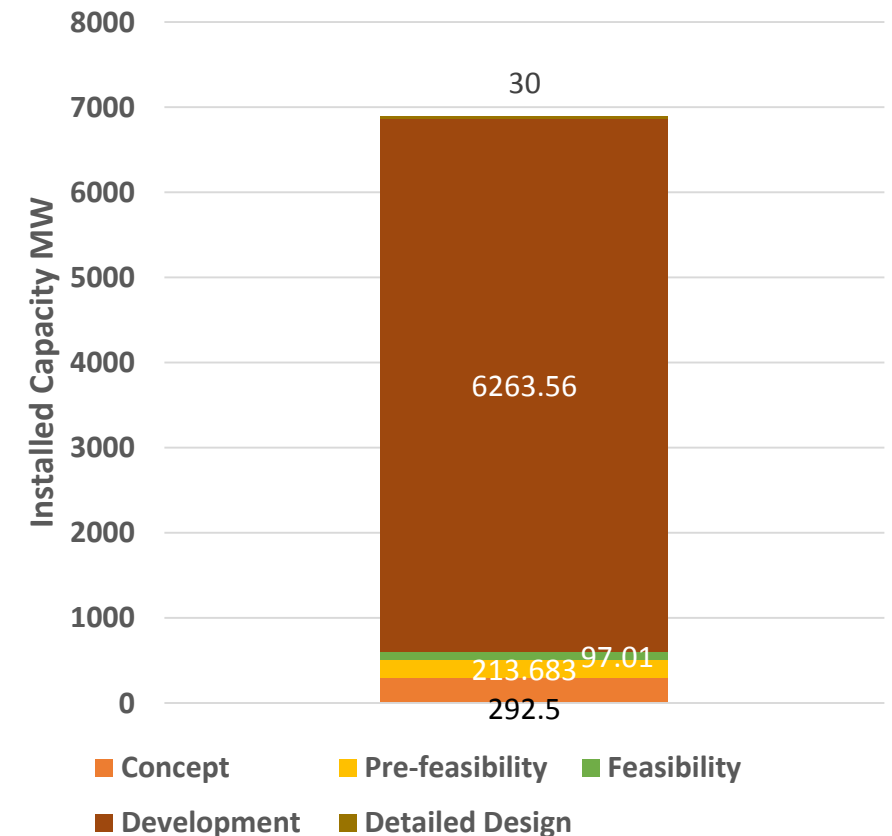
1. Steer and support the development of gender-sensitive policies.
2. Improve knowledge management, awareness creation and advocacy on gender and energy issues
3. Build and strengthen capacities in gender mainstreaming in energy policies and projects
4. Implement gender-responsive investment and business promotion in sustainable energy development in the ECOWAS region



ECOWAS PROJECT DEVELOPMENT & FINANCING INITIATIVE

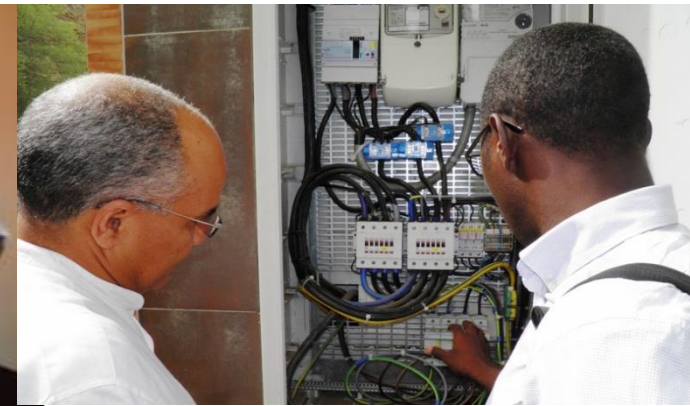
- Technical and legal advise to Member States in auction and bidding processes and PPAs negotiation
- Project preparatory activities and transaction advise
- Record of medium to large scale RE projects in a regional pipeline
- Match-making and investment facilitation:
 - Annual organization of investments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

RE projects under consideration in the region



RURAL ELECTRIFICATION & ACCESS PROGRAM ECOWAS RENEWABLE ENERGY FACILITY (EREF)

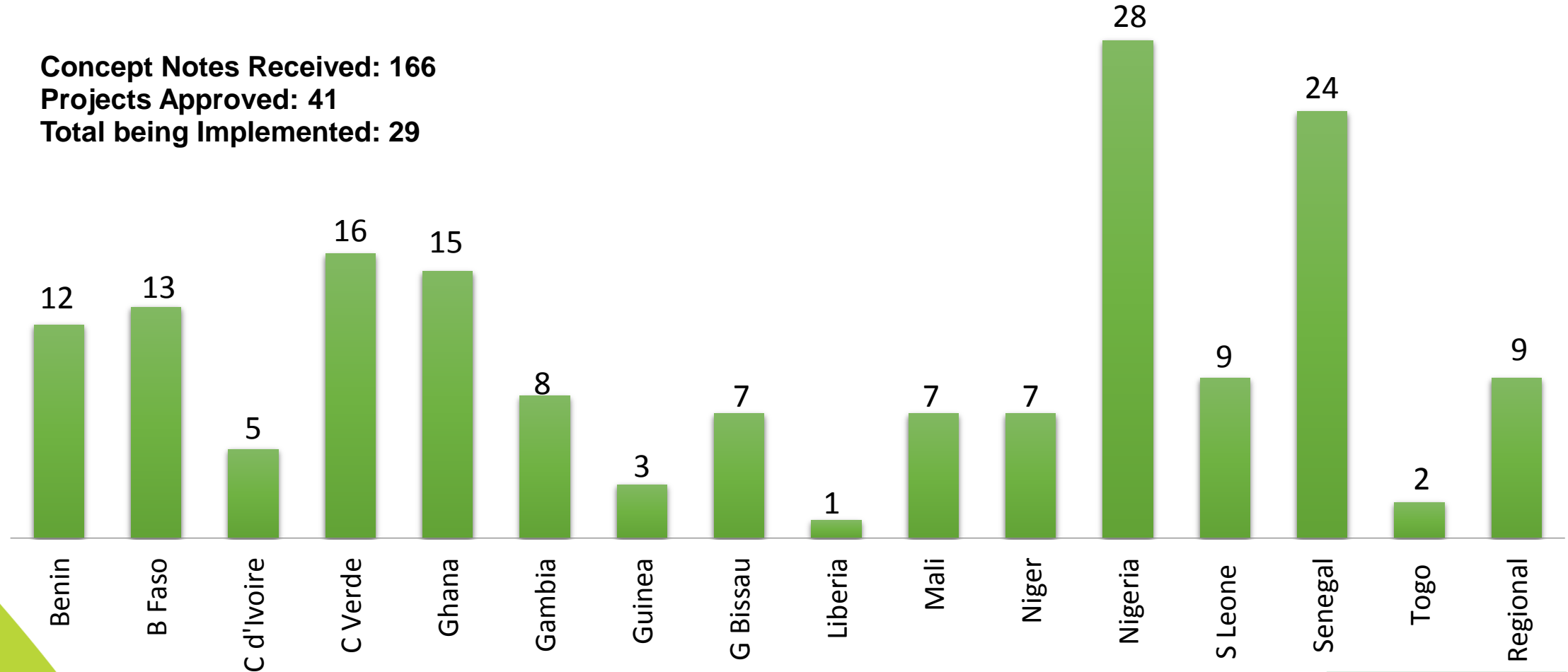
- Grant Facility managed by the ECREEE Secretariat (ECREEE-SEC) in cooperation with its National Focal Institutions (NFIs) in West Africa
- Undertakes regular call for proposals: 1st Call 2011. 2nd call 2014
- Co-funds small and medium sized RE&EE investment and business projects (5.000- 50.000 EUR 1st call, 50.000- 200.000 EUR 2nd call)
- Projects shall mobilize co-funding (minimum 25% 1st call, 50% 2nd call)
- Supports national or regional projects covering more than one country
- Rural and peri-urban areas should particularly benefit from the EREF)



FIRST EREF CALL – MAY TO JULY 2011

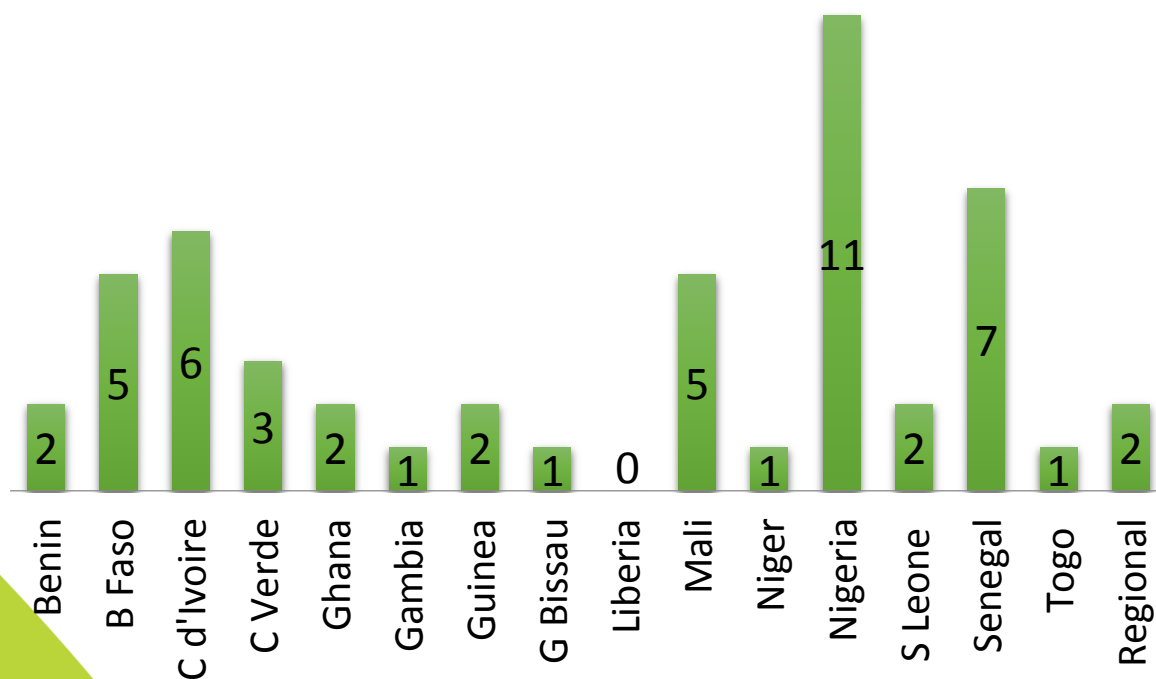
ECOWAS RENEWABLE ENERGY FACILITY (EREF)

Concept Notes Received: 166
Projects Approved: 41
Total being Implemented: 29

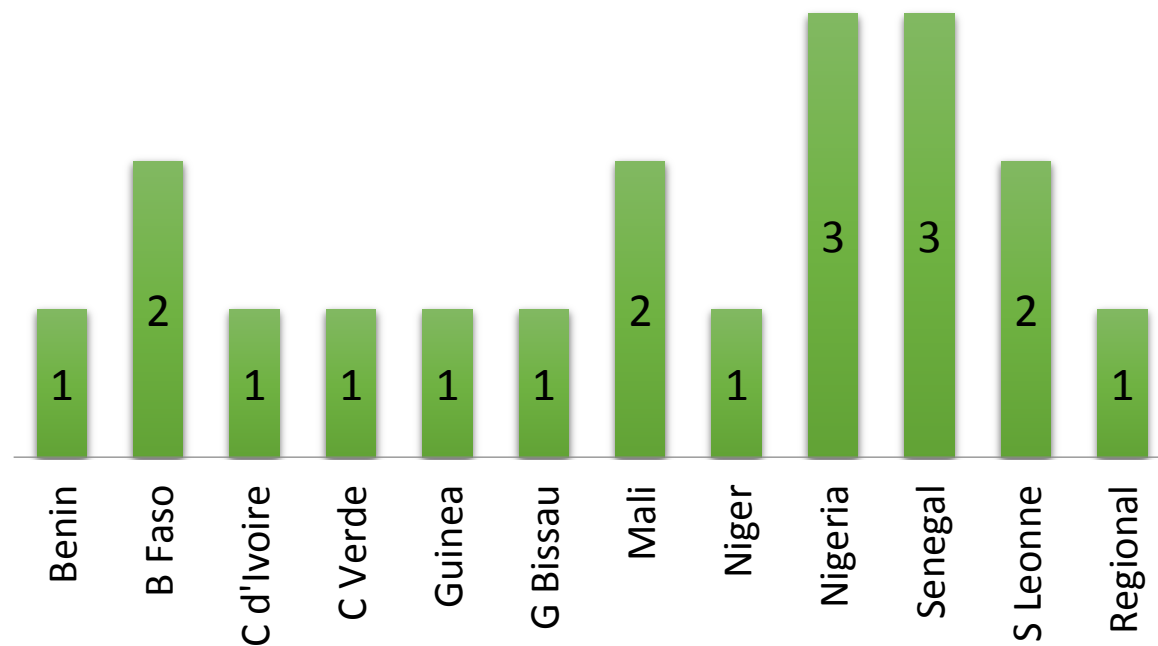


SECOND EREF CALL: THE APPRAISAL PROCESS IS CURRENTLY ON-GOING

51 proposals received from 14 ECOWAS countries + 2 regional projects



19 proposals admitted to the second step of the appraisal process from 11 ECOWAS countries + 1 regional projects



ECOWAS SOLAR THERMAL CAPACITY BUILDING & DEMONSTRATION PROGRAM

- **Overall objective:** contribute to the switch from a fossil fuel based energy supply to a sustainable energy supply system based on RE in general but based on solar thermal in particular.
- **Specific objectives:**
 - ✓ to inform the relevant stakeholders and the interested population about the different applications of solar thermal energy and the related impact on security of energy supply, poverty, employment and on the environment.
 - ✓ To provide comprehensive training of the key groups for production, installation and implementing of solar thermal systems in the participating countries.
 - ✓ To transfer results and knowledge of completed and running Tasks of the IEA Solar Heating and Cooling Program to the experts of key research institutions from the ECOWAS countries.
 - ✓ to support political decision makers and administration with information on successful support mechanisms in order to accelerate the dissemination of solar thermal technologies.



ECREEE CLIMATE CHANGE MITIGATION PROGRAM - CCMP

- The ECOWAS region is highly vulnerable to climate change
- Increasing energy access in the ECOWAS sub region must also intertwined.
- Working to address the issue of greenhouse gas emissions is also a priority for ECREEE.

Climate Change Mitigation Program (CCMP) Launched to

- ✓ Strengthen the knowledge and networking capacities for climate change mitigation in the ECOWAS member countries.
- ✓ Support the creation of an enabling environment for climate change mitigation at the institutional level and engage in international climate change advocacy.
- ✓ Mobilize climate finance for implementation for NAMAs and INDCs in the energy sector.
- ✓ Enhance the technical capacity of relevant actors in the identification, planning, development and implementation of the UNFCCC climate mechanisms specifically CDM, NAMAs and REDD+.
- ✓ Promote technology transfer to enhance the adoption of low GHG emission technologies (activities) in the energy sector through different forms of cooperation



:Historic climate change summit Opened a New Chapter in Global Efforts to Tackle Climate Change and most importantly Underscored the role of RE and EE in combating CC

PARTNERS

CORE



NEW



INVESTMENT



TECHNICAL



OTHER

