

# Africa Clean Energy Corridor

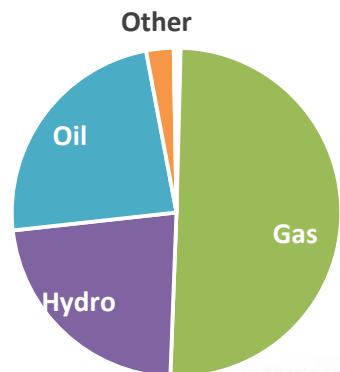
**Safiatou Alzouma Nouhou**  
**Programme Officer sub-Saharan Africa**  
**Abidjan, 18 September 2015**

# Power generation capacity in 2013

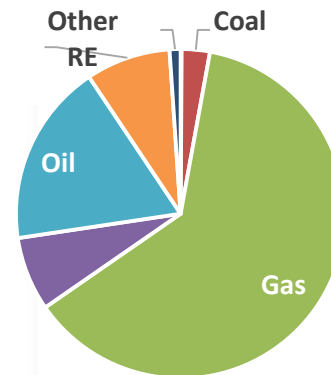
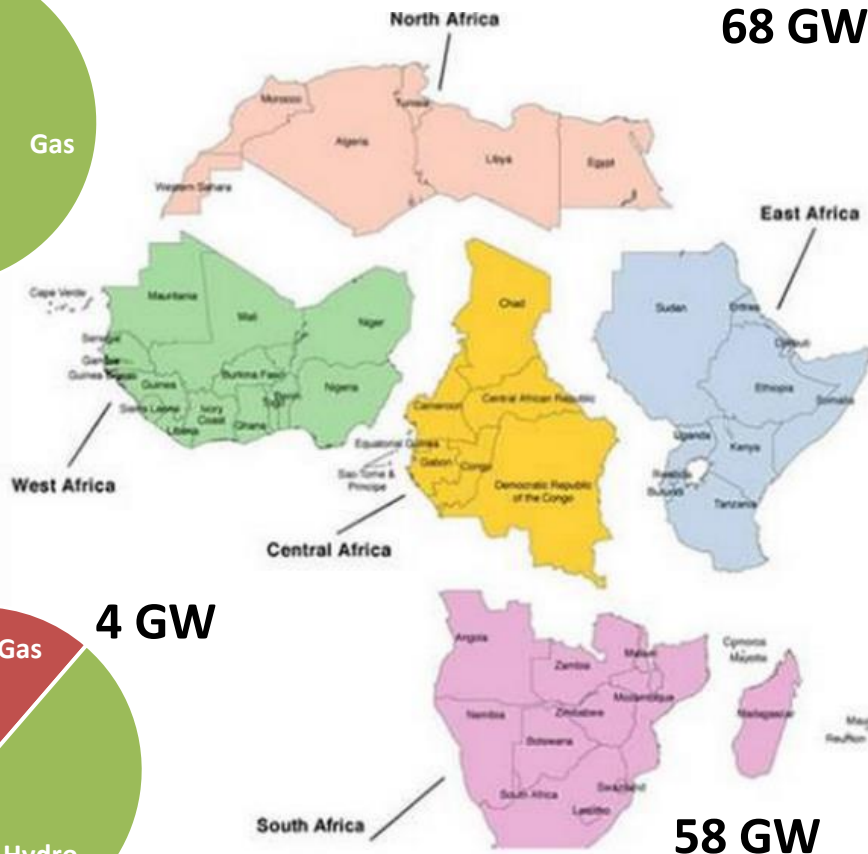


# IRENA

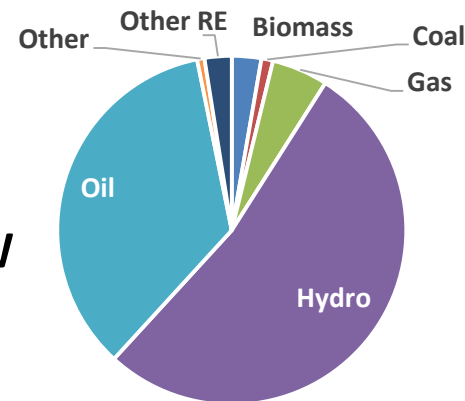
International Renewable Energy Agency



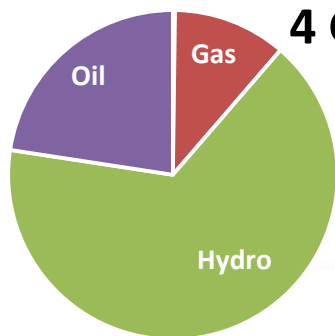
**19 GW**



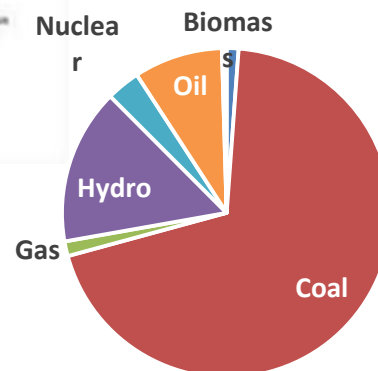
**68 GW**



**11 GW**



**4 GW**

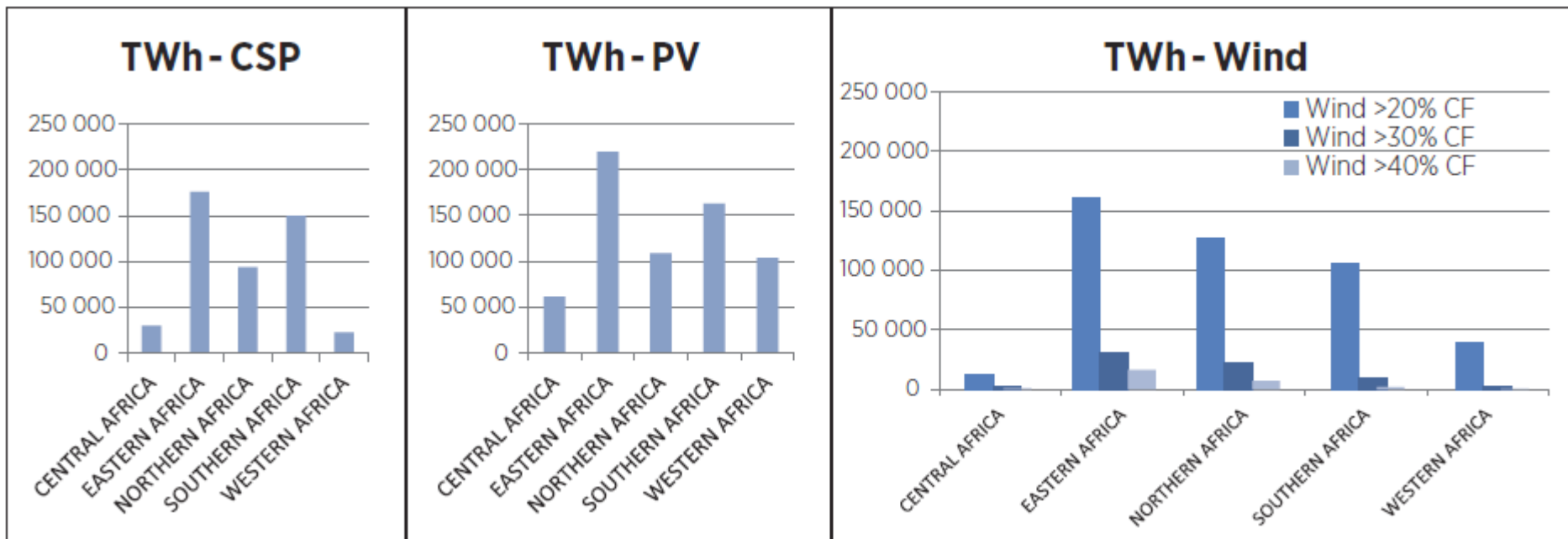


**58 GW**

\* "Other RE" includes solar, wind and geothermal  
 "Other" includes waste heat and blast furnace gas

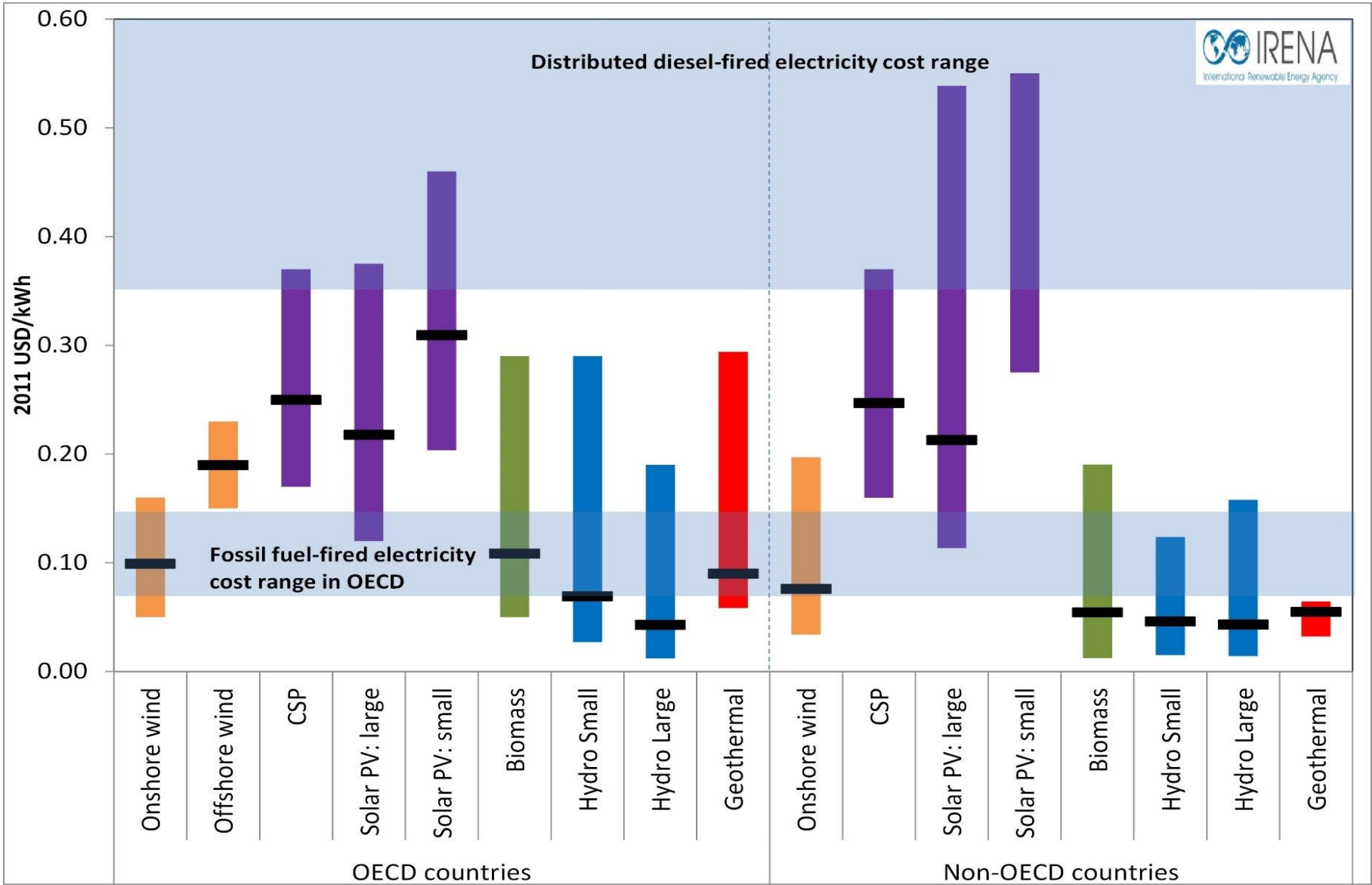
# RE Resources in Africa

- Detailed GIS analysis shows abundant but regionally different RE power generation potentials

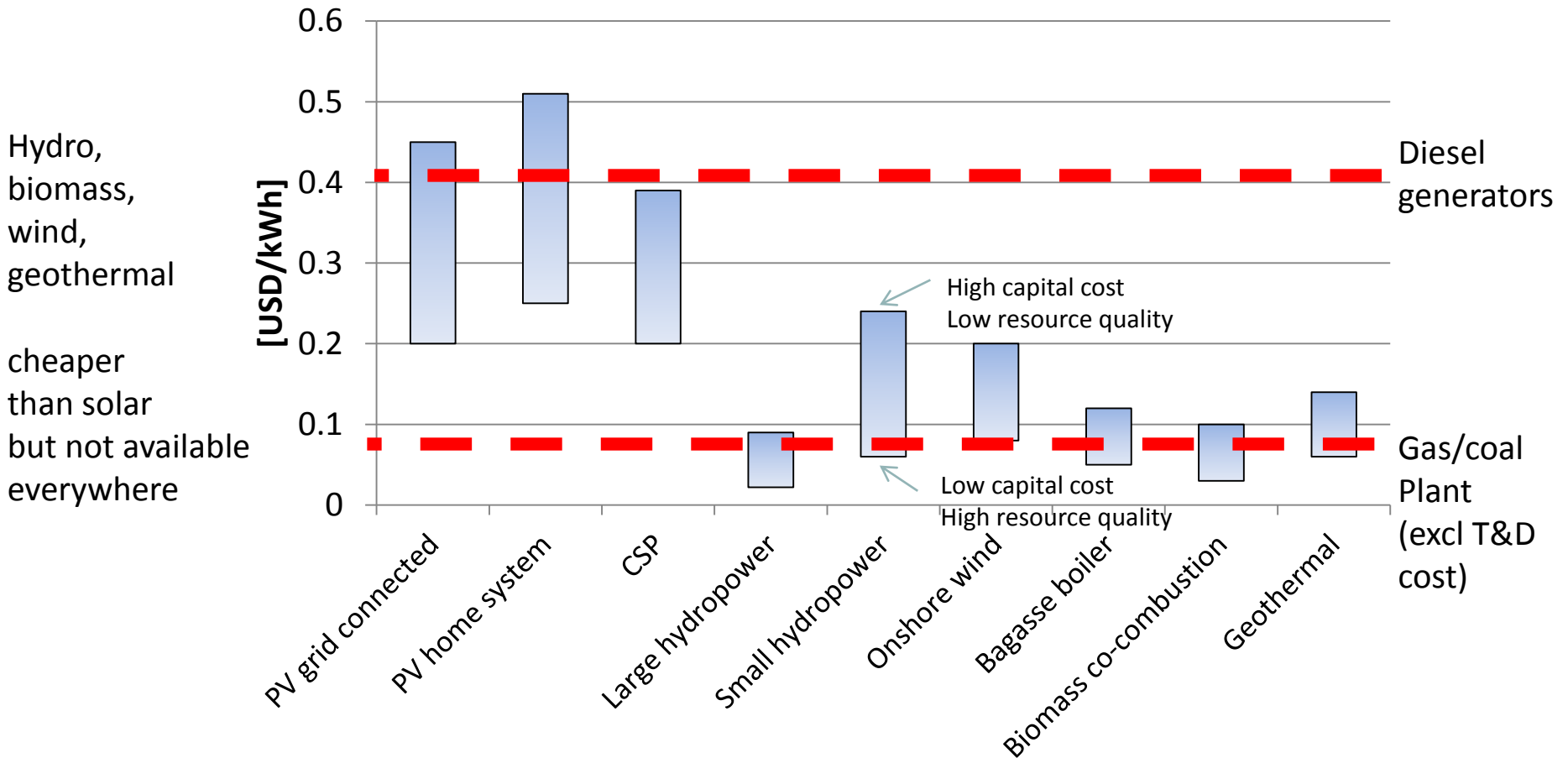


- Biomass > 2 600 TWh/yr

# Renewable power generation is increasingly competitive

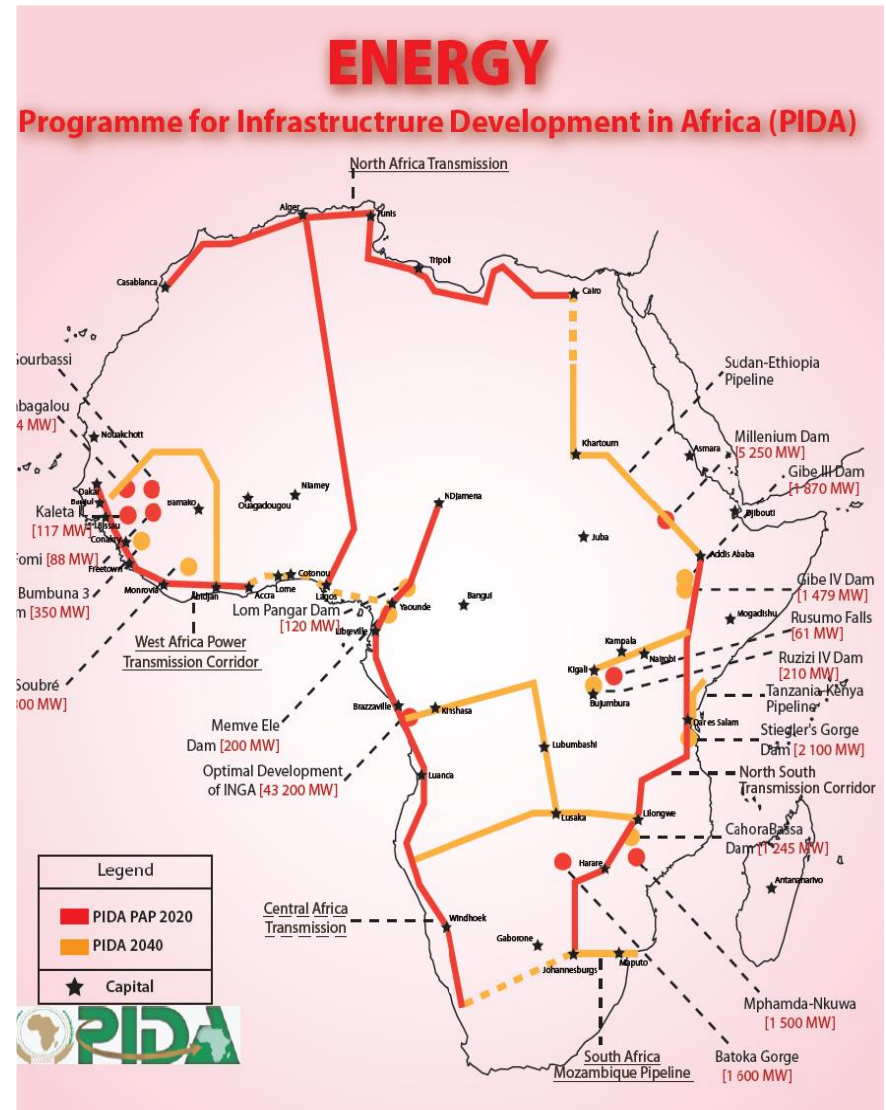


# Levelized cost of electricity Africa

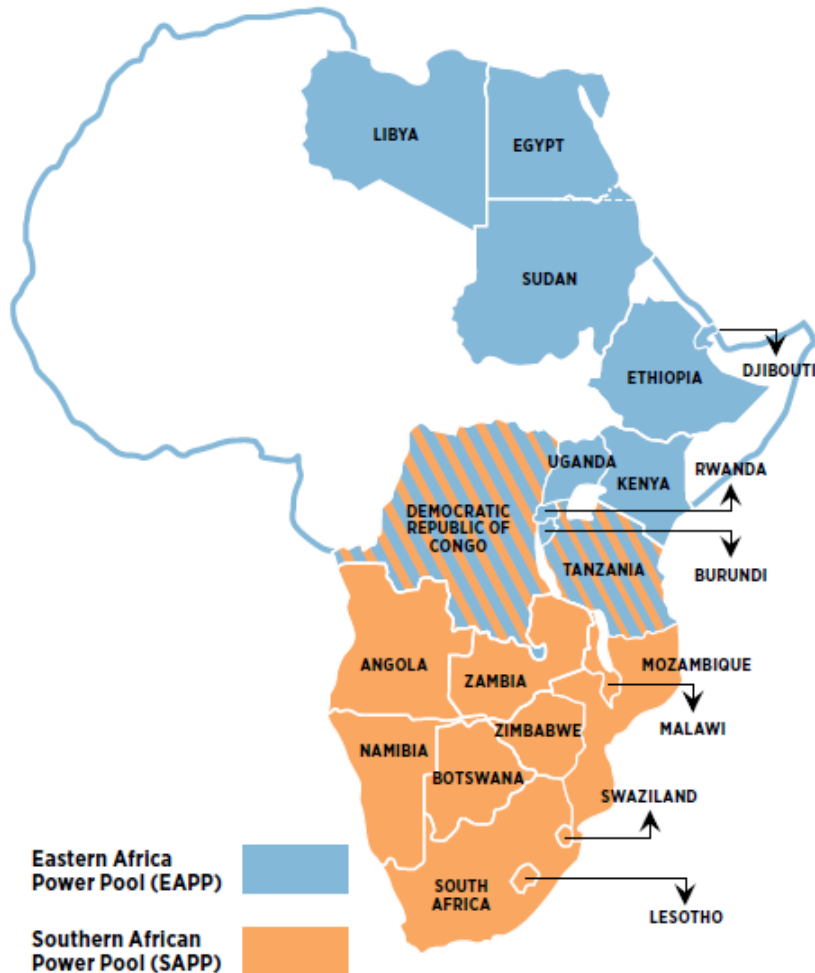


# Why ACEC?

- Growing electricity demand mainly in fast growing economies of the Continent
- High untapped Renewable Energy (RE) potential
- Huge reliance on fossil fuels for electricity generation in most countries
- Economic growth is stifled by power shortages and outages
- Ongoing effort to interconnect power grids through Transmission links
- Promotion of RE power generation and cross border trade of RE power



# ACEC Objective



- Develop RE resources and integrate renewable power into grid
- Promote cross-border trade of renewable power
- Build on PIDA as well as SAPP and EAPP work

# Political Support

Jan 2014

Ministerial Communique signed to endorse ACEC Action Agenda



Today

Supported by more than 30 countries, development partners, regional organizations, IFIs, and private sector



# ACEC and Climate Change



## ENERGY

Africa Clean Energy Corridor  
Action Statement and Action Plan  
*Provisional copy*



CLIMATE SUMMIT 2014  
UN HEADQUARTERS · NEW YORK  
23 SEPTEMBER · #CLIMATE2014

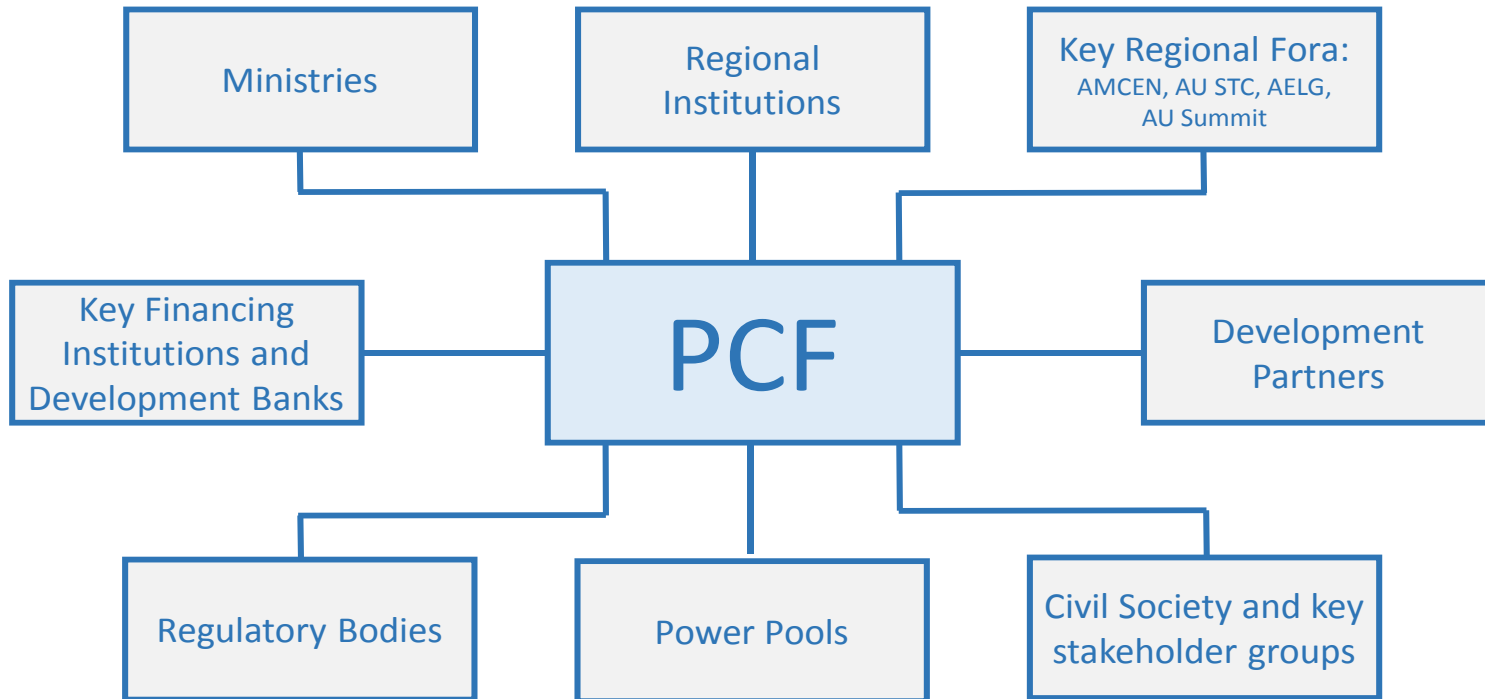
## Sept 2014: UN Climate Summit

ACEC announced as an area for collaborative action with an immense potential for transforming the energy sector and contributing to climate change action.

## Dec 2015: COP21 in Paris

ACEC to feature for demonstration of renewable energy as a crucial part of any viable solution for climate change.

## Facilitating strategic policy dialogue between decision makers.



## **ACTION PILLARS:**

### **Zoning and Resource Assessment**

Identification of high resource zones for RE development.

### **Country and Regional Planning**

Consideration of cost-effective RE options for power generation in national and regional plans.

### **Enabling Frameworks for Investment**

Opening markets to IPPs, reducing the costs of RE financing and facilitating power trade.

### **Capacity Building**

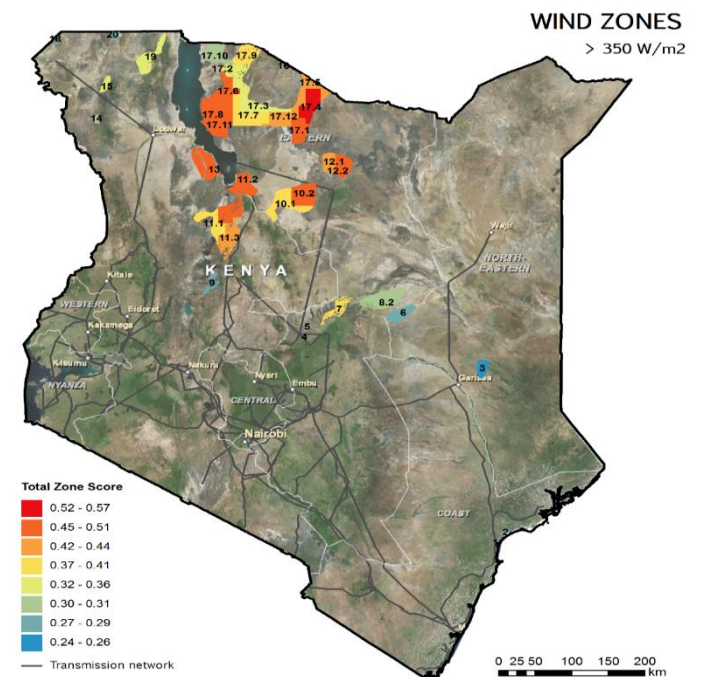
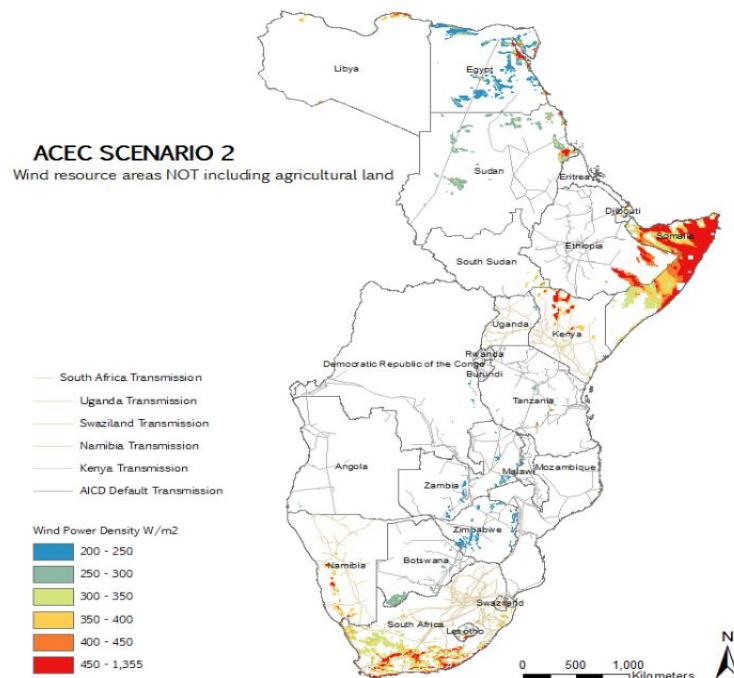
Development of skills to build, plan, operate, power grids with higher RE shares.

### **Public Information**

Awareness raising and promotion of the ACEC and its benefit.

# Resource Assessment and Zoning

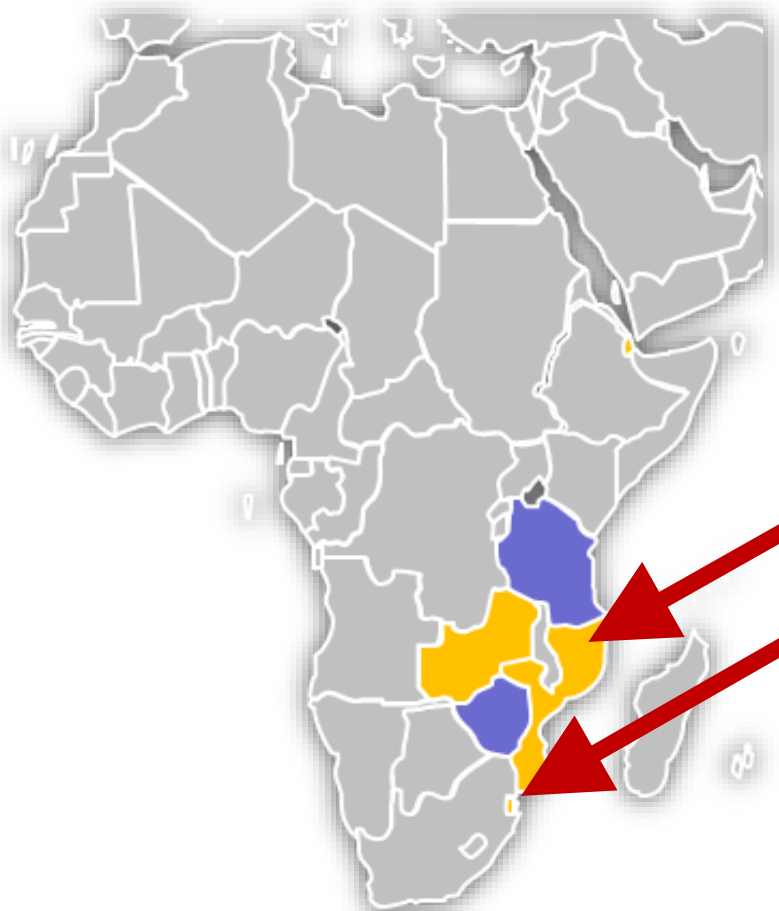
- High potential and cost-effective zones identified in all countries.
- Validation of identified zones underway in pilot country.
- Zoning results incorporated into EAPP Energy Master Plan.
- Zones under further development for decentralised solutions.



# Enabling Frameworks

## Renewables Readiness Assessment and Advisory

Policy, legislative and institutional guidance and support



### SWAZILAND

#### ✓ DJIBOUTI

- Grid Code and RE IPP Reg for policy adopted (from IPAs signed)

#### ✓ MOZAMBIQUE

#### ✓ SWAZILAND

#### ✓ ZAMBIA

- RE feed-in tariffs adopted
  - RE integrated into national energy policy and legislation
  - Rural Electrification Strategy revised with focus on RE by private sector
- Integrated resource planning under development

#### TANZANIA

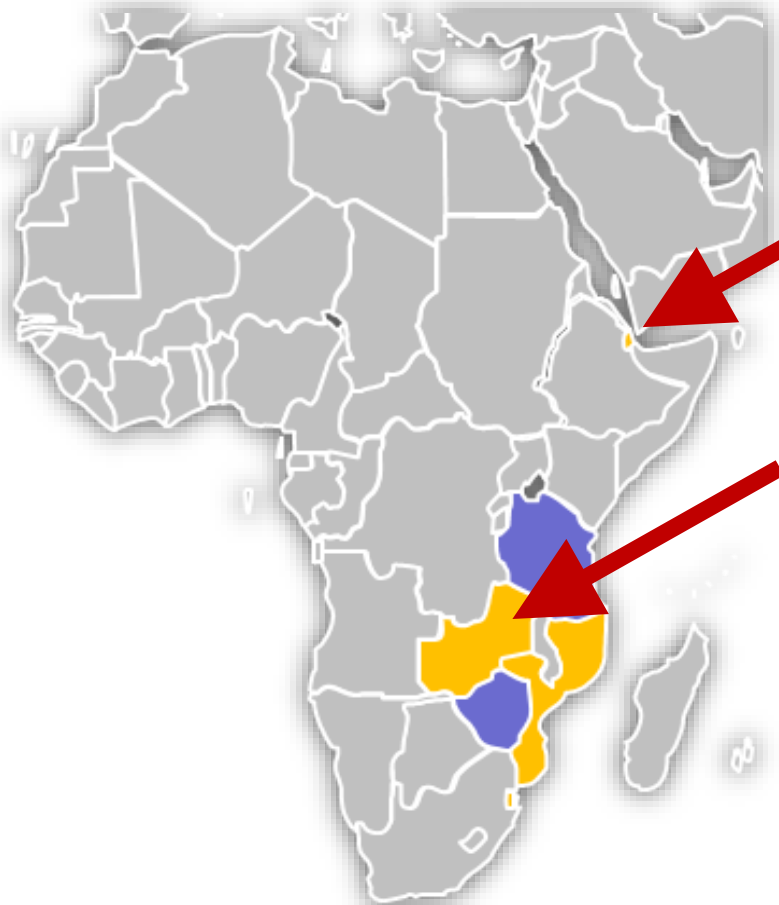
#### ZIMBABWE

#### EGYPT

# Enabling Frameworks

## Renewables Readiness Assessment and Advisory

Policy, legislative and institutional guidance and support



### ZABUATI

- IRENA assessed the gap in policy and legislative frameworks for RE development
- Integrated RE into the national energy plan and RE equipment development
- RE integrated into Electricity Master Plan<sup>14</sup>

# Enabling Frameworks



## Regulatory Empowerment Project

### 1. Planning Governance

Supporting management of power system plans with wider role of RE.

### 2. Capacity Building

1<sup>st</sup> IRENA Renewable Energy Training Week.

### 3. Governance of Regulatory Institutions

### 4. Tariffs and Incentives

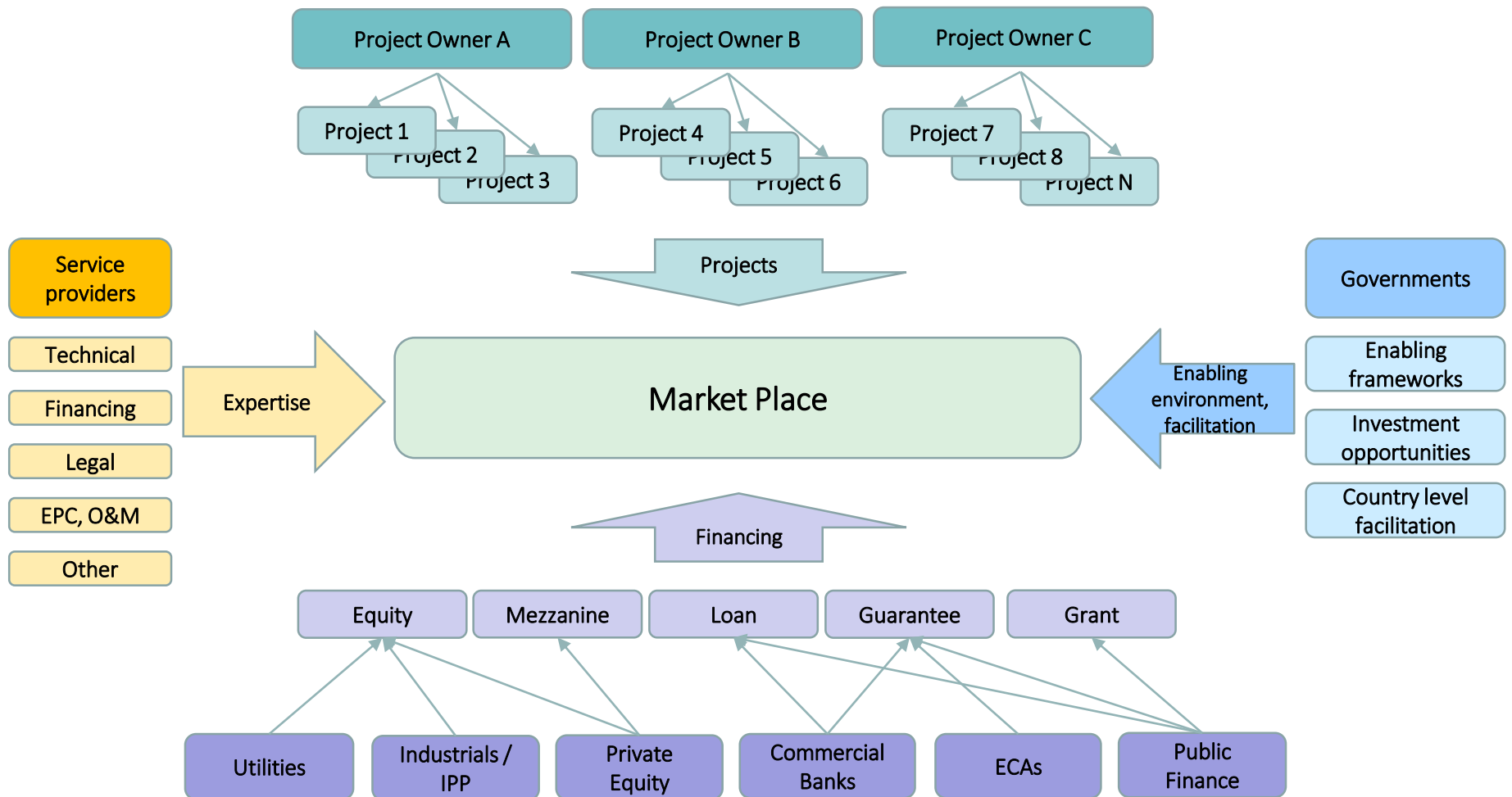
### 5. System Code Governance



# Enabling Frameworks

## Project Facilitation Platform

Support for project initiation & development and channeling financing



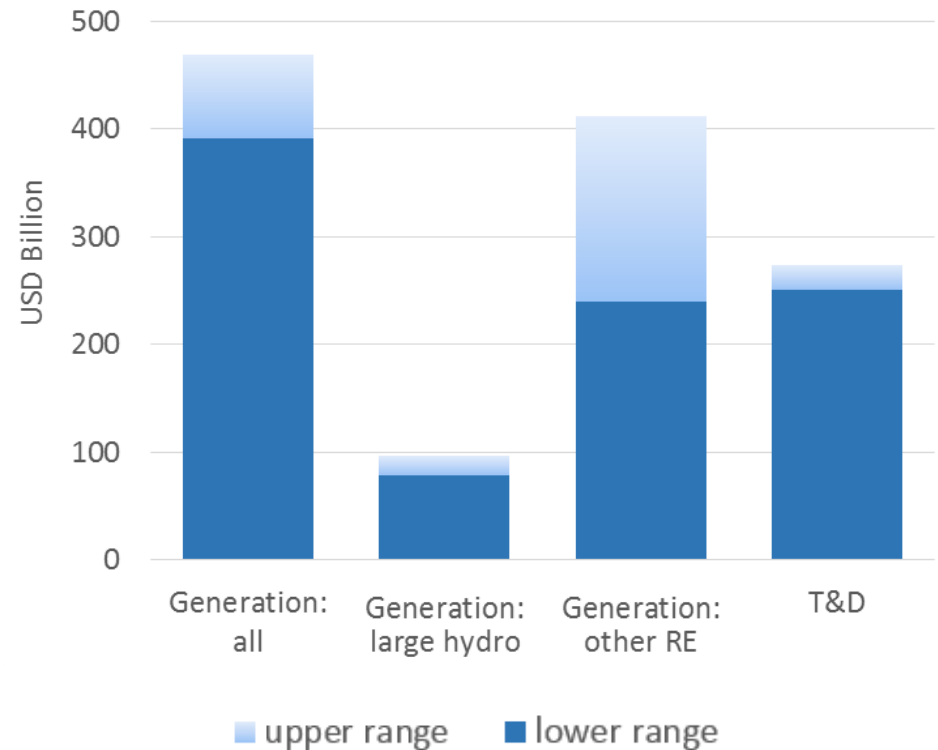
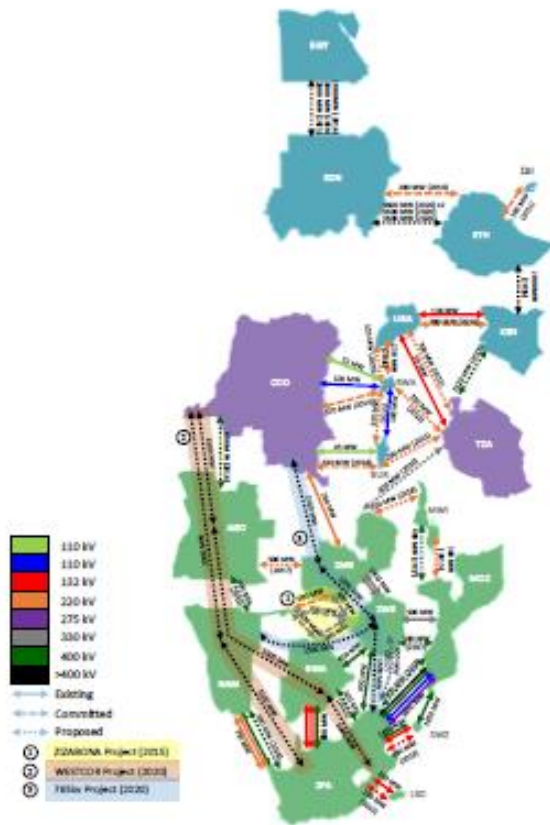


# National and Regional Planning

SPLAT least cost planning tool implemented in the power sector of ACEC region.

Investment needs 2015 to 2030:

- USD 20-25 bn/yr in generation
- USD 15 bn for T&D



# 4. Capacity Building

Develop skills and strengthen institutions to build, plan, operate, maintain and govern power grids and markets with higher shares of renewable electricity.

- Training workshops held for RE Zoning, SPLAT planning, governance frameworks, and integration of RE.



- Practitioner's Guide for grid integration of variable RE developed.

# IRENA's Value Added

ANALYSIS

**Resource Assessment & Zoning**

Technical potential;  
Identification of suitable areas

**RRA & Advisory**

Regulatory and investment environment

**REmap, SPLAT**

Commercial market potential and planning

**RESource & other Databases**

Market statistics;  
Policy database;  
Global Atlas

**Stream of bankable projects and financial closings**

FACILITATION

Policy dialogue amongst stakeholders

**Policy Consultative Forum**

Enabling investment environment

**Regulator & Utility Cooperation**

Support in project development and facilitating financing

**Project Facilitation Platform & Project Navigator**

Skills and knowledge

**Capacity Building**

Communication

**Awareness Raising**

**Thank you for your attention!**

# IRENA's engagement in West Africa: RRA

## Senegal

- Adoption of the Decree No. 2011-2013 providing conditions of power purchase and remuneration for electricity generated by RE plants and the conditions of their connection to the grid;
- Adoption of the Decree No. 2011-2014 provides the conditions of power purchase of surplus RE-based electricity from self-producers
- Development of FiT for RE with the support of EU
- WB- strategy and action plan on RE deployment in Senegal

## Niger

- New rural electrification agency created
- Reallocation of part of the tax on electricity for rural electrification as part of the internal resource mobilization mechanism for RE promotion

# IRENA's engagement in West Africa: RRA

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## **The Gambia**

- Enactment of Re law and establishment of RE fund
- GREC revived, capacity building activities for key stakeholders of the RE sector
- Development of standards and labels for RE equipment

## **Mauritania**

- The Government is taking concrete steps for various fronts to promote RE based off-grid electrification options

# IRENA's engagement in West Africa

## IRENA – Abu Dhabi Fund for Development (ADFD) funded projects:

- **Mali (USD 9m, 4MW hybrid solar-diesel for 30 villages)**  
Loan agreements signed, under implementation, Government co-funding.
- **Mauritania (USD 5m, 1MW wind)**  
Loan agreements signed, under implementation, UNDP GEF co-funding.
- **Mauritania (USD 6m, 1MW hybrid wind-solar PV-hydro)**  
Site appraisals scheduled.
- **Sierra Leone (USD 9m, 4MW grid connected solar PV)**  
loan agreements signed, under implementation, IsDB and ECREEE co-funding.

## System Planning Test (SPLAT)

Least-cost energy supply options are explored under different policy assumptions for West African Power Pool countries. Trainings on the use of this tool planned in October/November.

## Next steps:

- Technical stakeholder meeting in September/ October in West Africa for identifying elements for a **West – ACEC** action agenda
- Endorsement of the Action Agenda by Ministers/the Region.