



AFRICAN DEVELOPMENT BANK GROUP

# Energy Trade in Africa

09 September 2014

## Asian Development Bank Regional Energy Trade Workshop



# OUTLINE

- Overview of the AfDB Energy Strategy
- Overview of the Energy Sector in Africa
- Benefits of Regional Energy Trade in Africa
- Challenges, Experience and Lessons Learnt
- West and East African Power Pools
- Conclusion and Recommendation

# OVERVIEW OF THE AfDB Energy Strategy

Access  
to  
Energy

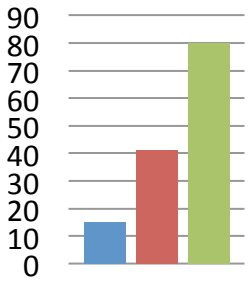
Clean  
Energy

Leverage  
Resources

Structure  
PPPs

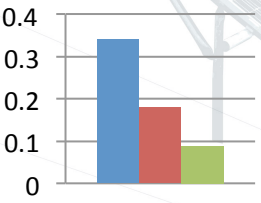
Enable  
Regional  
Energy  
Trade

# OVERVIEW OF THE ENERGY SECTOR IN AFRICA

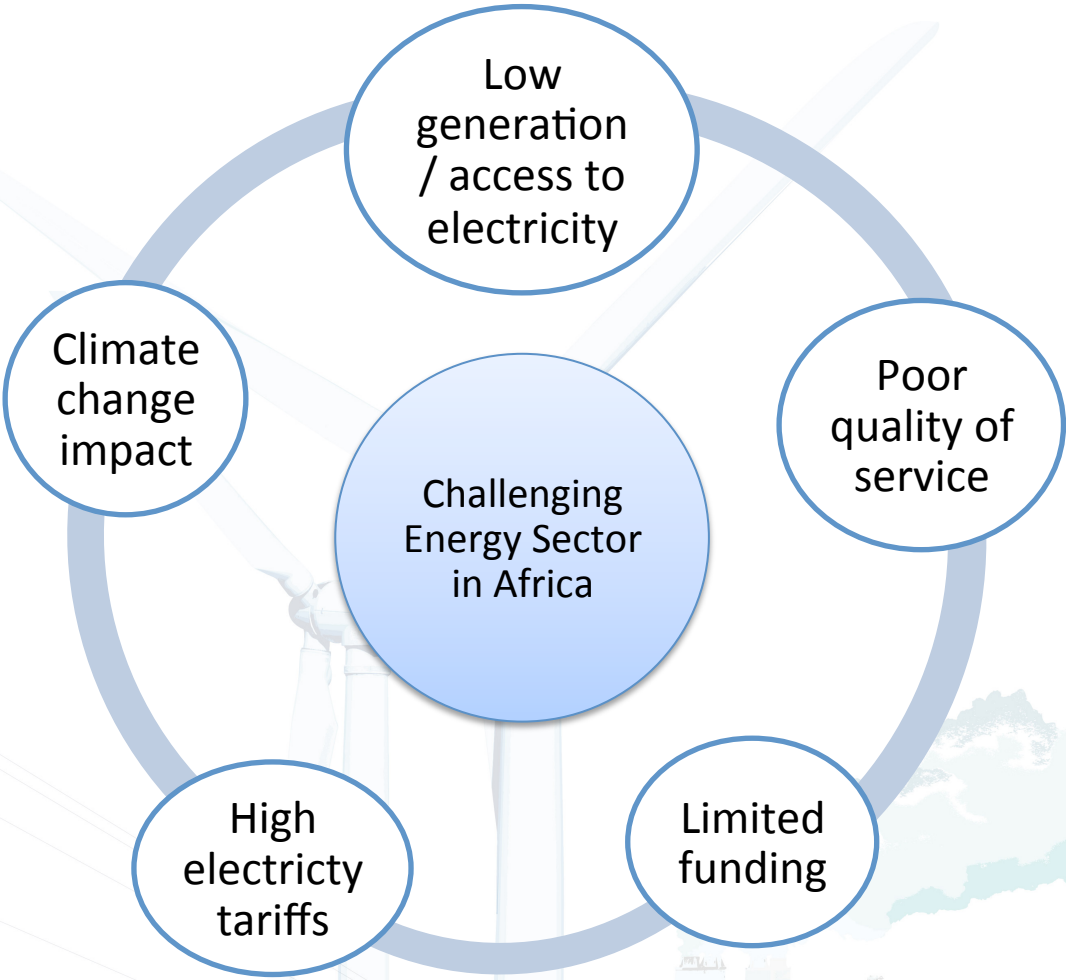


Electricity Access Rate (%)

- PFM
- Afrique
- Monde

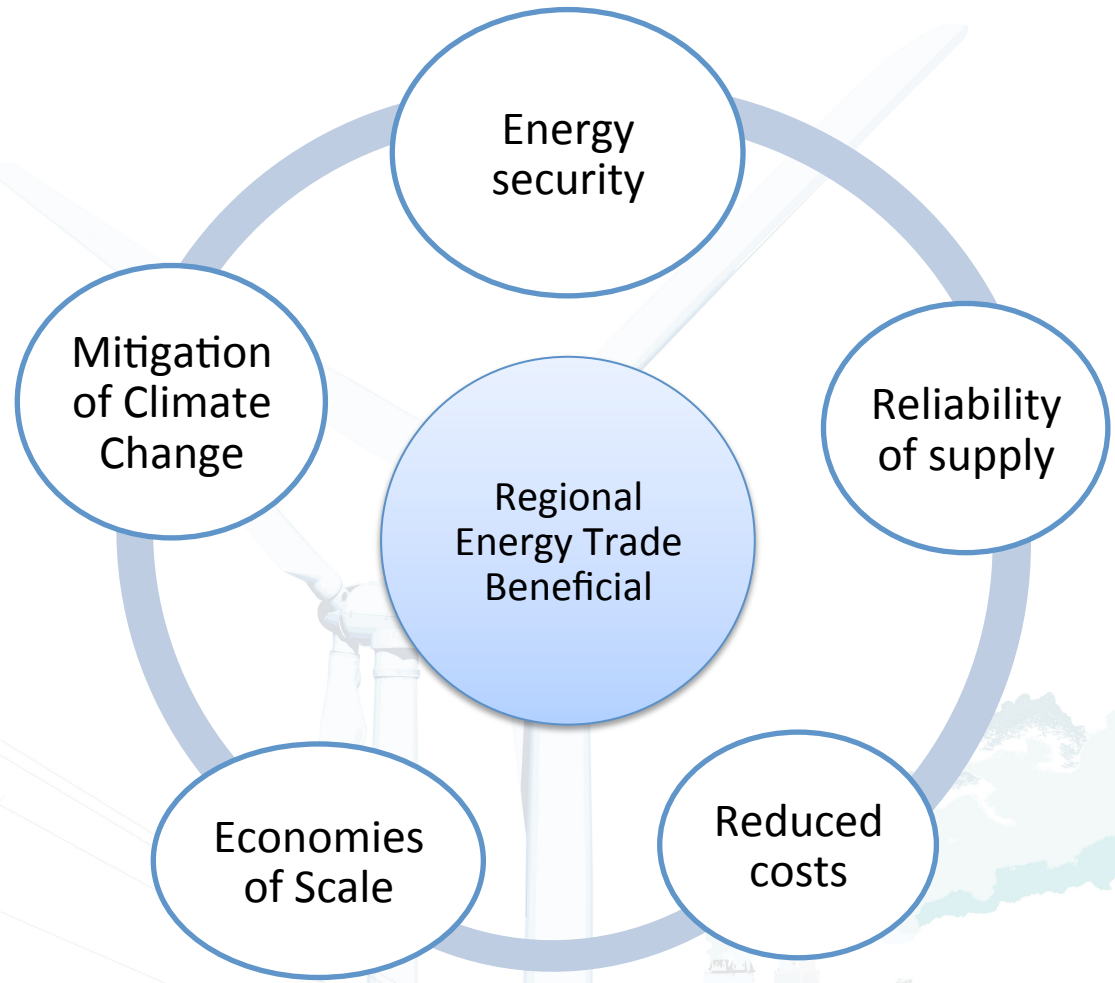
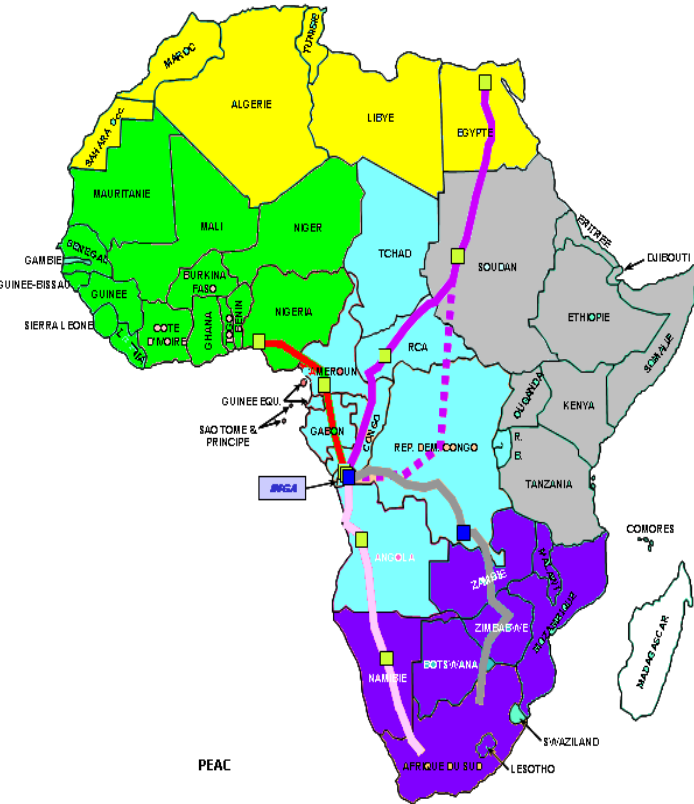


Average Electricity Tariff (USD / kWh)



# BENEFITS OF REGIONAL ENERGY TRADE

AFRICAN POWER POOLS



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# CHALLENGES, EXPERIENCES AND LESSONS LEARNT

## ➤ **Commitment**

- Country commitment and ownership is essential
- Regional commitment through appropriate policies and agreements

## ➤ **Harmonization**

- Harmonized regulatory framework for cross-border trade as well as harmonized technical standards required to ensure deregulated and competitive energy market.
- Role of Power Pools is crucial to ensure harmonization through consultation and cooperation between countries.

## ➤ **Planning**

- Efficient planning at both national and regional levels is crucial



# CHALLENGES, EXPERIENCES AND LESSONS LEARNT

## ➤ **Coordination**

- Plethora of project stakeholders with different capacities leading to limited coordination.
- Special Project Vehicle (SPV) to own and operate the assets – ensures coordination of project activities

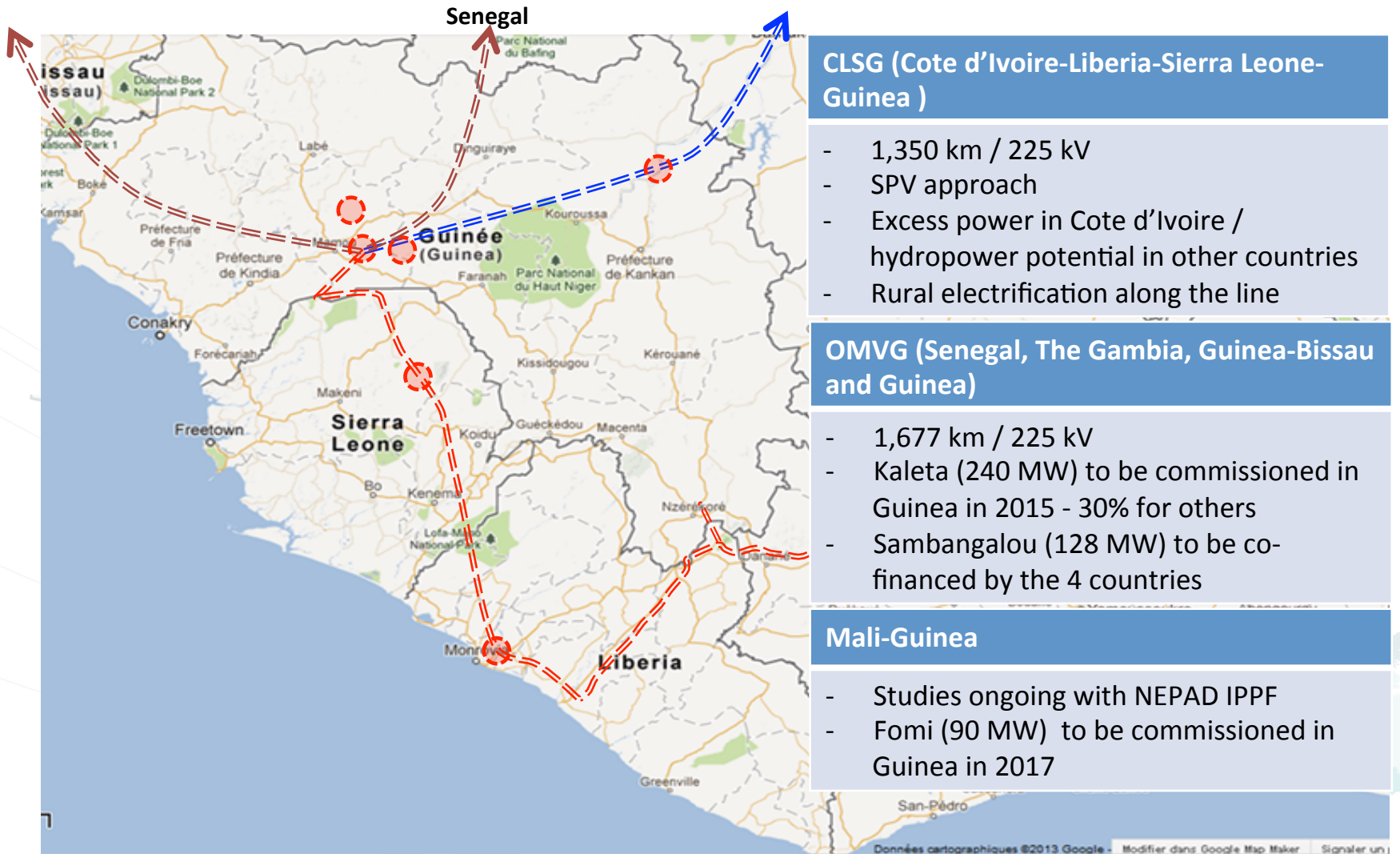
## ➤ **Capacity building**

- Limited capacity at national and regional levels.
- Design of a capacity building component to support the national public utilities and regional power pools.

## ➤ **Compensation of PAPs**

- Delays in the compensation of project-affected persons (PAPs).
- Budgeting of the project counterpart resources to be used for the compensations should be done upfront.

# West African Power Pool



## CLSG (Cote d'Ivoire-Liberia-Sierra Leone-Guinea)

- 1,350 km / 225 kV
- SPV approach
- Excess power in Cote d'Ivoire / hydropower potential in other countries
- Rural electrification along the line

## OMVG (Senegal, The Gambia, Guinea-Bissau and Guinea)

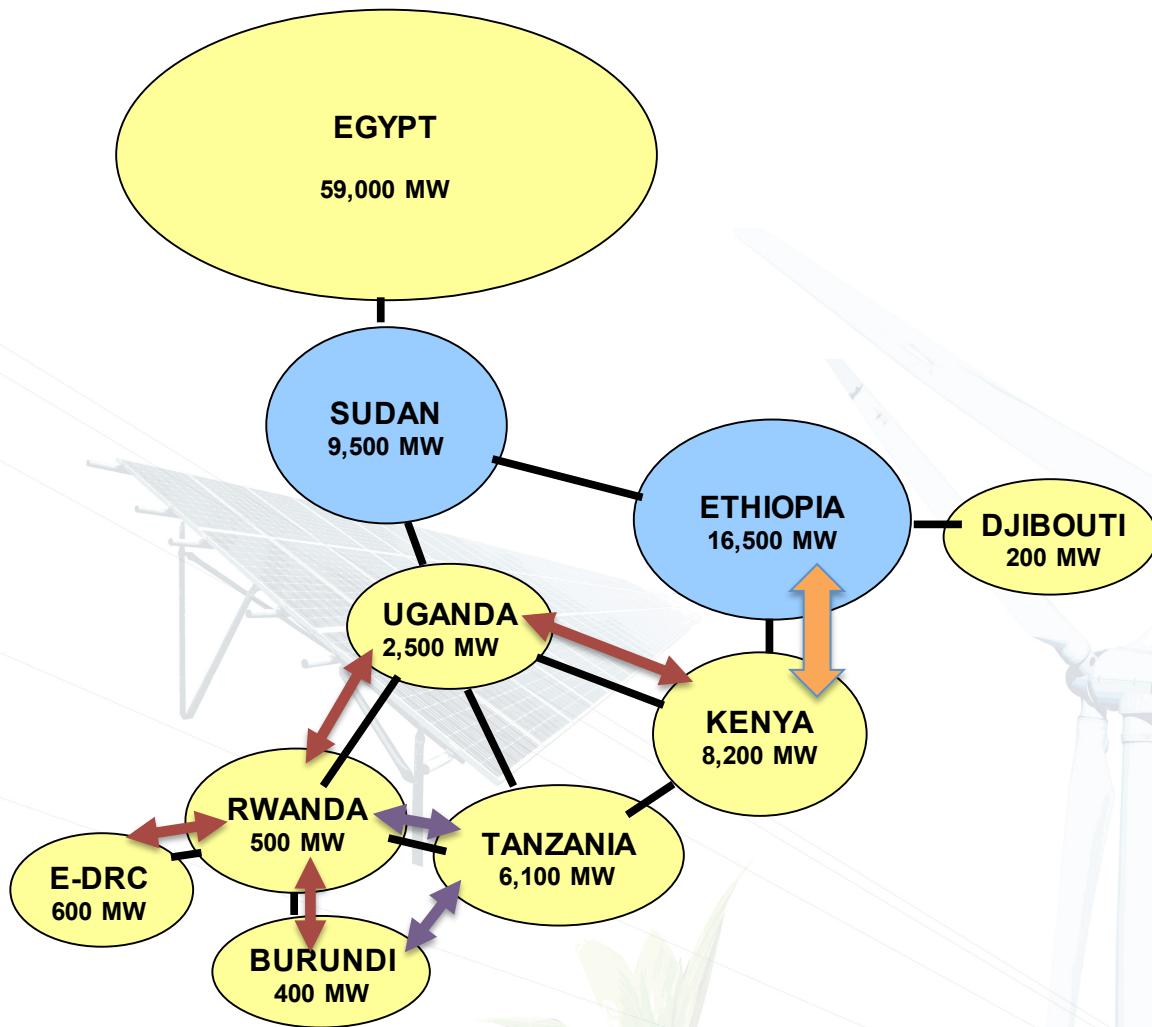
- 1,677 km / 225 kV
- Kaleta (240 MW) to be commissioned in Guinea in 2015 - 30% for others
- Sambangalou (128 MW) to be co-financed by the 4 countries

## Mali-Guinea

- Studies ongoing with NEPAD IPPF
- Fomi (90 MW) to be commissioned in Guinea in 2017



# East African Power Pool



## Ethiopia Kenya Electricity Highway

- 1,068 km / 500 kV (HVDC)
- Huge hydropower potential in Ethiopia (about 45,000 MW)

## NELSAP Power Interconnection (Burundi, Kenya, Uganda, DRC and Rwanda)

- 769 km / 225 kV
- Huge geothermal potential in Kenya
- Cheap hydropower generation from Ethiopia through Kenya

## Rusumo Falls (Tanzania, Rwanda and Burundi)

- 378 km / 225 kV
- 80 MW hydropower plant
- Transmission lines designed to enable trade within EAPP

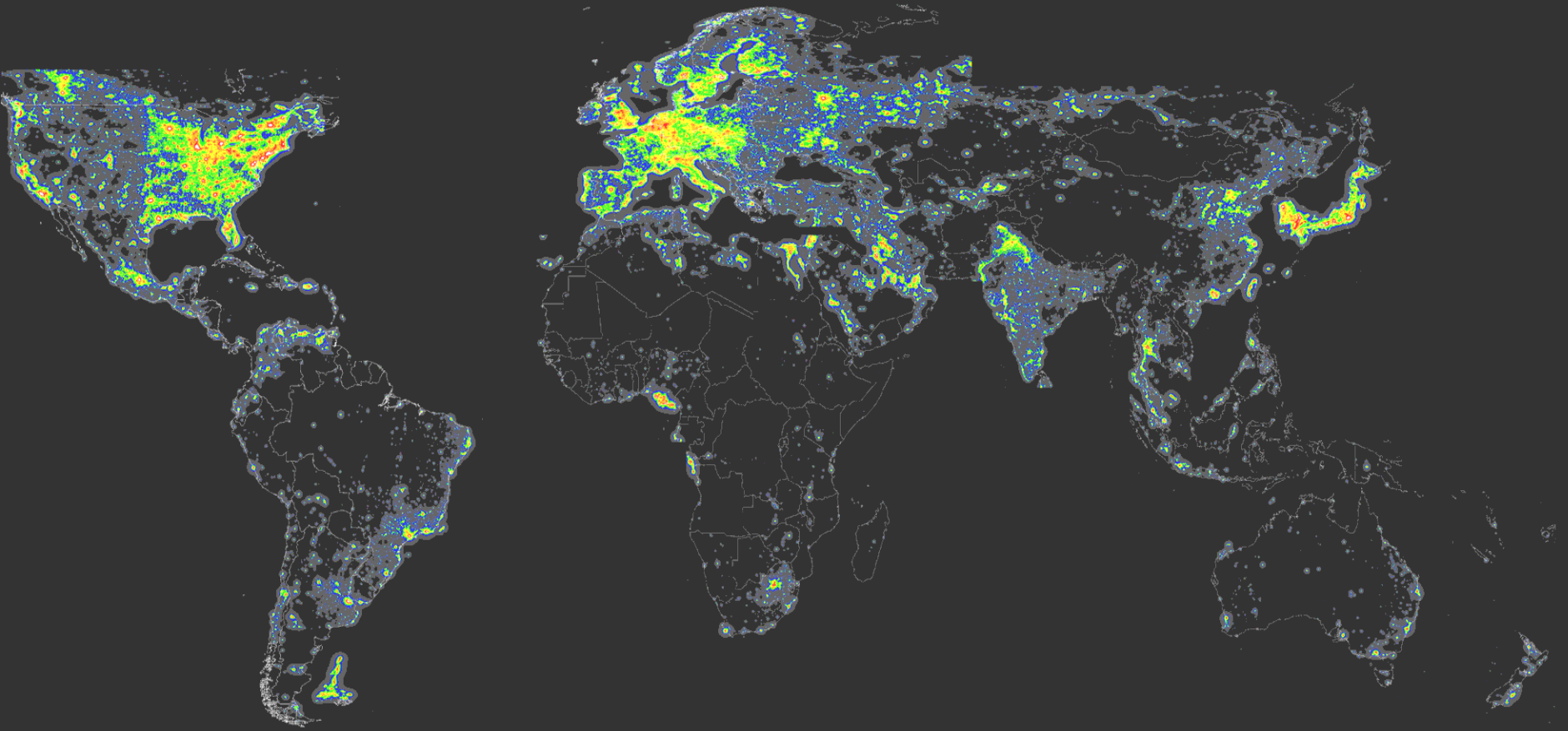
# Conclusion and Recommendation

- **Importance of regional trade**
  - Cost savings; revenue generation; pooling of resources; economies of scale; mitigation of environmental impacts.
  
- **AfDB has been playing a leading role**
  - Financing of studies; advisory services to structure the projects.
  
- **Role of Power Pools**
  - Ensures coordination and harmonization; need to be careful for power pools not to take over from countries.
  
- **Role of Regulation**
  - Regulatory framework for cross-border trade and technical standard (grid code) must be in place.

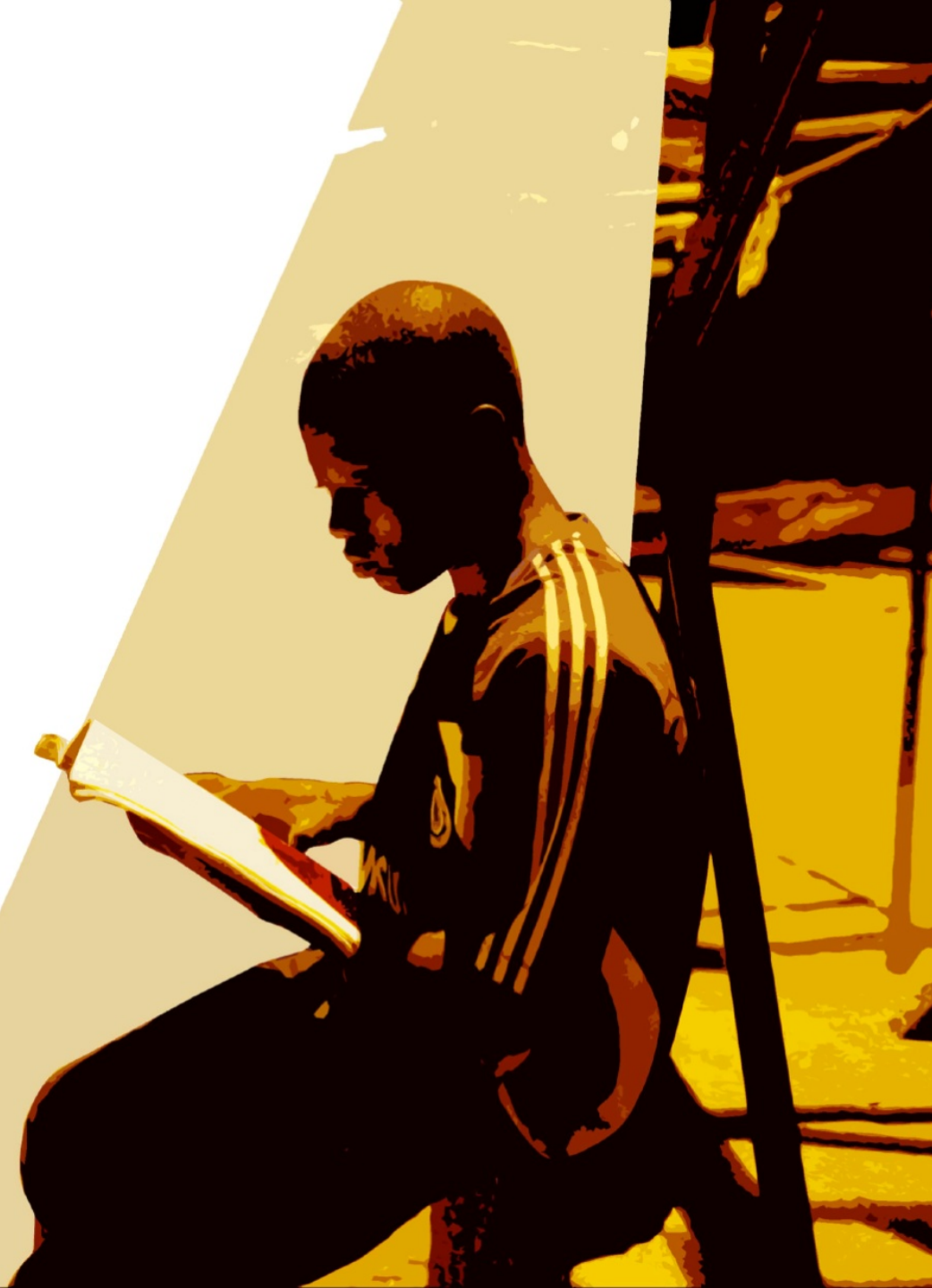
# Conclusion and Recommendation

## ➤ **Going forward**

- Power Pools to organize regular coordination meetings between countries.
- Regulatory entities to be created / strengthened
- Financiers to anticipate complexity and related issues with regional projects



**Our Vision:  
Cheaper and Cleaner Energy to Light and Fuel  
Economic Growth in Africa**



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