# AUTHORIDADE REGIONAL REGULADORA DE ELETRICIDADE DA CEDEAO

ECOWAS REGIONAL ELECTRICITY REGULATORY AUTHORITY



AUTORITÉ DE RÉGULATION RÉGIONALE DU SECTEUR DE L'ÉLECTRICITÉ DE LA CEDEAO

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# REGIONAL REGULATION OF THE WEST AFRICAN POWER SECTOR

# PHASE II ACTIVITY PROGRAM

2009 - 2013







#### **LIST OF ABREVIATIONS**

AFD Agence Française de Développement
AFU Administration and Finance Unit
CEB Communauté Electrique du Bénin

CEER Conseil des Régulateurs Européens de l'Energie

CIE Compagnie Ivoirienne d'Electricité

**ECOWAS** Economic Community of West African States

**ERERA** ECOWAS Regional Electricity Regulatory Authority

**ERGEG** Groupe des Régulateurs Européens de l'Electricité et du Gaz

FERC Federal Energy Regulation Commission (US)

**GS/WAPP** General Secretariat of the West African Power Pool

**IPP** Independent Power Producer

OHADA Organisation for the Harmonization of Business Law in Africa

OMVS Organisation de Mise en valeur du fleuve Gambie
OMVS Organisation de Mise en valeur du fleuve Sénégal

NBA

PPIAF Public-Private Infrastructure Advisory Facility
RERA Regional Electricity Regulatory Association

RRB Regional Regulatory Body

SIEPAC Système d'Interconnexion Electrique Pour les Pays de l'Amérique Centrale

**SOGEM** Société de Gestion de Manantali

**SONABEL** Société Nationale d'Electricité du Burkina

TRU Technical Regulatory Unit

**UEMOA** Union Economique et Monétaire Ouest Africaine

**UPDEA** Union of Producers Transporters and Distributors of Electrical Power in

Africa

VRA Volta River Authority

**WAGP** West African Gas Pipeline

WAPP West African Power Pool (WAPP/EEEOA)

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#### Introduction

The Economic Community of West African States (ECOWAS) is composed of fifteen member States which are Benin, Burkina Faso, Cape Verde, Côte d'Ivoire, The Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Mali, Niger, Nigeria, Senegal, Sierra Leone and Togo. It stretches over a surface area of approximately 6.1 million km² with a population of about 220 millions inhabitants.

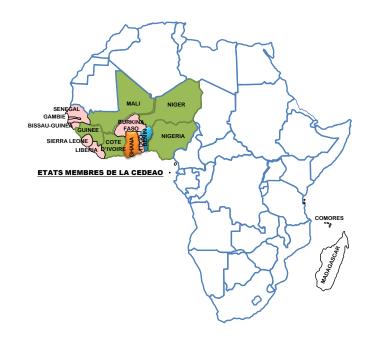


Figure 1: Situation géographique de la CEDEAO

At the organizational level, ECOWAS is made up of several institutions, notably the Authority of Heads of State and Government, the Council of Ministers, the Community Parliament, the Community Court of Justice and the ECOWAS Commission. There are also several specialized institutions intervening in well-defined sectors<sup>1</sup>.

The Community Headquarters is in Abuja, Nigeria.

#### The West African Power Pool

In most of the West African countries, power generation capacity is inadequate to meet the growing domestic demand estimated at 5 % per year. On the average, the ECOWAS Member States make use of low cost energy resources. However, the coastal region is endowed with huge power generation potentials: hydrocarbon in Nigeria and Côte d'Ivoire and hydroelectricity in Guinea, Ghana and Côte d'Ivoire. Generally, in order to enhance the energy capacities of the region there is need to increase the power generation capacities of sites closer to the energy resources and to develop the transmission systems notably in the remote northern parts of the region.

To this end and in pursuance of the regional power policy adopted in May 1982 aimed at enhancing power self-sufficiency in the region, the Authority of ECOWAS Heads of State and Government adopted in December 1999, a decision for the establishment of the West African Power Pool (WAPP). This Power Pool is designed to address the power shortages in the region through the implementation of power interconnections and the enhancement of power exchanges among ECOWAS Member States.

<sup>&</sup>lt;sup>1</sup> For example: the ECOWAS Bank for Investment and Development (EBID), the West African Health Organisation (WAHO), the General Secretariat of the West African Power Pool (WAPP) and the ECOWAS Regional Electricity Regulatory Authority (ERERA).

This commitment by the ECOWAS Member States, which consists in the pooling and the optimal sharing of energy resources, has resulted in the adoption of a number of provisions meant to put in place an adequate institutional and legal framework for the West African power sector.

#### The process for the establishment of a regional regulation for the West African power sector

In 2003, the ECOWAS Member States signed the Energy Protocol which "defines the legal framework for the promotion of a long-term cooperation in the energy sector, based on the principles of complementarity and mutual benefits with a view to enhancing investment in the energy sector and developing power trade with in the West African region". The objective of the Protocol is to:

- Ensure free exchange of power, equipment and energy products among Member States,
- Define non-discriminatory rules for energy exchanges and conflict resolution,
- Protect private investments, and
- Ensure safeguard of the environment and foster energy efficiency.

In the same vein, the 3<sup>rd</sup> Meeting of Ministers in charge of Energy held in Accra on April 5, 2002 adopted the concept for the implementation of a Regional Regulatory Authority (RRA) to foster power exchanges and reduce power costs, through the simultaneous optimization of primary energy consumption and introduction of more competitive and reliable power supply sources. The ECOWAS Commission was entrusted with the responsibility of establishing this Authority. The **Agence Française de** *Développement* (*AFD*) provided a technical and financial grant of 5 million Euros, for the implementation of the feasibility study and preliminary activities required for the establishment of this Authority.

The West African Regional Electricity Regulation Project was undertaken in two phases, in accordance with the provisions of the funding agreement signed between the ECOWAS Commission and the Agence Française de Développement (AFD):

- (i) The detailed developmental engineering of the regulatory authority (which led to the establishment of ERERA and constituted the phase 1 of the process), and
- (ii) The actual establishment of ERERA and its initial regulatory activities (phase2).

The ECOWAS Commission was supported in the implementation of phase 1 by the ICEA-SERRES group, through a technical assistance award granted to the Commission<sup>2</sup> following an international competitive bidding process. The Commission set up a Regional Regulatory Development Bureau (RRDO) made up of the Consultant and two West African Experts (a Legal Expert and an Electrician Expert) engaged by ECOWAS to take part in the study and ensure the implementation of the project after the departure of the consortium.

Under the funding agreement signed between AFD and ECOWAS, it was agreed that part of the grant funds, notably funds earmarked for the Phase 2 component of the Project, shall be reassigned as grant by ECOWAS to the ERERA, instituted at the completion of the Phase 1 component of the Project. The funding plan for the phase 2 component is set out in article 3 of the additional clause to the funding agreement.

This document, which summarizes the outcome of phase 1 component and outlines the activities of the ECOWAS Regional Electricity Regulatory Authority (ERERA) earmarked for implementation under phase 2, seeks to assess the resources required at the inception phase and for its smooth operations in principle by 2013. The assessment is based on:

- State of the regional power sector and the future requirements of the regional regulatory body within the framework of the market restructuring;
- Definition of the activities of ERERA in order to meet its regulatory requirements and established time schedules.
- Available sources of funding for ERERA.

<sup>&</sup>lt;sup>2</sup> "Terms of reference for project contractorship", March 2005.

#### I. RECAP OF PHASE 1 ACTIVITY PROGRAM

The Phase 1 component was launched from March 2006 to September 2009 under two stages:

The first stage (phase 1.1), was undertaken from March 2006 to February 2008 and led to the creation of the ERERA.

The second stage (phase 1.2) was undertaken from March 2008 to September 2009 and culminated in the establishment of the ERERA.

#### 1. Synthesis of implementation phase 1.1 (March 2006-Feb. 2008)

Phase 1.1 was marked by the scheduling and implementation by the RRDO of the following activities and actions:

- a. The setting up of the Regional Regulatory Development Office (RRDO), in Abuja (NIGERIA) at the premises of the ECOWAS Commission for the various services of the infrastructure Department. The RRDO was equipped with facilities and tools required for its smooth functioning.
- b. **The recruitment of two West African Experts,** who respectively assumed their functions and duties in January 2007, with regard to the Legal Expert and February 2007 with regard to the Technical Expert. These two experts and the ICEA-SERRES consortium constituted the RRDO.
- c. The diagnosis of regional institutions and stakeholders involved in the power sector of the ECOWAS Member States, following which a report was drafted and presented to the representatives of Member States. Oral comments expressed at the Bamako forum, held in April 2007, were integrated into the final report. The main lessons drawn from this diagnosis and which helped in the definition the ERERA missions are as follows:
  - ✓ Disparities in national legislations and the organization of the power industry of Member States, requiring institutional reforms to ensure the effective development of a regional market;
  - ✓ Disparities in the implementation and management of interconnections ;
  - ✓ Disparities in regulatory practices;
  - ✓ The need to harmonize technical procedures and regulations;
  - ✓ Risks of interferences of the Regional Regulatory Authority with regional jurisdictions and certain regional mechanisms responsible for market-competition;
  - ✓ Disparities in the expectations vis à vis the regional regulator.
- d. The definition of Regional Regulatory Body for the Electricity Sector of ECOWAS (RRB): Sequel to the missions undertaken in the respective Member States, a report outlining the missions, prerogatives and status of the RRB was produced. This report included a review of models of regional regulatory bodies throughout the world. It also highlights a range of possible organizational structures for the regional electricity market at different horizons and identifies the regulatory requirements at each stage. The missions and prerogatives of the RRB proposed were based on international practices and in accordance with the principles contained in the ECOWAS Energy Protocol.

The report defines the interfaces among the key stakeholders (ECOWAS Commission, GS/WAPP, RRB, Member States and National Regulatory Bodies) and recommends a status compatible with the ECOWAS legal arrangements (classification of decision-making bodies and acts issued by such authorities, the hierarchy and legal effects of these acts).

The text establishing the ECOWAS Regional Electricity Regulatory Authority (ERERA) adopted in January 2008 was drawn up based on this report outlining the missions, prerogatives & status and the study on the definition of the activities of the RRB.

- e. **Definition of regulatory activities:** The following activities were identified and adopted by the participants at the Bamako Forum on regional regulation (April 2007):
  - ✓ Dissemination of best practices in IPP and management contracts;
  - ✓ Assistance to the OMVS in order to facilitate current exchanges between the Manantali power plant and other facilities under construction and with a view to prepare their integration into the regional network;
  - ✓ Assistance in the definition of transmission tariffs within the framework of the Ghana-Burkina Faso interconnection;
  - ✓ Assessment of the rules of WAPP Operation Manual from a regional regulatory viewpoint for approval by the ERERA. Formulation of the implementation modalities and a proposal explaining the rationale for a regional Grid Code;
  - ✓ Identification and evaluation of key performance indicators for the national power sectors, comparative analysis of performances and drafting of the terms of reference for the acquisition of a database management system and a Website for its utilization in conformity with the rules of confidentiality to be defined (in line with the activation under benchmarking);
  - ✓ Assistance to the regulatory bodies of the OMVS Member States in preparation for the granting to eligible customers of free access to the network as scheduled by Senegal in 2009 and Mali in 2010.

Some of the activities were implemented under phase 1.2. The assistance towards the definition of transmission tariffs within the framework of the Ghana-Burkina Faso interconnection was suspended pending the outcome of the studies undertaken by WAPP on transmission tariffs. This activity is scheduled for implementation under phase 2.

f. The organization of a regional forum: an important part of phase 1 activities was focused on the sensitization of stakeholders on regional power regulatory activities (regional institutions, ministries, national regulatory bodies and operators). A regional Forum was organized from April 3 to 6, 2007 in Bamako, and was attended by 78 experts representing the Member States. The experts represented Ministries in charge of Energy, regulatory bodies and power utilities. Representatives of WAPP donors (AFD, PPIAF-World Bank, BOAD) and sub-regional organizations (OMVS, UEMOA) also participated in the meeting.

Another meeting of technical experts, representatives of Member States and national power regulatory bodies was held In Lomé (Togo) from November 12 to 15, 2007. It reviewed the text adopting the creation of ERERA and approved its activity program, provisional budgets and mode of funding over the initial five years.

Another meeting bringing together the same stakeholders was held from August 27 to 29, 2008 in Bissau. It reviewed the modes for the recruitment of members of the Regulatory Council and ERERA funding plan.

Another Forum is scheduled to hold in Accra for the kick-off of Phase 2 activities.

#### Table 1: Reports and documents produced during phase 1.1

- 1. Diagnositic study of the regulatory and institutional framework of the power sector of ECOWAS Member States, RRDO, March 2007
- 2. Regional Power Regulatory Mechanisms, RRDO, March 2007
- 3. Missions and Prerogatives of the would-be Regional Regulation Body, RRDO, March 2007
- 4. Study to Define the Activities of the future Regional Regulatory Body Part A: Organisation, RRDO, October 2007
- 5. Study to Define the Activities of the future Regional Regulatory Body Part B: Resources and Budget, RRDO, January 2009
- 6. Supplementary Act to the creation of the ERERA, RRDO, November 2007

#### 2. Synthesis of implementation phase 1.2 (March 2008-Sept. 2009)

Phase 1.2 was launched from March 2008 to December 2008, and was extended once, from January to March 2009. The Consultant's contract expired on March 31, 2009. It was extended once again from April to September 2009, to enable ERERA to acquire the legal and financial capacity to engage its budget and obtain funding from the Commission and donors. After the departure of the Consultant, the second project extension was first of all handled by the ECOWAS Commission, supported by the RRDO and then, managed as from April 2009 by the Chairman of the Regulatory Council.

Phase 1.2 was mainly focused on the pursuit of outstanding activities of phase 1, new activities relating to the establishment of the ERERA and the regulatory actions. The status of implementation of each of the activities is summarized below:

#### a. Outstanding Activities

These activities of Phase 1include:

- i. The recruitment of two other members of the ERERA Council: the vacancy announcement was published in November 2009, in all Member States and in certain international newspapers. The process is in progress.
- ii. The demonstrative regulatory action regarding the assistance to OMVS<sup>3</sup> is for the purpose of enhancing current exchanges and other facilities under construction at the level of OMVS to facilitate with a view to prepare their integration into the regional network. The AETS Consultant recruited following a competitive bidding process has submitted two progress reports (phases 1 and 2) to the ECOWAS Commission and OMVS and observations have been made thereon by the RRDO. The final report delivery meeting was held in Bamako (Mali) from 28 29 May, 2009. The final reports (for phases 1 and 2) have been transmitted to all the stakeholders (SOGEM and national utilities, notably).
  - This activity was fully implemented. The outcome of the study will be presented by the consultant at the Regulation forum.
- iii. The training organised for the Energy Director and two West African experts in June 2009 at the University of Florida (PURC): Both Experts participated in the training. It was an international lecture on the structural foundation and strategies of regulatory bodies, presented by the Public Utility Research Center (PURC) of Florida University, in coordination with the World Bank, from 8-19 June, 2009 at Gainesville. In the same premises, they also attended a lecture on "Practicing Leadership in a Political Environment" held on June 20, 2009.
- iv. The regulators forum: Initially scheduled for July 2009, was postponed to September 30, 2009 (at the closing date of phase 1.2) but could not be held for lack of timely mobilization of the required resources. The terms of reference for the forum were formulated and submitted to AFD and the ECOWAS Commission.

#### b. Establishment of the ERERA

The ERERA Chairman assumed his functions and duties at the Headquarters of ERERA in Accra in April 2009 and was joined in June 2009 by the West African Experts who were initially stationed at the ECOWAS Headquarters in Abuja. In addition to the finalization of the TOR for the forum and for the recruitment of the members of the ERERA Regulatory Council (abovementioned in item points a.i and a.iv), the following activities were carried out under the leadership of the ERERA Chairman:

<sup>&</sup>lt;sup>3</sup> The "Organisation pour la Mise en Valeur du fleuve Sénégal (OMVS)" consists of Mali, Senegal, Guinea and Mauritania. The latter is no longer an ECOWAS Member State.

- v. Formulation of the Headquarters Agreement: the text on the Headquarters Agreement was formulated and transmitted to the Ghanaian Authorities for consideration and signature.
- vi. Preparation of the funding agreements with the donors: These include agreements relating to the AFD grant and the additional funding to be secured from the European Union to the budget of ERERA for the initial first five years. A working session was held on September 10- 11, 2009 at the AFD offices in Paris between ERERA, the ECOWAS Commission and AFD with a view, among others, to finalising the project contractual documents. AFD was informed of the agreement in principle by the European Union Trust Fund for Infrastructure to grant One million seven hundred thousand (1.700.000) Euros. The European Commission was informed of ECOWAS' intention to introduce a funding request to the European Union, under the "Africa-EU Energy Partnership".
- vii. Staff Recruitment: This relates to the technical staff support to the ERERA Regulatory Council. The service of a recruitment agency shall be solicited to provide support to the Chairman and the Regulatory Coouncil in the recruitment of human resources required for the smooth functioning of the ERERA. This agency shall support ERERA in the formulation of a recruitment scheme as defined in the Definition Study.

This action is thus been carried forward to phase 2.

In the meantime, local staffs (composed of nationals of the host country) have been recruited with the support of the ECOWAS Commission, on a temporary contract basis to assist in the physical installation of the ERERA offices in Accra (Ghana).

- viii. Validation of the activity program and budget of ERERA: this document presents the said programme and budget to be submitted to AFD for approval.
- ix. Acquisition of management and communication tools (cf. regulatory actions): carried forward to phase 2 notably in relation to the action on the benchmarking.
- x. Preparation of cooperation agreement with the other regulators and regional or national institutions (cf. regulatory actions): further to the diagnositic report on the institutional and regulatory framework for the future functioning of the ERERA, (transmitted to the Commission and AFD) a series of meetings were organized by the RRDO, from March 11 to 23, 2009. Meetings were held with the OMVG General Secretariat, the OMVS High Commission, the Joint Justice and Arbitration Court of OHADA, WAPP General Secretariat, UEMOA Commission and UEMOA Court of Justice, so as to collate their comments and observations on the said diagnositic report. The discussions during these meetings allowed for the examination of the issues raised in the said report and reach a consensus on a process for consultation and collaboration with these different institutions.

Further to this first step, the ERERA Chairman embarked on a series of working missions, in July, August and September 2009, to Nigeria, Côte d'Ivoire, Senegal, the Gambia, Mali and Niger to meet with the power sector stakeholders. He met with officials of the key structures and organizations involved in the development and functioning of the regional electricity market at the national level (Ministries, national Regulators and power utilities) and at the regional level (GS/WAPP, UPDEA, USAID, UNDP, OMVS, OMVG, SOGEM, NBA) as well as the World Bank, through the PPIAF. The Chairman also met with the diplomatic representations of ECOWAS Member States in Accra. These missions, which will be pursued at the level of ECOWAS Member States, are aimed at establishing relations with the stakeholders of the regional power sectors and setting in motion the consultation and collaboration process vital to the attainment of the objectives assigned to the ERERA.

The report that will be produced at the end of these missions will serve for the definition of collaboration mechanisms with national regulators and the preparation of cooperation agreement with the other regional institutions. It will also serve as basis for the establishment of a support programme to countries engaged in the establishment of a regulatory body.

- xi. Definition of the fees of the regional electricity regulation and launching of its approval: A proposal was made by the RRDO on the modalities for fixing of regional regulatory fee to be paid by power utilities as from the third or fourth year of operation. This proposal would be submitted to the Member States by the ERERA (at the meetings for Experts from the Energy Ministries and national regulators). Once validated, it would be submitted for adoption to the Authority of ECOWAS.
- xii. Constitution of Advisory Committees: a draft legislation on the constitution of Consultative Advisory Committees has already been formulated. This draft text defines the composition, duties and responsibilities and modalities for the functioning of these committees. It shall be submitted to the ERERA Regulatory Council for consideration and adoption.

#### c. Regulatory Actions

- xiii. Benchmarking and installation of an information system for the monitoring of operators and power exchanges: the consultant selection process has been launched and candidates have been evaluated by the RRDO in collaboration with ECOWAS Commission. A list of candidates for the prequalifying stage was presented by the Consultant in his last quarterly report (annex 4 of the report n°12). A bidding exercise will be organized by ERERA, in the course of the phase 2.
- xiv. Validation of the operation manual for WAPP interconnected power system and the organisation a workshop on best contractual practices: the financing for these components has been submitted to the Public-Private Infrastructure Advisory Facility (PPIAF) of the World Bank, who has notified the Commission of a grant support of US\$75 000. However, the terms of reference submitted to PPIAF have been modified. Two individual consultants have been engaged by PPIAF, for the implementation of the two action plans. They have prepared a report on a technical assistance to ERERA, in "Capacity Building Support for the ECOWAS Regional Electricity Regulatory Authority", which is quite different from the initial terms of reference. The observations formulated by the RRDO on this report are presented in annex 5 of the last quarterly report of the Consultant ICEA-SERRES (report n°12).

The principal observation was the Consultant's unawareness of activities already undertaken and as such most of the recommendations were not substantive to the advancement of the project. Besides, the modification of the terms of reference made it impossible to implement the capacity building training exercise as planned through the organisation of a workshop.

A redefinition of the PPIAF consultants' assignment is therefore necessary in to achieve the desired result. The Chairman of ERERA, during his familiarization tour mentioned above (point x) drew the attention of PPIAF on this issue. Following this meeting, ERERA reintroduced its request, in which it prioritized its needs, accompanied by an official letter indicating that the expectations of their first request had not been met.

This action plan could be implemented under the phase 2 component.

- xv. Follow-up action on the development of the transmission tariffs undertaken by WAPP: this item point is one of the general activities slatted for implementation within the framework of ERERA's working relations with WAPP and was discussed with the GS/WAPP during the familiarization tour mentioned above (point x). Both institutions (ERERA and GS/WAPP) agreed to mutually inform each other on the level of implementation of their respective programmes, to assist each other in mobilisation of resources required for the accomplishment of their missions, and to share expertise for the implementation of their respective activities. Areas for common intervention were identified and a working group shall be set up to that effect. In addition, the organisation of a quarterly meeting between ERERA, WAPP, CREEE (Center for Renewable Energy and Energy Efficiency) and the Department of Infrastructures of the ECOWAS Commission was proposed; with a view to achieving synergy.
- xvi. Assistance to the ECOWAS Commission for preparation of a directive on the organisation of the regional electricity market: the tasks to be undertaken basically consist of the definition of the market, the development of the operating rules for the said market that will be adopted by ECOWAS through directives, and the establishment of a timetable for the effective implementation

of the institutional and legal harmonization. These tasks could not be fully implemented owing to the fact the ERERA was yet to be fully operational (Regulatory Council not yet functional). This action should therefore be rescheduled to phase 2.

xvii. Assessment of the capacity building needs of national regulatory bodies and national institutional frameworks: during meetings held with stakeholders of the regional electricity sector(see point x above), the issue of capacity building was raised by many of the stakeholders. This action plan was rescheduled for implementation in phase 2 with a view to meet the needs expressed in consonance with the mission assigned to the ERERA.

#### Table 2: Reports and documents issued during phase 1.2

- Assistance to the CREE and CRSE for the implementation of the Third Party Access to the Network - Report 1: Strategy for third party access to the network of Senegal and Mali, RRDO, June 2008
- 2. Assistance to the CREE and CRSE for the implementation of the Third Party Access to the Network Report 2 : Actions for implementation, RRDO, March 2009
- 3. Diagnosis on the Institutional and Regulatory Interfaces of ERERA, draft report, RRDO, August 2008
- 4. Assistance to the OMVS Report 1, draft version, AETS, January 2009
- 5. Capacity Building Support for the ECOWAS Regional Electricity Regulatory Authority, draft version, PPIAF, January 2009
- 6. Report on the Selection of the Chairman EcoAfrique, November 2008
- 7. Draft Internal Procedures Manuals for the ERERA, RRDO, March 2008
  - ✓ Internal Regulation of the ERERA
  - ✓ Administrative, Financial and Accounting Procedures Manual
  - ✓ Procedures for Conflict Resolution
  - ✓ Regulations for the Consultative Advisory Committees
  - ✓ Procedures for the Formulation, Adoption and Control of the technical rules for the operations of the West African Power Pool (WAPP)
  - ✓ Regulations on public consultations
  - ✓ Regulations on complaints and investigations
  - ✓ Procedures for the review of regional electricity master plan
  - ✓ Procedures for data/information request, submission and management

## **II.** Phase 2 Activity Program

#### 2.1 Descriptive summary of current state of the regional electricity sector

Under phase 1, the visits undertaken in all the ECOWAS Members States enabled RRDO to analyse the organisational situation of the electricity sector and energy exchange in the region. The observations made in this regards still reflect the reality on ground today.

The present market organisation is based on, three heterogeneous subgroups, as illustrated below:

- Burkina Faso Côte d'Ivoire Ghana Togo Benin Nigeria: this sub-group consists of three power sub-systems managed by separate companies (SONABEL, CIE, VRA, CEB, and PHCN) operating through bilateral arrangements among themselves and a transit contract agreement for effective power exchange between CEB and CIE. Power exchange on the Côte d'Ivoire –Benin axis provides a possibility for hydropower storage. Each country has full sovereignty over the facilities constructed within its territory and full control over its national power system;
- Nigeria-Niger: There is a firm export agreement for power supply from Nigeria to Niger. Each
  country has full sovereignty over the facilities constructed within its territory and full control over
  its national power system;
- Senegal River Development Organisation (OMVS): This is a joint power system (hydroelectricity Dam and transmission line) interconnecting the three members countries (Mali, Mauritania, Senegal) and which also primarily serves as a platform for sharing productions emanating from the hydropower station.

The other ECOWAS Member States have their separate power systems. An extension and reinforcement of the transmission system is envisages in 2009-2013, with the emergence of additional national markets and the future opening of the regional market. Over the period 2013-2017, we would experience a gradual introduction of competition in the regional market, followed by its liberalisation by 2017.

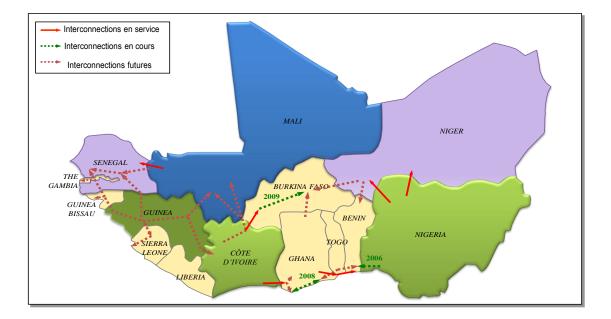


Figure 2: Present and future cross- border electricity exchanges

However, the development of power exchanges is still faced with many difficulties, among which are:

- Obsolete transmission infrastructures or insufficient production capacity to enhance cross-border exchanges;

- A very low investment capacity of the West African power utilities, heavy indebtedness and lack of financial autonomy;
- An inadequate institutional and contractual framework, thus compounding the problem of pricing for power exchanges and that of conflict resolution between power utilities or the States;
- Absence of regional planning, thus undermining the optimisation of investment plans.

The analysis on existing facilities at each country's level revealed disparities in the mode of sectoral organisation, industry structure, contractual relations and electricity sector regulation. Nonetheless, all the countries are involved, at different levels, in various reforms aimed at eliminating historic public monopolies in electricity production and distribution with a view to opening up of their markets. They have also foreseen the award of management contract, Leasing arrangements, long term concessions, or BOT, opening of production sector to private operators and its gradual unbundling from the distribution sector.

As regards the national market organisation, only Ghana and Nigeria have been able to put in place a vertically and horizontally unbundled model, which corresponds to a total opening of their markets. Côte d'Ivoire, Mali, Guinea and Niger have opted for the model of Sole Buyer in a vertically integrated industry managed by an operator with the possibility of having independent producers. However, it is necessary to mention the model of a central buyer, envisaged for a short term in Mali, Burkina Faso, with a gradual access of eligible customers to directly contract with the IPP. Senegal, in its ongoing reform process, opted for the vertical disintegration of its production, transmission and distribution activities. This model is a sort of transitional measure towards a total opening of its market, with the introduction of Independents Distributors and eligible customers. The dominant operator shall manage the production plants and enjoy full monopoly of the transmission and distribution systems, at the national level, over a well defined parameter. The implantation of a new production unit is permissible, as well as a distribution unit, as long as it is located outside the parameter of the dominant operator.

Togo and Benin on the contrary have a hybrid model (partial unbundling) with a particularity of having jointly-owned utility known as the Communauté Electrique du Bénin (CEB). CEB has monopoly over the transmission system but is not engaged in distribution, though it has the means of production which can be expanded. IPPs are allowed to operate, while the CEB plays the role of a Sole Purchaser for power distribution companies in Togo and Benin.

It is worth noting however that the national market structure does not pose major constraints to the development of regional market, at the current stage.

The organisation of cross-border electricity exchange is however similar throughout the sub-region. Except for the ownership of facilities, the management of the utility is carried out by joint technical committees under the supervision of ministerial committees. The market is predominantly operated through long term bilateral agreements. The analysis of the key stakeholders involved, also reveals the risks of dominant market positions that must be monitored closely by ERERA. However, the evolution of multilateral trade, with the gradual establishment of WAPP and the development of interconnections, will necessitate the development of management rules that are different from the present ones and which are geared towards bilateral transactions.

From the legal viewpoint, the regional regulatory framework embraces two community legislations (ECOWAS and UEMOA<sup>4</sup>) applicable in the areas of competition as well as fiscal and customs regulations. This situation could give rise to distortions in the regional electricity market, and conflicts in jurisdiction between the two institutions which operate under two different legal frameworks. As regards contract agreement, some disparities have been observed with regard to prevailing conflicts resolution mechanisms for trade agreements/contracts.

<sup>&</sup>lt;sup>4</sup> The Union Economique et Monétaire Ouest Africain (UEMOA) comprises eight countries: Benin, Burkina Faso, Côte d'Ivoire, Guinea Bissau, Mali, Niger, Senegal and Togo, all equally Members of the ECOWAS Community.

Based on these findings, the following key issues should be drawn to the attention of ERERA in respect to the development of the regional market:

#### a. Regarding the organisation of the regional market

It should be recalled that the adoption of the Energy Protocol by the ECOWAS Member States, which is primarily aimed at ensuring free exchange of power, equipments and energy products within the subregion, stipulates among others the principle of third party access to the network and right of transit. Accordingly, there is need to define a strategy for the implementation of these principles within the framework of the regional market development and to ensure its adoption by Member States, as ERERA can only acquire its legitimacy through the emergence of an harmonised community legislation laws, covering all domains (long term planning, notably in term of transmission, technical rules, tariffs, competition, fiscal matters...).

The following issues must be addressed in order to facilitate the development of the regional market:

- ✓ Establishment of a transparent legal framework for sectoral or multisectoral Public-Private Partnerships (IPP contract, concession...);
- ✓ Reduction of the level of policy , technical, commercial and financial risks through the mobilisation of a set of guarantees, not necessarily of a « take or pay » arrangement;
- ✓ Financial viability of purchasers/operators (electricity companies);
- ✓ Organising access of big consumers to a regional wholesale market;
- ✓ Granting IPPs access to the regional market;
- ✓ Involvement of the local financial system , scarcely mobilised as at now ;
- ✓ Monitoring of risks of dominant position through the simultaneous involvement of operators controlled by the same Shareholders in several segments.

#### b. Regarding tariff issues

The basic principle is that all tariffs must reflect the actual economic costs. In many of the countries, this principle cannot be respected because of the absence of a transparent regulatory system. This coupled with the huge technical and commercial losses indicate that the financial viability of the regional market may be undermined by the incapability of operators to meet their financial commitments. The two classical formulas used by the regulators are based on the ceiling price or service cost. Senegal and Mali are the only countries using these formulas, relying mostly on the price-cap method. Admittedly Mali encountered some difficulties in the application of this method, but the method was somehow successful in Senegal for over 5 years thanks to the constant review of the formula in collaboration with all the stakeholders.

It should be noted that the significant disparities in the fiscal charges applied to fuel purchase could create great distortion in the regional market. There is need for Member States to harmonise their fiscal arrangements. In the UEMOA countries, fiscal policy on fuel related products has already been harmonised at the community level.

Special attention should be paid the following key economic issues in the context of the regional market organisation:

- ✓ Difference in currency (apart from the countries of the UEMOA zone, all other countries of the community have their own currency );
- ✓ Price of fuel: distortions caused by fiscal policies (UEMOA common external tariff) and subventions; necessitate a detailed analysis of the different price components and an assessment of their impact comparatively with an economic cost analysis;
- ✓ Transmission and transit tariffs;
- ✓ determination of a common price tag for not supplied energy for use in the framework of an indicative regional planning;
- ✓ Dominant positions that could give rise to significant distortions in price at the regional market level.

ERERA shall recommend directives to the ECOWAS Commission for setting-up of the base- structure for the regional electricity market and the effective regulation of transmission access and tariff structure. Strict rules shall be formulated in order to ensure that the private cross-shareholdings do not dominate the national or regional market.

#### c. Regarding technical rules

Apart from the adoption of harmonised technical operating rules and monitoring of their application, emphasis will be laid on the availability of reserves and means of power -frequency regulation in order to ensure the demand-supply balance. A market will be developed for auxiliary services (supply of reactive energy, spinning reserves, etc.). To date, cold reserves are non-existent due to insufficient structural capacities in all the countries and mutual assistance operations are carried out on a voluntary basis.

However, as the production capacity increases at the regional level, it will create reserves and the interconnections will enable better optimisation of the daily and seasonal productions; we would also observe that the power plants (relatively old and average sized thermal plants) will be transformed into a peak load power plant or back-up power plant.

This already applies for the southern part of Burkina Faso and shall be applicable for the region of Ouagadougou as well as for the current thermal plants in Togo and Benin. There is now need to examine the utiliisation of these power stations at the regional level and, in the long run, at the national level, while taking into consideration inter annual hydrologic vagaries.

Similarly, optimal utilisation of hydraulics can be modified if envisaged at the regional plan and not particularly at the national level. Most especially, its maximum utilisation must include the availability of firm and secondary energy, and the utilisation of part of the installed capacity as reserve capacity for use at regional level.

The annual and multi-annual analysis of power scheduling for the optimal utilisation of the production and installed capacity of the hydropower stations can be addressed by introducing for example an optimisation clause in contract agreements (or use of the excess capacity for a short-term contract).

#### d. Market competition open door

The adoption of the single buyer system by several Member States seem to creating obstacles in the sense that the implementation of the access of third parties to the network depend largely on attitude of the historic operator and the regulator in view of the elaboration of transparent access rules and unbundling of its activities (accounts or institutional). The model of single buyer coupled with the effective unbundling of accounts should, in the long run, enable the development of power exchange and a transparent transmission tariff system.

This will further enable the determination of transparent transit rules. However, presently, it is only the Ghanaian network that is being used by CEB to transit its importations from Côte d'Ivoire. Actually, there are problems of network congestion and pricing. Neither CEB, nor any of the parties is satisfied about the management of these two issues.

With the future interconnection of all the countries of the region, the problems will transcend that of a bilateral framework. There is therefore need to determine the scope of these control areas and their management approach which will be entrusted to several operators. All the operators are expected to abide by common regional operating rules (Grid Code) as well as the regional mechanisms for arbitration and/or regulation.

#### e. As regards regulations

A regulatory body is to be set up in the respective Member States for national market oversight, with a view to ensuring its transparent functioning and the financial viability of the electricity sector, notably through the regulation of tariffs. Presently, only Côte d'Ivoire, the Gambia, Ghana, Mali, Niger, Nigeria, Senegal and Togo have operational regulators. In Burkina Faso and Benin the implementation process is in its final phase and the regulatory bodies are in their operationalisation phases (in July 2009, Burkina Faso

nominated Members of the Regulatory Authority to be put in place; while the recruitment of members of the Benin Regulatory Authority is underway)

Guinea, Guinea Bissau, Liberia and Sierra Leone are still at the project phase.

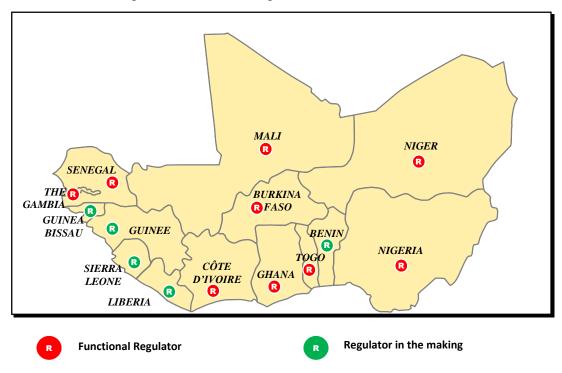


Figure 3: Situation de la régulation au niveau national

In practice, the independence of the regulator, as regards finance and decision making, is not effective in most of the countries that already have a regulatory body. The same thing applies for transparency in the decision making process with regard to all sectoral stakeholders and the public at large. There is need encourage the harmonisation of organisational and operational rules based on international best practices.

An enormous efforts geared toward capacity building is necessary<sup>5</sup>, in term of training on the basis and techniques of regulation (courses, seminars and workshops, study tours), reciprocal technical assistance in the execution of some regulatory actions at the national level (it was proposed to develop a regional expertise exchange program for the implementation of select areas of activities).

In countries where the regulatory bodies are yet to be put in place, an institutional support programme should be formulated ERERA in order to assist them in the process of creation and establishment of the national regulatory body (sensitisation of national stakeholders on the basis for regulation, drafting of texts, technical assistance in establishment and launching of activities, capacity building). It should be noted that during the visits of the Chairman of ERERA to the stakeholders of the regional electricity sector, these aspirations were clearly spelt out.

Besides, the relationship between ERERA and the sub-regional institutions, regional institutions in charge of competition matters and conflicts resolution must also be clearly specified<sup>6</sup>. Such institutional clarifications require accords on the practical modalities for each intervention and consultations to avoid conflicts in jurisdictions.

<sup>&</sup>lt;sup>5</sup> During ERERA's familiarisation visits to institutional stakeholders of ECOWAS Member States, this issue was one of the fundamental concerns raised by virtually all the national regulators contacted. In view of the foregoing, ERERA has decided on embark without delay on the formulation of a capacity building program in order to meet the anticipated expectations.

<sup>&</sup>lt;sup>6</sup> See the Diagnostic Report on the ERERA institutional interfaces, RRDO, July 2008

In view of all the issues highlighted, ERERA must play a key role at each stage of phase 2 implementation of adopted measures, in collaboration with the WAPP General Secretariat and all the stakeholders of the regional electricity sector.

# 2.2 Activities envisaged for the phase 2: Establishment of ERERA and initial regulatory activities

The ECOWAS Commission, at the 7th Meeting of ECOWAS Ministers in charge of Energy in the countries, presented a report entitled "ERERA Definition Study" which brought to the fore the need for a regional regulatory authority in view of the organisation of the market. This report defines the activities of ERERA in response to its regulatory needs as well as their timely programming. The report also contains assumptions and a budget proposal for the organisation and functioning of ERERA which have been adopted by the Meeting of Ministers in charge of Energy. The Ministers recommended the outcome of study as well as supplementary Act establishing ERERA, for approval by the Authorities of Heads of state and Government, through the ECOWAS Council of Ministers. The Council of Ministers adopted regulation C/REG.27/12/07 relating to composition, organisation, duties and Functions of the ECOWAS Regional Electricity Regulatory Authority (ERERA), at its meeting held in December 2007, in Ouagadougou. Similarly, the Supplementary Act A/SA.2/1/08 establishing ERERA was adopted by the Authority of Heads of State and Government at its 33rd Ordinary Session held in January 2008, in Ouagadougou.

The Authority of ECOWAS Heads State and Government which convened in Abuja on 19<sup>th</sup> December 2008, passed a decision establishing the Headquarters of ERERA in the Republic of Ghana through Supplementary Act A/S.A.10/12/08.

The principal tasks assigned to ERERA are summarised as follows:

- Formulation and monitoring of implementation of standard technical rules for the management power exchanges between the interconnected power systems in order to maximise their technical efficiency;
- monitoring of wholesale power exchanges between the various purchasers within the Member States and assessing their effectiveness in order to avoid anti-competition practices;
- ensuring that the respective participants abide by established commercial rules and their contractual commitments and development of procedures for conflict resolution;
- Establishment of an effective communication system for interactions betweens Member States Governments, regulatory bodies and electricity departments on matters of common interests.

Accordingly, ERERA is an independent entity charged with the responsibility of ensuring the regulation of cross border electricity exchanges and assisting national power regulatory bodies in Member States.

The regional regulatory authority shall assist in enhancing good governance through the liberalisation of trade and by ensuring compliance by all parties with the power sector agreements and norms. It seeks to build trust among the market actors and consequently to facilitate the involvement of the private sector.

The tentative programme of activities below is primarily based on the definition study adopted by the authorities of ECOWAS for the initial five years following the inception of ERERA. It has been reviewed taking into consideration the establishment of ERERA and the deferral of the designation of its Regulatory

<sup>&</sup>lt;sup>7</sup> 7th Meeting of ECOWAS Ministers in charge of Energy held in Lomé on 16th November, 2007. This meeting was preceded by two meeting of Experts from Member States. This meeting was preceded by the meeting of Experts from the Member States, which reviewed the missions of ERERA, the text establishing the institution and its tentative activity program (Bamako, April 2007 and Lomé, November, 2007).

Council. It covers activities relating to the establishment of ERERA and activities relating to the organisation of the market.

Two categories of actions were considered in its activities schedule and implementation:

- a. The first category (ACTIVITIES 1) relate to tasks to be undertaken in view of the launching of ERERA and is spread over a period 2009-2013 with the recruitment of the ERERA's Council Members and support staff, the physical installation of its Headquarters, the adoption of regulatory instruments (internal regulations and procedures), and the pursuit of demonstrative regulatory actions initiated by the RRDO.
- b. The second category (ACTIVITIES 2) consists of actions to be carried out in view of the organization and monitoring of the regional market operations. These activities will be carried out in two stages:
  - i. In the first stage (2010-2013) which will be undertaken simultaneously with the inauguration phase. This concerns mainly the enhancement of the current state of the market and preparation for its opening through the implementation of the following actions:
    - ✓ Reliability and rationalization of existing exchanges through the adoption of harmonized technical and commercial rules;
    - ✓ Market definition and preparation of Directives of the ECOWAS Commission, based on a planned schedule for institutional and regulatory harmonization and market opening;
    - ✓ Expansion of power exchanges, through the organisation of a short term market.
  - ii. In the second stage (2014-2019), ERERA shall be responsible for the oversight of the existing market and coordinate the organisation of the regional wholesale market.

In this perspective, with regard to the second category of activities (ACTIVITIES II), the three primary tasks to be carried out by ERERA over the period 2010-2013 consist of:

- Review and finalisation of the market operating rules (activity 2.1);
- Coordination of the organisation of the regional wholesale market (activity 2.2);
- Assist in the harmonisation of the institutional and regulatory rules of the national electricity sectors (activity 2.3).

All the tasks planned under these two categories of activities are listed in the definition study report and hereby presented in the hierarchical order as contained in the said study.

#### 2.2.1 Activity 1 : Establishment of ERERA

#### a) Tasks 1.1, 1.2, 1.3, 16, and 1.7: Recruitment of Council members and support staff

ERERA will kick-off its activities with a simple organisational structure which will be reinforced with the expansion of its activities, the full development of the regional market and supplementation of its regulatory tasks. This is the reason why the Supplementary Acts establishing ERERA stipulates the nomination of three Regulatory Council members who shall be assisted by of group of experts, a support structure composed of two units, dissociating the functions of regulation and logistics, under the direct supervision of the Chairman of the Council. An Administrative and Finance Unit (AFU) shall assume the functions of human resources management, accounting, budget and corporate affairs, including the functions of External Relations /Communication.

A Technical Unit shall be in charge of the main regulatory activities.

The Regulatory Council will adopt for this purpose an organisational chart displaying the respective responsibilities and workforce required for each operational unit and the corresponding job

description profile. The Regulatory Council shall also adopt the procedures for human resources management and the salary/allowance scale for ERERA staff members.

After three years of operation, it was envisaged in the Text to increase the number of the members of the Regulatory Council to five, after technical audit of the organization, the procedures and accounts of ERERA. This audit will be carried out every 3 years in order to assess the effectiveness of ERERA in the execution of its assignments. This technical audit will equally serve in the assessment of recruitment needs of the two complementary members.

#### b) Tasks 1.4: Signing of the Headquarters Agreement and installation of ERERA

It involves the monitoring assignments at the Ghanaian Authorities level, the signing process of the draft headquarters agreement already drafted by ERERA. Since beginning of October 2009, the Ghanaian Government provided an office building for 'ERERA in Accra. It decided that the office building will be renovated in order to conform to need of ERERA. Beside this assignment, the institution will be in charge of acquisition of equipments (fixed assets, computers and networks, vehicles, furniture and others, etc...).

However, still in context of the installation of ERERA, the Chairman of ERERA will embark on a series of familiarization visits of the stakeholders of the electricity regional market in all ECOWAS Member States. The visit that has started in the member countries that have already in place active national electricity regulators<sup>8</sup>, and will continue later with countries that do not any active regulatory body<sup>9</sup>, with which ERERA will identify measures to be taken in order to make them operational.

A general report will be elaborated at the end the visit and will serve as a base for the establishment of a support programme for committed member countries in the creation of a regulatory body and a support programme to national regulatory bodies.

# c) Tasks 1.5, 1.6, 1.9, 1.10, 1.13: Finalization and adoption of internal regulations of ERERA, administrative finance and accounts procedures manual, and various internal procedure texts

The various draft texts on the internal regulation of ERERA and various internal procedures were drafted during the phase 1. Theses texts define the procedures for regulation, to enable ERERA carry out its missions and the functions, notably in the area of consultation, elaboration of technical rules operation and commercialization, attribution of licenses, collection and information management, and settlement of differences. It was proposed at the beginning of phase 2, that the Regulatory Council will finalize the texts elaborated by RRDO and adopt them in conformity with the final organigram designed.

Besides, the Regulatory Council, when put in place, will examine and adopt the composition of Consultative Advisory Committee as well as their internal regulation and operation procedures.

#### d) Tasks 1.8: Preparation and adoption of the quarterly activity Program and Budget

Activity programs over three years, backed up by budget that comprises expenses of investment and operational fees of ERERA, will be elaborated and adopted by the Regulatory Council. It will monitor the elaboration of simplified procedures for follow up on budget execution.

#### e) Tasks 1.12 et 1.15: Development of RIMS and WEB site

ERERA will build, with the support of internal consultants, a regulatory information management system (RIMS), including inventory of information technology needs, collections, data processing

<sup>&</sup>lt;sup>8</sup> Côte d'Ivoire, the Gambia, Ghana, Mali, Niger, Nigeria and Senegal

<sup>&</sup>lt;sup>9</sup> Benin, Burkina Faso, Guinea, Guinea-Bissau, Liberia, Sierra Leone et Togo

and transmission of data. A WEB site will be designed with the publishing of periodic official news bulletin.

#### f) Tasks 1. 13: In-house training of staff

A training of the staff of ERERA based on the utilization of procedures for regulation that enable it to implement or carry out its activities and the authority of ERERA, it is necessary with a first application, as regards budget procedures which will be defined and adopted. An internal training seminar will be organized in 2010 when the staff will be in place.

#### g) Tasks 1. 14: cooperation agreement with other regional institution regulators

This involves the signing of Cooperation accord with other national regulatory bodies outside of ECOWAS and international, as well as regional institutions intervening in the regional electricity market. This is prolongation of tasks 2.9 realized in the phase 1.

ERERA will continue discussions with the concerned institutions in order to remove any uncertainty linked with competence conflict in the regional electricity sector, and define all the intricacies of cooperation agreement with them.

#### h) Tasks 1.16: Setting up of Consultative Advisory committees<sup>10</sup>

For the development of regional electricity market, ERERA envisages a participative and interactive approach. For this reason, these committees will be set up in 2011 in order to associate all the stakeholders of the market with the decision making process and subscribe to the approval of decisions that will be taken by the Regulatory Council. This action is expected to lead to the eventual setting up of an effective operational committee.

The creation of these committees was envisaged in the article 22 of regulation SC/REG/27/12/07 of 15 December 2007 on the organization, functions and operation of ERERA.

The Consultative Advisory Committee shall be composed of representatives of the national regulatory authorities, representatives of National Directorates in charge of the electricity sector;

- A Consultative Advisory Committee composed of the representatives of the operators;
- A Consultative Advisory Committee composed of the representatives of consumers of electricity in ECOWAS.

The text proposed the organization an annual meeting with these committees in order to present their annual activity report and also obtain propositions meant to ameliorate the regional regulatory bodies. Attributions, operation and rules for procedures of these committees, as well as public audience will be specified in internal regulations of ERERA which will be adopted by the Regulatory Council.

#### i) Tasks 1. 18: Definition of strategic development plans and assistance to regulatory bodies

The organization of regional market must be more specified in the course of 2012. A guideline will be prepared based on conclusions of the study on the organization of the market. From the guideline, a strategy will developed in collaboration with the national regulatory bodies and the different stakeholders. It will specify the deployment plans of regulatory elements in coherence with the creation of regional market both on national and regional level.

<sup>&</sup>lt;sup>10</sup> Their functioning is taken into consideration in the operating budget of ERERA.

#### j) Tasks 1.19: ERERA Inauguration Forum

The organization of the forum of regional regulation, envisaged at the conclusion of phase 1, shall officially inaugurate the activities of ERERA. The terms of reference are elaborated and forwarded to AFD and the ECOWAS Commission. It will also serve to disseminate results of the studies carried out during the creation of ERERA; this forum will be followed by an organized workshop for the stakeholders of regional electricity sector, in the context of regulation moderated by Public *Utilities Research Center* of the de University of Florida.

The following tables show all inclusive planning of listed tasks above (intervention and period of execution):

Activity 1 : Implementation of the ERERA (duties to perform)	Authority	Other participants	Activities to be financed	2009	2010	2011	2012	2013
1.1 Recruitment and designation of The Chairman of the Council	Meeting of Ministers of Energy	AFD Consultant + Recruitment agency	Recruitment agency + limited committee meetings + interviews					
1.2 Recruitment and designation of the first 2 Members of the Council	Meeting of Ministers of Energy	AFD Consultant (TDR firm RH) + FirmRH	Recruitment agency + limited committee meetings + interviews					
1.3 Recruitment and designation of the last 2 Members of the Council	Meeting of Ministers of Energy	FirmRH	Recruitment agency + limited committee meetings + interviews					
1.4 Signature of the Headquarters Agreement & setting up of the ERERA	ERERA Chairman	Experts + ERERA Council	2 preliminary missions of the Chairman + cost of installation (local rent & subscription to basic services)					
1.5 Finalization and adoption of the Institution regulations	Council	ERERA Experts						
1.6 Definition and adoption of the organization chart	Council	ERERA Experts						
1.7 Recruitment of the staff	Council	Firm RH	Firm RH + meetings + interviews					
1.8 Establishment and adoption of the activities programme, of annual and triennial budgets	Council	Experts ERERA + ERERA UAF	AFD Consultants					
1.9 Finalization of administrative procedures	Council	ERERA Experts + ERERA UAF						
1.10 Finalization of the internal Manual procedures	Council	ERERA Experts + Consultants + UAF						

Activity 1 : Implementation of the ERERA (duties to perform)	Authority	Other participants	Activities to be financed	2009	2010	2011	2012	2013
1.11 Adoption of internal Manual procedures	Council							
1.12 Development of a RIMS	Council	Consultants, UAF, ERERA Experts	SI Consultants + Seminar with Member States					
1.13 In-house training	Council	Consultants AFD, ERERA Experts	Consultants					
1.14 Cooperation Agreement with other regulators and regional institutions	Council	ERERA Experts, UAF	AFD Consultants					
1.15 Website & official Bulletin	Council	UAF, Experts + Consultants	SI Consultants					
1.16 Setting up of Consultative Advisory Committees	Council	UAF, ERERA Experts + Consultants	Consultants					
1.17 Settlement on the ERERA royalties rates	ECOWAS Council of Ministers	Council / Meeting of Ministers of Energy						
1.18 Development of a strategic scheme 2011-2015	Council	ERERA Experts, Consultants	Consultant					
1.19 ERERA Forum	Council	Experts	Forum (with ECOWAS Commission contribution)					

#### 2.2.2 Activities 2: Organization and monitoring of the regional market

The prospective analysis on the regional power market previously carried out and briefly referred to herein above<sup>11</sup>, identified regulation requirements in compliance with a two-stage market development.

At the first stage (2009-2013), it will be a question of improving the current market and prepare its opening by implementing the following actions:

- ✓ reliability and rationalization of existing exchanges via the adoption of harmonized technical and commercial rules;
- ✓ Definition of the market and preparation of ECOWAS Commission guidelines as per an harmonizing legal and institutional timetable and market opening;
- ✓ Enlargement of exchanges through the organization of a short term market.

In this perspective, the three main tasks to perform by the ERERA over the 2009-2013 periods consist of:

- Improving and completing the operation rules of the current exchanges
- Getting set for the regional wholesale market
- Harmonizing rules and institutions.

#### 2.2.2.1 Activity 2.1: Improvement of operation rules of current exchanges

The purpose is to get the various exchange areas to converge by initiating the following actions on the technical and contractual levels:

#### a) Task 2.1.1: Approval of WAPP Operation Manual rules

The harmonization of operation rules for WAPP interconnected networks help optimize and make the operations of the interconnected system reliable. A « Code of regional network» (Grid Code) will be developed in the place of current bilateral contract rules, so that all the participants could benefit from:

- √ Non-discriminatory access to transmission services;
- ✓ Guarantee of quality and reliability of transmission services;
- ✓ Transparency and a capacity of predicting transmission tariffs;
- ✓ Accessibility to information vital to its operator's activity.

However, the nature of this Code is to be closely related to the options retained for the regional market.

Thus, the development of the Grid Code must be conducted in parallel with reflections on the regional market. A review of operation rules of the interconnected network already worked out by the WAPP General Secretariat was provided as part of the regulation actions prescribed for phase 1 of AFD assistance. Prior to the approval of the said rules by the Regulation Council, a request for comments, addressed to the stakeholders of the regional electricity sector (national regulators and other involved institutions), will be launched through newspapers and e-mails prior to the scheduling and consideration of the issue at a meeting of the consultative Advisory committees.

 $<sup>^{11}</sup>$  Page 11 above, point 2.1 "Descriptive summary of the current state of the regional electricity sector"

Thereafter, the WAPP Secretary General will meet with the Regulatory Council in order to review the outcome.

An external consultant shall be called upon to assist the ERERA during that process, i.e. from the stage of rules review to the analysis of comments and the definition of measures to be taken. The consultant's knowledge of other interconnected power systems (SAPP, FERC and UCTE) and best international practices will be helpful. TORs shall be developed to define the content of the mission and the consultant's profiles.

This action shall lead to the adoption of a Regulation of the ECOWAS Council of Ministers (See task 2.3.14 below)

#### b) Task 2.1.2: Harmonization of contracts

This activity consists of gradually converting current bilateral contracts, applicable in cross border power exchanges, into contracts denominated in exchange blocs so as to facilitate the structuring of contracts and their share among many stakeholders. This issue was recalled at every first meeting with stakeholders, notably those involved in the cross border power trade such as SONABEL (Burkina Faso) and CEB (Togo-Benin) interested in supporting the improvement of the current exchange contracts. Actually, as a result of the recent power shortage in Côte d'Ivoire, these power- importing utilities are now facing an inadequate supply leading to frequent load shedding at the level of national markets.

It is imperative to have this activity launched by 2010 so that the ERERA could, in concrete terms, demonstrate its usefulness with operational stakeholders on the regional market of cross border power exchanges.

It will be a question of carrying out a study to identify the critical issues about power exchange agreement, to make an inventory of best practices of the subject to be shared. The study shall lead to the creation of a reference legal framework for the purposes of a sectorial or multisectoral Public-Private Partnership in the region. (IPP contract, concession).

The outcome for the study shall be released through the organization of training workshops by the ERERA. Therefore, a workshop grouping the whole of the stakeholders of the regional market is planned for training and consensus purposes. So, the ERERA shall have to suggest standard contractual provisions for cross border exchanges, build a consensus on a strategy of adapting the existing contracts. In-house expertise and external consultants shall be consulted to that end (1 legal expert specialized in contracts/dispute settlement and 1 expert in power purchase agreements).

#### c) Task 2.1.3: Planning

The development of regional power market requires enhancing of power generation and transmission facilities for the purposes of sufficient power supply. At the level of generation, the development of IPPs, particularly in countries endowed with primary power resources, is a major strategic axis. Beyond the definition of a regional master plan and the efforts made by the General Secretariat to implement the projects, the stake is to create an attractive environment for investors and monitor the effective implementation of the programme on time. This double stake implies first of all a financial viability of the operators (lending capacity), then the capacity building for WAPP and the operators with respect to the arrangement and the implementation of projects and, at last, the setting up of projects monitoring and execution mechanism.

#### i. ECOWAS Regional Power Policy

ECOWAS Commission provided for reviewing in 2010 its regional policy on energy which dates back to 1982. ERERA will actively take part in this process.

#### ii. Generation master plan – WAPP transmission

WAPP Secretary General is responsible for drawing up the regional master plan on which ERERA should give a motivated opinion prior to adoption by the Member States. This assignment shall be performed by the ERERA experts who shall have to analyze the planning methods used for the definition of the generation-transmission regional plan and the national master plan

To this end, the ERERA shall invite WAPP Secretary General to propose applicable planning criteria for the establishment of the Generation-Transmission regional master plan to be analyzed by Member States, in the light of international standards. Amendments shall also be made, discussed with all the stakeholders before presentation of the master plan to the Regulatory Council.

The present master plan adopted in 2004 will be revised in 2010. Over the 2009-2011 periods, consultations could be held in the framework of the consultative Advisory committees meetings.

#### d) Task 2.1.4: Access of eligible customers to the regional network

This task is a continuation of the regulation action on the same topic initiated for the OMVS zone in phase 1 of the AFD assistance. The technical, economic and contractual aspects shall be subject to review. This work shall be supplemented by the assessment of Ghana's and Nigeria's experience.

The aim of the Regulatory Council shall be to build a consensus on a strategy allowing the extension of the experience to WAPP zone A<sup>12</sup> and to work out widely acceptable criteria and regional rules. These rules shall, in the long run, be an integral part of the regional Grid Code.

The Regulatory Council shall draw on the in-house expertise and external consultants (Engineer and economist).

Previous consultations with WAPP General Secretariat consultative Advisory committees are indispensable.

#### e) Task 2.1 5 : Cost Calculation and transmission tariff

This activity aims at establishing harmonized rules for access cost calculations to networks, transit, ancillary services as well as rules for transmission cost sharing among producers and consumers. It constitutes a previous work for the institutional harmonization (see task 2.3.15 below).

The Council shall take as reference the tariff study carried out by WAPP to appreciate the pricing methodology proposed by the latter (this study shall be monitored by the ERERA Experts). It shall, among others, establish the allowed and non allowed costs as well as indexation rules and periodic revisions. An independent cost auditor shall have to handle it so as to facilitate the implementation of the tariff methodology. Institutional requirements shall also be identified and taken into account with respect to task 2.3.15 on harmonization.

Apart from the ERERA experts, the Council shall have to hire international experts to help it appropriate the best practices in the subject and carry out a cost audit for pertinent transmission. The Council shall request for comments on the proposals and invite all the stakeholders to an open meeting prior to decision-making.

<sup>&</sup>lt;sup>12</sup> WAPP Zone A comprises Benin, Burkina Faso, Côte d'Ivoire, Ghana, Niger, Nigeria and Togo. WAPP Zone B comprises the Gambia, Guinea, Guinea Bissau, Liberia, Mali, Senegal and Sierra Leone.

#### f) Task 2.1.6: Benchmarking

Beyond the compliance with the technical rules at the level of interconnections operations, good technical and financial performances of operators are determining factors for the reliability and durability of exchanges. As a matter of fact, high technical and commercial losses reduce the capacity of any operator to finance his operation (including his imports) and development. As well, pricing levels not reflecting the costs constitutes a similar mortgage. A convergence of those performance indicators is of paramount importance at the regional level. Yet, the snag is that the countries lagging behind, in terms of performance, are caught in a vicious circle (bad performances engender a precarious financial situation, thereby hampering the access to financial resources vital to the recovery of the worsening situation. Emergency plans for the most serious cases (Guinea Bissau, Guinea, The Gambia, Sierra Leone and Liberia) are under discussion with the donors under the auspices of WAPP. At the sub-regional level, the freezing of national tariffs has led to jeopardizing operators such as CEB and Eskom Manantali-OMVS. Therefore, ERERA will have to see to it that the institutional prerequisite be implemented during this phase of development, by putting in place catching up tariff measures and performances, not forgetting the effective implementation of an efficient tariff regulation.

The ERERA shall exert its regulatory or approval power and shall also assert its authority through the development of reference rules and the production of benchmarking periodic reports on general matters (contractual rules used, financial and technical performances of the sector and operators, etc.), or more targeted (technical efficiency, generation and transaction costs, effective implementation of regulation mechanisms, etc.).

To this end, the ERERA shall resort not only on the whole of information supplied by WAPP Members, a part of which shall be relayed by WAPP Information and Coordination Centre (in charge of collecting and processing technical data), but also data collected by its own means from operators and national regulators. All this flow of information shall help it ensure the reliability by crosschecking of various sources.

Thus, a benchmarking study had been planned under phase 1.2 (action 3.1 of demonstrative regulation actions of DBRR) and must be followed by the implementation of an information system for monitoring of operators and power exchanges. This action was achieved till the pre qualification stage. The call for tenders shall be organized by the ERERA.

After the implementation of this study, the follow-up of the task shall continue in-house by the ERERA experts on the basis of outputs of phase 1.2 of AFD assistance. A mission at the WAPP General Secretariat is planned every year.

#### g) Task 2.1.7: Exchanges with non ECOWAS Member States

It's a matter of laying down the principles of exchange management with non ECOWAS *Member States*. It is for instance the case of integration of power exchanges within the OMVS in the context of WAPP: Mauritania being part of these exchanges without being an ECOWAS member, the question of opposability of writs and decisions of the community vis-à-vis this Third Party States shall be raised.

A study could be carried out by the ERERA on this topic by its in-house expertise. Proposals shall be made to the Regulatory Council which, in conjunction with the ECOWAS Commission and WAPP, shall review its implementation conditions.

#### 2.2.2.2 Activity 2.2: Organization of the regional wholesale power market

#### a) Task 2.2.1: Market organization study

The opening up and organization of the market require the implementation of a minimum of institutional harmonization in terms of structure of the electricity industry, third party access to the national and regional grids, and rules governing the markets at the national and regional levels. The analysis of current constraints to the development of the market allows us to conclude on the need to take harmonization measures in the short term, more so at the institutional than technical levels, such as:

- ✓ The drafting of Directives for harmonization at the institutional level (unbundling of generation) and development of rules for opening up (threshold of eligible customers, Third Party Access to the Network);
- ✓ Development of Rules for a regional wholesale market and the regional Grid Code;
- ✓ Definition of the information to be exchanged and the rules access and management of this information.

This study on definition of the market shall provide guidance on the following points:

- Participants,
- Types of transaction,
- Functioning of the market,
- Status of operators,
- Real time functioning of the system and the system services market,
- Scheduling of the implementation of the different elements of the regional market.

This study shall be carried out by the ERERA in collaboration with ECOWAS Commission and WAPP (Approval of TOR and follow-up of the study implementation). The ERERA shall initiate a wide consultation on the options defined by the study so that the rules on market organization and an implementation schedule could be adopted at the regional level. The adopted principles should be expressed in the form of Guidelines submitted for adoption by the Council of Ministers.

#### b) Task 2.2.2: Directives on the market

The ERERA shall work out, from the outcome of the study on the market organization, the texts on community directives to make the national markets for comply so as to ensure their future compatibility with the regional market. Those texts shall be submitted to the ECOWAS Commission for adoption.

#### c) Task 2.2.3: Short Term Wholesale Market

The feasibility of this market shall, at first rest on the optimization of hydroelectric generation in a regional framework and the capacity exchange opportunities resulting from the non-coicidence of peak periods of the different national systems.

Then, the development of supply should help increase the volume of transactions. A short term market (even simplified in terms of products and deadline, like SAPP Short Term Power Market) is the natural complement vital to a « market » composed only of bilateral contracts. It is likely to:

✓ Facilitate the acquisition of standby capacity under abnormal conditions for a determined producer thereby contributing entirely to the achievement of the bilateral contracts;

- ✓ Provide instruments for promotion, supervision and valuation by the exchanges market <sup>13</sup>; in other words, it constitutes an important optimization tool for the utilization of generation means;
- ✓ Give an indication on marginal power prices at the generation level;
- ✓ Compel transmission operators to declare their transit and transmission prices, as these elements are useful for the management of the short term market;
- ✓ Initiate an embryonic market organization (definition of the stakeholders and the market management and monitoring organ, common operation rules till the financial liquidation of exchanges) and introduce competition.

The ERERA shall develop and adopt operation and management procedures of this market: market rules and monitoring procedures, control and sanction procedures among others.

#### d) Task 2.2.4: Capacity building

For the advent of a more open and better structured regional market, national regulators need technical and professional capacity building as well as assistance to fully achieve their goals. This issue was raised by a good number of stakeholders wherever the ERERA Chairman paid visits to stakeholders of the regional power sector. Three actions are proposed so as to meet those expectations, in accordance with the ERERA missions:

- ✓ Assessment of the requirements: It shall be carried out in-house in 2010 by the ERERA experts on the basis of questionnaires to be sent to regulators and ministries and also the use of WAPP previous reports on the matter. The report shall be discussed during the consultative Advisory Committee meetings.
- ✓ Development of a regional scheme for capacity building (Ministries and national regulators) over the 2011-2015 period. An external Consultant shall be assigned this task. He shall make the most of the requirements assessment carried out by the ERERA experts to propose and implement a capacity building programme for the national regulators and potential stakeholders of the regional market and sensitize them to the need in harmonizing the measures.
- ✓ In-house capacity building at ERERA: Concerns training programmes for the ERERA technical staff with notably the organization of a study trip to regional regulators (CEER, ERGEG, SIEPAC, FERC).

#### e) Task 2.2.5: Settlement on sanctions

As part of its missions, the ERERA is entrusted with the follow-up of the implementation of rules and guidelines for the setting up of the regional market by ECOWAS Member States. To this end, it has at disposal the power to monitor the respect for market operation rules (compliance to contracts, mode of intervention – supply, purchase – on the market, identification of anti competitive practices, etc.).

So, it can enjoin one or several operators to modify their terms and contractual clauses or put an end to some practices considered as illegal or anti competitive on the regional market, including a potential excessive occupation of interconnection lines. Subject to community guidelines and national rules, it can also suspend or terminate any operation considered illegal, whether discovered by itself or upon referral from third party.

<sup>&</sup>lt;sup>13</sup> This term refers to a cross-border electrification practice, notably to take advantage of the non simultaneity of peak hours.

The ERERA enjoys a power to sanction enabling it to impose civil penalties corresponding to the failures discovered (against utilities and other stakeholders of the sector). This power to sanction is exerted under the control of the ECOWAS Court of Justice.

However, the process of sanction imposing requires coordination with WAPP, national regulators and States in order to avoid double sanctions while harmonizing sanctions to be imposed, limiting the sanction to an operator and defining the conditions of application on the ground.

The ERERA shall prepare, in-house, a regulation on the sanctions to be taken in case of violation of market rules that will be discussed at Consultative Advisory Committees. This text shall be submitted for adoption by the Council of Ministers.

#### f) Task 2.2.6 management of special funds provided by sanction fees.

The aim is to define the statute and procedures for operation of funds that will be generated from sanctions/fines imposed on operators of regional market. The initial text will be realized internally. ERERA will propose to the ECOWAS Council of Ministers, the regulation on the creation and management of the special accounts funded by sanctions/fines.

#### 2.2.2.3 Activity 2.3 Harmonisation of rules and institutions

#### a) Task 2.3.1: Adoption of the regional Grid code

It concerns the execution of tasks 2.1.1 relating to the review of the operations manual of WAPP within the framework of preparing the regional Grid code. It should be noted that the interconnection of all the countries as envisaged in the course 2014, it is expected also that practical works in the process will develop, because a parallel influx will emerge on the network and a balanced management system will be carried out in the control zones entrusted to specific operators who will be placed in the position of authority. When problems are beyond the bilateral framework, it will be necessary to determine the extent of these control zones and their management system which will be entrusted to many operators. The operators should submit to the common rules of operations of the interconnected regional network and its regulatory mechanism that will be designed by WAPP and approved by ERERA. For this reason, ERERA will monitor the preparation and adoption of harmonized rules aimed at facilitating a maximum guarantee of security of international exchange: planning and exchange of operational rules, etc.

The approach adopted for the rules for joint operations of WAPP will be maintained for the task, that is, an approval of rules by the regulatory bodies, a request for comments will be made in the newspapers and electronic mails before the issue is discussed and debated on during meeting of Consultative Advisory Committees involving the stakeholders of the regional electricity sector (national regulatory bodies, operators and all other institutions concerned).

This task is expected to lead to the adoption of directives by the ECOWAS Council of Ministers on operational rules of regional interconnected power system.

#### b) Task 2.3.2: Minimal harmonisation of the organisation of national markets

This task is a continuation of the study on the opening up and organization of the market. The directives that will be issued from this study will be forwarded to each member country. The aim is to render the national market structure compatible with the regional market operations. For this reason, it should be noted that the unbundling of accounts is at the minimum in order to ensure a transparent transmission tariff system and allied services. In view of this, ERERA will carry out a study on the structure of national markets and will propose a plan of action. This action is expected to lead to the drafting of directives on minimal harmonization of the organization of the national electricity

sector, in order to ensure their future compatibility with regional market (rules of separation of accounting and jurisdiction);

However, ERERA will examine the conditions of the attributions of licenses at the national level in order to ensure minimal conditions at the regional level, and involve the national regulatory bodies in the process of harmonization of conditions for licenses issuance . ERERA will propose as a result, directives for the issuance of licenses at the regional level and monitoring of regional electricity market.

# c) Tasks 2.3.3: Harmonization functions and authority of the national regulatory bodies with regards to cross border exchange

This is a complementary action to the tasks 2.3.2 and it is in the context of a more global institutional harmonization. However, this is envisaged, considering the present disparity between the functions and the powers of the national regulatory bodies and the need for a clear coordination between national and regional regulations. ERERA will prepare for this purpose a support programme for the national regulatory bodies, which will aim to identify the constraints as well as to define and design an action plan for the harmonization of rules and practices. This programme contains an aspect of capacity building. The case of national regulatory bodies of Burkina Faso, still in the process of installation (the members of its Council have just been nominated in July 2009) is noted here: during the visit of the chairman of ERERA to the stakeholders in the regional electricity sector, the need for a support in its creation and eventual commencement of operations was clearly expressed.

In view of this, the ERERA will in the immediate (in course of 2010) design a support programme for the countries committed to the putting in place of a regulatory body. It will engage the services of experts in the region and in the member countries having experience in the domain. An institutional support programme will be designed by ERERA in order to assist the countries that are still in the process of creating their regulatory bodies (sensitization of national stakeholders, the basics of regulation, drafting of legislations, and technical assistance in the installation and launching of activities reinforcement of capacity). The countries that are concerned by this support are Guinea Bissau, Guinea, Liberia and Sierra Leone.

In the short term (2010), ERERA plans to intervene in Guinea Bissau of which the authorities have presented their request. An evaluation mission that will comprise of experts of the national regulatory bodies already in operation will be made in order to prepare a support programme. This experience will be extended to member countries having the plan to institute a regulatory body.

The consultations carried out will enable ERERA to collate the requests of national regulatory bodies and prioritise. The support of ERERA to the national regulatory bodies constitutes a fundamental function of ERERA and its legitimacy.

In summary, the following tables show a programming of tasks listed above (participants and period execution):

Activity 2.1 :Improve operating rules and current exchanges (Task to carried out)	Authority	Other participants	Activities to be financed	2009	2010	2011	2012	2013
2.1.1 Approval of rules of OSMP	Council	Consultant AFD Experts ERERA	Request for comments & consultative Advisory committee meeting					
2.1.2 Harmonisation of Contracts	Council	WAPP Consultant AFD Experts ERERA	consultative Advisory committee meeting					
2.1.3 Planning	Council	WAPP Experts ERERA	consultative Advisory committee meeting					
2.1.4 Access eligible customers to regional network	Council	WAPP Consultant AFD Experts ERERA	Consultant AFD					
2.1.5 Calculation of transmission cost and tariff	Council	WAPP Experts ERERA	Consultant for cost auditing					
2.1.6 Benchmarking	Council	WAPP Consultant AFD Experts ERERA	Collection of information					
2.1.7 Exchanges with non ECOWAS countries	Council	WAPP Consultant AFD Experts ERERA	consultative Advisory committee meeting					

Activity 2.2 : Organization of a regional wholesale market (Task to be carried out)	Authority	Other participants	Activities to be financed	2009	2010	2011	2012	2013
2.2.1 study on market organisation	ECOWAS Commission & Council	WAPP Experts ERERA	Review TDR and realization of study by internal consultant					
2.2.2 Directives on the market	ECOWAS Commission	B oard, WAPP Consultant AFD	consultative Advisory committee meeting					
2.2.3 short term wholesale market	Council	WAPP, Experts ERERA	Request for comments & consultative Advisory committee meeting					
2.2.4 Reinforcement of capacity	Council	Experts ERERA Consultant AFD	Workshops Study travel					
2.2.5 fine on sanctions	Council	Consultant AFD ERERA Experts	Request for comments & consultative Advisory committee meeting					
2.2.6 management of special account to be funded by fine from sanctions	Meeting of Ministers Energy	Council WAPP Commission	Legal Consultant for Elaboration of Statute and procedures of operation					

Activity 2.3 : Harmonisation rules and institutions (Task to be carried out)	Authority	Other participants	Activities to be financed	2009	2010	2011	2012	2013
2.3.1 Adoption of the regional grid code	Council & WAPP	Experts ERERA	Request for comments & consultative Advisory committee meeting					
2.3.2 Harmonisation of market organisation	Council	Experts ERERA, WAPP & National Regulators	Request for comments & consultative Advisory committee meeting					
2.3.3 Harmonisation Of missions and power of National regulators In cross border exchanges	ECOWAS Commission & Council	Experts & National regulatory body	Request for comments & consultative Advisory committee meeting					

Other activities	Authority	Other participants	Activities to be financed	2009	2010	2011	2012	2013
Financial audit	Council	Audit firm	Consultants					
Technical audit	Council	Audit firm	Consultants					

## 2.3 Summary of the principal stages and results

The following tables shows the expected results for the execution of tasks listed above, and enumerates the deliverable (texts, reports, documents) and their period of delivery.

# 2.3.1 Expected Results

ı	Period	Results
2009	2 <sup>nd</sup> Quarter	<ul> <li>Finalization of Recruitment of other members</li> <li>Negotiation and signing of Head office accord with the host countries;</li> <li>Installation 'ERERA office in the appropriate building in the Head office;</li> <li>2010 Budget approved by AFD</li> <li>Negotiation and signing of accord on retrocession of financing AFD to ERERA</li> <li>Recruitment and installation of a minimum administrative staff for the take off its operation (accounting staff administrative, personnel secretaries and liaison staff, etc.)</li> <li>Familiarization Visit with the stakeholders of the electricity of sector in the member countries</li> </ul>

Pe	eriod	Results
	eriod 1 <sup>st</sup> quarter	Results  - Nomination of two other Council members - 3 operational Council members - Adoption of work programme of ERERA - Approval of the organisational chart of ERERA by the Council - Recruitment of staff - Adoption of internal regulation - Adoption Procedures manuals (internal and administrative ) - Recruitment of auditors - Review and amendment of regulatory procedures draft - Organisation of internal information seminar for all staff, - Designing of training programme capacity building and finance research - Designing of a web site - Elaboration of an activity programme of ERERA
	2 <sup>nd</sup> quarter	<ul> <li>Preparation of settlement on a required information, their modality of presentation or transmission and rules of de confidentiality</li> <li>Initiation of a study of the development of RIMS</li> <li>Organisation of consultations with stockholders of sector on the procedures of regulation and the ongoing interconnection projects in the region</li> <li>execution of pilot projects already realised by RRDO in Mali and Senegal and with OMVS (summary document for web site, seminar restitution during the meeting of the Consultative Advisory Committee example- to elaborate concrete actions to carried out</li> <li>on the basis of consultations realised, an elaboration of an action schedule with the national operators and regulatory bodies. (notably, to plan contacts with Côte d'Ivoire, Ghana, Mali, Benin-Togo on the issue of interconnection</li> <li>Production/diffusion of activity reports</li> <li>Organization of consultations with the court of justice</li> <li>Organization of consultations with the authorities of competitors</li> <li>Elaboration and proposition of cooperative agreement with institutions of the same domain with ERERA</li> <li>Adoption and publication of regulatory procedures in the official Bulletin.</li> <li>Recruitment of financial auditing firm by ERERA</li> <li>Approval of 2011 budget proposal</li> </ul>

	Period	Results
2011	1 <sup>st</sup> quarter	<ul> <li>2010 annual report</li> <li>Financial audit report</li> <li>Partnership agreement signed with competent bodies (competition, investment)</li> <li>Functional Web Site</li> <li>Finalised MIS</li> <li>Meeting with the consultative Advisory Committees on the planning</li> <li>Defined criteria for eligible customers</li> <li>Publication of Benchmarking</li> <li>Transmission Tariffs (auditing of finalized cost and proposition of approved tariff)</li> <li>Strategic plans for ERERA</li> <li>Guideline for prison investors (in collaboration with WAPP)</li> <li>Designing of model of licenses and elaboration of harmonized criteria for issuance</li> </ul>
	2 <sup>nd</sup> quarter	<ul> <li>Approval of market rules</li> <li>Approved regional Grid code (protocols of inclusive access)</li> <li>Finalized procedure for issuance of license</li> <li>Directive on organisation of regional market for ECOWAS Commission</li> <li>Elaboration of rules of accounting and institutional separation</li> <li>2011 approved Budget</li> <li>Publication of Benchmarking</li> <li>Publication of official Bulletin</li> </ul>

	Period	Results
2012	1 <sup>st</sup> quarter	<ul> <li>2011 annual report</li> <li>Financial audit report</li> <li>Minimal Harmonisation of task and power of national regulatory bodies (Directive)</li> <li>Finalised rules for exchange with non ECOWAS countries</li> <li>Issuance of Licences</li> </ul>
	2 <sup>nd</sup> quarter	<ul> <li>Recruitment of an audit firm for technical management</li> <li>Putting in place of an internal monitoring Committee for regional market</li> <li>optimum unbundling of historical operators</li> <li>2013 approved Budget proposal</li> <li>Publication of official Bulletin</li> <li>Recruitment Consultant firms for the recruitment of remaining two members of the Council</li> </ul>

	Period	Results
		- 2012 Annual report
		- Financial audit report
		- MIS Technical audit report
		- Study on market organisation
		- Meetings with Consultative Advisory committee on regional Grid
	1 <sup>st</sup> quarter	Code, organization of national markets and harmonization
	-	assigned tasks and power of the national regulatory bodies in the
		area of cross border electricity exchanges
2013		- Organisation of market at short term (approved operator of the
		market)
		- Approved five-year plan
	2 <sup>nd</sup> quarter	- Approved 2014 budget proposal
		- Publication of Benchmarking
		- Publication of official Bulletin
		- Recruitment of two other Members of the Council
		- Recruitment of supplementary staff
		<ul> <li>In-house training of recruited staff</li> </ul>
		- Review of 2011 – 2015 Strategic plan

# 2.3.2 Deliverables and Timeline

Activity 1 : putting in place ERERA	Deculto (delinerable	F. 10 0 11 0 10 0 11	Imple	emen	tation	pe	rioc	l/d	eliv	ver	у	Ohaama
(Tasks to realised)	Results/deliverable	Frequency	2009	201	201	1	201	<b>L2</b>	2	013	3	Observ.
1.1 Recruitment and nomination of Council Chairman	Active Chairman	Every 5 years										
1.2 Recruitment and nomination of the first 2 Council Members	Active members	Every 5 years										
1.3 Recruitment and nomination of the last 2 Council Members	Active members	Every 5 years										
1.4 Signing of Accord of & official commissioning of the Head office	Signed Accord and equipped office. Activity Report (visit to the states)	Once										
1.5 Finalization and adoption of internal regulations.	Text signed by the Chairman and Council members -	Once and renewable if necessary										
1.6 Elaboration and adoption organisational chart	Decision signed by the Chairman	Once and renewable if necessary										
1.7 Recruitment of staff	Active staff	Occasionally										
1.8 Preparation and adoption activity programme, annual and biannual budgets		Annual										
1.9 Finalisation of administrative procedures	Text signed by the Chairman	Once and renewable if necessary										
1.10 Finalization of internal procedures Manual	Text signed by the Chairman	1										

F				т т		1 1		1 1	1 1	1 1	—
1.11	Adoption of internal procedures Manual	Text signed by the chairman	1								
1.12	Development of MIS	functional System	Regular (up date)								
1.13	In house training	Report and list of trained staff	Periodical								
1.14 int	Cooperation agreement with institutions with mutual erest	Signed Accord	Once and renewable if necessary								
1.15	Web site & official Bulletin	Operational web site and published Bulletin	Permanent								
1.16	Creation of Consultative Advisory Committee	Operational Committee	Permanent								
1.17	Regulation on the fees due ERERA	Regulation adopted	Once and renewable if necessary								
1.18	Elaboration of 2011-2015 strategic plan	Strategic plan adopted	Periodical								
1.19	Forum of ERERA	Established Report	1								

Activity 2.1 : Ameliorate the present operating rules				Period of delivery									
on exchanges (Tasks to be carried out)	Result/deliverable	Frequency	2009	20	10	20	)11	2	012 2013		.3	Observations	
2.1.1 Approval of rules of the Operational Manual WAPP	Evaluation report	Occasionally											
2.1.2 Harmonisation of agreements	Study Report on agreement models	1											
2.1.3 Planning	Report	quarterly											
2.1.4 Access of eligible customers to regional network	Adoption access Code and Criteria for eligibility	Once and renewable if necessary											
2.1.5 Calculation of transmission costs and tariffs	Approval of tariff methodology	1											
2.1.6 Benchmarking	Report	Annual											
2.1.7 Exchange with non ECOWAS countries	Reports of accord on activity	Occasional											

Activity 2.2 : Organisation of a wholesale	Decut /delinerable	Francisco		Per	iod	of	del	live	ry			Ohaamuutiana
market (Tasks to be carried out)	Result/deliverable	Frequency	2009	201	0	201	1	201	12	20	)13	Observations
2.2.1 study on the market organisation	Study Report on the action plan Periodical											
2.2.2 Directives on the market	adopted Directives	Once and renewable if necessary										
2.2.3 short term wholesale market	Elaborated Procedures and adopted	Once and renewable if necessary										
2.2.4 Reinforcement of capacity	Evaluation report	Periodical										
2.2.5 Regulation on sanctions	Adopted rules	Once and renewable if necessary										
2.2.6 Management of special account Funded by par sanction fines payments	Adopted rules	Once and renewable if necessary										

Activity 2.3 : Harmonization of rules and institutions (Tasks to perform)	Outcome /Deliverables	Frequency		Rel	Observation			
			2009	2009 2010		2012	2013	]
2.3.1 Adoption of the Regional Grid Code	Code adopted	Once and revision if needs be						
2.3.2 Harmonization of the national market organization	<ul><li>Guidelines adopted</li><li>Assessment Report (implementation)</li></ul>	Periodical						
2.3.3 Harmonization of missions and powers of national regulators in cross border exchanges	- Guidelines adopted - Assessment Report (implementation)	Periodical						

	Release period							
Other Activities	Outcome /Deliverables	Frequency	2009	2010	2011	2012	2013	Observation
Financial audit	Audit report	Annual						
Technical audit	Audit report	Every three years						

# 2.3.3 Periodic Reports

	Particulars	Frequency							Per	iod								Observation
	rai ticulais	riequency	2009		20	10		-	20	11		20	12		2	013	3	Observation
1.	Six-monthly activity reports	Six-monthly		X		X		X		X	x		X	>	(	>	(	
2.	Annual activity reports	Annual		X				Χ			X			>	(			
3.	Draft annual budget	Annual		X			Х			X			Х			>	(	
4.	Financial statements	Annual							X			Х			>	(		
5.	Financial Audit	Annual						Χ			Х			>	(			
6.	Technical audit	Every 3 years												>	(			

## III. ERERA Five-year Budget

ERERA five-year budget was developed on the basis of the work programme proposed and according to the staff scheme. It takes into account the decision taken at the coordination meeting held in February 2009 in Paris according to which phase 2 of the project will commence in October 2009, and spread to 2013.

#### 3.1 Overall Budget

Costs for staff were established on the basis of Service Conditions at ECOWAS Commission:

- i. The Chairman of the Regulatory Council (hereinafter the Chairman) is the Head of the Institution and was appointed and graded D2-5 of ECOWAS salary scale;
- ii. The Chairman was appointed in March 2009;
- iii. The other members of the Regulatory Council are classified at the level of the director of ECOWAS staff hierarchy (D1-5);
- iv. The Council shall have three (3) members from 2010 to 2013, and two other members shall be appointed in 2014 according to the market development; and
- v. The Council shall be assisted by a pool of 4 experts for the technical regulation, 3 executives for the Administration and Finance.

From the activity programme and the above mentioned staff scheme, the provisional budget covering the 2009 - 2013 period of ERERA amounts to **8, 348, 073 (eight million three hundred and forty eight thousand seventy three) Euros** as set out on the table below:

Taaka	Components		Amo	unt stated in	Euros		Total
Tasks	Components	2009	2010	2011	2012	2013	Total
1. Development engineering (phase 1) /Support to the ERERA functioning (phase 2)	Activity 1	59.574	279.753	122.320	10.000	30.000	501.647
	Salaries	134.067	996.556	1.078.907	1.078.907	1.078.907	4.367.344
Regulation actions	Carried forward balance from Regulation demonstrative actions	0	290.542	0	0	0	290.542
(including permanent members salaries phase 2)	Activity 2 (Regulation actions)	0	212.257	459.650	206.618	238.460	1.116.985
3. Logistic support to the ECOWAS Commission and WAPP		0	0	0	0	0	0
4. Programme monitoring-management		0	0	0	0	0	0
5. Office costs	Equipment	2 .402	202.202	8. 000	8. 000	8. 000	228. 604
6. Provisions for workshops and missions in member States	Functioning	11.597	418.503	407.015	487.015	467.015	1.791.145
7. Contingency		0	17.911	6.930	13.364	13.601	51.806
TOTAL		207.640	2.417.724	2.082.822	1.803.904	1.835.983	8.348.073

# 3.2 Budget allocation per funding source

#### 3.2.1 Global allocation

Source	Total amount			Years		
Source	Total amount	2009	2010	2011	2012	2013
AFD	2,929,326.00	98,479.93	1,190,161.25	1,110,259.21	490,356.51	40,069.59
ITF	1,700,000.00	0.00	680,000.00	425,000.00	340,000.00	255,000.00
ECOWAS	2,299,411.57	109,159.07	547,563.00	547,563.00	547,563.00	547,563.00
Sector's Operators	1,419,335.43	0.00	0.00	0.00	425,984.43	993,351.00
Total	8,348,073.00	207,639.00	2,417,724.26	2,082,822.21	1,803,903.94	1,835,983.59

## 3.2.2 Detailed allocation

Tasks	Detailed Tasks	Source of	Amount financed	Financed	2009	2010	2011	2012	2013
1.	Tasks	funds AFD	461,564.74	share 92.01%	19,491.74	279,753.00	122,320.00	10,000.00	30,000.00
Developme nt		ITF	0.00	0.00%	0.00	0.00	0.00	0.00	0.00
engineering (phase 1)	"activity 1"	ECOWAS	40,082.26	7.99%	40,082.26	0.00	0.00	0.00	0.00
/Support to			ŕ		,				
the ERERA functioning (phase 2)		Sector's Operators	0.00	0.00%	0.00	0.00	0.00	0.00	0.00
	salaries :	AFD	1,331,152.26	23.05%	64,989.69	330,023.30	657,924.21	180,465.86	2,069.59
2. Regulation actions	regulatory actions \$\phi\$1.2.carried forward es:	ITF	1,455,679.61	25.21%	0.00	639,679.61	340,000.00	272,000.00	204,000.0 0
(including permanent members	regulatory actions φ2 (i.e. activité2)	ECOWAS	2,111,843.43	36.57%	69,076.81	529,652.07	540,633.09	534,199.36	533,961.7 1
salaries phase 2)	Total	Sector's Operators	876,196.08	15.17%	0.00	0.00	0.00	298,860.08	577,336.0 0
3. Logistic support to		AFD	0.00						
the		ITF	0.00						
ECOWAS Commissio		ECOWAS	0.00						
n and WAPP		Sector's Operators	0.00						
		AFD	0.00						
4. Programme		ITF	0.00						
monitoring- manageme		ECOWAS	0.00						
nt		Sector's Operators	0.00						
		AFD	132,924.00	58.15%	2,401.27	106,522.72	8,000.00	8,000.00	8,000.00
5. Office	"equipment"	ITF	0.00	0.00%	0.00	0.00	0.00	0.00	0.00
costs		ECOWAS	95,679.61	41.85%	0.00	95,679.61	0.00	0.00	0.00
		Sector's Operators	0.00	0.00%	0.00	0.00	0.00	0.00	0.00
6. Provisions		AFD	1,003,685.49	56.04%	11,597.23	378,182.61	322,015.00	291,890.65	0.00
for	"operations"	ITF	244,320.39	13.64%	0.00	40,320.39	85,000.00	68,000.00	51,000.00
workshops and		ECOWAS	0.00	0.00%	0.00	0.00	0.00	0.00	0.00
missions in member		Sector's							416,015.0
States 7.		Operators	543,139.35	30.32%	0.00	0.00	0.00	127,124.35	0
Assistance			0.00						
to the establishme			0.00						
nt of the ERERA			0.00 0.00						
		AFD	0.00						
8. contingenc		ITF	0.00						
у		ECOWAS	51,805.77	100%	0.00	17,910.93	6,929.91	13,363.64	13,601.29
		Sector's Operators	0.00						
		Total	8,348,073.00	8,348,073.0 0	207,639.00	2,417,724.26	2,082,822.21	1,803,903.9 4	1,835,983. 59
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