

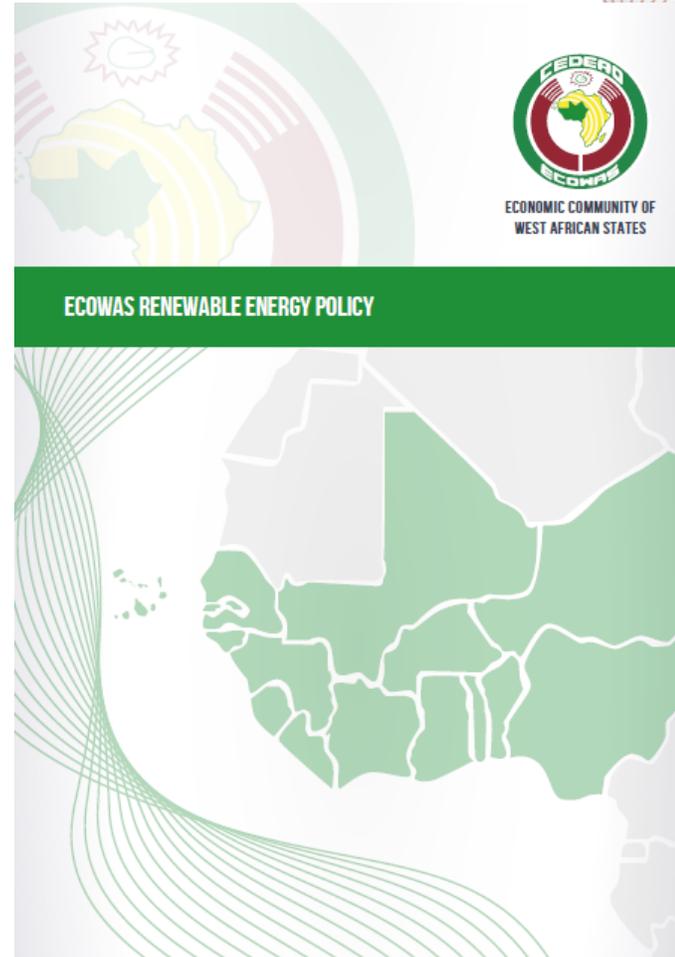
Attaining the ECOWAS Sustainable Energy Targets

Mahama Kappiah
Executive Director
ECREEE

ECOWAS RE & EE POLICIES: EREP, EEEP

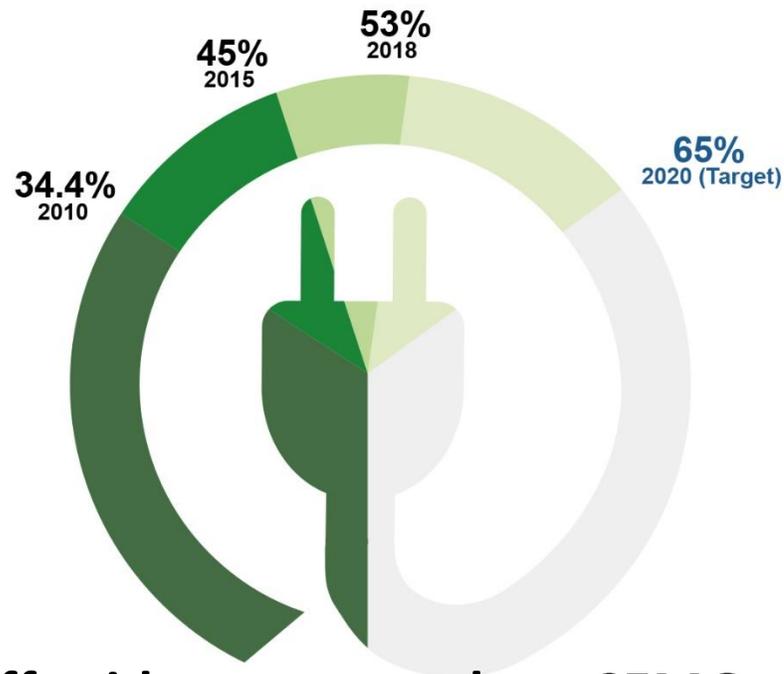
- Adopted by the ECOWAS Authority of Heads of State and Government, July 2013, Abuja
- Sustainable Energy Country Action Plans developed across the 15 Member States

*Developed in Partnership with
UNIDO, Austria, Spain, European
Union, RECP, EUEI-PDF*



ENERGY ACCESS

Evolution of electricity access (% of population) in the ECOWAS region - Period 2010 to 2018



Target 2030

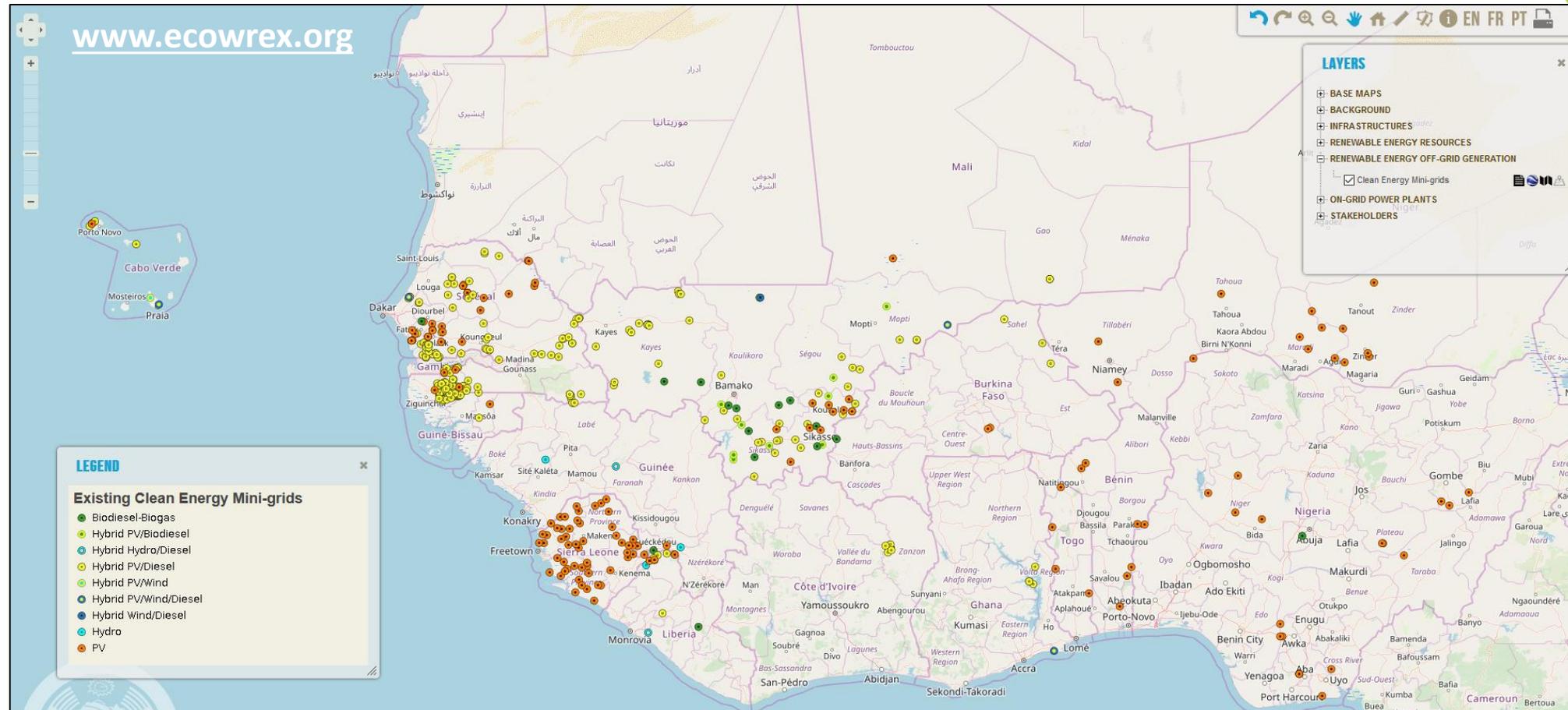


Off-grid systems such as CEMGs and stand-alone technologies will help us attain target by 2020.

In **2018**, about **90,000** rural HH had electricity access through **541 CEMGs**, falling far short of the **regional target of 60,000 CEMGs by 2030**.

Decentralized RE will serve **25% of Rural Population**

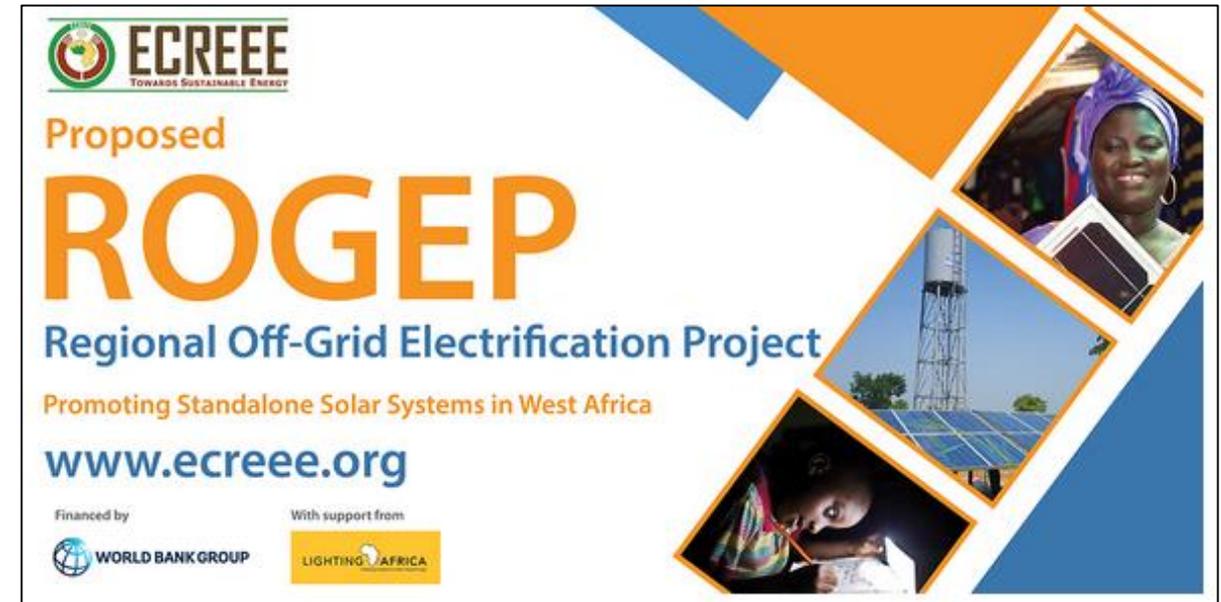
Target for decentralized RE solutions:
(CEMGs and stand alone systems)
22% by 2020 and 25% by 2030



Estimated number of **stand-alone**
RE systems in 2017: **1,564,230**

ECREEE Regional Off-Grid Electrification
Project (**ROGEP**) targets:

- **10,755,000 people**, provided with improved electricity service through stand-alone solar systems by 2024



The poster features the ECREEE logo at the top left, with the tagline 'Towards Sustainable Energy'. The main title 'Proposed ROGEP' is prominently displayed in large orange letters. Below it, the full name 'Regional Off-Grid Electrification Project' is written in blue, followed by the subtitle 'Promoting Standalone Solar Systems in West Africa' in orange. The website 'www.ecreee.org' is listed in blue. At the bottom, it states 'Financed by' with the World Bank Group logo and 'With support from' with the Lighting Africa logo. The right side of the poster is decorated with three diamond-shaped images: a woman in a purple headwrap holding a smartphone, a solar panel array with a water tower in the background, and a child reading a book under a lamp.

Access to modern cooking energy:

Share (%) of households using modern cooking solutions:

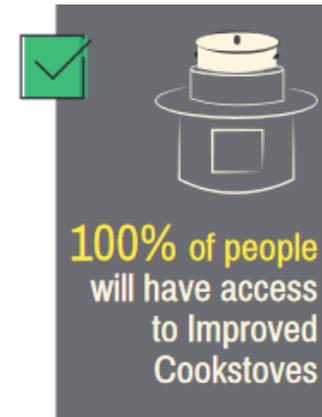
Country	LPG	Electricity	Kerosene	Census year
Benin	5.0%	0.3%	2.8%	2013
Burkina Faso	1.3%	0.7%	0.1%	2014
Cabo Verde	76.5%	0.3%		2017
Côte d'Ivoire	22%			2014
Gambia	3.4%		0.6%	2013
Ghana	22.8%	0.5%	0.5%	2013
Guinea	0.8%	0.6%	0.5%	2014
Guinea-Bissau		5%		2011
Liberia	0.95%	0.9%	0.4%	2008
Mali		28.9%		2017
Niger	0.5%			2012
Nigeria	0.9%	0.2%	25%	2008
Senegal		43.5%		2014
Sierra Leone	0.8%	0.5%	0.7%	2015
Togo	2.76%	0.08%	0.37%	2010

Share of households with access to ICS:

Country	Share (%)	year
Benin	10.7	2017
Burkina Faso	23.0	2016
Cabo Verde	0.9	2017
Guinea Bissau	2.0	2010
Mali	66.8	2017
Niger	2.0	2016
Senegal	13.5	2014

Targets:

- Ensure universal access to ICS by 2020
- Increase the share of the population served with modern fuel alternatives for cooking, including LPG, to 36% by 2020 and 41% by 2030

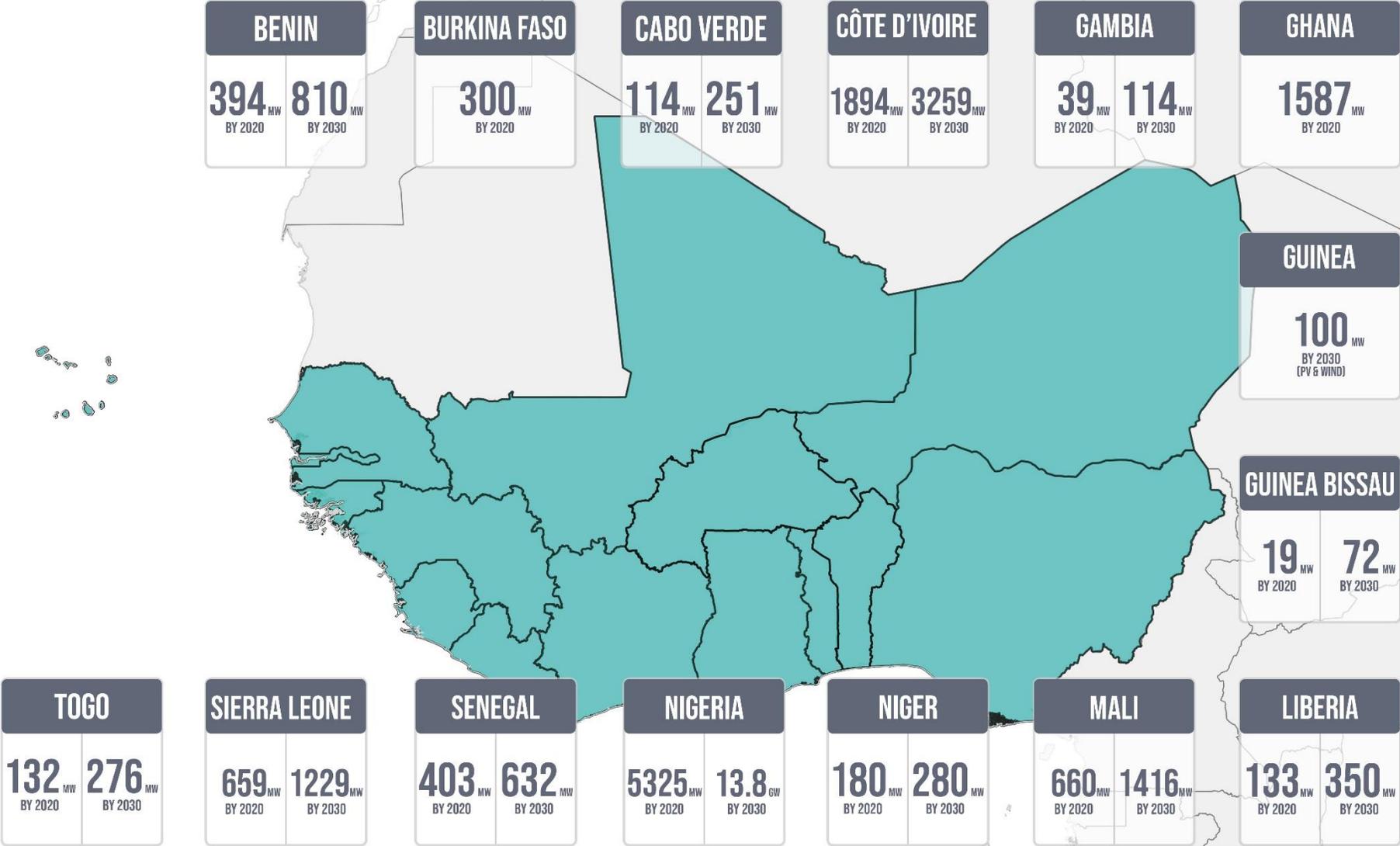


Renewable Energy

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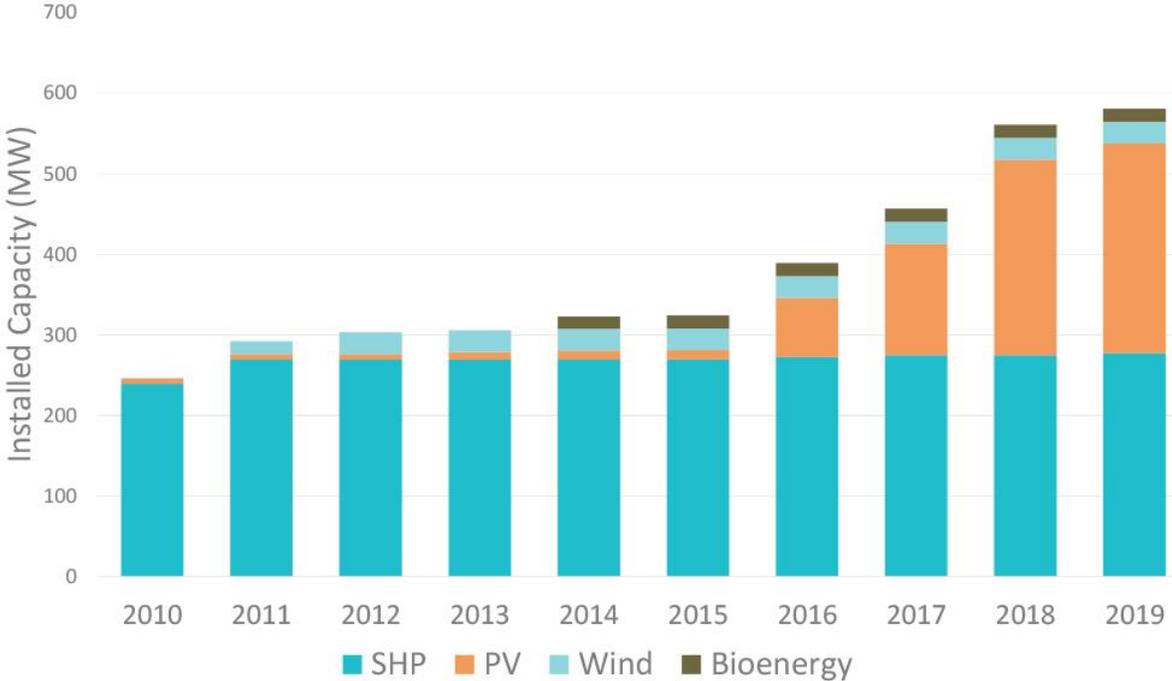


ECOWAS RENEWABLE ENERGY INSTALLED CAPACITY TARGETS BY COUNTRY

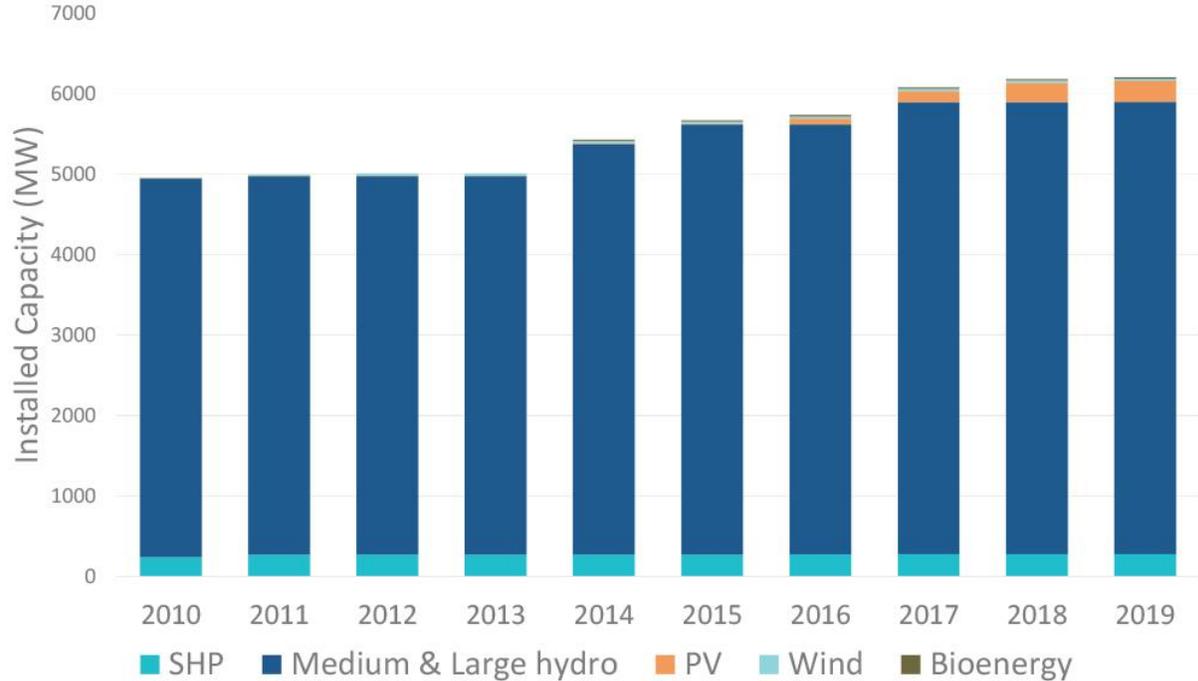


RE installed capacity in the ECOWAS region in the period 2010-2019

RE Installed Capacity
(excluding medium and large hydro)



RE Installed Capacity
(including medium and large hydro)



ECOWAS Region	<u>Year</u>	<u>RE installed capacity (excluding medium and large hydro) (MW)</u>	<u>SHP (MW)</u>	<u>PV (MW)</u>	<u>Wind (MW)</u>	<u>Bioenergy (MW)</u>
	2010	246	239	6,8	0,15	
	2011	292	269	6,8	16	
	2012	303	269	6,8	27	
	2013	306	269	9,3	27	
	2014	323	269	11	27	15
	2015	324	270	11	27	16,3
	2016	389	273	73	27	16,3
	2017	456	275	139	27	16,3
	2018	561	275	243	27	16,3
2019	581	277	260	27	16,3	

ECOWAS Region	<u>Year</u>	<u>RE installed capacity (including medium and large hydro) (MW)</u>	<u>SHP (MW)</u>	<u>Medium & Large hydro (MW)</u>	<u>PV (MW)</u>	<u>Wind (MW)</u>	<u>Bioenergy (MW)</u>
	2010	4951	239	4704	6,8	0,15	
	2011	4997	269	4704	6,8	16	
	2012	5008	269	4704	6,8	27	
	2013	5010	269	4704	9,3	27	
	2014	5427	269	5104	11	27	15
	2015	5669	270	5344	11,0	27	16,3
	2016	5733	273	5344	73	27	16,3
	2017	6076	275	5619	139	27	16,3
	2018	6180	275	5619	243	27	16,3
2019	6200	277	5619	260	27	16,3	

RE on grid planned installed capacity:

Projects that **could be commissioned during the next 1 to 4 years:**

RE Technology	Number of projects*	Total capacity (MW)
PV	25	673.5
Wind	2	168.7
SHP	2	26.7
Medium & Large hydro	5	915
Biomass	1	46

**Planned means under construction, funding has been approved or there is an official tender process ongoing*

Energy Efficiency

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EE Targets:

From the declaration **ECOWAS Energy Efficiency Policy (EEEP)***

Article 1:

The Energy Efficiency Policy and Action Plan for implementation of the energy efficiency policy are hereby adopted.

Article 2:

1. The overall objective of the Energy Efficiency Policy by 2020 is to improve energy efficiency in the ECOWAS Region to levels of international standards.
2. The specific target of the regional policy is:
 - (i) To implement efficiency measures that free-up 2,000 MW of power generation capacity by 2020;
 - (ii) Phase out inefficient incandescent lamps by 2020;
 - (iii) Reduce average losses in electricity distribution from the current levels of 15-40% to the world standard levels of below 10%, by 2020;
 - (iv) Achieve universal access to safe, clean, affordable, efficient and sustainable cooking for the entire population of ECOWAS, by 2030;
 - (v) Adopt region-wide standards and labels for major energy equipment by end of 2014;
 - (vi) Develop and adopt region-wide efficiency standards for buildings (e.g. building codes);
 - (vii) Create instruments for financing sustainable energy, including carbon finance, by the end of 2013 and in the longer term, establish a regional fund for the development and implementation of sustainable energy projects.

*Source:
http://www.ecreee.org/sites/default/files/documents/ecowas_energy_efficiency_policy.pdf



Free-up
2,000 MW
of power
generation by
2020



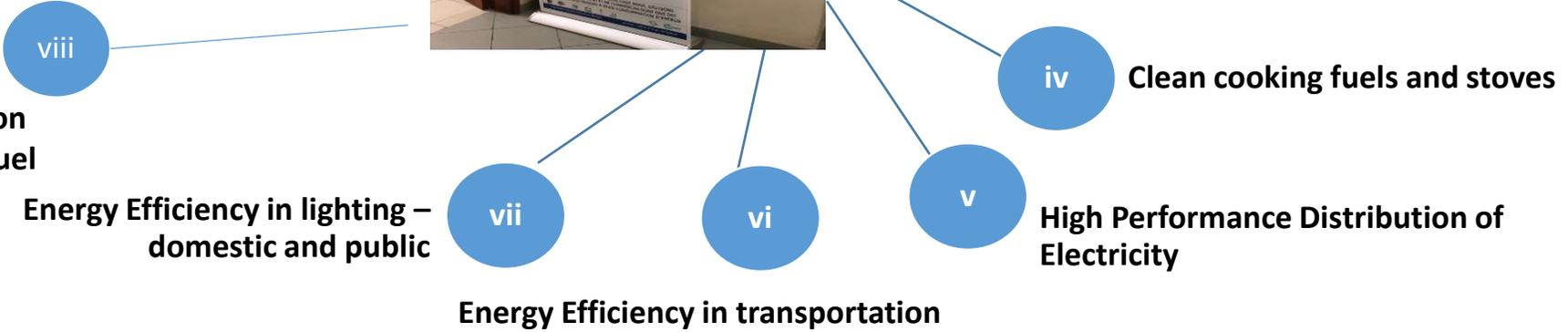
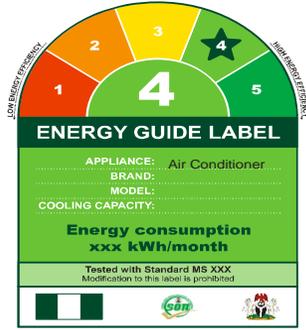
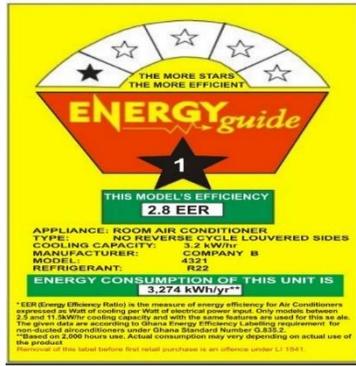
Phase-out
incandescent
lamps by 2020



Reduce
electricity
distribution
losses to
10% by 2030



Energy Efficiency Program





2019 Objectives

- Promotion of Energy Efficiency Service Companies “EESCOs” (audits, ESPC, etc.)
- Capacity building on energy efficiency in industry

Achievements

- Trainings on EE Energy Performance Contracting (Niger, Benin, Togo, Mali and Burkina Faso Trainings)
- Introduction to Energy Management System based on ISO 50001 (Benin, Niger, Mali, Burkina Faso, Togo)
- Capacity development of Energy Management System in selected industries in Niger, Benin, Togo, Mali and Burkina Faso. Trainings scheduling in progress for Senegal, Cote d’Ivoire and Guinea
- Energy audit and training in a selected industries (Benin, Togo, Niger, Mali and Burkina).

Opportunities and future Prospects

- ❖ Support the integration of Energy Management System based on ISO 50001 in the industrial sector (certification of industries to Energy Management Systems based on ISO 50001)
- ❖ Integration of Energy Efficiency Networks (EENs) in the industry

Minimum Energy Performance Standards (MEPS)

Countries that have introduced national energy efficiency standards for electric lights (2017)

Country	Status
Benin	Adopted
Cabo Verde	Under development
Ghana	Adopted, approved; MEPS and labels implemented
Nigeria	Adopted, approved; not yet implemented
Senegal	Adopted

Countries that have introduced national MEPS for electrical appliances (2017)

Country	Appliance	Status
Benin	Air conditioners	Not adopted
Cabo Verde	Air conditioners, refrigerators, TVs, water heaters, washing machines	Under development
Ghana	Air conditioners, refrigerators	Adopted
Nigeria	Air conditioners, refrigerators	Adopted
Senegal	Air conditioners, refrigerators	Adopted

Development of new Standards and ECOWAS EE Label

- Dakar July 31: Validation of new EE Standards: Electric fans, TV, and electric solar water heaters, by the Technical Management Committee (TMC)
- Dakar, August 2: Validation of EE standards for TV, Fans, and electric solar water heaters by the Technical Harmonization Committee (TH5)
- Cotonou, September 28-29:
 - Adoption of ECOWAS EE label design/format by standards organization bodies
 - Adoption of draft ECOWAS EE label Directives by Standards Bodies

EE Standards, Labels and EE Testing Facilities in the Gambia

- Designing of Testing facilities in the Gambia (EE lighting and EE clean cooking) in progress (with collaboration the Ghana Standard Authority)
- Capacity development for key stakeholders to promote EE standards, labelling and implementation of testing facilities in progress

Praia - February 8th, 2019

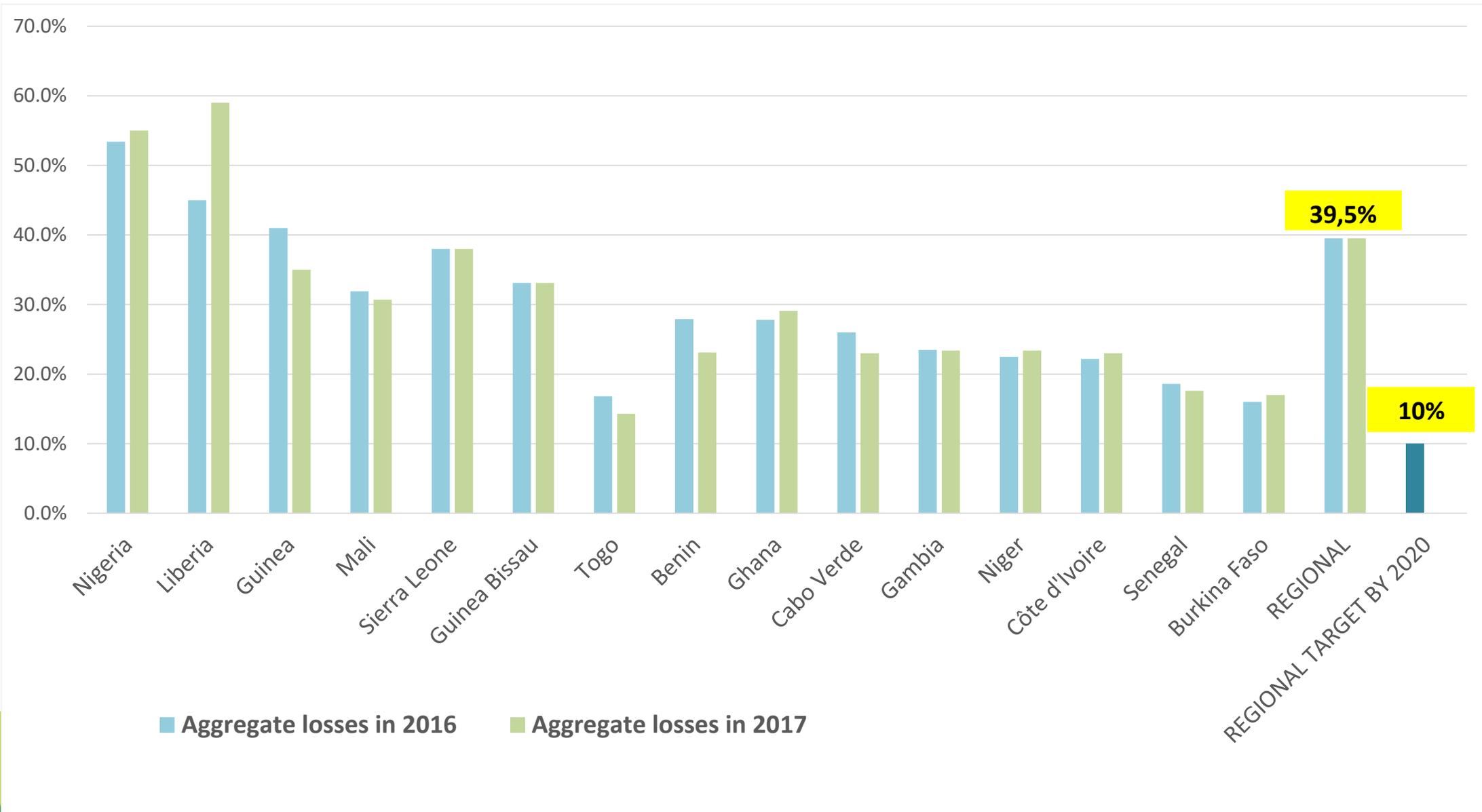
- The Prime-Minister of the Republic of Cabo Verde, the Executive Director of ECREEE and the Chargé d’Affaires of the Embassy of Luxembourg, inaugurate the debut of the first seven vehicles 100% electric in Cabo Verde. This was the beginning of a process, which according to the Government of Cabo Verde, will culminate in the next decades by achieving the goal of phasing out the use of fossil-fuel based vehicles.



Future Prospects

- ECREEE in collaboration with member states for more electric cars
- ECREEE to draft regulation on standardization of fuel

Aggregated electricity losses, 2016 and 2017



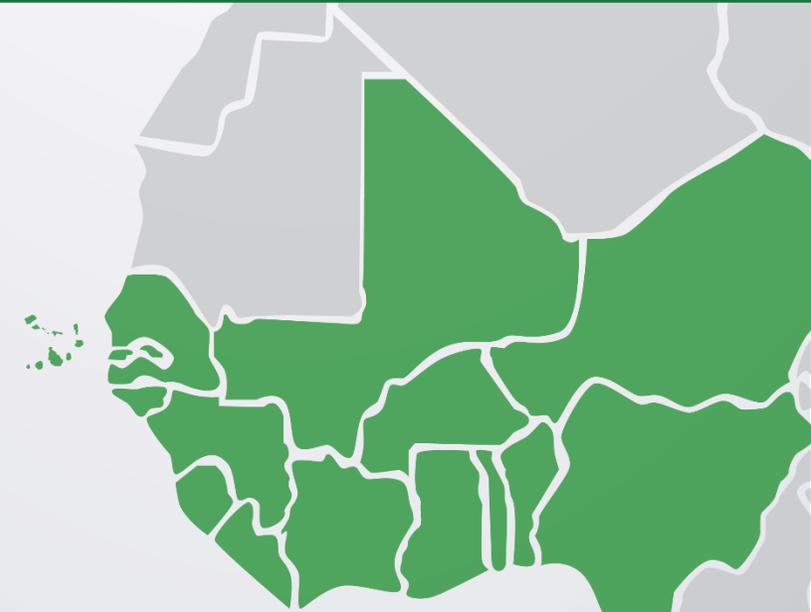
Regional Progress Report on Renewable Energy, Energy Efficiency and Energy access in ECOWAS region

- Context: Monitoring Framework Report
- Developed internally
- Available on-line:
 - ECREEE www.ecreee.org/page/publications
 - ECOWAS Observatory for RE and EE (ECOWREX) www.ecowrex.org
 - ECOWAS SEforALL network www.se4all.ecreee.org
- Statistics incorporated on ECOWREX country profiles
- Shared with:
 - IRENA (statistics unit), REN21, IEA, Africa Energy Portal (AfDB), World Bank, etc.
- Increased impact of ECREEE:
 - <https://africa-energy-portal.org/reports/regional-progress-report-2017-renewable-energy-energy-efficiency-and-energy-access-ecowas-region>
 - Statistics integrated into IRENA, IEA and REN21 reports and platforms



REGIONAL PROGRESS REPORT ON RENEWABLE ENERGY, ENERGY EFFICIENCY AND ENERGY ACCESS IN ECOWAS REGION

MONITORING YEAR: 2017



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ECOWAS CENTRE FOR RENEWABLE ENERGY AND ENERGY EFFICIENCY
CENTRO PARA AS ENERGIAS RENOVÁVEIS E EFICIÊNCIA ENERGÉTICA DA CEDEAO
CENTRE POUR LES ENERGIES RENOUVELABLES ET L'EFFICACITÉ ENERGÉTIQUE DE LA CEDEAO

