



**Conducive regulatory framework to  
secure a sound implementation of the  
business models- perspectives from  
ECOWAS Member States**

**Mahama Kappiah, Executive Director**

**"Empowering Rural Electrification" Brussels, 30 September 2014**

# ECREEE – the ECOWAS Centre For Renewable Energy And Energy Efficiency

- **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 61<sup>st</sup> 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:**



Austrian  
Development Cooperation

- **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: 2014 edition under execution**
- **ECREEE was appointed by the ECOWAS Energy Ministers as the SE4ALL Focal Point for West Africa**





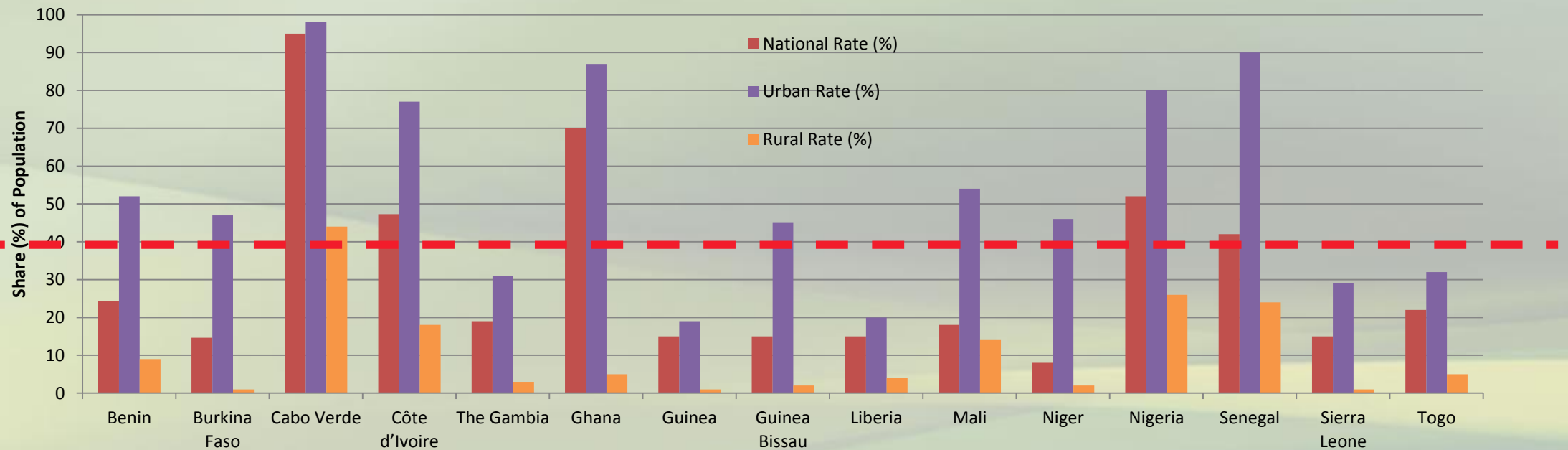
# ECREEE RESULT AREAS



# **ECOWAS Rural Electrification Situation and policy Framework**

# In the ECOWAS 42% of the population has access to electricity (8% if we consider only the rural population)

Electricity Access Rates in ECOWAS Member States



Source: ECREEE, REN21

**More than 175 million people with no access to improved electricity services**

# ECOWAS RE POLICY TARGETS BY 2020/2030

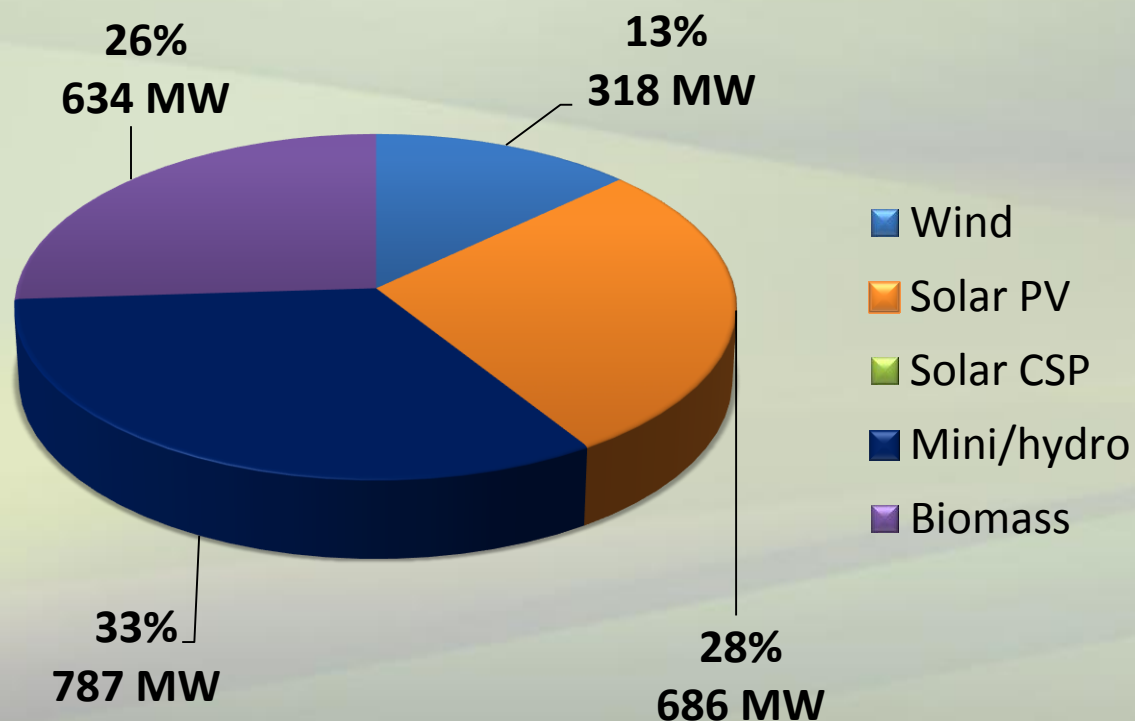
in MW of installed capacity	2010	2020	2030
Load forecast ECOWAS, in MW peak load	10,659	25,128	39,131
ECOWAS total RE capacity (medium and large hydro)	3,447	6,272	11,340
ECOWAS RE Penetration in % of peak load	32%	25%	29%
<b>EREP renewable energy options in MW</b>	<b>0</b>	<b>2,425</b>	<b>7,606</b>
EREP renewable energy options in % of peak load (excl. medium and large hydro)	<b>0%</b>	<b>10%</b>	<b>19%</b>
<b>Total RE penetration (incl. medium and large hydro hydro)</b>	<b>32%</b>	<b>35%</b>	<b>48%</b>

in GWh of produced electricity	2010	2020	2030
Load forecast ECOWAS – electricity demand in GWh	65,696	155,841	243,901
ECOWAS RE total production (medium and large hydro) in GWh	16,965	27,494	46,844
ECOWAS RE production Share (medium and large hydro)	26%	18%	19%
<b>EREP renewable energy options – production in GWh</b>	<b>0</b>	<b>8,350</b>	<b>29,229</b>
EREP renewable energy options - % of electricity demand (excl. medium and large hydro)	<b>0%</b>	<b>5%</b>	<b>12%</b>
<b>RE production Share</b>	<b>26%</b>	<b>23%</b>	<b>31%</b>

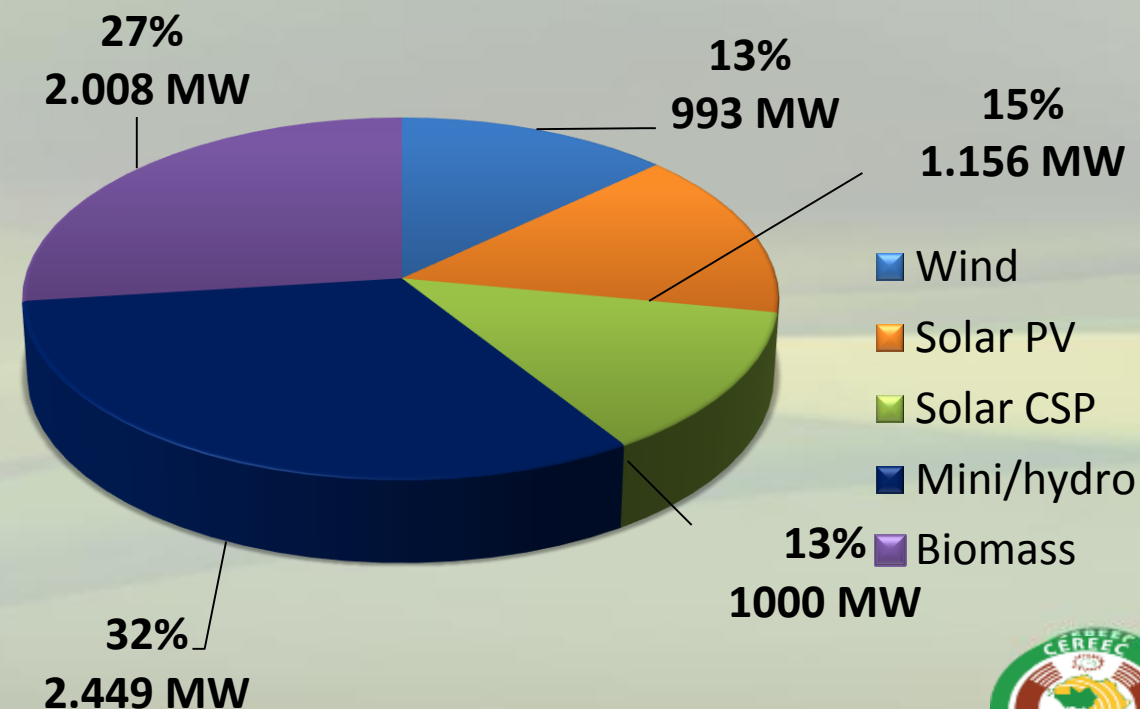
# GRID-CONNECTED RE SCENARIO OF ECOWAS BY 2020/2030 (excl. medium and large hydro)

Individual countries decide on RE mix!

Installed RE Capacity 2020 2,425 MW



Installed RE Capacity 2030 – 7,606 MW



# ECOWAS ENERGY ACCESS TARGETS BY 2020/2030

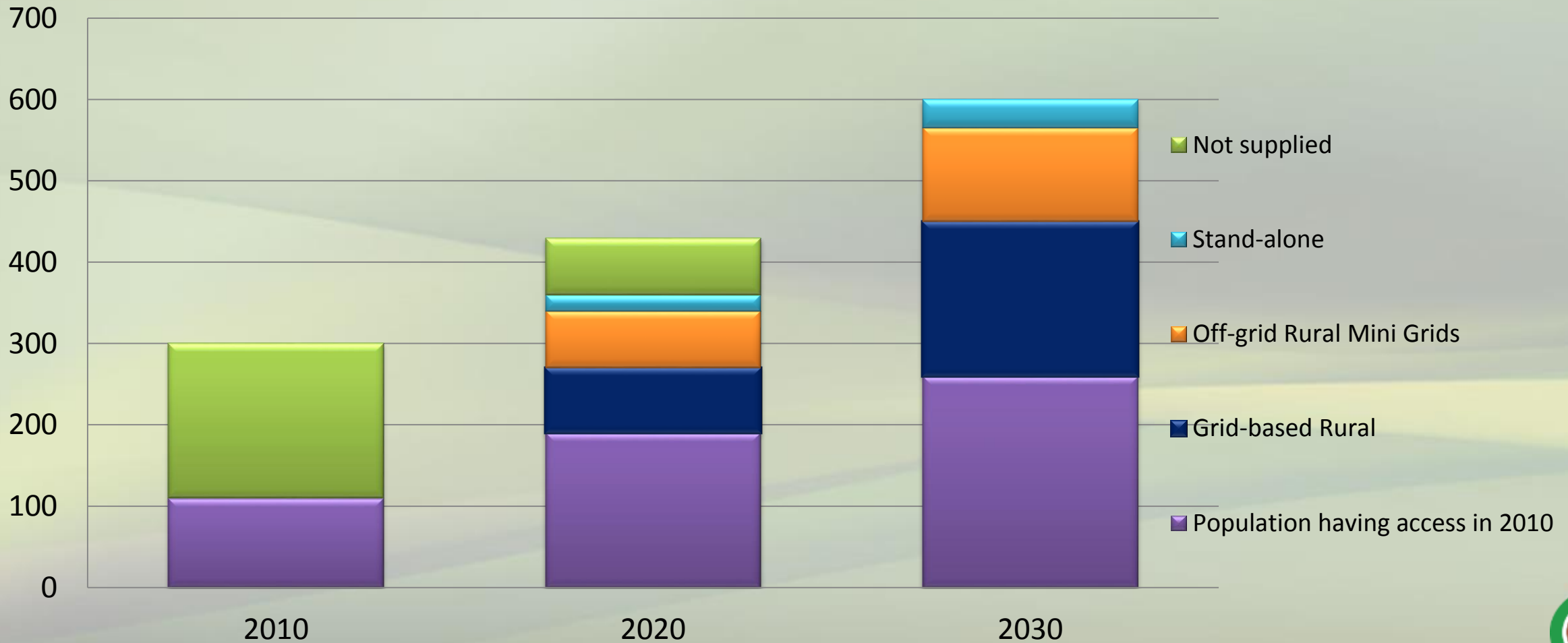
Rural RE Electricity Targets	2010	2020	2030
Share of rural population supplied by mini-grids and stand-alone systems in %	?	22%	25%
Mini-Grids to be installed		60,000 3,600 MW	128,000 7,680 MW
Stand-alone systems		210,000	262,000



# ECOWAS RE POLICY

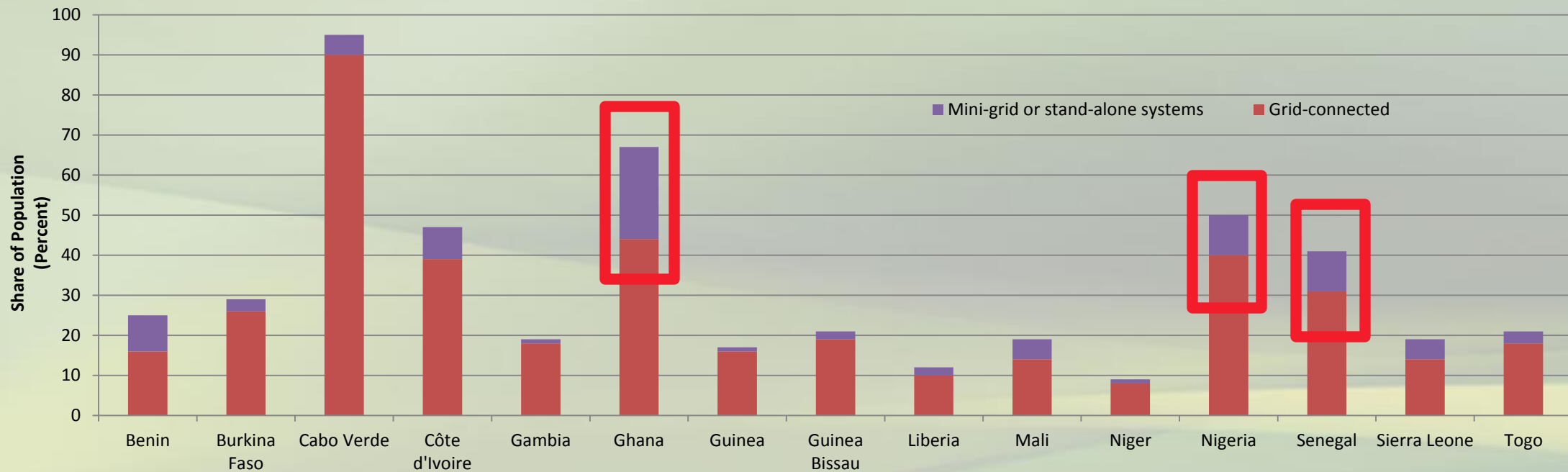
## ACCESS TARGETS BY 2020/2030

Population in mio inhbts



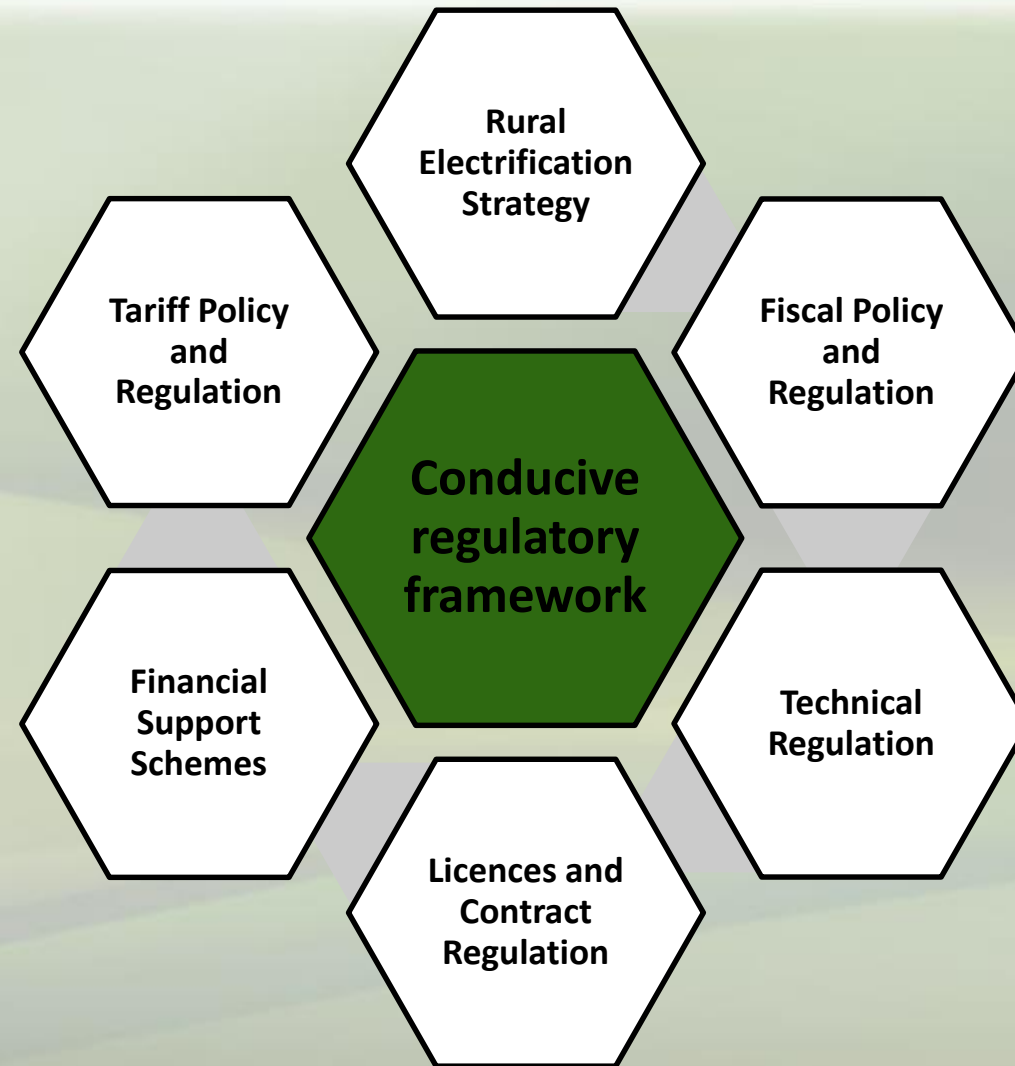
# The distributed generation is already playing an import role to promote access to electricity

Share of Electrified Population Relying on Grid-connected or Distributed Systems in ECOWAS Member States

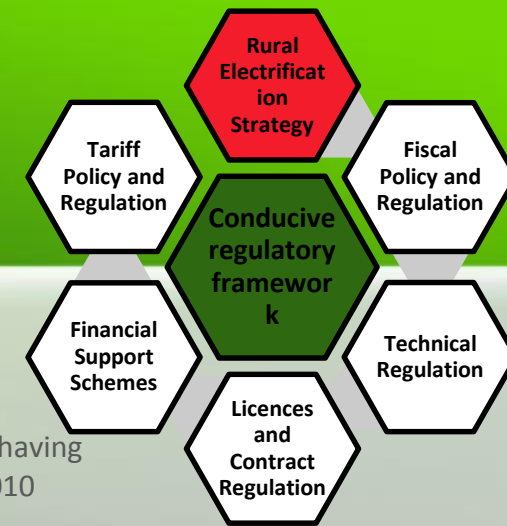


Source: ECREEE, IRENA

# The elements of a conducive regulatory framework to secure a sound implementation of the business models



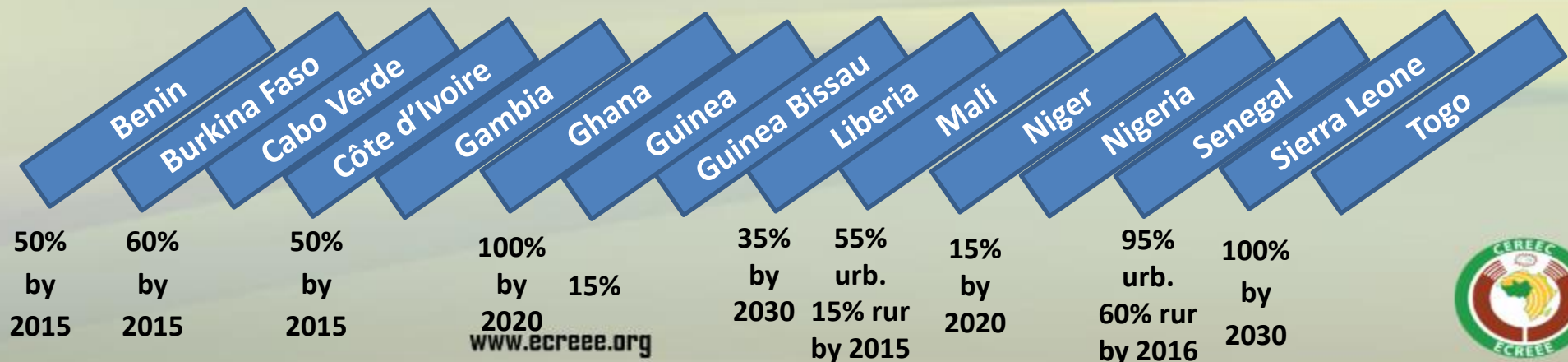
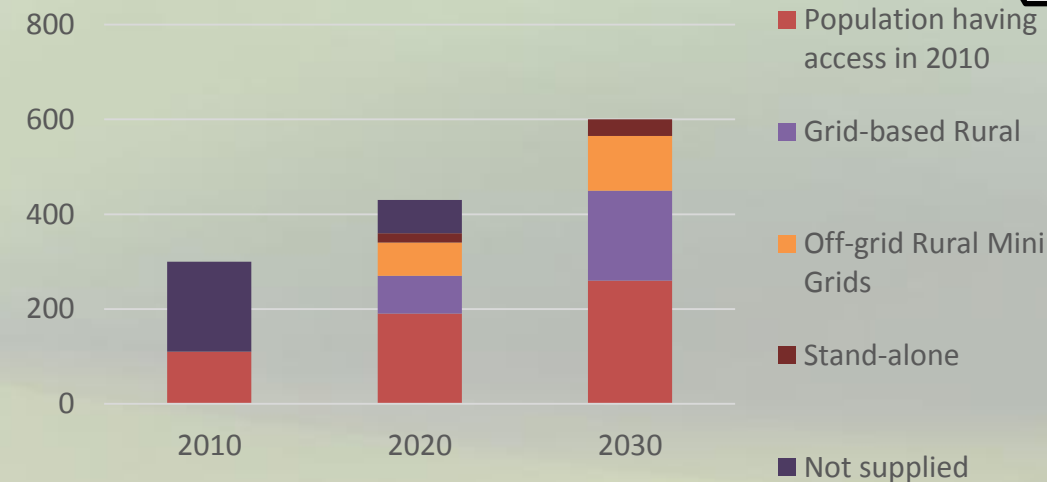
# A rural electrification strategy sets the base for a conducive environment



The ECOWAS goal: universal access for all the citizens becomes a reality in 2030

Rural RE Electricity Targets	2020	2030
Share of rural population supplied by mini-grids and stand-alone systems in %	22%	25%
Mini-Grids to be installed	60,000	128,000
	3,600 MW	7,680 MW
Stand-alone systems	210,000	262,000
Investment (b€)		32,3

Population in mio inhbits



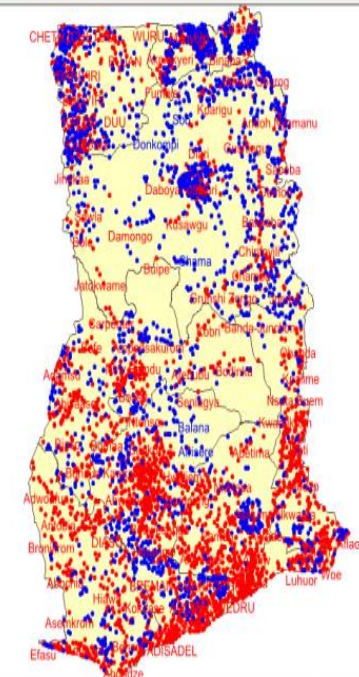
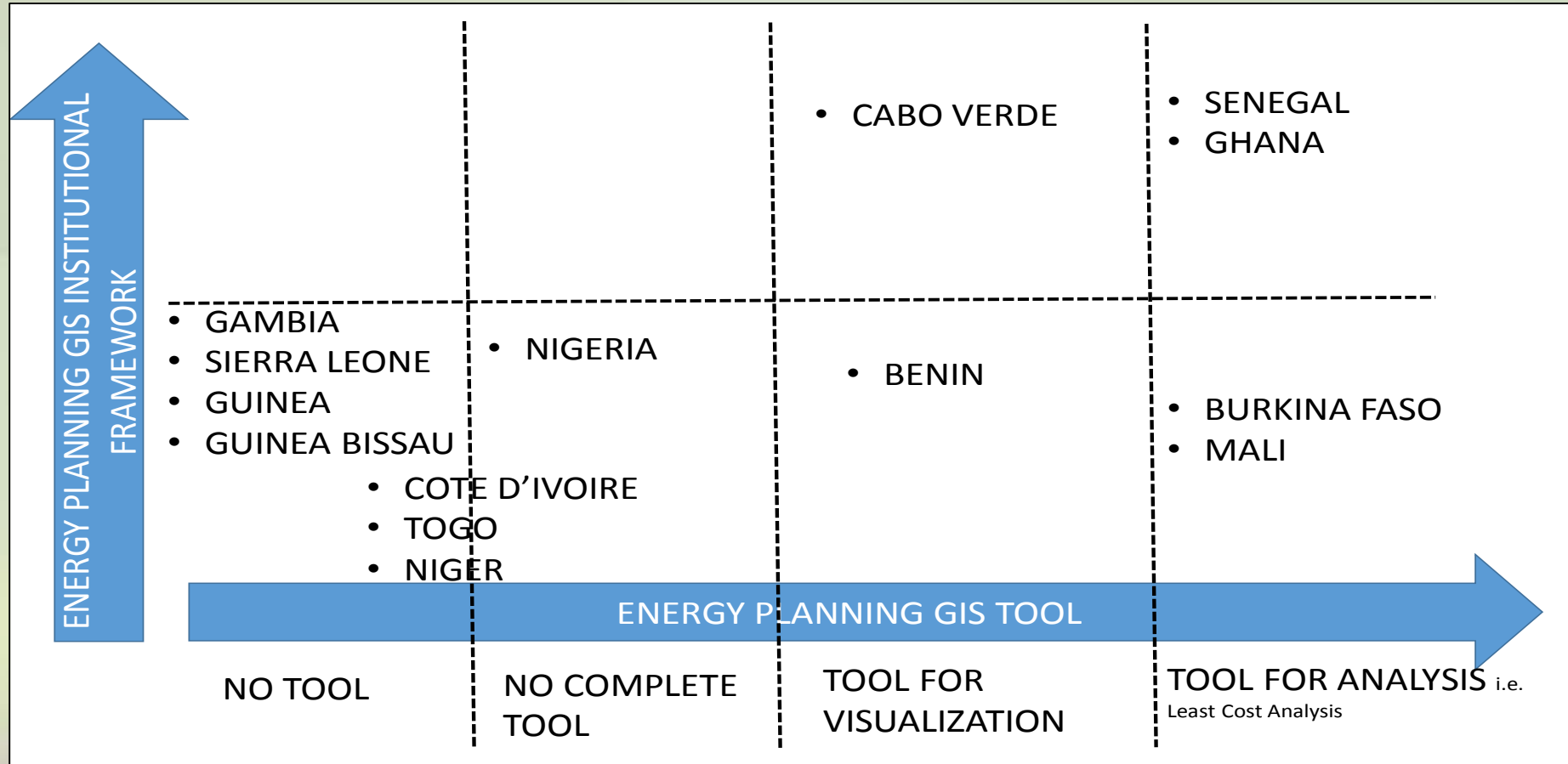
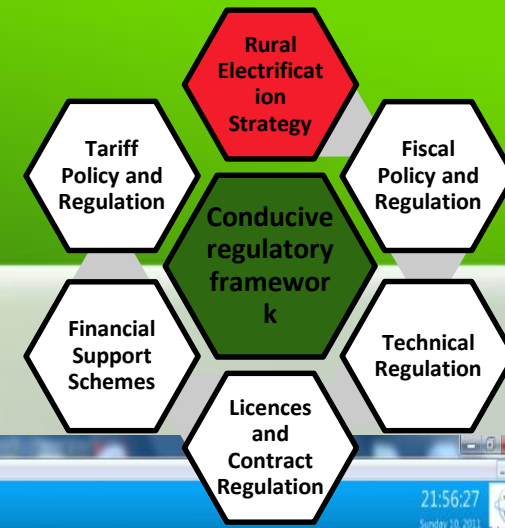
National Electricity access goal

www.ecreee.org





# GIS tools are getting more and more important in the rural electrification strategies



Source: KNUST

Region	District	Community	Electrification	Population	X	Y
Ashanti Region	Adansi North	Bena	Unelectrified	453	650205.899	695031.599
Ashanti Region	Adansi North	Bukunwase	Unelectrified	395	671787.077	695174.726
Ashanti Region	Adansi North	Obuase	Unelectrified	439	660336.04	695031.599

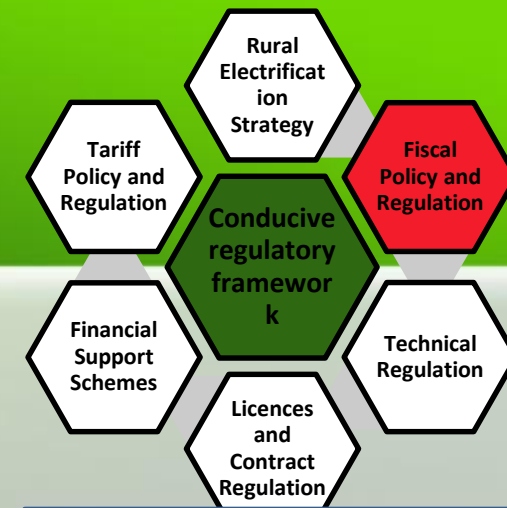
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# The majority of the ECOWAS countries have fiscal incentives to facilitate the investment

## Example: A tax benchmarking for some ECOWAS countries



Benin	Burkina Faso	Côte d'Ivoire	Niger	Senegal
Exemption for 5 to 9 years	Investment tax allowance	Exemption for 5 to 15 years	Exemption for 5 years	Investment tax credit
No exemption	<ul style="list-style-type: none"> <li>Exemption on imported equipments</li> <li>Exemption on imported solar energy equipments</li> </ul>	<ul style="list-style-type: none"> <li>Exemption on imported equipments</li> <li>9% VAT on solar energy equipments</li> </ul>	Exemption on imported equipments + services	No exemption but a deferred payment of VAT
75% to 100% exemption for goods & equipments	<ul style="list-style-type: none"> <li>5% reduced rate</li> <li>Exemption on imported solar energy equipments</li> </ul>	<ul style="list-style-type: none"> <li>40 to 50% exemption on equipments and goods</li> </ul>	<ul style="list-style-type: none"> <li>Exemption on equipments and goods</li> <li>50% exemption on diesel &amp; fuel oil</li> </ul>	Exemption on equipments and goods

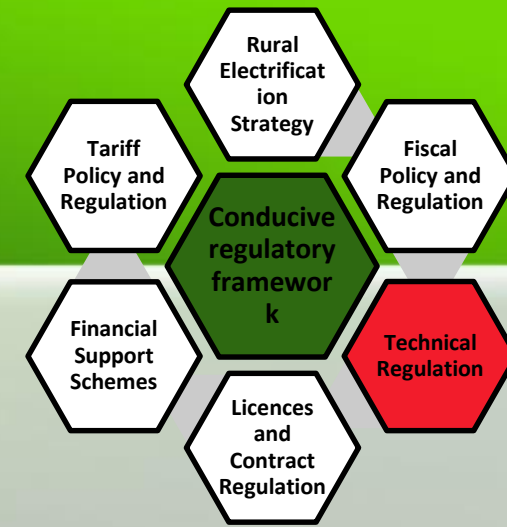
Corporate income tax

VAT

Customs duties

# Clear and transparent technical regulations provide security to promoter and customer

**Example: the Senegalese Agency for Rural Electrification established minimum technical specifications and environmental regulations**



AGENCE SÉNÉGALAISE D'ELECTRIFICATION RURALE  
(ASER)

## MANUEL DES PROCÉDURES

Minima techniques  
Règles environnementales

**It includes:**

- **Technical regulations for LT grid connected to a MT grid**
- **Technical regulations for LT grid connected to a genset**
- **Technical regulations for solar home systems**
- **Environmental regulations**

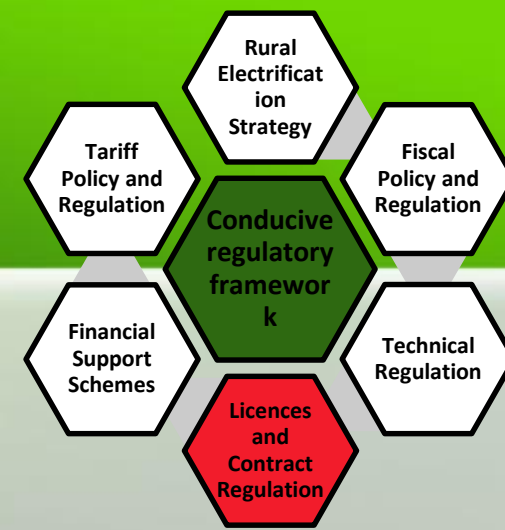
Juin 2005

Source: <http://siteresources.worldbank.org/INTRENENERGYTK/Resources/Ann030bis0Minima0Tech0D1P1ST0L0220905.pdf>  
[www.ecreee.org](http://www.ecreee.org)



# The governments have to regulate licenses and contracts while simplifying the procedures

**Example: Nigeria Electricity Power Sector Reform Act of 2005 eliminates the licensing for small scale electricity generation and distribution**



Extraordinary



## Federal Republic of Nigeria Official Gazette

No.77 Lagos - 8th August, 2005 Vol. 92

Government Notice No. 150

The following is published as Supplement to this Gazette:

Act No.	Short Title	Page
6.	Electric Power Sector Reform Act, 2005	A77-130

Printed and Published by The Federal Government Press, Lagos, Nigeria.

FGP 153/102005/1,000 (OL 67)

Annual Subscription from 1st January, 2005 is Local: N15,000.00 Overseas: N21,500.00 [Surface Mail]  
N24,500.00 [Second Class Air Mail]. Present issue N350.00 per copy. Subscribers who wish to obtain Gazette  
after 1st January Should apply to the Federal Government Printer, Lagos for amended Subscriptions.

The act under part (iv), section (62), subsection (2) states that a person may construct, own or operate:

- an undertaking for generating electricity not exceeding one megawatts (1MW) in aggregate at a site or
- an undertaking for the distribution for electricity with a capacity not exceeding 100 KW in aggregate at a site or such other capacity as the commission may determine from time to time without a license.

Source: <http://www.nipptransactions.com/wp-content/uploads/downloads/2013/03/Electric-Power-Sector-Reform-Act-2005.pdf>

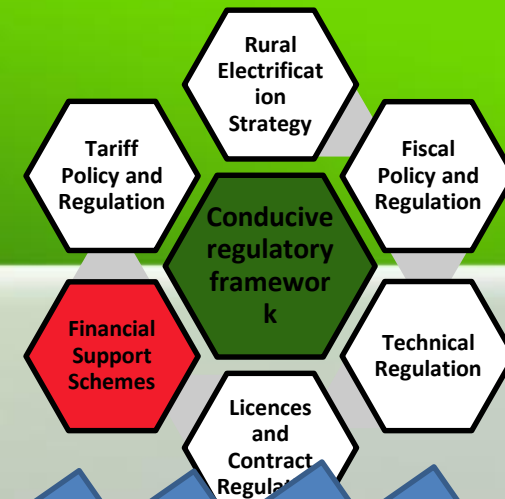
[www.ecreee.org](http://www.ecreee.org)





# Public financial support schemes can help the economical viability of the investments

The majority of the ECOWAS countries have already established public financial support schemes



Benin  
Burkina Faso  
Cabo Verde  
Côte d'Ivoire  
Gambia  
Ghana  
Guinea  
Guinea Bissau  
Liberia  
Mali  
Niger  
Nigeria  
Senegal  
Sierra Leone  
Togo

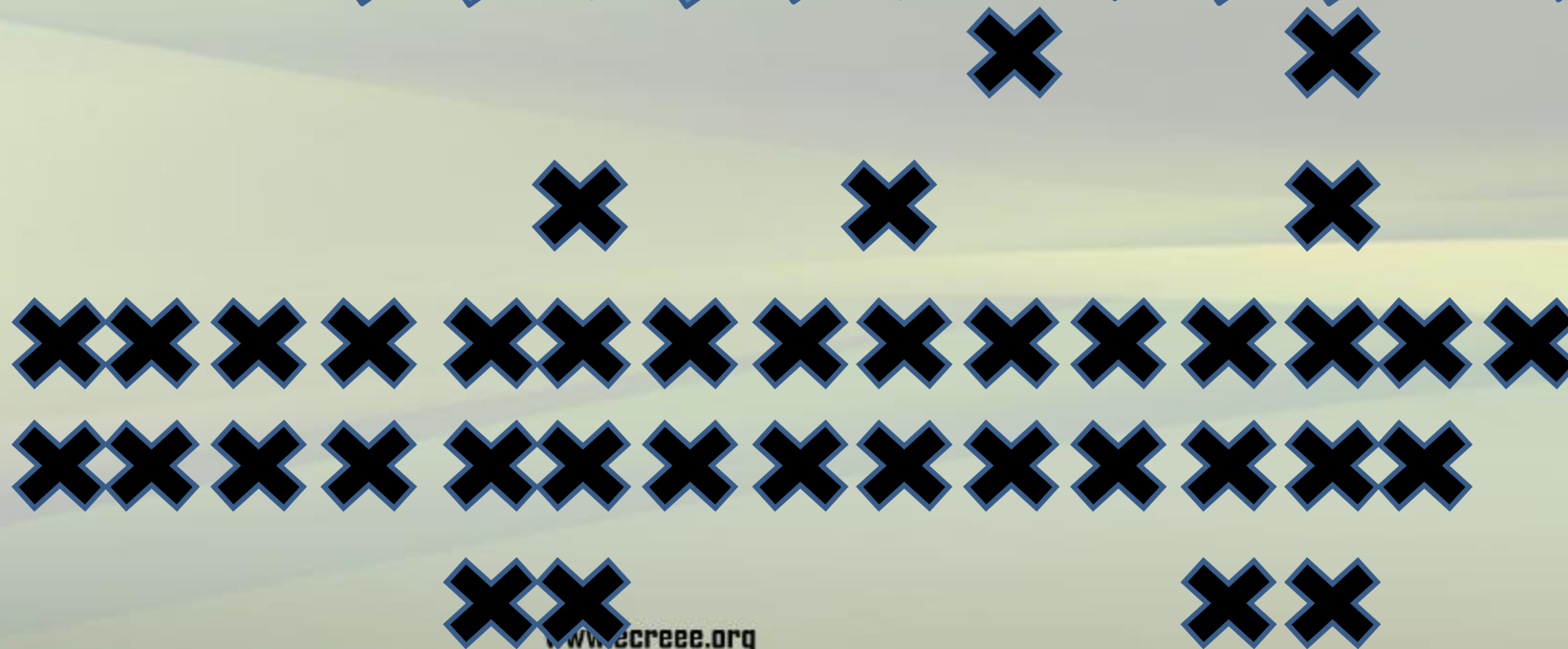
Financial support to developers through rural electrification funds

Output-based subsidies for energy services products

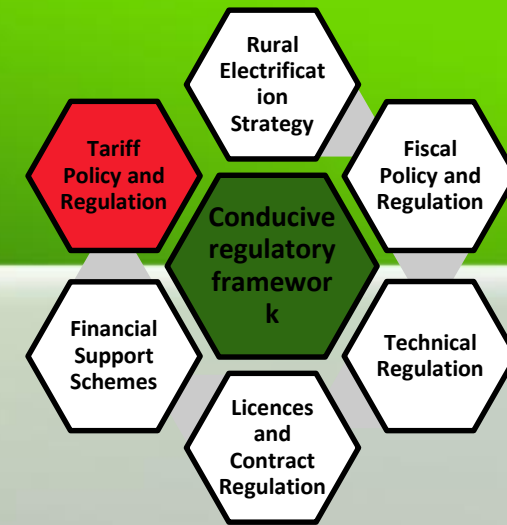
Traditional subsidies

Direct public investments in access projects

Special support for Renewable energy



# Clear and transparent tariffs provide security to promoter and customer

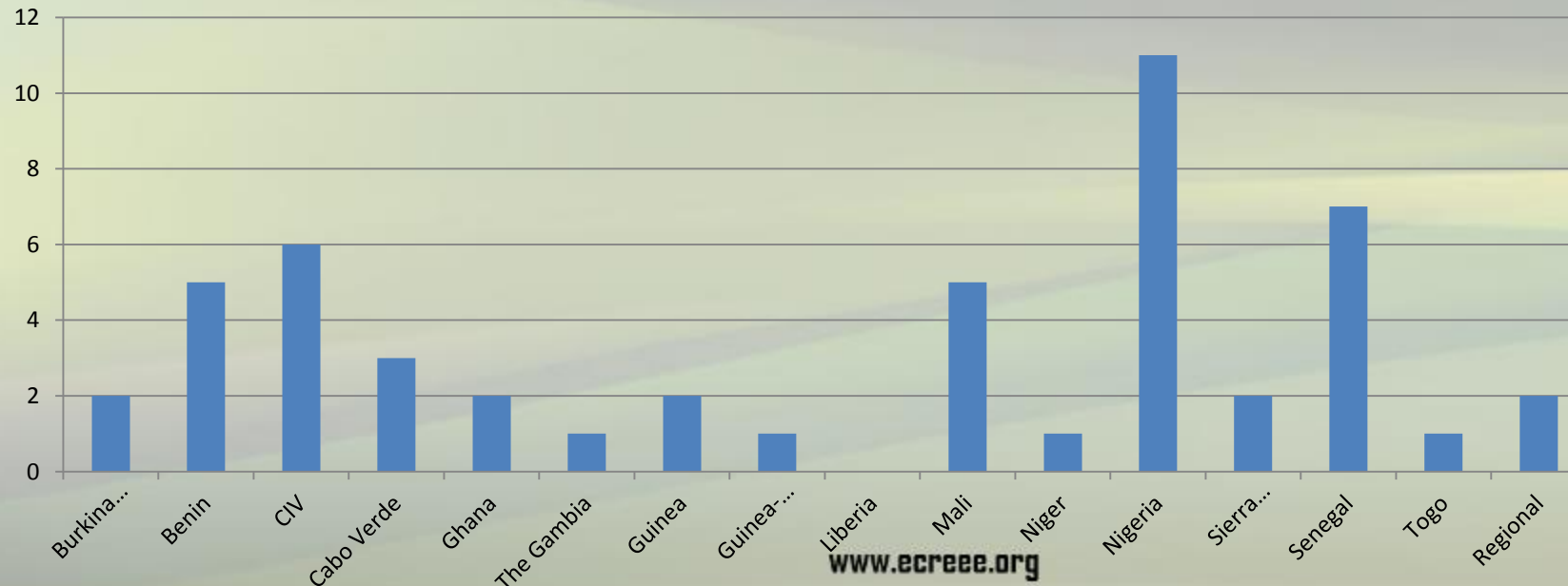


**Example: in Senegal, the Electricity Sector Regulatory commission has established tariffs for the rural electrification concession, the Delegated Temporary Managers (GDT) and the Local Rural Electrification Initiative (ERIL) operators**

Rubriques	Coût des Services électriques en milieu rural (en F CFA)				
	N1	N2	N3	N4 Réseau	N4 Solaire
Redevance Mensuelle H5	4.000	7.500	13.000	120 FCFA /KWh	71 FCFA/KWh
Taxe pour les Collectivités Locales (TCL)	50	100	170	2,5 % coût énergie consommée	2,5 % coût énergie consommée
Redevance FER (RFER)	50	100	170	0,7 FCFA/kWh	2,5 %
Cautionnement Mutuel Antivol	25	50	75	1,25 %	1,25 %
Participation de l'abonné à la mise en place du projet payable sur 36 mois	12.000	22.500	39.000	66.000	66.000

# ECREEE is managing a Renewable Energy Facility – 2014 call is focused on Clean Mini Grids

- Providing grant co-funding from 50,000 up to 200,000 Euros to support the development of clean mini-grids
- Total funding available is 1 million Euros
- Emphasis on sustainability of the project (establishment of a sustainable ownership, management, operation and maintenance system)
- Ability of applicants to mobilize non grant co-funding is positively evaluated
- 51 proposals received from 14 ECOWAS countries are currently under evaluation



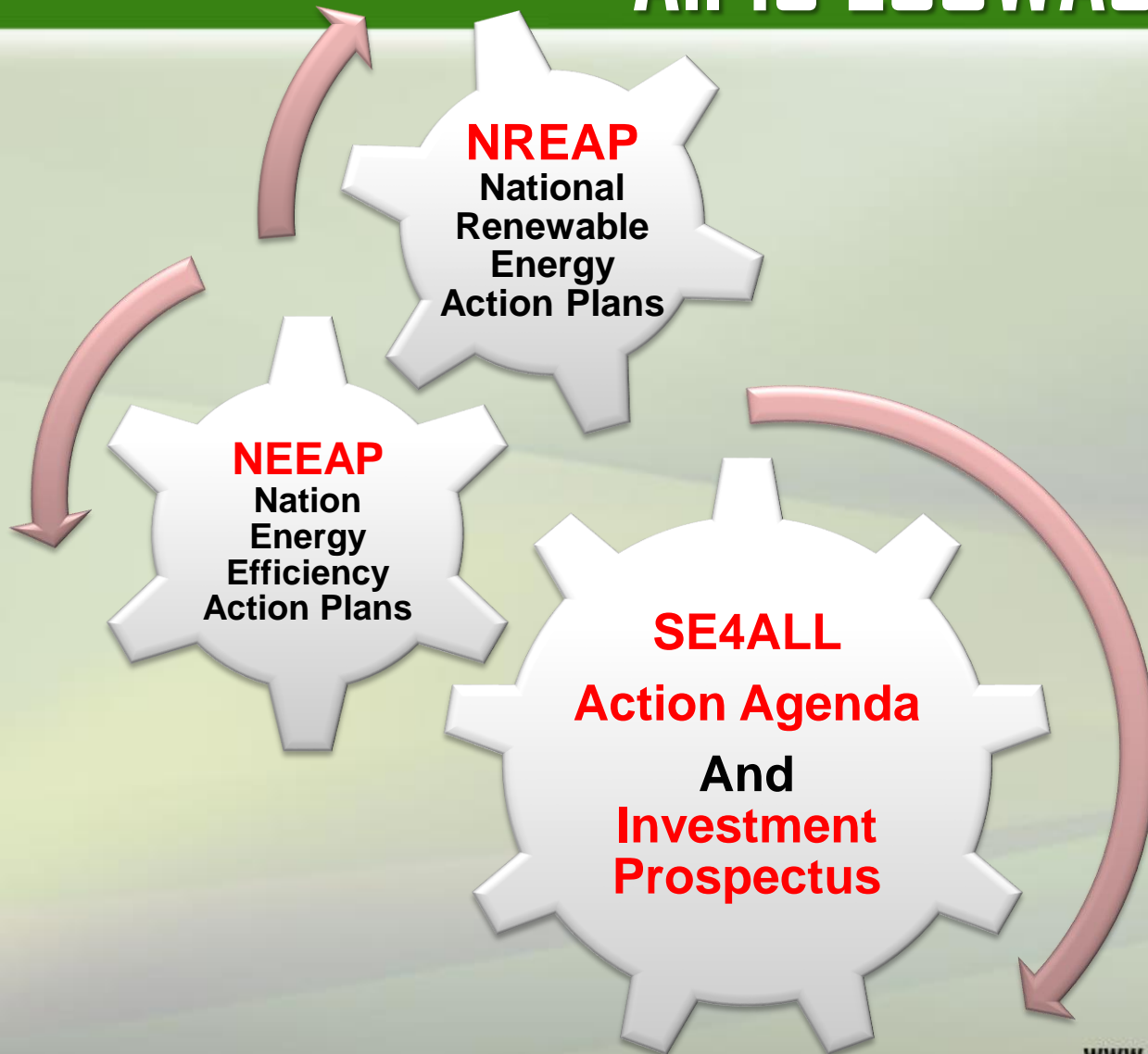
# Rural Electrification is an essential element in the ECOWAS RE and EE National Action Plan Process

- 2006, ECOWAS/UEMOA White Paper on access to energy services for populations in rural and peri-urban areas has been adopted
- ECOWAS Renewable Energy Policy (EREP) and ECOWAS Energy Efficiency Policy (EEEP) have been adopted by the ECOWAS Authority of Heads of State and Government, July 2013, Abuja
- Sustainable Energy For all Initiative (SE4ALL) Initiative has been launched and ECREEE is the Focal institution for ECOWAS;
- ECREEE is currently developing National Renewable Energy Action Plans and National Energy Efficiency Action Plans (NEEAP) and SE4ALL Action Agendas with all 15 ECOWAS Member States.





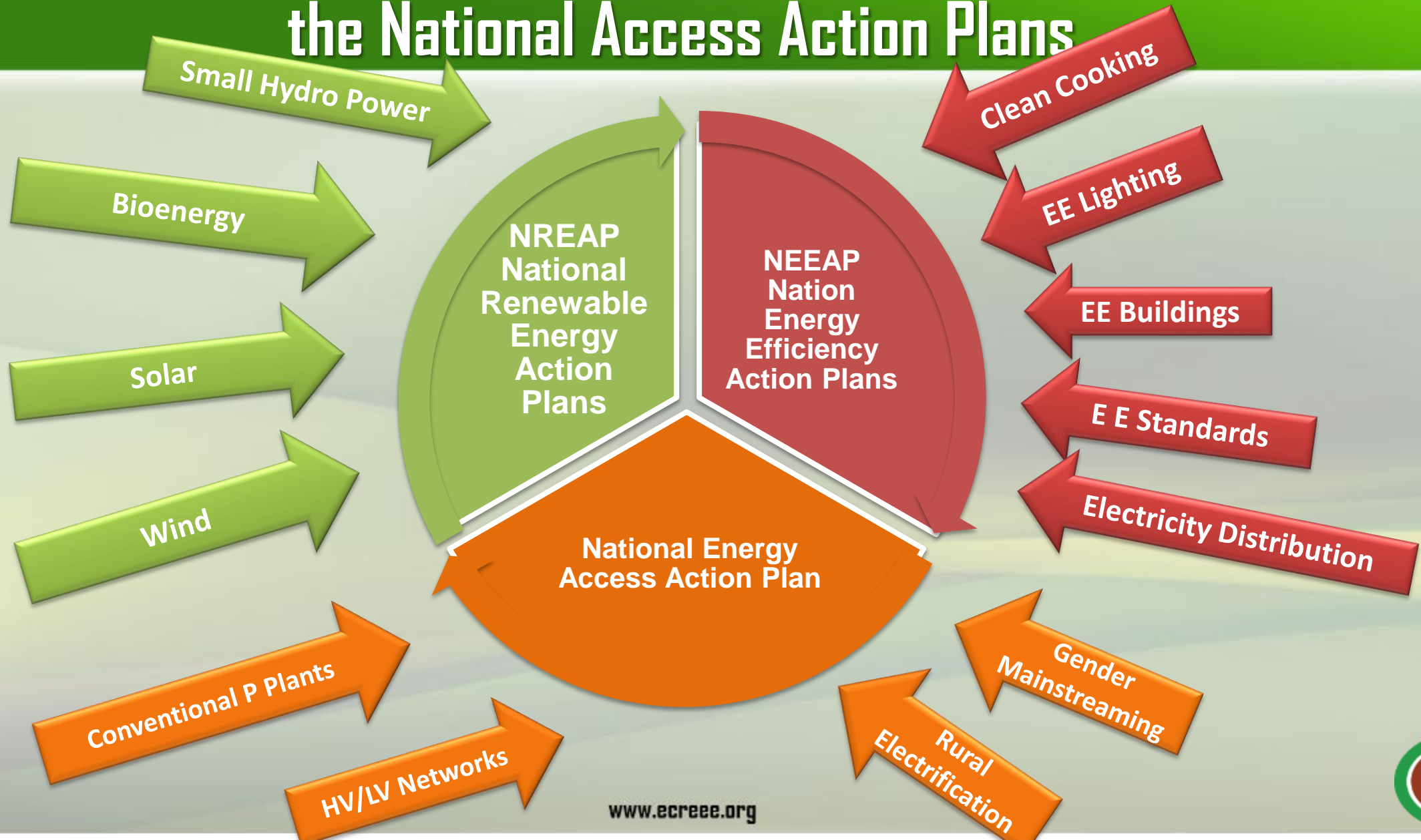
# Action Plans are being developed in All 15 ECOWAS Member States



## ECREEE SUPPORT TO THE PROCESS

- Development of the Action Plan Templates;
- **15 national consultants to assist Member States** with the development of the Action Plans;
- **Team of international experts** to provide on-going support;
- Support towards the organisation of national Kick Off and Validation meetings;
- Review and quality assurance
- Organization of **Regional Concerted Actions** to facilitate regular exchange and collaboration among the Member States;
- Support towards formulation/revision of national RE & EE policies, laws, regulations;
- Support towards detailed resources assessment and grid capacity;
- Assist in the development of portfolios of bankable projects, project preparatory activities and mobilisation of investment.

# National SE4ALL Action Agenda includes the NREAPs, NEEAPs and the National Access Action Plans





# A team of International Experts have been engaged by ECREEE to support the process



international Expert Team supporting the development of the Action Plans



High Level Kick Off in Mali



Action Plan Meeting with ECREEE and the Minister of State for Power in Nigeria



High Level Kick Off in the Gambia



High Level Kick Off in Burkina Faso



Action Plan Meeting Cabo Verde

## International Partners to support the Action Plan process



Austrian  
Development Cooperation

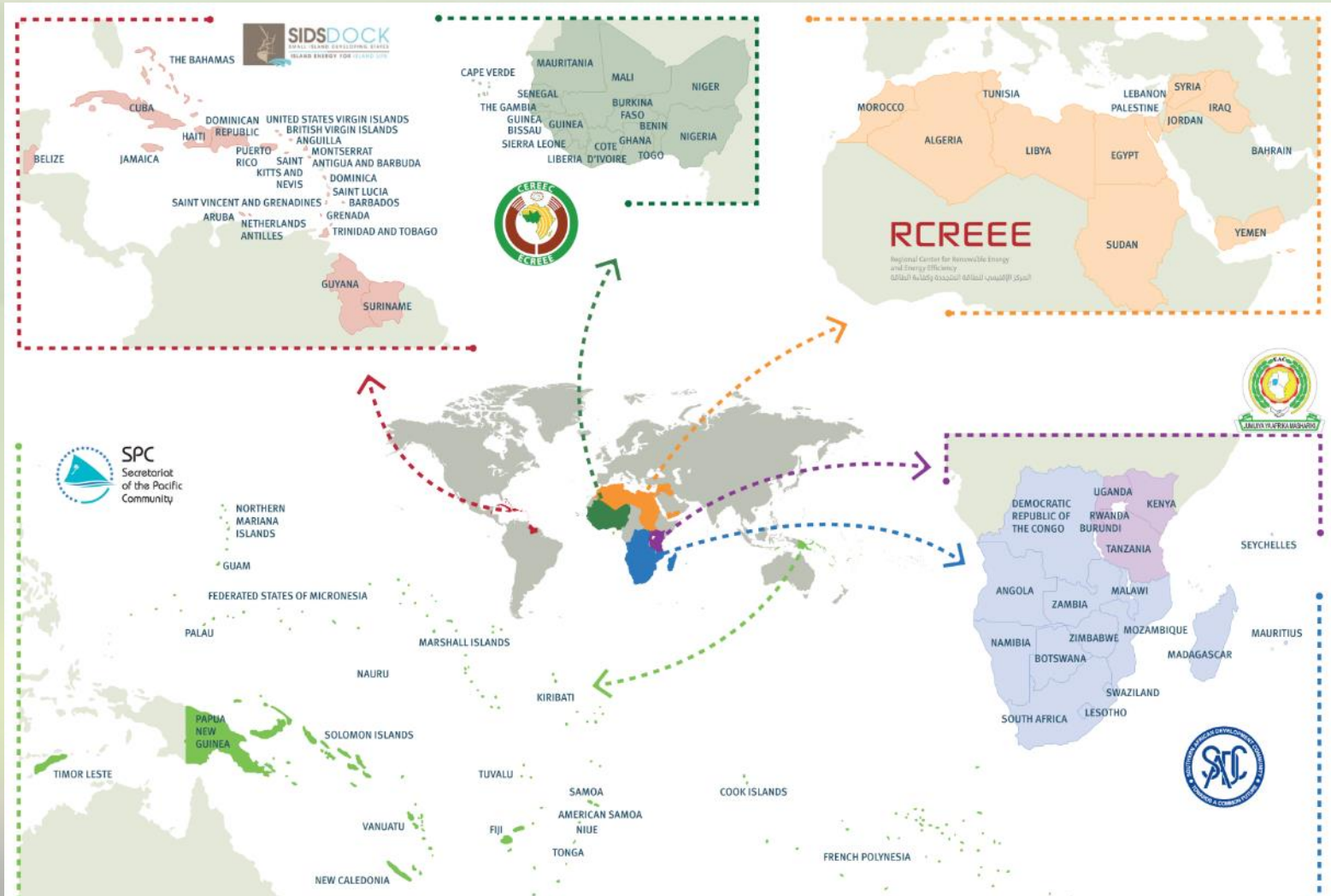


Deutsche Gesellschaft  
für Internationale  
Zusammenarbeit (GIZ) GmbH





# ECREEE is partner in the Global Network of Regional Sustainable Energy Centers of UNIDO



Share of lessons learned and capacity building through collaboration among the regional centres is key on rural electrification programmes





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