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**MEETING OF THE PERMANENT
REPRESENTATIVES' COMMITTEE
ADDIS ABABA, 15 MAY 2018**

**FIRST PROGRESS REPORT OF THE CHAIRPERSON OF THE
COMMISSION ON HARMONISATION OF REGULATORY
FRAMEWORK FOR THE ELECTRICITY MARKET IN AFRICA**

I. INTRODUCTION

1. Further to my undertaking to the PRC on 6 March 2018, I am pleased to submit the present report on the Permanent Representatives' Committee, on actions taken by the Commission regarding the Harmonisation of the Regulatory Framework for the Electricity Market in Africa. The report was prepared by the Commission's Department of Infrastructure and Energy.

II. BACKGROUND

2. The energy sector in Africa continues to face challenges that include low generation capacity and efficiency, high costs, unstable and unreliable energy supplies and low access rates, amongst others. These challenges have adversely affected socio-economic development on the continent. With the demand for modern energy consistently on the rise, there is a critical need to address policy, investment, market and technical barriers to energy sector development on the continent. The development of regional energy infrastructure and market is one of the key strategies to address these gaps and barriers. In the energy sector, for instance, a harmonised regulatory framework at the continental and regional levels will facilitate the creation of an African energy market, enhance private sector participation in the energy sector and mobilise the huge financial and technical resources required to provide modern energy access to all Africans as stipulated in the African Union (AU) Agenda 2063 and United Nations (UN) Agenda 2030 on Sustainable Development.
3. In recognition of the benefits of a harmonised regulatory framework of the energy sector for the continent, the AU Energy Ministers, in their Maputo Declaration of 5 November 2010 issued at the first Conference of Energy Ministers of Africa (CEMA), committed to "harmonise 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". The Energy Ministers recommended that the Commission "strengthen and harmonize legal and regulatory frameworks in the African energy sector".
4. As a follow up to this recommendation, the Commission established a Programme on Energy Regulatory Frameworks, with a view to identifying gaps, recommending best practices and designing action plans to harmonise continental and regional regulatory frameworks in the African energy sector, focusing particularly on the electricity sector. The programme was developed in collaboration with the European Union (EU), under the EU Technical Assistance Facility (EU-TAF).

III. DEVELOPMENT OF A STRATEGY AND ACTION PLAN ON HARMONISED REGULATORY FRAMEWORKS FOR THE ELECTRICITY MARKET IN AFRICA

5. The first phase of the programme, which was carried out from 2015 to 2016, involved extensive consultations with Member States, Regional Economic Communities (RECs), power pools, regional regulatory associations, the African Development Bank, the UN Economic Commission for Africa (UNECA) and specialised Pan-African institutions, such as the African Utilities Regulatory Association (AFUR), the Africa Electro-technical Standardization Commission (AFREC) and the African Energy Commission), among others.
6. This phase resulted in the development of a Strategy and the Action Plan. The main purpose was to identify and detail the various interventions that will support the policy and legislative instruments, as well as the measures to be taken at the national, regional and continental levels to ensure the development of regional electricity markets. The Strategy and Action Plan were adopted by the Specialised Technical Committee (STC) on Transport, Transcontinental and Interregional Infrastructure, Energy and Tourism (STC-TTIET) in Lomé, Togo, on 17 March 2017, and by the Executive Council at its 31st Ordinary Session held from 27 June to 1 July 2017, in Addis Ababa.
 - (a) Strategy for the development of a Harmonized Regulatory Framework for the Electricity Market
7. The Strategy for the harmonization of the regulatory frameworks for the electricity market in Africa aims to achieve a fully integrated, competitive and harmonized electricity market, in order to accelerate Africa's development and improve access to electricity for African people. It was designed to contribute to the following six (6) strategic objectives:
 - i) development of effective regional and continental electricity markets through legislative and regulatory measures and changes;
 - ii) improvement of the operational efficiency and performance of the Electricity Supply Industry (ESI);
 - iii) creation of stable, transparent and predictable environment to attract investments;
 - iv) enhancement of electricity markets frameworks to increase access;
 - v) enhancement of renewable energy frameworks; and
 - vi) establishment of norms, standards and frameworks for energy efficiency.

(b) Action Plan for Harmonized Regulatory Framework for the Electricity Market

8. The purpose of the Action Plan is to identify the actions, as well as the key actors required at the national, regional and continental levels to achieve continental regulatory harmonization. The Action Plan identified the following five key pillars around which the regulatory harmonization process will revolve at the national, regional and continental levels:
 - i) creating a robust economic regulatory framework;
 - ii) establishing a solid technical regulatory framework;
 - iii) creating an enabling electricity market environment;
 - iv) enhancing renewable energy framework; and
 - v) establishing the norms, standards and frameworks for energy efficiency.
9. The Action Plan recognizes that individual markets are at different stages of development and that the development and liberalization of these markets will vary accordingly. The Action Plan is structured to be implemented as a set of phased activities. It is structured into short (3-5 years: 2017-2021), medium (6-8 years: 2022-2024) and long (9-14 years: 2025-2030) terms. It also identifies the required resources and recommends programmes for implementation as flagship projects.
10. Implementation of the short term activities, which are aimed at setting the stage for full harmonisation over the medium and long terms, is estimated to require Euro 12.3 Million. This amount covers preparation of key instruments for economic and technical regulation and the creation of enabling environment and framework for renewable energy.

IV. STATUS OF IMPLEMENTATION OF THE STRATEGY AND ACTION PLAN

11. Following the development of the Strategy and Action Plan, the Commission focused its efforts on the implementation process. Financial and technical resources for this phase were obtained from the EU-TAF. The agreed activities under this phase are as follows:
 - i) to carry out a study on Harmonized Transmission System Tariffs guidelines which will serve as the basis for developing regional harmonized transmission system tariffs, including wheeling charges and loss allocation approaches, to be applied by African Power Pools;
 - ii) to carry out a scoping study to establish a Coordination and Support Unit within the Commission for the implementation and follow-up of the Strategy

and Action Plan. The Unit will focus on mobilising and ensuring strong co-ordination and political commitment among all stakeholders, as well as on human and institutional capacity development; and

- iii) to develop institutional and policy model to perform technical and economic regulation for micro/mini-grids.

12. Implementation of the second phase commenced in May 2017 and concluded in February 2018. During this phase, the Commission, in consultation with stakeholders, reviewed various transmission system tariff methodologies applied in different parts of the world analyzed and ranked them for suitability in the African context based on the following criteria:

- i) economic efficiency;
- ii) cost recovery;
- iii) transparency;
- iv) correct price signal;
- v) simplicity of application; and
- vi) impact on transmission network.

13. Furthermore, various coordination models for the regional electricity markets and key aspects of micro/mini-grids were analyzed by exploring institutional and policy models. The analysis included consultations with stakeholder institutions that took part in the development of the Strategy and Action Plan. Their input was sought on the following issues:

- i) recommendations for transmission tariffs models;
- ii) recommendations for the institutional and policy model for micro/mini-grids; and
- iii) recommendations for the model for Continental Coordination Unit.

14. The following conclusions were reached:

- i) the transmission tariff methodology “MW-km with Load Flow” was selected as the most appropriate. Under this method, the tariff is based on transmission distance supported by load flow studies. It emerged as the best methodology based on the selected criteria indicated above.
- ii) with respect to the mini-grid models, it was concluded that there is not a single one-size-fits-all model. It was, therefore, agreed to develop

guidelines that will assist Member States to prepare policies and adopt models in line with their unique situations. The key factors considered included the following: distance from the grid, plans for grid extension, available resources for generation; policy, legal and institutional arrangements with regard to private sector participation; and tariff regime;

- iii) as for the Coordination Unit, it was agreed that the Unit should be embedded in the Energy Division of the Commission's Department of Infrastructure and Energy and that its Terms of Reference should ensure that it does not duplicate or conflict with coordination mandates of other institutions, including the NEPAD Agency.

- 15. Based on the agreed transmissions tariff methodology, I am pleased to report that Transmission Tariff Guidelines and Monitoring Plan have now been developed and validated by stakeholder institutions. In addition, a five-year business plan and one-year work plan have been developed for the continental coordination. The Commission is in the process of recruiting an energy expert to lead the coordination of the harmonisation activities. These were presented to the Sub-Committee on Energy of the STTIET on 23rd March 2018 in Nouakchott, Mauritania, which called upon Member States, RECs, power pools and other relevant institutions to support the operationalisation of the harmonised transmission system tariffs methodology.

V. NEXT STEPS

- 16. The third phase of the implementation of the Programme Energy Regulatory Frameworks is scheduled to commence in May 2018. The activities will focus on piloting the application of the transmission tariff methodology, as well as the guidelines and monitoring plan developed in phase 2. A meeting of all power pools and relevant institutions is planned for the second week of May 2018. It is planned to select two power pools and one transmission line for the pilot project.
- 17. The pilot phase will be undertaken simultaneously with intensive training of relevant national and regional institutions involved in regional power trade, namely power pools, power utilities, transmission system operators (TSOs), power market system operators (MSOs), national regulators and Ministry of Energy Departments in Member States.
- 18. The expected outcomes of the pilot phase are as follows:
 - i) TSOs, MSOs and other stakeholders will have a good understanding of the transmission tariff methodology;

- ii) Regional Regulators, TSOs and MSOs will better comprehend the operation of the tariff computation model;
 - iii) TSOs, MSOs, National and Regional Regulators, RECs and other relevant stakeholders in the selected pilot region/project will be assisted to negotiate specific parameters of the transmission tariff methodology model in order to operationalise it;
 - iv) TSOs, MSOs and other stakeholders in the selected pilot region/project will be guided to carry out the relevant load flow and other system studies; and
 - v) Any implementation challenge/s will be identified and rectified in a timely manner, to pave the way for full-scale roll-out of the tariff methodology.
19. The lessons learnt during the pilot phase after six to twelve months will be used to refine the methodology and guidelines, which will then be presented to the STC-TTIET for adoption. The third phase will also feature a component on establishment of norms, standards and frameworks for energy efficiency. This will include development of Guidelines for Energy Labelling and Eco-Design at the Continental Level that will initially focus on energy efficiency in buildings (particularly lighting), street lighting, solar water heaters, technical grid losses, power factor correction, etc. Under this component, one country per REC will be supported to develop and apply specific guidelines for energy labelling of specific products.

VI. CHALLENGES

20. The implementation of the programme for the harmonised regulatory framework of electricity markets has so far been possible thanks to the EU financial and technical support. Given the importance of the programme for Africa's integration agenda and competitiveness, there is need to diversify the source of funding and, in particular, increase self-funding by Member States.
21. Furthermore, it is important to complete the development of physical infrastructure linking different markets and power pools in order to realise the electricity market and the harmonisation of regulatory frameworks to support it. Unfortunately, considerable delays have been witnessed in several regional interconnections. The support of Member States and the RECs, working with investors on these projects, is urgently required to mitigate such delays.
22. The continental electricity market will rely on the successful functioning of power pools and regional regulatory bodies. However, these bodies frequently experience delays in payment of subscriptions by governments and

utilities, which in turn, adversely affect their ability to carry out their core activities.

VII.OBSERVATIONS AND RECOMMENDATIONS

23. The Strategy and Action Plan clearly specifies the actions required at national, regional and continental levels in order to realise the envisaged continental electricity market. Proactive engagement and involvement of Member States is necessary in order to achieve the stated objectives. I, therefore, wish to appeal to the members of the PRC to take up these issues with their respective capitals, bearing in mind the need for speedy action.
24. Actions expected of Member States, at this stage in the implementation of the programme on harmonisation of energy regulatory frameworks, include the following:
 - i) implementing the national actions which largely relate to reforms in the power sector so that the national policy, legal, regulatory and institutional frameworks support cross-border electricity trade at competitive cost reflective tariffs;
 - ii) ensuring that the RECs develop policies and allocate adequate resources to support regional institutions established to facilitate regional power trade;
 - iii) empowering regional regulatory authorities to carry out regulatory functions pertaining to cross-border electricity trade;
 - iv) making timely subscriptions to the power pools and regional regulatory bodies;
 - v) strengthening their institutions, fast tracking the implementation of the national components of the Action Plan, and taking an active part in the pilot phase towards the creation of the continental electricity market; and
 - vi) providing the necessary financial contributions to the implementation of the Action Plan.
25. The operationalisation of the Continental Coordination Unit is also crucial. The recruitment of the Coordination Unit Team leader is underway, but additional human capacity is needed to make the Unit fully operational. Until the Unit is operational and fully funded, it is important that the Commission continues to receive support of the EU-TAF, as required.
26. I am confident that the Commission can count on the PRC's support in its efforts to harmonise the energy regulatory frameworks and achieve a unified

electricity market in Africa. This will greatly boost our drive towards regional integration in this crucial area.