



# Harmonised Regulatory Framework for Electricity Market in Africa

Strategy and Action Plan

Rashid Ali Abdallah  
Head of Energy Division  
Department of Infrastructure and Energy

Lome, Togo

1<sup>st</sup> Ordinary Session of the STC on Transport, Transcontinental and Interregional Infrastructure, Energy and Tourism

1<sup>ère</sup> Session ordinaire du CTS sur les transports, les infrastructures transcontinentales et interrégionales, l'énergie et le tourisme





# Content

- Background and Mandate
- Implemented Activities (2015 – 2016)
- Developed Strategy and Action plan
- Implementation Modality
- Recommendation and Way Forward





# Current Status of Electricity Sector In Africa

- ❑ The electricity sector in Africa faces huge challenges which include low generation capacity and efficiency, high costs, unreliable energy supplies and low access rates.
- ❑ These challenges have adversely affected socio-economic development on the continent.
- ❑ There is a need to develop robust and large scale energy infrastructure and markets at the continental, regional and national levels to meet current and future demand.
- ❑ **Urgent need for the harmonization of policies, legislation, regulatory and institutional frameworks at the regional and continental levels to enhance coordination, cooperation and remove barriers to facilitate cross-border trade and investments.**





# Background, Mandate and Aspiration in Agenda 2063

- ❑ “Harmonize regulations and promote good governance with a view to creating a conducive climate for increased direct investment, both national and foreign, and especially public-private partnerships”. *Maputo Declaration of 05 November 2010, African Energy Ministers*
- ❑ The African Energy Ministers recommended to the African Union Commission (AUC) to “strengthen and harmonize legal and regulatory frameworks in the African energy sector”.
- ❑ Agenda 2063:
  - *Aspiration 1: A prosperous Africa based on Inclusive Growth and Sustainable Development;*
  - *Aspiration 2 : An Integrated Continent Politically united and based on ideas of Pan Africanism and vision of Africa Renaissance*





# Benefits

- ❑ Ensure long-term sustainability of the power sector and catalyze investments at regional and continental levels;
- ❑ Increase cross-border trading and power pooling, as well as enhance access to electricity;
- ❑ Enhance influence of continental infrastructure in terms of network regulation, electricity market design and coordination;
- ❑ Improve learning from ‘best practice’ regulation through pooling of regulatory resources;
- ❑ Improve transparency of tariff methodology towards achieving cost reflectivity;
- ❑ Introduce “workable” competition and its minimum requirements for effective operation of the generation, transmission, distribution and sale segments of the electricity supply industry (ESI)
- ❑ Establish rules for non-discriminatory and third-party access to the transmission and distribution networks;
- ❑ Ensure market structure reforms and indicate the rules for legal and functional unbundling of transmission and distribution systems;





## Implemented Activities - 2015 - 2016

- ❑ AUC organized an Inception meeting to initiate the development of the (a) Strategy Document and (b) Action Plans - October 2015
- ❑ AUC organized the First Stakeholders' Workshop in Addis Ababa, Ethiopia with the objective to solicit inputs from Continental and Regional Institutions to develop the Strategy - 23 - 24 February, 2016
  - The outcomes of the first Workshop was used to develop the Strategy Document and action plan.
- ❑ AUC organized the Second Stakeholders' Workshop in Praia, Cape Verde with the objective to review the strategies, action plans and recommendations - 01 - 03 June, 2016
  - The outcomes of the second Workshop was used to finalise the Strategy Document and develop the Action Plan .
- ❑ AUC organized a validation workshop in Cairo, Egypt with the objective to validate the Strategy Document and the Action Plans and also build a consensus amongst all relevant African stakeholders on the implementation modalities of the programmes - 27 - 29 September, 2016





# Part 1: Strategy Document

- Strategy document has been developed with aim to achieve a fully integrated, competitive and harmonized electricity market in order to accelerate Africa's development and improve access to electricity considering *following strategic objectives*:
- Developing effective Regional and Continental Electricity markets;
  - Improving the operational efficiency and performance of the Electricity Supply Industry;
  - Creating stable, transparent and predictable environment to attract investment;
  - Enhancing electricity markets frameworks to increase access;
  - Enhance Renewable Energy Frameworks;
  - Establish norms, standards and frameworks for energy efficiency;





## Part 2: Action Plan Document

□ The Action Plan identifies the ***main stages and pillars*** of the harmonization process by identification the following key phases: at the National, Regional and Continental levels:

### ▪ **Initial Phase of Harmonization Process:**

- ✓ Identification of following Key Areas or Pillars for achieving regulatory harmonization;
  - Economic Regulatory Framework;
  - Technical Regulatory Framework;
  - Enabling market environment;
  - Enhancing Renewable Energy Frameworks;
  - Establishing the norms, standards and frameworks for energy efficiency.
  - Identification of main activities, particularly establishment of key institutions and development of important documents;

### ▪ **Market Opening Phase:**

- ✓ The aim of the market opening phase is to implement or operationalize the actions from the initial phase of the harmonization process;
- ✓ Identification of activities to achieve market opening at the National, Regional and Continental levels;

### ▪ **Harmonized Electricity Market and Progress Monitoring:**

- ✓ Identify the roles of various agencies and institutions;
- ✓ Monitor progress of harmonization of regulatory framework towards achieving the set objectives at the country, regional and continental levels.





# Strategic Requirements

- ❑ Reaching the objective of a harmonized regulatory framework in the electricity sector in Africa, requires:
  - A.Strong Coordination:** reinforce the political and technical coordination role of AUC in order to coordinate the recommendations and changes;
  - B.Strong Political Commitment:** create awareness/convince African Countries' Governments to reinforce / create independent and transparent Regulators; and develop compatible and effective continental and regional policies through long term strong commitments.
  - C.Allocation of Responsibilities:** share out and allocate adequate responsibilities from national to regional authorities and from regional to continental levels;
  - D.Human Capacity and Resources:** Support the operation of strong continental and regional institutions with sufficient human and financial resources ;
  - E.Effective Review Mechanism and Progress Monitoring:** Establish a mechanism using the existing structures and organs at continental and regional levels to monitor the progress and challenges, if any, which might have occurred during the implementation phase of any of the activities.





# Main Responsibilities

## A.African Union:

- ☐ Formulation and coordination of a Continental Strategy and Harmonized Regulatory Framework for Electricity Supply System;
- ☐ Guidelines and monitoring of regional and national policy makers and electricity harmonization actors;
- ☐ Monitoring of market rules and grid codes (emphasis on interconnections) recommended at continental level, defined and implemented at regional and national levels;
- ☐ Development and promotion of technical harmonization;
- ☐ **Potential implementing actors:** Member States , AUC, STCs/CEMA, AFREC/AFSEC, NEPAD/NPCA, AfDB, UNECA, APUA, AFUR





# Main Responsibilities

## B. Regional Economic Communities:

- ❑ Coordination and monitoring of national legislation, regulatory frameworks, establishment of National Regulators and enhancement of power sector organization at regional level;
- ❑ Coordination and monitoring of large scale interconnections and large scale power plants;
- ❑ Coordination and monitoring of the development of Renewable Energy and Energy Efficiency (both supply and demand side) regional policies, plans and programmes.
- ❑ **Potential implementing actors:** RECs, Regional Regulators and Associations, Power Pools, Regional RE and EE centres.





# Main Responsibilities

## C. Member States

- ☐ Establish and update sector policy and legislation;
  - ☐ Establish and strengthen autonomous national regulatory agencies (electricity/RE/EE);
  - ☐ Establish simple, clear and transparent licensing, procurement and permits procedures;
  - ☐ Create competitive market with non-discrimination and open access to networks;
  - ☐ Facilitate infrastructure development, national and transnational;
  - ☐ Establish independent system operation;
  - ☐ Establish and enforce codes, technical and quality of service standards;
  - ☐ Improve technical and operational efficiency of Utilities;
  - ☐ Establish sustainable tariff regime;
  - ☐ Ensure financial viability of sector through corporatization/ commercialisation of State owned Enterprises;
  - ☐ Undertake targeted capacity building and skills training;
  - ☐ Establish framework for increasing access.
- ☐ **Potential implementing actors:** Governments, Ministers, Ministries, National Regulators and Agencies.





# Action Plan – Essential Elements

□ In developing the Action Plan documents, the following basic essential elements which underpin the regulatory harmonization process were considered :

- Access to electricity;
- Price of Electricity and affordability issues;
- Quality of Electricity Supply to customers, including customer services or commercial quality of electricity;
- Impact of the power sector reforms on economic and business development;
- Impact of reforms on public sector finance.





# Action Plan – Implementation Phases

## Phased implementation of actions within the short, medium and long-term time frame

### Phase 1: Initial Phase of Harmonization Process

#### Short term (3- 5 years)

- Identification of following **Key Areas or Pillars** for achieving regulatory harmonization;
  - ❖ Economic Regulatory Framework;
  - ❖ **Technical Regulatory Framework;**
  - ❖ Enabling market environment;
  - ❖ **Enhancing Renewable Energy Frameworks;**
  - ❖ Establishing the norms, standards and frameworks for energy efficiency.
- Identification of main activities, particularly establishment of key institutions and development of important documents

### Phase 2: Market Opening

#### Medium term (6-8 years)

- The aim of the market opening phase is to implement or operationalize the actions from the initial phase of the harmonization process;
- Identification of activities to achieve market opening at the National, Regional and Continental levels

### Phase 3: Harmonized Electricity Market and Progress Monitoring!

#### Long term (9-14 years)

- Identify the roles of various agencies and institutions;
- Monitor progress of harmonization of regulatory framework towards achieving the set objectives at the country, regional and continental levels





## Action Plan – Main features

- ❑ A roadmap for implementing the various activities and its horizon;
- ❑ based on three time frames: Short -term (3 - 5 years), Medium -term (6 -8 years); and the long -term (9 -15 years);
- ❑ Specific activities and actions;
- ❑ Identifies the budgetary requirements and financial implications;
- ❑ Identifies the implementing agencies;
- ❑ Develop monitoring and evaluation framework at the national, regional and continental levels;
- ❑ Identifies of priority activities for implementation;





## Action Plan – Main Pillars

□ The following five Key Areas or Pillars for achieving regulatory harmonization were considered;

- Economic Regulatory Framework;
- Technical Regulatory Framework;
- Enabling market environment;
- Enhancing Renewable Energy Frameworks;
- Establishing the norms, standards and frameworks for energy efficiency.





# Action Plan – Short Term

Level	Priority 1 Programmes	Priority 2 Programmes	Priority 3 Programmes
National	<ul style="list-style-type: none"> <li>Establishment of a National Regulator</li> <li>Tariff Reforms: Accounting Separation, Tariff Guidelines and Methodology, Cost of Service Study, Tariff Unbundling. Also RE tariff reforms to be included</li> <li>Establish RE Feed-In tariffs, Competitive Tendering, Net metering, etc</li> <li>Grid Code development</li> <li>Develop Market Rules</li> <li>Develop Minimum Performance Standards and Labelling for EE</li> </ul>		<ul style="list-style-type: none"> <li>Develop licensing framework for smaller power plants</li> <li>Develop Rural Electrification Standards</li> <li>Quality of Service Regulations and Standards</li> <li>Develop and design roadmap for market model</li> </ul>
Regional	<ul style="list-style-type: none"> <li>Establish regional regulatory authority</li> <li>Develop harmonized transmission system tariff methodology</li> <li>Develop System Operation Manuals and Codes of Practice</li> <li>Implement monitoring of power pools</li> <li>Develop harmonization of EE and labelling standards</li> </ul>	<ul style="list-style-type: none"> <li>Establish regional coordination and dispatch centre or upgrade existing system control centres</li> </ul>	<ul style="list-style-type: none"> <li>Monitor progress of power pools through regular meetings</li> </ul>
Continental	<ul style="list-style-type: none"> <li>Implement regulatory performance review mechanism</li> <li>Monitor and implementation of power pools</li> <li>Establish Centres of Excellence</li> </ul>		





# Action Plan – Medium Term

Level	Priority 1 Programmes	Priority 2 Programmes
National	<ul style="list-style-type: none"> <li>Full operationalization of national regulator</li> <li>Implementation of Grid Code</li> </ul>	<ul style="list-style-type: none"> <li>Implement RE Feed-In tariffs, Competitive Tendering, Net metering, GETFiT</li> <li>Implement RE Guidelines and streamline licensing procedure</li> <li>Complete electricity market opening process</li> </ul>
Regional	<ul style="list-style-type: none"> <li>Operationalization of Regional Regulatory Authorities</li> <li>Implementation of Operations Manual and Codes of Practice</li> <li>Operationalize regional dispatch and coordination centres or upgrade area control centres</li> <li>Support Centres of Excellence for capacity building</li> </ul>	<ul style="list-style-type: none"> <li>Implement harmonized transmission system tariff methodology, including wheeling charges and cost allocation methodologies</li> <li>Develop a strategy for implementing flagship infrastructure projects as the “corridors”, for power trade.</li> <li>Implement Standard Model Contracts</li> </ul>
Continental	<ul style="list-style-type: none"> <li>Monitoring progress of market integration</li> <li>Support to the Centres of Excellence</li> </ul>	





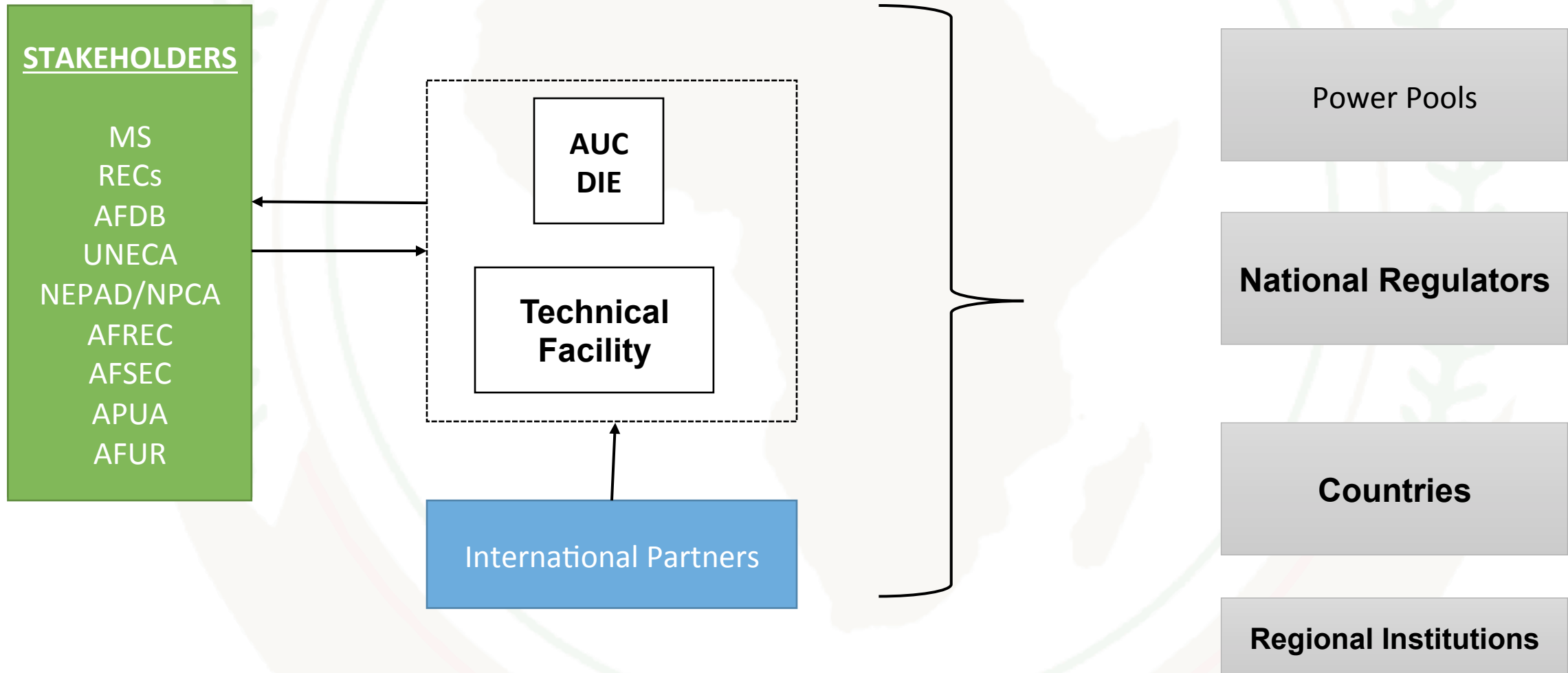
# Action Plan – Long Term

Level	Priority 1 Programmes	Priority 2 Programmes
National	<ul style="list-style-type: none"><li>▪ Implement tariff unbundling and cost reflective tariffs;</li><li>▪ Update existing tariff guidelines/regulations and methodology</li><li>▪ Revise Grid Code</li><li>▪ Implement Market Opening and ensure operational autonomy of transmission system operator</li></ul>	<ul style="list-style-type: none"><li>▪ Undertake performance monitoring and assessment of power utilities</li><li>▪ Implement Quality of Service Regulations and Enforcement</li></ul>
Regional	<ul style="list-style-type: none"><li>▪ Revise/update Market Rules</li><li>▪ Full operationalization of dispatch and coordination centre</li><li>▪ Implement strategy for implementation of flagship projects</li></ul>	
Continental	<ul style="list-style-type: none"><li>▪ Monitoring of progress of power pools and market integration</li><li>▪ Undertake performance review of regulators</li><li>▪ Progress monitoring of Centres of Excellence</li></ul>	





# Action Plan – Implementation Modality





## Current Phase – Phase 2

□ following studies will be conducted and validated in 2017:

- Harmonized Transmission System Tariffs;
- Technical and Economic Regulation for microgrids / mini-grids;
- Design for the Establishment of an effective Continental Energy Coordination Unit





# Recommendation and Way Forward

- ❑ Complete the remaining studies in phase 2;
- ❑ Establish the technical Facility within AUC to implement the Action Plan;
- ❑ Awareness creation and consensus
- ❑ Funds Mobilization





# Thank you for your attention



This project is funded by  
the European Union

**EU SE4All Technical  
Assistance Facility Eastern  
and Southern Africa**

A project implemented by

**ATKINS**

in Consortium with



CENTRE FOR RENEWABLE  
ENERGY SOURCES AND SAVING

**ECOFYS**

sustainable energy for everyone





# Strategic Objectives and Approach

□ The following strategic objectives have been identified:

- Developing effective Regional and Continental Electricity markets;
- Improving the operational efficiency and performance of the Electricity Supply Industry (ESI);
- Creating stable, transparent and predictable environment to attract investments;
- Enhancing electricity markets frameworks to increase access;
- Enhance Renewable Energy Frameworks;
- Establish norms, standards and frameworks for energy efficiency

