WEST AFRICAN POWER POOL

SYSTEME D'ECHANGES D'ENERGIE ELECTRIQUE OUEST AFRICAIN

General Secretariat / Secrétariat Général

BUSINESS PLAN

2012 - 2015

New Objectives

Objective 1 : Ensure Effective and Efficient Implementation of WAPP Priority Projects

Objective 2 : Establish a Regional electricity market

Objective 3 : Capacity Building Programme for WAPP

September 2012

SUMMARY

INTRODUCTION

The West African Power Pool (WAPP) is a specialized institution of ECOWAS covering 14 out of the 15 Member States of this regional economic community (Benin, Côte d'Ivoire, Burkina Faso, Ghana, The Gambia, Guinea, Guinea Bissau, Liberia, Mali, Niger, Nigeria, Senegal, Sierra Leone and Togo).

The WAPP is an international organization operating in the general interest of the regional power network system with a view to ensuring reliable power supply throughout the region. WAPP Members comprise public and private power generation, transmission and distribution entities involved in the operations of the power network system in West Africa.

WAPP Vision

The strategic objective of the WAPP Organization is based on a dynamic vision aimed at integrating the operations of national power systems into a unified regional electricity market, which will, over the medium to long-term, assure the citizens of ECOWAS Member States a stable and reliable electricity supply at a competitive price. The participants in this unified market will enjoy conditions enabling a level playing field for all and facilitating the balanced development of diverse energy resources of ECOWAS Member States for their collective economic benefit, through long-term energy sector cooperation, unimpeded energy transit and increasing cross-border electricity trade.

WAPP Mission

The mission is to ensure the realization of WAPP's vision through effective use of WAPP Cooperation Agreements aimed at encouraging all participating power utilities to collectively institute and adhere to common rules of practice for power systems planning, designing, operational reliability and security as well as project management and exchange of information.

I. METHODOLOGY OF FORMULATING THE 2012 - 2015 BUSINESS PLAN

This Business Plan for the period 2012 - 2015 was developed under the initiative and leadership of the WAPP Secretary General.

The Plan was prepared by the Staff, Secretary General, Directors and Executives of the WAPP Secretariat, who collectively contributed the information at their disposal, their knowledge and willingness to ensure its development.

This Business Plan is developed as a guide for the successful establishment of a fully integrated cooperation within an organization at its spiralling growth phase, spurred on by an unwavering dynamism to attain its ultimate goal: The establishment of a regional market, providing the citizens of ECOWAS Member States access to abundant, reliable and available electricity, at a competitive price to the populace.

This Plan is the logical sequence of the first Business Plan (2006-2009) and the second Business Plan developed for the WAPP, which covered the period 2006-2009 and 2009-2012. It is within the context of the follow-on of these plans that analysis of the implementation status was carried out, new actions were recommended and the follow-up on activities underway but unable to be completed during the period under review. The reasons were analyzed and solutions proposed to try to minimize the consequences in terms of time schedule and costs.

As in the previous document, the WAPP Business Plan for the period 2012-2015 intends to establish clear and realistic goals based on the vision, mission and values of the WAPP Secretariat. These goals, which are in line with those previously defined, have been recaptured in clear action plans and the resources required achieving these goals, identified and clearly articulated.

Distinctly, this Business Plan for the period 2012-2015:

- On the one hand, defines the strategic guidelines for medium-and long-term development of the regional energy infrastructure defined and adopted by the Heads of State and Government of the ECOWAS through a Supplementary Act A/SA 12/02/12 in the ECOWAS Revised Master Plan for the period 2012 -2025 and the progressive implementation of the regional electricity market,
- On the other hand, sets forth a priority action plan (2012-2015) which will enable WAPP to fulfil its mission.

The methodological approach adopted for the formulation of this Business Plan covers the following aspects:

- An appraisal of the Implementation of WAPP current development strategy through a review of the organization's objectives and priority projects in 2009;
- Definition of new goals to guide the activities to be undertaken by the WAPP from 2012 to 2015 with regard to the development of the region's generation and transmission facilities as well as the establishment of the regional electricity market;
- Assessment of human and financial resources currently used by the WAPP for the accomplishment of its mission;
- Formulation of a plan for priority actions over the period 2012-2015 based on the assessment of WAPP's current needs which are derived from the new strategic goals enunciated in the ECOWAS Revised Master Plan.

II. WAPP ORGANISATION

II.1 ELIGIBILITY REQUIREMENTS

Membership in WAPP Organization is voluntary and is open to any entity, public or private, which: (a) own/operate generation facilities of 20MW or larger, and /or distribute and retail electricity ; and/or (b) own/operate "major transmission facilities in the region", if such facilities are physically interconnected and have an impact on coordination of system operations in the West Africa region (the "Transmission Owning/Operating Members"), or (c) have an interest in the electricity sector in the West Africa region or "Transmission Owning/Operating Members" (the "Other Members").

II.2 STRUCTURE OF THE WAPP ORGANIZATION

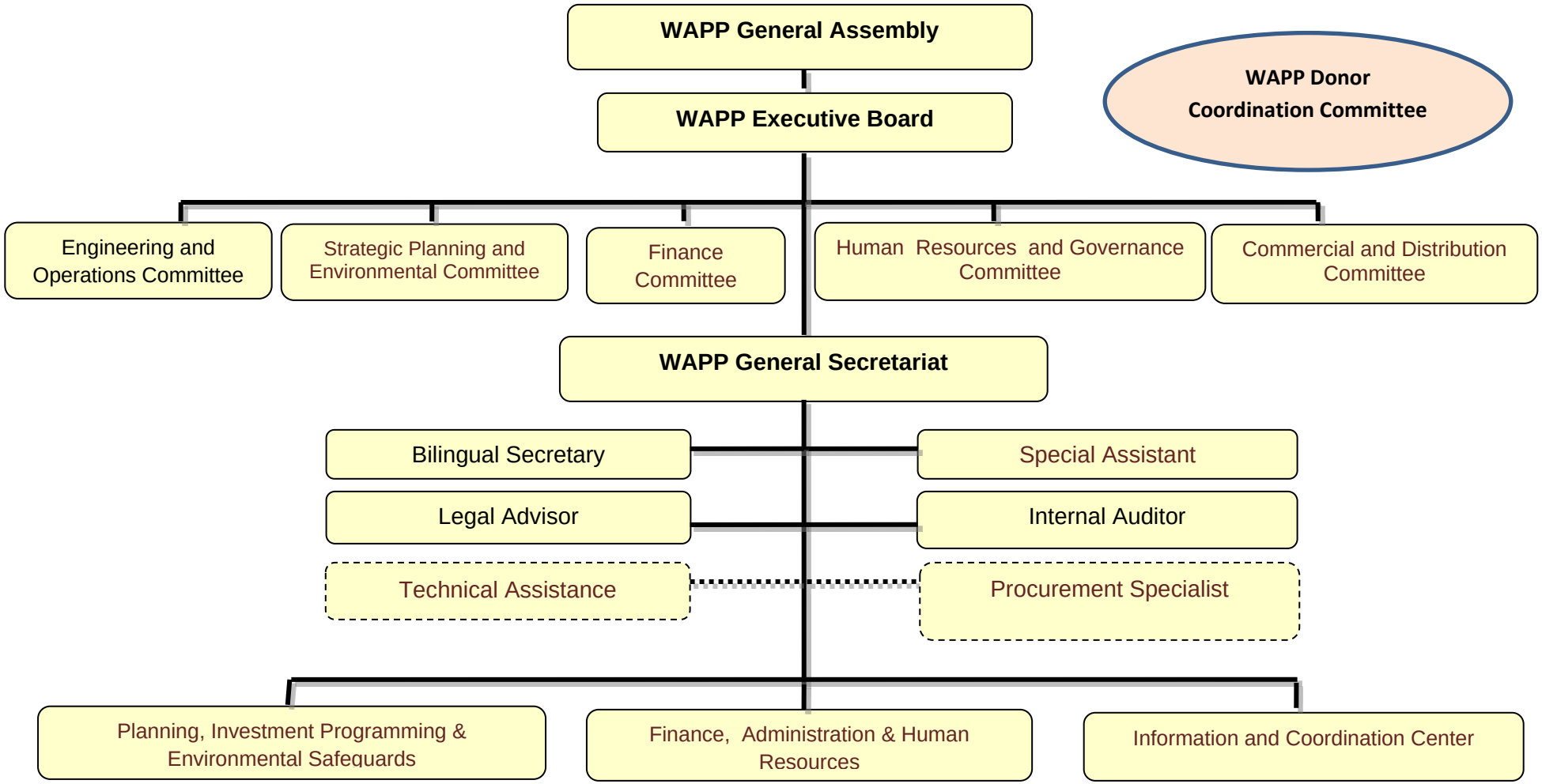
The WAPP operated under the auspices of ECOWAS prior to the establishment of the WAPP Organization. The WAPP Articles of Agreement provides a framework to institute a management structure for the WAPP, its organization and functions in order to establish a framework of cooperation between participating members.

The WAPP governance structure comprises:

- The General Assembly ;
- The Executive Board ;
- The Organisational Committees ;
- The WAPP Secretariat.

A simplified organizational structure of the WAPP organization is depicted below, while a more detailed structure is attached as Annex.

WAPP OVERALL ORGANISATIONAL STRUCTURE



II.3. WAPP GENERAL ASSEMBLY

The General Assembly is the highest decision making body for the WAPP. It comprises representatives of all Member States of WAPP.

The General Assembly is charged to, among others:

- Observe the provisions assigned to it in accordance with the WAPP Articles of Agreement and the Membership Agreement.
- Facilitate in accordance with the provisions of the WAPP Articles of Agreement and the Membership Agreement, the co-ordination of appropriate measures towards the implementation of the principles of the WAPP Articles of Agreement.
- Engage the Members in accordance with the prescribed provisions in order to facilitate the implementation of programs and projects in the implementation framework of the Articles of Agreement.
- Examine and adopt the amendments to the WAPP Articles of Agreement.
- Approve the new applications for membership to the WAPP Articles of Agreement and any removal or re-instatement of a Member.
- Elect the members of the Executive Board.
- Examine and adopt the staff and financial regulations of the structures of governance of WAPP.
- Examine and adopt the annual reports of the Executive Board.
- Determine the Headquarters of the WAPP Secretariat.

II.4. WAPP EXECUTIVE BOARD

The WAPP Executive Board meets at intervals. It is responsible for defining policies and monitoring the operations of the WAPP as well as the planning of its future development. The Board consists of eleven members, including the Secretary General. The elected representatives who serve on the Executive Board comprise Chief Executive Officers of the WAPP Member utilities.

The duties of the WAPP Executive Board include, but are not limited to the following:

- Direct activities of all Organizational Committees;
- Examine and recommend to the General Assembly, the entry, exit and re-entry of Members to the WAPP Organization;
- Authorize all major contracts and [finance/debt] instruments;
- Select and review the performance of Officers, who shall serve at the pleasure of the Executive Board;
- Determine positions, duties, qualifications, salaries, benefits and other matters pertaining to the Officers and Staff;
- Review, approve, disapprove or recommend revision to the actions of any Organizational Committee;

- Approve or revise the operating and capital budgets and any additional expenditures of the WAPP structure;
- Convene the General Assembly at least annually;
- Recommend amendments to the Articles of Agreement for the Approval of the General Assembly;
- Recommend amendments to the Membership Agreement for the Approval of the General Assembly;
- Approve Guidelines pertaining to standards and policies of the WAPP Organization and penalties for non-compliance with such Guidelines; and
- Authorize filings with relevant regulatory bodies.

II.5. WAPP ORGANISATIONAL COMMITTEES

The WAPP Organisational Committees (Organisational Committees), comprising the Engineering and Operating Committee (EOC), the Strategic Planning and Environmental Committee (SPEC), the Finance Committee, (FC) Human Resources and Governance Committee (HRGC) and the Commercial and Distribution Committee (CDC), provide support and advice to the Executive Board on all matters concerning collective policy formulation functions for developing, maintaining and updating common “rules of practice” on technical, planning, operational and environmental aspects of WAPP. The Organisational Committees shall be composed of technical experts drawn from the WAPP member utilities. The Chairperson of any Organisational Committee may appoint Task Forces as necessary to carry out its mission. Task Force appointments under the auspices of any Organisational Committee shall be made with due consideration to the competence and expertise of the Members and their geographical location.

II.6. WAPP SECRETARIAT

The WAPP Secretariat is the administrative organ to support the Executive Board in the accomplishment of the duties and is also responsible for the day-to-day management of WAPP. The Secretariat has responsibility for the management and coordination of a team of independent professionals and a restricted number of permanent core staff responsible for implementing the day-to-day tasks required to accomplish the mission of WAPP. The staff of the WAPP Secretariat performs the secretarial function for all meetings of the permanent WAPP Committees and any ad hoc task force. Consultants are also recruited on a short term basis to strengthen the organizational capacities of the WAPP.

The Secretariat is empowered to:

(a) Employ qualified technical and administrative employees;
(b) Engage office space;
(c) Employ outside technical and professional service organizations;
(d) Execute contracts;
(e) Serve as the representative of the WAPP Organization before the Regional Power Regulatory Authorities other regulatory bodies of ECOWAS member states and in other public forums;

(f) Incur reasonable expenses; and

(g) Make Staff resources available to individual Members or groups of Members on a non-discriminatory, timely and based on the principle of first-come-first-serve basis so as not to interfere with current or future needs and priorities established by the WAPP Organization.

III. STRATEGIC BACKGROUND OF THE REGION

III.1. SOCIO-ECONOMIC BACKGROUND OF THE REGION

The ECOWAS Community covers a surface area of 5,105 million km^2, comprising 15 States which despite their significant disparities in terms of size, population, climate and availability of natural resources, reflect more or less similar socio-economic realities.

With an average annual population growth rate of 2.7% classified among the highest in the world. The total population of ECOWAS, is estimated at 306.2 million in 2011 and is unevenly distributed within this economic space. As a matter of fact, Nigeria alone accounts for more than half of the total population (52%) spread over only 18% of the total surface area of this space. In contrast, Niger and Mali, both countries joined together, account for half the total surface area of this space but represent only 10% of the total regional population.

It is worth noting that about an average of 60% of this population reside in the rural areas. Burkina Faso, Niger and Mali record the highest rural population rates of respectively, 81.70%, 83.20% and 69.50% as at 2011. This divide between urban and rural areas will be reversed over the forthcoming years, due to the accelerated pace of urbanization. The growth rate of the urban population over the period 2005-2010 estimated at 3.81% per annum is significantly higher than the global average growth rate of 2.7%. This rapid urbanization is mostly due to the phenomenon of rural exodus rather than the natural population growth.

III.2. REGIONAL STRATEGIC RESOURCES FOR ELECTRICITY GENERATION

The major energy resources available for electricity production in West Africa are hydropower, oil and natural gas as well as coal in small quantities.

Nigeria owns the largest reserves in hydropower resources, and almost the entire oil and gas reserves within the sub region, exploitable over short and medium terms.

Crude Oil: Nigeria, Côte d'Ivoire and Ghana are the current producers of crude oil in the sub region with varying degrees of satisfaction of their power consumption. Indeed, Nigeria is an exporter of crude oil while Côte d'Ivoire and Ghana are unable to meet their

domestic consumption. Nigeria and Ghana are importers of refined products while Côte d'Ivoire is self-sufficient.

Senegal is one of the non-crude oil producing countries endowed with refineries, and yet is compelled to import refined products to meet its entire needs. The refineries in Liberia and Sierra Leone were closed down following the civil war in these countries.

Natural Gas: Nigeria and Côte d'Ivoire currently produce gas for electricity generation. Both countries have proven gas reserves, estimated in 2002 at respectively 400 billion and 15 billion cubic meters. Nigeria is a major exporter of liquefied natural gas. Recently offshore gas has been discovered off the coast of Ghana, with reserves estimated at 24 billion cubic meters.

The gas in Nigeria is largely flared-off pending the commissioning of the West African gas pipeline. The 678 km West African Gas Pipeline transports t gas from Nigeria to Cotonou in Benin, to Lomé in Togo and to Tema and Takoradi in Ghana. In March 2011, the first compressed plant in Lagos was commissioned allowing compressed gas to be supplied at the moment to Ghana.

Coal: This source of fuel, widely used for electricity production worldwide, is practically not used in West Africa. Nigeria has more than 250 million tons of coal reserves but produces only 70,000 tons per year. Nigeria had a small 30 MW coal plant. The public authorities want to increase the use of coal at a significant level as a means of diversifying the sources of fuels used in the country.

Fuel prices: The world's crude oil price has risen to its highest level of over US$100 per barrel in recent years. Intermediate and residual distilled fuels are used throughout West Africa for electricity production. The consequences of the price hikes of these products have been particularly severe for the electricity sector of non-crude oil producing countries and even more severe for power network systems in these countries operating predominantly on thermal energy. The cost of transporting fuel oil from the coastal ports to the power plants in the landlocked countries has occasioned corresponding increases in the price of electricity in countries such as Mali, Burkina Faso and Niger. Even within the individual countries electricity production in remote areas not connected to the major network of coastal countries is also affected by the cost of transportation of petroleum products, as is the case of the forest zone in Guinea or Tambacounda in Senegal.

The price of natural gas used in Nigeria is about 3 times lower than international prices. The ECOWAS Revised Master Plan assumed a price twice higher than the price in Nigeria for the West Africa Gas Pipeline.

Hydropower is an important source of energy for West Africa which cuts across major rivers and their tributaries. These include:

- River Senegal with a total surface area of about 436,000 km^2, runs across Mali, Mauritania, Senegal and Guinea.

- River Niger, the largest basin covering a surface area of 2,113,200 km^2, is shared by several countries including ECOWAS Member States, notably Nigeria, Mali, Niger, Guinea, Burkina Faso, Benin, Côte d'Ivoire and Sierra Leone.
- The Gambia River with a surface area of 69,900 km^2, cutting across Senegal, Gambia and Guinea.
- The Mano River, forming more than 145 km along the Liberia–Sierra Leone Border. The river and its affluents cover a surface area of approximately 8,250 square km^2.

The existence of these river basins, has endowed the region with huge unexploited hydropower potentials, which are mainly concentrated in two countries (Nigeria and Guinea).

Other waterways, whose basin is located exclusively in one country, owing to their huge potentials offer opportunities for regional development. These are namely the Konkouré River in Guinea, the Volta River in Ghana.

In most cases, the hydropower projects considered non-economic as compared to thermal plants at the time of formulating the WAPP Master Plan have turned out to be more lucrative today due to the soaring prices of petroleum products, but should be further examined in details before engaging in their development.

IV. ANALYSIS OF CURRENT STATUS

IV.1. CURRENT SITUATION OF WAPP POWER SYSTEM

The WAPP power system covers two geographical Zones A and B, each consisting of interconnected power systems, which, according to the organization's 2015 vision, should be connected to enable electricity trade at the regional level.

The WAPP Zone A Member States: (Côte d'Ivoire, Ghana, Togo, Nigeria, Niger, Burkina Faso and Benin) are all presently interconnected under the following cross border interconnections:

- Côte d'Ivoire - Burkina Faso, Côte d'Ivoire – Ghana – Togo – Benin - Nigeria: Exports emanate basically from Côte d'Ivoire, Ghana and Nigeria to other countries; Ghana, however, imports from Côte d'Ivoire.
- Nigeria-Niger: The bulk of Niger's electricity needs come from Nigeria via this interconnection line.

With regard to the WAPP Zone B Member States: (Mali, Senegal, Guinea, Guinea-Bissau, Gambia, Liberia and Sierra Leone), the only existing cross-border interconnection is that between Senegal and Mali, and this interconnection enables power transmission to the two countries from the production of Manantali hydropower plant, a e power generation facility managed by SOGEM within the framework of the OMVS. However, with the expected commissioning of the Cote d'Ivoire – Mali Interconnection Project by end 2012, the systems in Zone A and B shall be integrated.

In addition to the exports through the HV network, there are cross-border exchanges through Medium Voltage systems, as is the case with the power supply by the Ivoirian power system to the communities of Kadiolo and Zegoua in Mali. Similar exchanges take place between Burkina Faso and Ghana, Ghana and Togo, Benin and Togo, Cote d'Ivoire and Liberia, between Niger, Nigeria and Benin.

In order to facilitate the coordination of information exchange by the ICC within the framework of the future unified market, the Zones A and B have been subdivided into five control areas, each responsible for ensuring the balance of supply and demand within its own control area, maintaining interchange scheduling with other areas and frequency control, in coordination with the ICC.

Currently, the electricity sector in WAPP member States provides power supply to only about 30% of the population. The region's maximum load is just above 7,000 MW as against a total energy demand of about 50,000GWh, out of which over 85% is accounted for in the three major electricity exporting countries (Nigeria, Ghana and Cote d'Ivoire), with nearly 57 % for Nigeria alone.

According to the ECOWAS Revised Master Plan for the Generation and Transmission of Electricity developed for the WAPP for the period 2012 - 2025, the population of West Africa is projected to reach 448 million while the maximum demand is estimated at 31,870 MW.

Within this context, the demand in Zone A (Nigeria, Benin, Togo, Ghana, Cote d'Ivoire, Niger and Burkina Faso) could reach 27,871 MW by 2025, while demand in Zone B (Mali, Senegal, Guinea, Gambia, Guinea Bissau, Sierra Leone and Liberia) could rise above 4,000 MW by 2025. It is expected that Nigeria, which represents over 52% of the population of ECOWAS, will consume over 60% of the electricity produced in the region.

Based on the scenario in the ECOWAS Revised Master Plan, electricity demand in most of the countries in the WAPP region, grows at an average rate ranging from 5% to 7% annually from 2010 to 2025. The major exceptions were Nigeria which required a growth rate of more than 8% to meet its huge electricity deficit and Guinea which due to the significant development of the smelting industries will have its demand grow by an average rate of 14% per annum.

Currently, electricity demand is far from being satisfied with a high level of performance deficiencies in practically all the countries within the region, notably due to insufficient generation and transmission infrastructure, and the energy crisis resulting from the soaring prices of petroleum products (some utilities do not have adequate financial resources to meet their fuel l supplies). Electricity consumption in West Africa is among the lowest in the world.

Within the WAPP, it was observed that the amount of power generated fell on the interconnected system was below the projections that were made for the Years 2009, 2010 and 2011. Amounts of 41,000GWh, 48,500GWh and 50,000GWh were respectively generated for the Years 2009, 2010 and 2011 against expected values of 64,070 GWh, 68,076 GWh and 72,275 GWh for the same periods[1]. In spite of the annual increase in generation, the gap between demand and supply of electricity in the sub-region kept on widening. This situation further coupled with a continuous increase of unmet needs, was basically due to the energy crisis prevailing in the sub region (drought and non-availability of gas have led to insufficient electricity generation from hydropower and thermal sources).

In Benin and Togo, the Société Béninoise d'Energie Electrique (SBEE) and the Compagnie d'Energie Electrique du Togo (CEET) were both faced with a deficit ranging from 100 to 200 MW resulting in daily load shedding. A similar situation in Ghana resulted in the commissioning of an additional 342 MW thermal generation capacity by end 2007. The authorities in Togo and Benin, in anticipation of a regional solution, respectively developed emergency power generation of 100 MW and 80 MW.

In addition, the state of the generation park in Cote d'Ivoire did not enable it to meet the national demand and the needs expressed by its neighbouring countries owing to, on the one hand, inadequate water inflows within the hydropower facilities which led to a reduction in their capacity by about 50% and, on the other hand, insufficient natural gas which engendered a drastic reduction in the availability of thermal generation facilities. In order to address these deficits, an emergency 110 MW gas turbine was installed before April 2008, as well as an increment in natural gas generation capacities.

The deficit, even more acute in Nigeria, is estimated at 6,000 MW. In order to address this situation, the public authorities had planned to implement a vast programme tagged "National Integrated Power Project (NIPP)" which will allow for the installation of an additional capacity of 4,000 MW before the end of 2007, thus reducing the deficit to 2,000 MW.

In Senegal and Mali, the situation is likewise severe with a deficit of more than 60 MW in 2010. The implementation of an additional 127 MW thermal capacity helped to reduce the level of deterioration of the quality of service. The deficit was accentuated by difficulties in

[1] *2005 WAPP Performance Indicators*

the provision of fuel as well as the soaring prices of petroleum products and difficulties encountered by Senelec in settling its bills.

To address this precarious situation faced by the electricity sector in Mali, plans have been envisaged to urgently develop, before the end of 2009, interconnections between Ghana, Burkina and Mali, on the one hand, and between Cote d'Ivoire and Mali, on the other hand.

This crisis further compounded by the hikes in the prices of petroleum products has had significant impacts on the already precarious financial situation of the utilities, the majority of which - in spite of the entire situation - have embarked on the development of new generation means in order to address and reduce power failure within their respective networks. To this end, ambitious programmes, quite different from those envisaged in the Revised Master Plan, are being developed throughout the WAPP region, ranging from the coal plants in Senegal to the huge combined cycle plants and the natural gas under the WAPP Emergency Power Supply and Security Plan (EPSSP), just to mention a few.

This situation was the basis on which the WAPP Secretariat, at the request of the Executive Board and ECOWAS Commission, undertook a study on an emergency power supply plan for WAPP Member utilities.

IV.2. PIPES DEPARTMENT (PLANNING, INVESTMENT PROGRAMMING & ENVIRONMENTAL SAFEGUARDS)

The implementation of priority investment programmes is coordinated by the WAPP Secretariat through the PIPES Department, which is responsible for supervising the development and implementation of projects right from the planning phase through to the commissioning of the projects (pre-feasibility and feasibility studies, financing, preparation of tender documents, and implementation). In collaboration with the Strategic Planning and Environmental Committee and task forces, the major activities of PIPES are carried out, within the framework of implementing the WAPP investment programme. These activities include:

- Prepare terms of reference for project studies and supervise the consultant selection process;
- Conduct, coordinate and monitor feasibility, technical, economic, financial and environmental studies of regional project interconnection lines and generation facilities ;
- Supervise the selection process for the contractor to undertake the implementation of projects;
- Coordinate, supervise and review periodically the implementation of regional project interconnection lines and generation facilities;
- Organise meetings of the Strategic Planning and Environmental Committee for the adoption of programmes and recommendations based on studies undertaken and provide support to the committee in the accomplishment of its mission;

- Solicit and mobilize financing for projects and organise coordination meetings with relevant donors;

The human resources of the PIPES Department currently in charge of all activities relating to the implementation of the priority investment programme consist of six persons each responsible for specific activities:

- The Head of Studies, Planning and Funds Mobilisation, responsible for the preparation of the Priority Projects and mobilisation of financing, is the only permanent staff of the Department. The position of PIPES Director, responsible for the supervision of the overall activities of the Department, has been vacant since January 2011 and is being covered since that date by the Head of Studies, Planning and Funds Mobilisation;
- Three Project Coordinators seconded to the WAPP by VRA, ECG and EDG;
- One Project Coordinator from ECG and on contract responsible for the MV Cross Border Projects;
- Project Administrator on contract;

In addition, a Technical Assistant, contracted within the framework of the cooperation between the European Union and WAPP, is providing technical support to the WAPP Secretariat from September 2012 to August 2013. This was preceded by a resident 3-year EU-funded Technical Assistance that concluded in June 2012.

The strategic goals of WAPP under the supervision of PIPES relate to the planning and implementation of regional energy infrastructure whose medium term implementation strategy was defined in the 2009 -2012 Business Plan adopted by the WAPP General Assembly in October 2009. The WAPP Priority Investment Programme presented in the table below, within the purview of this Business Plan and taking into consideration the gap between demand and supply of electricity, comprises several sub programmes for generation and transmission projects whose implementation will enable to the interconnection of a majority of countries within the region by 2017. A review of the implementation of this programme and the analysis of their impact are dealt with in 5.6.

IV.3. ICC DEPARTMENT (INFORMATION & COORDINATION CENTER)

The ICC is responsible for promoting operational coordination between Transmission Owning/Operating Members through actual day-to-day information sharing/exchange between the operational coordination centres of WAPP Members. These responsibilities include:

- Collect, analyse and disseminate information portraying an overview of the current state of WAPP;
- Monitor the evolution of the electricity situation in ECOWAS Member States with special focus on national power systems faced with emergency situations (in order to forewarn the risks of performance deficiencies and to provide them with corrective measures);

- Periodically analyse the economic and technical potentials and feasibility of the electricity trading arrangements among Member State Utilities;
- Facilitate the development of technical norms and standards for the efficient operation of the national and interconnected power networks;
- Provide support for monitoring of the technical performances of power utilities.

The implementation of the unified electricity market in West Africa is also conducted under the responsibility of the ICC department whose principal on-going activities include:

Activities contained under the WAPP priority goals defined in the 2009-2012 Business Plan

- Establish an Information and Coordination Centre (Regional Coordination Dispatching Centre);
- Ensure the technical coordination between power systems, notably with the implementation of the Operation Manual;
- Put in place an Management Information System (MIS) and a Monitoring & Evaluation mechanism and Manage the WAPP web site;
- Establish the Regional Electricity Market
- Strengthen the cooperation with the main players in the electricity sectors of West Africa (Regional Regulators, Telecommunication, Energy Ministries, Fibre Optic)

The strategic objective of the WAPP ICC Project is to put in place the technical, organisational, institutional and logistic requirements for the creation of an effective regional electricity market.

In order to achieve this objective, the sub-programmes set out below are being pursued:

A	**Programme 1: Implement a functioning Information Coordination Centre**
1	Implementation of the WAPP ICC
2	Implementation of the WAPP Dark Fibre project
3	Implementation of the WAPP Operational Manual
4	○ Preparation towards the synchronisation of WAPP Zone A interconnected power system ○ Development of Technical Norms and Standards for the efficient operation of the interconnected system (standardization of protection system, communication and emergency plan etc) with the studies and analysis ○ Development of Operating Instructions and Procedures (Policy 1 -7) ○ Development of Certification Programme for System Operators (Policy 8) ○ Improvement of the operation of the interconnected system
4	Develop the Market Rules
5	Reinforce technical cooperation with stakeholders of the power sector
B	**Programme 2: Implementation of Monitoring and Evaluation System**
1	Strengthening of WAPP M & E

2	Improvement the WAPP Database
3	Strengthening of the electronic archive system of WAPP
4	Improvement of the WAPP Website
5	Publish the operation indicators of the electric system
C	**Programme 3: Energy Efficiency of the WAPP Member Utilities**
1	Organise fora on the best practice in energy efficiency
2	Facilitate exchange programme amongst the WAPP Member Utilities
3	Collect and propose modalities for tariff adjustment
4	Develop a model for monitoring the load balance on the high voltage network
5	Create a database on distribution equipment
6	Develop a standard financing document for the electricity distribution companies
D	**Programme 4: Preparation towards the operation of the Power Pool**
1	Implementation of an exchange programme with other power pools
2	Capacity Building for ICC Staff and Staff of the Dispatching Centre
3	Implementation of a Road Map for the establishment of a Regional Electricity Market

The human resources of the ICC department currently in charge of all activities relating to the implementation of the Regional Electricity Market consist of six persons each responsible for specific activity:

- The Director of ICC responsible for the supervision of the overall activities of the ICC;
- An Engineer and economist responsible for activities relating to the implementation of the Regional Electricity Market;
- An Engineer responsible for ensuring optimal functioning of the network (monitoring of the system, ensuring that technical, organisational, procedural and material conditions are in place in order to attain network reliability and security;
- An IT Specialist responsible for activities relating to ICT;
- An Engineer responsible for Monitoring and Evaluation;
- A Bilingual Secretary.

IV.4. FINANCE & ADMINISTRATION DEPARTMENT

The role of the Finance & Administration Department is to strengthen the organizational structure of the WAPP and to manage the financial and accounting system of the WAPP Secretariat.

Its current activities focus on:

- Recruitment of Staff for the WAPP Secretariat;
- Development of performance evaluation criteria and performance appraisal system for the staff of the General Secretariat have been developed;
- Assessment of the training needs and development of a training plan for the staff of the WAPP Secretariat;

- Development and monitoring the implementation of the Budget of the WAPP Secretariat;
- Publication of financial information in accordance with the provisions of the WAPP Financial and Accounting Manual and Financial Regulations;
- Organise the external audit of the WAPP Secretariat by an External Auditor recruited through competitive bidding process;
- Implement an integrated accounting and human resources management system;
- Organization of periodic meetings of the Finance Committee (FC), Human Resources and Governance Committee (HRC).

IV.5. STRATEGIC ANALYSIS OF THE WAPP

The strategic orientation of the entire activities of the WAPP Secretariat in the medium and long term ought to be defined on the basis of a strategic analysis of the existing situation, based on Strengths, Weakness, Opportunities and Threats.

IV.5.1. STRENGTHS

- A firm and consistent political will;
- A clear and stable vision of the future over the long-term (a regional electricity market based on mutual assistance and solidarity);
- A needs planning at the regional level has been initiated;
- The launching of the concept of mobilization of funds at the regional level, for development of projects involving several States;
- A coherent institutional framework, which evolves in accordance with the strategic needs (energy protocols, establishment of the WAPP within ECOWAS sub region and sub-regional organizations, such as the OMVS, establishment of a regional regulatory body, establishment of the WAPP Secretariat);
- A tradition of cooperation between ECOWAS Member States and a proven capacity for the development of common projects (OMVS, CIE-VRA energy interchanges);
- Free movement of goods and people between ECOWAS Member States;
- Support from the World Bank, the EU, and other donors;
- Adequate gas and hydropower resources when properly harnessed to meet the ever increasing needs;
- Concrete projects have already been initiated (the Coastal Transmission Backbone network, interconnections, cross-border electrification of communities on both sides of the borders. and the engagement of Strategic Partners to develop emergency power generation facilities) ;
- The capacity to develop emergency projects for ECOWAS citizens (Guinea-Bissau).

IV.5.2. WEAKNESSES

- A low regional self-financing capacity compared to the needs, significant financing requirements needed to be mobilized from institutional donors, and private investors;
- Capacities and knowledge to be developed and adapted to a network vision and a regional market vision (establishment of a market, regional planning process, regional operations);
- General inadequacy of generation and transmission infrastructure (generation deficit, limited power exchanges, quality of product to be improved (high and uncontrolled costs, frequent load shedding);
- Power system operations are generally inefficient, at both the technical and commercial level (huge frequency deviations, significant losses, low recovery rate);
- Significant delays in the project development process;
- Insufficient awareness within the utilities of the establishment of a regional electricity market;
- A systematic and regular information sharing/exchange process needs to be put in place, with adequate computer and telecommunications tools to be identified and acquired;
- A regional planning process to be adopted and shared between system operators.

IV.5.3. OPPORTUNITIES

- The region continues to be endowed with significant energy resources that could be developed for the benefit of the ECOWAS citizenry;
- The awareness of decision makers on the latent energy crisis and the foreseen degeneration of this crisis is an opportunity for the mobilization of policy makers and the necessary financing required for the development of infrastructure;
- The relatively durable decline in global economic activities will lead to an increase in the quantity of gas available to meet regional needs and thus induces a reduction in the world gas price over a certain period;
- Motivated individuals, mindful of the issues and stakes involved, supported by a Secretariat that is conscious of its role and mission;
- Operational Committees whose strength lie in the capacities of their individual members, accustomed over time to working together towards a common objective, capable of transferring their knowledge and expertise based on terms and conditions to be developed and determined.

IV.5.4. THREATS

- The failure to meet ever increasing needs of a region whose population is growing at a vigorous pace;
- An economic and social growth undermined by lack of reliable and available energy (risk of economic and social crises);

- A costly electricity sector, still existing despite all odds and general inefficiency, which is only partially capable of fulfilling its role, with the looming and constant threat of interruption of power supply;
- A world financial crisis whose duration and magnitude are yet to be fully determined and whose consequences could slow down the flow of financing to the developing countries;
- A region that has witnessed conflicts that has affected the securing of financing and implementation of projects.

This analysis confirms the relevance of regional integration as envisaged by the ECOWAS Member States. The efforts to reinforce the efficiency of WAPP needs to continue with renewed vigour.

V. REVIEW OF PRIORITY GOALS DEFINED IN 2009

The Business Plan adopted in 2009 by the WAPP General Assembly was developed to serve not only as a roadmap in the pursuit of the activities of WAPP, but also as a criterion for performance evaluation over the period 2009 – 2012.

The Business Plan took into consideration the priority objectives of 2006 which ought to have been fully achieved before setting additional clear and realistic objectives based on the vision, mission and values of WAPP.

On adoption of the Business Plan by the WAPP General Assembly, the WAPP Secretariat implemented specific action plans aimed at achieving these set objectives. A review of the implementation of these objectives is set out as follows:

V.1. OBJECTIVE N°1:

“UPDATE ECOWAS REVISED MASTER PLAN FOR THE GENERATION AND TRANSMISSION OF ELECTRICAL ENERGY”

A fundamental objective of the Master Plan is to develop a clear, global and consistent vision of the future development of power generation and transmission infrastructure within the sub-region. The Master Plan provides investors a rational basis for investment decision making in a number of generation and transmission projects that may be proposed to them.

The important gaps identified between the objectives of the last Master Plan and the effective development of power systems at the national and regional levels, have brought to the fore the urgent need to update the WAPP Master Plan. The purpose of the update was to integrate current developments into a medium and long term strategy for the

expansion of the regional power generation and transmission infrastructure in line with the WAPP vision.

The various actions undertaken in the course of the updating of the Master Plan include the following:

Update of the characteristics of the regional electricity network, main sources of generation, transmission and cross border electricity trading;

- Analysis of the demand and supply electricity in each country and at the sub-regional level (control areas) as well as regional;
- Identification/determination of an optimal development plan for the regional power generation and transmission system;
- Update of static and dynamic stability studies with a view to assessing the impact of new power generation and transmission infrastructures;
- Assessment of the major impacts on the environment;
- Recommendation of new implementation strategy for the WAPP priority investment projects, taking into account newly approved projects.

The update of the Master Plan was funded by the EU-Africa Infrastructure Trust Fund through the EIB, and undertaken by the Consultant TRACTBEL in collaboration with the WAPP Secretariat, Ministries in charge of energy and national utilities of ECOWAS Member States with support from the EU-funded resident Technical Assistance at the WAPP Secretariat.

The final report of the Studies showed that a total investment outlay of US$26.5 billion will be required to finance the regional priority projects for the period 2012 – 2025. This comprises 33 generation projects that require a total investment of US$20 billion and 26 transmission projects with an estimated cost of US$6.5 billion. The financial viability of the regional priority projects showed a positive Net Present Value of US$12.1 billion for the entire region over the period 2012-2025.

This Report was adopted by the WAPP Executive Council and the 6th General Assembly held on 27th and 28th October 2011 respectively in Lomé.

The ECOWAS Commission in collaboration with the WAPP Secretariat organised from 24th to 25th November 2011 in Abidjan a meeting of the Ministers in charge of Energy in the sub-region to adopt the conclusions and recommendations of the studies and authorised the submission of the Report to the Conference of the Heads of State and Government of the ECOWAS for approval.

Consequently, the 40th Ordinary Session of the Conference of Heads of State and Government of the ECOWAS held in Abuja from 16th to 17th February 2012 adopted the said conclusions and recommendations of the Report through a Supplementary Act A/SA.12/02/12 relating to the Update of the ECOWAS Revised Master Plan for the Generation and Transmission of Electrical Energy.

V.2. OBJECTIVE N° 2:

"ESTABLISH A REGIONAL ELECTRICITY MARKET"

The important steps in the establishment of a Regional Electricity Market include the development of Market Rules, development of Standard Contracts, development of a transmission Tariff Methodology, and implementation of the Operation Manual.

In order to reap the full benefits of interconnection, the synchronisation of the network at the same time as the commissioning of the WAPP priority projects constitutes an essential activity for the WAPP Secretariat.

With regard to the establishment of the Regional Electricity Market, the WAPP Secretariat undertook the following activities:

Development of the Market

The development of Market Rules and Market Design is one of the necessary conditions for establishing a Regional Electricity Market.

- Through restricted competitive bidding, Mercados AF Consultant was recruited to develop the Market Design and Market Rules for the Regional Electricity Market. The Consultant's reports were adopted by the Task Force on Electricity Market for onward submission to the appropriate WAPP authorities.

Implementation of the Operation Manual

The Operation Manual which comprises guiding policies that sets out the principles, procedures, requirements and criteria to be observed by the players in the electricity sector for an efficient operation of the WAPP interconnected network. Essential conditions for the implementation of the manual which the WAPP Secretariat has endeavoured to fulfil are the following:

- Synchronisation of the WAPP interconnected network in Zone A
- Development of technical norms and standards for interconnected system (harmonization of the protection system, communication, emergency security plan etc)
- Acquisition of appropriate tools for system studies and analysis to ensure efficiency of the system
- Implementation of Operation Instruction and Procedures
- Certification of WAPP System Operators
- Implementation of consultation meetings of the players in the electricity market with a view to improving system operation.

The WAPP Secretariat with Technical Assistance from the World Bank implemented the Operation Manual.

Synchronisation of the interconnected system after the commissioning of each priority project

In order to implement the synchronization of the network the following activities were undertaken:

- Establishing the necessary conditions for synchronization
- Developing an action plan for each of the member utilities concerned
- The World Bank gave WAPP a Grant of US$31.5 million to support among others, the synchronization project
- Implementation of the action plan and regular monitoring

Implementation of the WAPP ICC

The achievement of this objective will facilitate efficient trading in electricity between utilities in ECOWAS Member States by promoting operational coordination between the transmission owning companies and network operators will depend on the existence of the required infrastructure, organisation and management tools for the interconnected network.

In this regard the WAPP Secretariat initiated the ICC Project. The following actions have been undertaken:

- The feasibility studies of the ICC Project prepared by KEPCO with financing from KOICA were updated and the technical specification of equipment defined. The WAPP ICC Project will be financed by the European Union.
- The perimeter fencing of the site for the ICC Project has been completed with internally generated funds. The WAPP Secretariat has mobilized from the European Union, ECOWAS and UEMOA, an amount of €60 million for the construction of the WAPP ICC and the head office of the WAPP Secretariat.
- Commencement of construction works.

Implementation of the WAPP Dark Fibre

- Following the World Bank Study on the ‘’WAPP Broadband Business Opportunity’’ in 2009, on the utilization of excess fibre on the WAPP transmission network for communication purposes, WAPP intends to engage a Management Company to act in partnership with WAPP and on behalf of the Dark Fibre Leasing Consortium to facilitate effective leverage of the excess fibre on the WAPP network. To this end, a Dark Fibre Consortium Agreement and Terms of Reference for the selection of the Management Company were prepared.

V.3. OBJECTIVE N° 3:

"DEVELOP A REGIONAL STRATEGY FOR THE IMPLEMENTATION OF WAPP INFRASTRUCTURE PROJECTS THROUGH A SPECIAL PURPOSE COMPANY (SPC)"

This goal was principally aimed at using the Special Purpose Company model as a strategy for implementing the WAPP transmission line interconnection projects pursuant to Decision WAPP/19/DEC.26/10/07 of the General Assembly and adopted by the ECOWAS Heads of State and Government through Supplementary Act A/SA.3/01/08.

The model is being deployed on the Cote d'Ivoire – Liberia – Sierra Leone – Guinea (CLSG) Interconnection Project where the four countries have agreed to establish a Special Purpose Company that shall among others own, finance, construct, operate, and maintain the interconnection line. The establishment of the related institutional framework involved the preparation of legal documents that included:

- Treaty to be executed by the 4 beneficiary countries
- Articles of Association
- Shareholders Agreement, International Project Agreement
- Power Purchase Agreement (PPA)
- Transmission Service Agreement (TSA)

The model has also been adopted for the development of the 450 MW WAPP Maria Gleta (Benin) Regional Power Generation Facility and the 450 MW WAPP Aboadze/Domunli (Ghana) Regional Power Generation Facility, where these projects are envisaged to be realised through Special Purpose Companies under the framework of public-private partnerships. The Private Partner was selected through International Competitive Bidding.

V.4. OBJECTIVE N° 4:

"SET UP EFFECTIVE MONITORING & EVALUATION SYSTEM"

This goal envisages the development of a comprehensive plan for the implementation of a WAPP M & E system that will specifically address the following challenges:

- Information focused on data that is relevant and appropriate to the WAPP Priority Projects;
- Ensure that all required information is available to participating utilities;
- Clear definition of reporting requirements for each indicator to allow for the smooth flow of information to the WAPP M & E System and to ensure that data collection and analysis can be done in an efficient manner.
- Harmonization of the existing M & E reporting system.

A World Bank Grant of about US$627,000 was given to the WAPP Secretariat for the development of the Management Information System (MIS) and the M & E System. The grant covered the cost of a Consultant and the acquisition of equipment for the MIS and M&E system. Hardware and software were acquired for the WAPP Secretariat and the M

& E Units of the Member Utilities. The harmonization of WAPP Performance Indicators was also completed.

The development of the MIS ensured that a computerized platform was put in place for the implementation of the M & E System. The MIS has thus provided the necessary tools for decision making. And includes other program management (inputs) and implementation (processes) functions as well as capacity to track input and output indicators.

V.5. OBJECTIVE N° 5:

"IMPLEMENT WAPP STAFF TRAINING PROGRAM"

The accomplishment of the activities of the WAPP Secretariat will be accompanied by the implementation of a minimum capacity building program based on the training needs assessment with a view to achieving the priority goals of WAPP.

This minimum capacity building program includes the following activities:

- On-the-job training for specific jobs;
- Formal training sessions organized with the assistance of technical assistance in the workplace and facilitated by experts recruited on short term basis;
- Training sessions outside the office premises and outside the technical assistance framework.

The main focus of the training program includes the following which are closely linked to the WAPP Priority Goals:

Project Planning, Management and Environmental Impact Assessment Study

- Feasibility Studies relating to HV network interconnections and generation projects;
- Institutional Framework for interconnection projects and generation projects using PPP model;
- Monitoring of project implementation.

Within the framework of implementing the M & E System, training sessions were held for WAPP Experts in the Member Utilities.

Training sessions were held in the area of system planning through the acquisition of appropriate computerized tools (PSS/E software for power system studies and PSAP software for regional and national power system analysis).

Establishment of a Regional Electricity Market

The findings of the training needs assessment study (Capacity Building Program Initiative - CBPI) brought to the fore the need to strengthen the capacity of the staff of the WAPP Secretariat and Member Utilities.

Among others, training sessions relating to the establishment of a regional electricity market were conducted that focused on the following topics:

- The Concept of Market Operation and Regulation;
- Modus operandi of different market entities: Market Operators, System Operators, Network Management, commercial operations, Regulators and Generators);
- Standard Contracts;
- Tariff Setting;
- Rules and Procedures for market operation;
- Management Information System.

V.6. "ACHIEVEMENTS REALISED ON PRIORITY GOALS"

The Table below attempts to present the level of achievement realised on the Goals that were indicated in the 2009 – 2012 Business Plan:

Percentage Realisation of Objectives in 2009 - 2012 Business Plan:

Goal No	Goal Defined in 2009-2012 Bsuiness Plan	Status	% Achievement
1	UPDATE ECOWAS REVISED MASTER PLAN FOR THE GENERATION AND TRANSMISSION OF ELECTRICAL ENERGY	Study completed and approved by ECOWAS Heads of State and Government	**100**
2	ESTABLISH A REGIONAL ELECTRICITY MARKET		**43**
	Market Development	Market Design and rules have been developed; Site secured in Benin and fenced; Funding mobilised to implement ICC Project	30
	Implementation of Operation Manual	Breakdown of gap analyses done; Costs for the additional equipment required for an effective deployment of the Manual assessed; Operating Manuals prepared for the TCN-CEB interconnection and the Ghana-Togo MV cross border projects	40
	Synchronisation of Power Systems	Funding secured to improve the synchronisation of the power systems;	60
3	DEVELOP A REGIONAL STRATEGY FOR THE IMPLEMENTATION OF WAPP INFRASTRUCTURE PROJECTS THROUGH A SPECIAL PURPOSE COMPANY (SPC)	Strategy being deployed on CLSG Interconnection Project; All legal documents have been prepared and adopted.	**80**
4	SET UP EFFECTIVE MONITORING & EVALUATION SYSTEM	Funding secured to implement M & E system. M & E Units created in WAPP Member Utilities; Hardware and software were acquired for the WAPP Secretariat and M & E Units of the Member Utilities	**90**
5	IMPLEMENT WAPP TRAINING PROGRAM	Training was conducted during period on all the areas identified in the 2009 - 2012 Business Plan.	**100**
	Aggregate Average Achievement		**83**

Summary of Training Conducted within framework of 2009 - 2012 Business Plan

No	Activity	Period	Attendance	No of Participants	Venue	Funded by
1	Training on preparation of Feasibility Studies for transmission line projects	September 2009	Experts from CLSG utilities and WAPP Secretariat	8	Paris	EIB
2	Training on Power System Operations/Distribution& Transmission	February 2010, April 2010	Technicians and engineers from EDG & EAGB	37	CFPP Senelec Dakar,	EU / USAID
3	Training on Power System Operations/Distribution	April - June, 2010	Technicians and engineers from LEC, NAWEC & NPA	43	ECG training Center, Tema, Ghana	EU
4	PPP Training for WAPP Secretariat Staff	August 2010	Staff of WAPP PIPES & Legal Dep.	4	Pretoria, South Africa	AfDB
5	MS Office software training for WAPP Secretariat	December 2010, January 2011	Staff of WAPP Admin, ICC, PIPES & Legal Dep	15	Lomé & Cotonou	USAID
6	Accounting & Financial Management Software Training	February 2011	Staff of WAPP Admin & Financial Dep.	5	Lagos	USAID
7	03 session PPP Training for WAPP Sec. Staff	March 2011	Personnel of WAPP Admin, ICC, PIPES & Legal Dep.	5	Cotonou	UE
8	Training on PSS/E for WAPP Member Utilties	May 2011	Participants from WAPP Member Utilities	30	Tema	WAPP
9	Training on Power System Operations/Distribution	July 2011	Technicians and engineers from SBEE & CEET	23	CFPP Senelec Dakar,	USAID
10	Training workshop on the use of PPP for the development of WAPP Projects	September 2011	Professional from WAPP utilities & Regional Institutions	26	Accra	AfDB
11	Power Sector Governance and Development of Regional Electricity Market Seminar	September 2011	Participants of WAPP Executive Board Members and Senior Staff of WAPP Secretariat	18	Cotonou	USAID
12	Training on M&E software and harmonisation of performance indicators for WAPP Member Utiltities	November - December 2011, Februay 2012	Participants from WAPP utilities	106	West Africa	WB
13	Training on preparation of ESIA for transmission line projects	November - December 2011	Experts from CLSG	48	Abidjan, Monrovia, Freetown, Conakry	EIB
14	Training on customisation of M&E software	June 2012	Staff from WAPP Secretariat	3	Bangkok	WB
15	Training on M&E software for WAPP M&E Focal Points in WAPP Member Utiltities	June 2012	Experts from WAPP utilities	20	Cotonou	WB
16	Training on USAID disbursement procedures for staff of WAPP Secretariat DAF	July 2012	Staff from WAPP Secretariat	4	Cotonou	USAID
17	Training on USAID financial management procedures	September 2012	Staff from WAPP Secretariat	1	Abidjan	USAID
	Total No. of Persons Trained			***396***		

V.7. “REVIEW OF THE PRIORITY PROJECTS AS STATED IN THE INVESTMENT PROGRAMME”

This section involves an analysis of the impact of the implementation of the priority projects stated in the 2009-2012 Investment Programme on the regional electricity market, which included:

WAPP Priority Investment Programme

Sub-programmes	Priority Projects
Coastal Transmission Backbone (330kV lines)	330 kV Aboadze (Ghana) – Volta (Ghana) Transmission Line Project
	330 kV Volta (Ghana) - Lome 'C' (Togo) – Sakété (Benin) Interconnection Project
	330 kV PHCN/TCN (Nigeria) – CEB (Togo/Benin) Interconnection Reinforcement
	330 kV Riviera (Cote Ivoire) – Prestea (Ghana) Interconnection Reinforcement
	147 MW Adjarala Hydropower Facility
Inter-zonal Transmission Hub	330 kV Aboadze (Ghana) – Presta (Ghana) – Kumasi (Ghana) - Bolgatanga (Ghana) Transmission Line Project
	161 kV Tumu – Han - Wa (Ghana) Transmission Line Project
	225 kV Bolgatanga (Ghana) - Ouagadougou (Burkina Faso) Interconnection Project
	225 kV Ghana – Burkina - Mali Interconnection Project
	225 kV Bobo Dioulasso (Burkina Faso) – Ouagadougou (Burkina Faso) Transmission Line Project
	225 kV Cote d'Ivoire – Mali Interconnection Project
	225 kV Guinea – Mali Interconnection Project

North core Transmission	330 kV Birnin Kebbi (Nigeria) – Malanville (Benin) – Niamey (Niger) - Ouagadougou (Burkina) Interconnection Project
Development of the OMVS/OMVG power system	OMVS : Felou (60MW), Gouina (140MW) and reinforcement of transmission network
	OMVG : 225 kV Senegal - The Gambia - Guinea - Guinea Bissau Interconnection
	OMVG : Kaleta (240MW) and Sambagalou (128MW) Hydropower Facilities
	Development of Souapiti (515MW) Hydropower Facility
Development of the CLSG power system	Cote Ivoire – Liberia - Sierra Leone - Guinea Interconnection Project
	Reconstruction of 64 MW Mount Coffee Hydropower Facility
	Expansion of Bumbuna Hydropower Facility
Emergency Power Supply Security Plan	450 MW WAPP Maria Gleta (Benin) Regional Power Generation Facility
	450 MW WAPP Aboadze/Domunli (Ghana) Regional Power Generation Facility
	150 MW WAPP Power Generation Facility within OMVS Zone (Senegal)
MV Cross-Border Electrification	Ghana-Burkina; Ghana-Togo; Cote d'Ivoire-Liberia ; Ghana- Southern Togo ; Benin-Northern Togo
	The Gambia - Senegal ; Senegal - Guinea Bissau

- **Coastal Transmission Backbone Subprogram (Cote d'Ivoire, Ghana, Benin/Togo, Nigeria)**:- Aims to establish a robust interconnection link and corridor for power exchanges among WAPP Zone 'A' Coastal States.

  - ***330 kV Aboadze (Ghana) – Volta (Ghana):*** The transmission line became operational in September 2010 and was financed by World Bank (WB) under WAPP APL1, European Investment Bank (EIB), Kuwaiti Fund and Ghana Grid Company (GRIDCo). Not only does this line allow for power exchanges among the Coastal States, it also ensures the evacuation of power generated by the new thermal power stations at Aboadze and Volta. The performance of the line is being monitored by WAPP.

  - ***330 kV Volta (Ghana) – Lome 'C' (Togo) – Sakété (Benin):*** The project is at the level of implementation and being financed by the African Development Bank, KfW, and World Bank. Works on the Ghana segment are on-going. Prequalification of bidders have been completed for the Togo/Benin segment and bids have been launched. Recruitment of Owner's Engineer is also underway. The line which is designed to improve power exchanges on the Coastal Transmission Backbone, is expected to be commissioned in 2014.

  - ***330 kV Riviera (Cote d'Ivoire) - Prestea (Ghana):*** The project is currently at the stage of preparation and the pre-investment studies are being funded by the EU-Africa Trust Fund through the European Investment Bank. Consultants have been recruited to prepare a Feasibility Study and Preparation of Bidding Documents as well as a Line Route and Environmental and Social Impact Assessment Study. The project is expected to be commissioned in 2016.

  - ***330 kV PHCN/TCN (Nigeria) – CEB (Togo/Benin) Interconnection Reinforcement:*** The project is currently at the stage of preparation. Terms of Reference have been prepared for a Feasibility Study and Preparation of Bidding Documents as well as a Line Route and Environmental and Social Impact Assessment Study to be conducted. Requests for funding were also sent to Funding Agencies for consideration. The project is expected to be commissioned in 2017.

  - ***147 MW Adjarala Hydropower Facility:*** The project is at the level of processing for financing. All pre-investment studies for the project have been concluded and complementary studies to update the Economic and Financial analyses on the project and also the Environmental and Social Management Plan and the Resettlement Action Plan are being carried out. The African Development Bank, World Bank, Islamic Development Bank, KfW, ECOWAS Bank for Investment and Development, Banque Ouest Africaine de Développement, Saudi Fund and UEMOA have indicated firm interest to participate in the project's financing.

- **Inter Zonal Transmission Hub Subprogram (Burkina Faso and Mali via Ghana and Cote d'Ivoire, OMVS via Mali, Liberia, Sierra Leone, Guinea via Cote d'Ivoire):** Aims at establishing reliable transmission corridors to transport relatively cheaper energy from the coastal countries to the landlocked countries in West Africa which are less endowed with energy resources.

  - ***330 kV Aboadze (Ghana) – Prestea (Ghana) – Kumasi (Ghana) - Bolgatanga (Ghana) Transmission Line Project:*** The project is at the level of processing for financing. Technical specification for the 330 kV transmission line and substations was completed and funding was secured from Agence Française de Développement (AFD) to support GRIDCo in realizing the 330 kV Kumasi - Bolgatanga transmission line segment of the project. The project is expected to be commissioned in 2016/17.
  - ***161 kV Tumu (Ghana) – Han (Ghana) - Wa (Ghana) Transmission Line Project:*** The project is at the stage of implementation. The Environmental and Social Impact Assessment Studies have been completed and the Ghana Environmental Protection Agency issued an Environmental Permit. Construction works have commenced and the project is expected to be commissioned by 2014.
  - ***225 kV Bolgatanga (Ghana) - Ouagadougou (Burkina Faso) Interconnection Project:*** The project is at the stage of implementation and is being financed by the WB, AFD and EIB. The Transmission Service Agreement (TSA) between SONABEL and GRIDCo was executed and the Power Sales and Purchase Agreement (PSPA) between VRA and SONABEL was being finalised for execution in December 2012. The recruitment of an Owner's Engineer was ongoing and the expected commissioning of the line is 2015.
  - ***225 kV Ghana – Burkina - Mali Interconnection Project:*** The project is at the level of processing for financing. Pre-investment studies that were funded by EIB have been concluded and environmental permits issued in each of the three countries. Complementary studies funded by the EU-Africa Infrastructure Trust Fund through AFD are being carried out to among others, elaborate an appropriate commercial framework and update some aspects of the Environmental and Social Impact. The AFD, AfDB, EIB and EBID have indicated their firm interest to participate in the financing of the project. A WAPP Joint Implementation Committee for the project has been established and an institutional framework to implement the project adopted. The project is expected to be commissioned by 2016/17.
  - ***225 kV Bobo Dioulasso (Burkina Faso) – Ouagadougou (Burkina Faso) Transmission Line Project:*** The project was commissioned in September 2010 and its performance is being monitored by WAPP.

- ***225 kV Cote d'Ivoire – Mali Interconnection Project:*** Construction works on the project have been completed and the commissioning of the line was carried out in August 2012. The project was financed by the Governments of Cote d'Ivoire and Mali through bilateral cooperation with the Government of India, and also with the participation of BIDC and BOAD.
- ***225 kV Guinea – Mali Interconnection Project:*** The project is currently at the stage of preparation and the pre-investment studies are being funded by the AfDB. Consultants are being recruited to prepare a Feasibility Study and Preparation of Bidding Documents as well as a Line Route and Environmental and Social Impact Assessment Study. The project is expected to be commissioned in 2017.

➢ **North-core Transmission Sub-program (Nigeria, Niger, Burkina Faso, Benin):** Aims at reinforcing the stability of the WAPP interconnected system by establishing a reliable transmission corridor among the landlocked countries in West Africa and increasing access to low cost energy resources.

- ***330 kV Nigeria – Niger - Benin - Burkina Interconnection Project:*** The project is at the level of preparation. Pre-investment studies that were funded by the concerned national utilities have been concluded. Complementary studies are required to among others, elaborate an appropriate commercial framework and update the Feasibility Study and Environmental and Social Impact Assessment. Terms of Reference for these studies have been prepared and related Requests For Funding sent to WAPP Donors for consideration. The project is expected to be commissioned by 2017/18.

➢ **Development of the OMVS/OMVG Power System Sub-program (The Gambia, Guinea, Guinea Bissau, Mali, Senegal):**- Aims to interconnect national systems of The Gambia, Guinea, Guinea Bissau, Mali, Senegal and secure access to sources of low cost energy to be built on the Gambia River, the Senegal River and the Konkoure River Basins.

- ***60 MW Felou Hydropower Facility (OMVS-SOGEM):*** The project is at the level of implementation and being financed by the WB and EIB. Construction works are in progress and commissioning is expected in 2013.
- ***225 kV OMVG Energy Project:*** The project is at the stage of processing for financing and comprises the development of Hydropower facilities at Kaleta (240 MW) and Sambangalou (128 MW) in addition to a 225 kV transmission line interconnecting Senegal, The Gambia, Guinea Bissau and Guinea. Pre-investments studies have already been undertaken and more than 60% of the funding already mobilised. In a bid to accelerate the realisation of the

project, the Government of Guinea launched the construction of the 240 MW Kaleta Hydropower plant and commenced discussions with the OMVG Secretariat on the envisaged quantity of power that would be available from Kaleta for OMVG Member States. Similarly, In view of availability of part funding from the KfW and as requested by the national power utilities of Senegal and The Gambia, consultation meetings were held with a view to accelerating the implementation of the 225 kV transmission line OMVG Western Corridor by fast tracking the realisation of the 225 kV Kaolack (Senegal) – Brikama (The Gambia) – Soma (The Gambia) - Tanaf (Senegal) transmission line segment. Discussions were commenced among Senelec, NAWEC, OMVG Secretariat, KfW and WAPP Secretariat on an appropriate institutional framework to implement the transmission line segment. The WAPP Secretariat also submitted a request for funding to the 10th EDF and presented the initiative to the 21st WAPP Donors' Coordination Meeting. The entire OMVG Energy Project as initially conceived is expected to be completed in 2017/18.

- ***515 MW Souapiti Hydropower Facility:*** The project is at the level of preparation. The WAPP Secretariat mobilised funding from the World Bank to prepare a Feasibility Study for the project to complement Environmental and Social Impact Assessment studies being carried out by the AfDB. The process to recruit the Consultant to prepare the Feasibility study was launched. Commissioning of the project is expected in 2018/19.

➢ **Re-development of the Cote d'Ivoire – Liberia - Sierra Leone - Guinea Power System Sub-program:**- Aims to re-develop the hydro resources and interconnect Liberia, Sierra Leone into the WAPP System.

- ***225 kV Cote d'Ivoire – Liberia - Sierra Leone - Guinea Interconnection Project:*** The project is at the level of processing for financing. Pre-investment studies that were funded by the WB and the EU-Africa Infrastructure Trust Fund through the EIB were completed and adopted. The Government of Guinea issued an Environmental Permit for the project and the process in the other concerned countries was almost completed. Financing for the project is envisaged by the AfDB, WB, EIB and KfW and in fact, the Board of Directors of the WB gave approval on May 31st, 2012. The four countries have agreed to establish a Special Purpose Company (SPC) to implement the project and manage its operations after commissioning. The legal documents to establish the related legal and institutional framework comprising an International Treaty, International Project Agreement, Articles of Association and Shareholders Agreement, have been adopted. The Project Implementation Unit was being established and the project is expected to be commissioned in 2016.

- ***64 MW Mount Coffee Hydropower Facility:*** The project is at the level of processing for financing. Pre-investment studies that were funded by the EU-

Africa Infrastructure Trust Fund through the EIB and KfW were completed and adopted. Terms of Reference (ToR) for the establishment of a Dam Safety Panel (DSP) and an Environmental Safety Advisory Panel (ESAP) were prepared and the project was handed over to the Liberia Electricity Corporation for implementation. Commissioning of the project is expected in 2015.

- **WAPP Emergency Power Supply Security Plan Sub-program:**- Aims to address the energy deficits in the sub-region and improve the stability of the WAPP interconnected system.

  - ***450 MW WAPP Maria Gleta (Benin) Regional Power Generation Facility:*** The project is at the level of implementation. 46 hectares of land with freezone status has been acquired from the Government of Benin. Through international competitive bidding, Sithe Global Power Ventures LLC was selected as Private Partner to support WAPP realize the project. A Joint Development Agreement (JDA) and Confidentiality Agreement (CA) were executed between WAPP and Sithe Global. Following resolution by the WAPP Executive Board, a Joint Implementation Committee was established for the project. Sithe Global has begun updating the pre-investment studies that had been previously carried out by WAPP and discussions have commenced on the elements of a Project Implementation Agreement that would govern among others, the design and commercial framework for the project. Commissioning of the project is expected in 2016/17.

  - ***450 MW WAPP Aboadze/Domunli (Ghana) Regional Power Generation Facility:*** The project is at the level of implementation. 50 hectares of land has been identified at Domunli in Ghana and the process is advanced with the Government of Ghana to secure title to the land with freezone status. Through international competitive bidding, Sithe Global Power Ventures LLC was selected as Private Partner to support WAPP realize the project. A Joint Development Agreement (JDA) and Confidentiality Agreement (CA) were executed between WAPP and Sithe Global. Following resolution by the WAPP Executive Board, a Joint Implementation Committee was established for the project. Sithe Global has begun preparing pre-investment studies and discussions have commenced on the elements of a Project Implementation Agreement that would govern among others, the design and commercial framework for the project. Commissioning of the project is expected in 2017/18.

  - ***150 MW WAPP Power Generation Facility within OMVS Zone (Senegal):*** Following several attempts by WAPP to identify a suitable site for the project with the Governments of Mali and Senegal that led to significant delays in advancing the project, the Government of Senegal in June 2012 requested the WAPP to re-launch the project. Consultations were subsequently held between the Governments of Senegal and The Gambia with OMVS-SOGEM and WAPP

Secretariat during which, the Government of Senegal proposed to make available to the project a site at Saint Louis to take advantage of possible gas supplies from Mauritania. The Government of Senegal also indicated that it could consider a site at Kayar or a site at Sendou as potential alternative sites. A formal request for a site was consequently submitted to the Government of Senegal for approval to enable the securing of a Strategic Partner to support WAPP develop the project. Commissioning of the project is expected in 2018.

- **WAPP Medium Voltage (MV) Cross-Border Electrification Sub-program:**- Aims to increase access to electricity services to populations residing in rural and peri-urban communities along Border areas. The sub-program is being realized within the framework of the ACP-EU Energy Facilities of the European Union.

  - ***Ghana - Togo MV Cross Border Project (1st Energy Facility):*** The project was commissioned and inaugurated in March 2011 and involved the electrification of twenty-one (21) communities in Togo from Ghana. The project was financed by the EU, Electricity Corporation of Ghana (ECG), Compagnie Energie Electrique de Togo (CEET), and Communauté Électrique du Bénin (CEB)

  - ***Ghana – Burkina MV Cross Border Project (1st Energy Facility):*** The project was completed in August 2012 and involved the electrification of six (6) communities in Burkina from Ghana. The project was financed by the EU, Volta River Authority (VRA), and Société Nationale d'Electricité du Burkina (SONABEL).

  - ***Cote d'Ivoire – Liberia MV Cross Border Project (1st Energy Facility):*** The project involves the electrification of Eighteen (18) communities in Liberia from Cote d'Ivoire. The works in Côte d'Ivoire were completed. In Liberia, all MV cross arms and insulators were installed in Grand Geddeh and Nimba counties. In Maryland, bush clearing and installation of MV poles were well advanced. The Project is being financed by the EU, Liberia Electricity Corporation (LEC), and the defunct Société d'Opération Ivoirienne d'Electricité (SOPIE) (now CI-Energies) and is expected to be commissioned in 2013.

  - ***Ghana – Southern Togo MV Cross Border Project (2nd Energy Facility):*** The project involves the electrification of Fifteen (15) communities in Southern Togo from Ghana. The pre-investment studies for the project have been adopted and the process was launched to recruit Contractors to implement the project. The Project is being financed by the EU, ECG, CEB and CEET and is expected to be commissioned in 2014.

  - ***Benin – Northern Togo MV Cross Border Project (2nd Energy Facility):*** The project involves the electrification of Ten (10) communities in Northern Togo from Benin. The pre-investment studies for the project have been adopted and

the process was launched to recruit Contractors to implement the project. The Project is being financed by the EU, CEET and CEB and is expected to be commissioned in 2014.

- ***Senegal – The Gambia:*** Requests were being prepared for submission to the ACP-EU 3rd Energy Facility for consideration.
- ***Senegal – Guinea Bissau:*** Requests were being prepared for submission to the ACP-EU 3rd Energy Facility for consideration.

V.8. "ACHIEVEMENTS REALISED ON THE PRIORITY PROJECTS"

The Table below attempts to present the level of achievement realised on the Priority Projects in the 2009 – 2012 Business Plan:

Projects in 2009-2012 Business Plan whose ***Preparation*** should have been completed within the period:

	Project	Status by end 2012	% Completion	Challenges Encountered
1	Update and adopt Master Plan	Study Completed	100	
2	330 kV Riviera (Cote d'Ivoire) – Prestea (Ghana) Interconnection Reinforcement Project;	Feasibility Study and ESIA Study in progress.	60	Delays in securing funding to do pre-investments studies due to socio-political conflict
3	Han (Ghana) – Bobo Dioulasso (Burkina Faso) – Sikasso (Mali) – Bamako (Mali) Interconnection Project;	Pre-investment studies completed; Financing mobilised;	100	
4	225 kV Bolgatanga (Ghana) – Ouagadougou (Burkina Faso) Interconnection Project;	Pre-investment studies completed and financing mobilised	100	
5	Cote d'Ivoire – Liberia – Sierra Leone – Guinea Interconnection Project;	Pre-investment studies completed and financing mobilised	100	
6	Transmission lines emanating from 90 MW Fomi Hydropower Project – *225 kV Nzerekore (Guinea) – Fomi (Guinea) – Bamako (Mali) Interconnection Project;*	Pre-investment studies in progress	30	Delays in securing funding to do pre-investments studies

7	450 MW WAPP Maria Gleta (Benin) Regional Power Generation Facility;	Private Partner secured to support WAPP develop project and Joint Development Agreement executed; 46 hectares of secured with title and with freezone status; Pre-investment studies completed	100	
8	400 MW WAPP Aboadze/Domunli (Ghana) Regional Power Generation Facility;	Private Partner secured to support WAPP develop project and Joint Development Agreement executed; 50 hectares of land identified at Domunli in Ghana and process well-advanced with the Government of Ghana to secure title with freezone status	20	Delays in securing private partner
9	150 MW WAPP OMVS Power Generation Facility;	Consultations held between the Governments of Senegal and The Gambia with OMVS-SOGEM and WAPP Secretariat; Government of Senegal proposed to make available site for project	5	Delays in securing site for project, which has still not yet been acquired
10	225 kV Laboa (Cote d'Ivoire) – Ferkessedougou (Cote d'Ivoire) Transmission Line Project;	Pre-investment studies Completed	100	
11	Expansion of 50 MW Bumbuna Hydropower Project – Yiben Reservoir (WAPP Sierra Leone Special Program);	Consultations held with Government of Sierra Leone	5	Required the development of CLSG project for justification
12	Development of 515 MW Souapiti Hydropower Project;	ESIA study in progress	10	Delays in securing funding to do pre-investments studies
	Aggregate Average Completion		**61**	

Projects in 2009-2012 Business Plan whose ***Implementation*** should have been completed within 2009 - 2012:

	Project	Status by end 2012	% Completion	Challenges Encountered	Dimension	
					Length (km)	Capacity (MW)
1	330 kV Aboadze (Ghana) – Volta (Ghana) Transmission Line Project;	Operational Since September 2010	100		210	
2	330 kV Volta (Ghana) – Lome 'C' (Togo) – Sakete (Benin) Interconnection Project;	Financing was secured from AfDB, WB, BOAD and KfW. Ghana portion of works almost completed. Recruitment of Contractors was in progress for works in Togo/Benin	60	Delays in the implemenetation were realised as a result of among others, delays in completing financing for the Togo/Benin part of the project and a re-routing of the transmission line	425	
3	225 kV Bobo Dioulasso (Burkina Faso) – Ouagadougou (Burkina Faso) Transmission Line Project;	Operational Since December 2009	100		338	
4	225 kV Ferkessedougou (Cote d'Ivoire) – Segou (Mali) Interconnection Project;	Commissioned in 2012	100		370	
5	50 MW Bumbuna Hydropower Project;	Commissioned in November 2009	100			50
6	400 MW Bui Hydropower Project;	Construction Works in progress	90			400

7	WAPP Guinea Bissau Special Program;	Completed in 2011	100			
8	225 kV Bolgatanga (Ghana) – Ouagadougou (Burkina Faso) Interconnection Project;	Implementation in progress	15	Delays in closing financing for the project due to additional preparation requested by concerned Funding Agencies (Network reinforcements in Ghana)	210	
9	Han (Ghana) – Bobo Dioulasso (Burkina Faso) – Sikasso (Mali) – Bamako (Mali) Interconnection Project;	Processing for financing by Funding Agencies and complementary studies were kicked off to address requests comments from Funding Agencies	10	New Funding Agencies participating in financing of project requested some amendments to pre-investment studies; Re-routing of transmission line proposed	748	
10	225 kV Laboa (Cote d'Ivoire) – Ferkessedougou (Cote d'Ivoire) Transmission Line Project;	Implementation in progress	40	Delays in closing financing for the project due to socio-political conflict	285	
11	Ghana - Togo MV cross border project	Completed in 2011	100		103	
12	Ghana - Burkina Faso MV cross border project	Completed in 2011	100		64	
13	Cote d'Ivoire - Liberia MV cross border project	Cote d'Ivoire component of project commissioned; Works in Liberia in progress	60	Delays in construction due to socio-political conflict and securing complete funding for the project	360	
	Aggregate Average Completion		74		3,113	450

V.9. "SUMMARY OF ANNUAL BUDGET EXECUTION BETWEEN 2009 AND 2012"

This section provides a summary of executions of WAPP Annual Budgets between 2009 and 2012:

		Budget (UA)	Actuals (UA)	Budget (UA)	Actuals (UA)	Budget (UA)	**Actuals (UA)	*Budget (UA)*	*Budget (UA)*
		2009	2009	2010	2010	2011	2011	*2012*	*2013*
1	Personnel Expenses	1,118,829	862,113	1,463,902	1,121,344	1,338,265	1,181,533	*1,414,319*	*1,718,646*
2	General Expenses	423,459	231,348	353,916	327,245	397,661	498,712	*336,441*	*315,547*
3	Administrative Expenses	715,933	646,315	760,143	758,647	689,542	824,309	*513,139*	*797,891*
4	Executive Board and Committee Meetings	434,215	231,247	506,737	444,178	560,491	565,529	*593,319*	*612,998*
5	Capital Expenses	170,885	143,813	67,448	299,604	179,401	358,223	*184,655*	*108,175*
	TOTAL	2,863,321	2,114,836	3,152,146	2,951,018	3,165,360	3,428,306	*3,041,873*	*3,553,257*

** *The 2011 Actuals includes support received from World Bank and USAID*

VI. OBJECTIVES FOR THE PERIOD 2012 - 2015

VI.1. OBJECTIVE N° 1:

"ENSURE EFFECTIVE AND EFFICIENT IMPLEMENTATION OF WAPP PRIORITY PROJECTS AS DEFINED IN THE MASTER PLAN"

This objective is to ensure that the WAPP Priority Projects in the approved updated ECOWAS Revised Master Plan for the Generation and Transmission of Electrical Energy are implemented in time and within Budget.

The Planning, Investment Programming and Environmental Safeguards (PIPES) Department of the WAPP Secretariat is responsible for the preparation, mobilisation of financing, coordination and monitor of the WAPP Priority Projects approved in the Master Plan. The PIPES Department works closely with utility teams and Ministries in charge of energy to ensure that pre-investment studies that include Feasibility, Institutional, Commercial, Environmental and Social Impact Assessments, are carried out by independent consultants to demonstrate the bankability of the Priority Projects. The PIPES Department also maintains constant interaction with Donors to among others, coordinate mobilise financing for the preparation and implementation of the projects and also coordinate the interventions of Donors on projects. During the implementation of projects, the PIPES Department assumes a coordinating and monitoring role and also provides periodic updates on the progress of projects to the WAPP Strategic Planning and

Environmental Committee, WAPP Executive Board and the WAPP Donor Coordination Committee.

During the period 2012 – 2015, the WAPP Infrastructure Program as predicated on the approved Master Plan, shall aim to significantly increase the level of integration of the WAPP interconnected system and augment the composition of low cost, clean energy generation sources in the energy mix. In particular, the Infrastructure Program shall increase the number of interconnected systems, reinforce the capacities of existing interconnections and develop generation resources including hydropower. The concept of establishing Special Purpose Companies for regional projects as enacted by the Authority of the ECOWAS Heads of State and Government through Supplementary Acts A/SA.3/01/08 and A/SA.4/01/08, shall be further deployed, whilst taking into account lessons learnt from the on-going CLSG Project and the WAPP Regional Power Generation Facilities in Ghana (Aboadze/Domunli) and Benin (Maria Gleta).

The activities foreseen by the PIPES Department with associated Budget indicated in Chapter VIII include but are not limited to the following:

Sub-programs	Priority projects	PIPES Activities	Expected Commissioning
Coastal Transmission Backbone	330 kV Riviera (Cote d'Ivoire) - Prestea (Ghana) Interconnection Reinforcement Project	Feasibility study, ESIA, Bidding Documents, Funding Mobilisation; Monitoring of project implementation	2017
	330 kV Volta (Ghana) – Lome C (Togo) – Sakete (Bénin) Interconnection Project	Following up on implementation	2014
	330 kV TCN (Nigeria) - CEB (Benin) Interconnection Reinforcement Project	Feasibility study, ESIA, Bidding Documents, Funding Mobilisation; Following up on project implementation	2017
	WAPP 760 kV Super Grid Project in Nigeria:	Following up on preparation and implementation	2021
Interzonal Transmission Hub	225 kV Bolgatanga-Ouagadougou Interconnection Project	Following up on project implementation	2015
	225 kV Ghana – Burkina – Mali Interconnection Project	Finalization of complementary Pre-investment Studies, Securing of Financing, Following up on project implementation	2016
	330 kV Aboadze-Prestea- Kumasi - Bolgatanga & 161kV Tumu-Han-Wa Transmission Line Projects	Following up on project implementation	2015
	225 kV Guinea – Mali Interconnection Project	Feasibility study, ESIA, Bidding Documents, Funding Mobilisation; Following up on project implementation	2016
North Core Transmission	Birnin Kebbi (Nigeria) - Malanville (Benin) - Niamey (Niger) - Ouagadougou (Burkina)	Recruiting Consultants, Finalizing complementary Pre-investment Studies, Securing of Financing, Following up on project implementation	2017

Development of the OMVS/OMVG power system	OMVS :Felou (60MW), Gouina (140MW), and reinforcement of transmission network	Following up on project preparation and implementation	2013
	Integration of the power systems of Senelec (Senegal) and NAWEC (The Gambia) as accelerated implementation of the OMVG Energy Project	Securing of Financing, Following up on project implementation	2016
	Sambangalou (128MW), 225 kV Interconnection Line among Senegal, The Gambia, Guinea Bissau, Guinea		2017
Re-development of CLSG power system	Cote d'Ivoire - Liberia - Sierra Leone - Guinea Interconnection line	Establishing Project Implementation Unit, Establishing Special Purpose Company, Recruiting Owners' Engineer, Following up on project implementation,	2016
	Rehabilitation of the 64 MW Mount Coffee Hydrpower Project in Liberia	Following up on project implementation	2015
	128 MW Kassa B Hydropower Project in Guinea	Pre-feasibility study, Feasibility study, ESIA, Bidding Documents, Funding Mobilisation;	2019
	86 MW Bikongor Hydropower Project in Sierra Leone	Pre-feasibility study, Feasibility study, ESIA, Bidding Documents, Funding Mobilisation;	2019

Strategic Generation	450 MW WAPP Maria Gleta (Benin) Regional Power Generation Facility	Update Pre-investment studies, Fuel Supply Agreements, Power Purchase Agreements, EPC, Monitoring of project implementation	2016
	450 MW WAPP Domunli (Ghana) Regional Power Generation Facility	Prepare Pre-investment studies, Fuel Supply Agreements, Power Purchase Agreements, EPC, Monitoring of project implementation	2017
	150 - 450 MW WAPP Regional Power Generation Facility in Senegal within framework of EPSSP	Secure Private Partner, Prepare Pre-investment studies, Fuel Supply Agreements, Power Purchase Agreements, EPC, Monitoring of project implementation	2018
	147 MW Adjarala Hydropower Project	Securing of Financing, Following up on project implementation	2018
	Rehabilitation of the Kainji and Jebba Hydropower Plants in Nigeria	Following up on project implementation	2014
	515 MW Souapiti Hydropower Project in Guinea	Feasibility study, Bidding Documents, Funding Mobilisation; Following up on project implementation	2018
	30 MW Solar Power Plant in Mali	Feasibility study, ESIA, Bidding Documents, Funding Mobilisation; Following up on project implementation	2019
	220 MW Tiboto Hydropower Project	Pre-feasibility study, Feasibility study, ESIA, Bidding Documents, Funding Mobilisation;	2020
MV Cross-Border Electrification	Ghana- Southern Togo and Benin- Northern Togo MV Cross Border Projects	Monitoring and coordination of project implementation, commissioning	2014
	Cote d'Ivoire-Liberia MV Cross Border Project	Monitoring and coordination of project implementation, commissioning	2013
	Projects under 3rd Energy Facility of ACP-EU	Pre-investment Studies, Recruit Consultants, Recruit Contractors, monitoring of project implementation	2016
Other Activities	Donor Coordination Meetings	Coordinating the interventions of Donors and mobilizing funding for the development and execution of WAPP Priority Projects	
	WAPP Strategic Planning and Environmental Committee	Evaluate and adopt program of PIPES and examine pace of implementation of WAPP Priority Projects	
	Technical cooperation	Reinforcing relations in the domain of power exchanges	

VI.2. OBJECTIVE N° 2:

"ESTABLISH A REGIONAL ELECTRICITY MARKET"

In order that the citizens of ECOWAS have access to electricity at a competitive cost, it is essential that the Regional Electricity Market be in place during the period 2012-2015.

To implement the Regional Electricity Market, the WAPP Secretariat with the assistance of the Financial and Technical Partners shall implement the following activities:

Development of the Market

- Implementation of the WAPP ICC
- Implementation of a road map for establishing the Regional Electricity Market
- Capacity Building Programme for the Staff of ICC and Staff of the Control Centre
- Implementation of Exchange Programme with other Power Pools.

Implementation of the WAPP Operational Manual

- Carry out the synchronization of WAPP Zone A interconnected power system
- Development of Technical Norms and Standards for the efficient operation of the interconnected system (standardization of protection system, communication and emergency plan etc) with the appropriate tools for analysis and studies
- Development of Operating Instructions and Procedures (Policy 1 -7)
- Development of Certification Programme for System Operators (Policy 8)
- Improvement of the operation of the interconnected system
- Strengthen technical cooperation with the players in the electricity sector

Strengthen of the Monitoring and Evaluation System

- Strengthening of the M & E capacity of WAPP
- Improve the WAPP Database
- Strengthening of the electronic archive system of WAPP
- Improve the WAPP Website
- Publish information on the electric system

Implementation of the WAPP Dark Fibre Project

Implementation of an Energy Efficiency Programme for the WAPP Member Utilities

- Organise fora on Best Practices including energy efficiency
- Facilitate exchange programme amongst the WAPP Member Utilities
- Collect and propose modalities for tariff adjustment
- Develop a model for monitoring the load balance on the high voltage network
- Create a database on distribution equipment
- Develop a standard financing document for the electricity distribution companies

VI.3. OBJECTIVE N° 3:

"RE-INFORCE THE CAPACITY OF WAPP"

The successful achievement of the activities of the WAPP Secretariat will require the implementation of a minimum capacity building program. A needs assessment was undertaken under the cooperation agreement with USAID. The specific (human resources capacity building and training) needs must be addressed in order to achieve the priority goals of WAPP.

This minimum capacity building program will include several types of activities:

- Training of the ICC personnel to be responsible for management of the power pool.
- Formal training sessions organized by the technical assistance in the workplace and undertaken by experts recruited on short term basis;
- Training activities organized outside the office premises and outside the framework of the technical assistance (e.g. activities such as immersion courses).

The main focus of the training program is as follows:

- Management of the ICC data base, management of the energy exchange, management of the day to day contracts etc;
- Project Planning, Management and Environmental Impact Assessment Study;
- Establishment of a Regional Electricity Market.

This training program is designed for the staff of PIPES and ICC departments as well as designated representatives of the power utilities drawn from the Organizational Committees and Task Forces.

Project Planning, Management and Environmental Impact Assessment Study

The findings of the training needs assessment study (CBIP - Capacity Building Initiative Program) reveal that the WAPP possesses the required competences to update the regional master plan and monitor the priority projects. However, the lack of human resources in the PIPES department makes it necessary to recruit staff or preferably the permanent secondment of staff from power utilities. In any event, given the importance and the regional dimension of the power generation and transmission infrastructure projects whose planning, management and control are coordinated are coordinated by the additional staff placed at the disposal of the PIPES department and by representatives of the power utilities, members of the Strategic Planning and Environmental Committee, there is imperative need to strengthen the capacities of these staff members. The need to build the capacity of the staff of the PIPES Department is further reinforced by the fact that these projects have to comply with international environmental safeguard,

Although most of the completed or on-going feasibility studies under the priority investment program include a specific training program for local counterpart experts from beneficiary power utilities and the WAPP Secretariat (training undertaken by consultants conducting the studies), it is considered that training should be extended to additional

experts from beneficiary power utilities to ensure optimal monitoring of projects by the WAPP Secretariat and power utilities.

The training activities relating to the pre-investment activities are:

- Feasibility studies of HV network interconnections and power generation projects Regional and national planning of power generation and transmission facilities;
  - Design and optimization of infrastructure: power stations (civil and electromechanical engineering) and networks (lines and substations);
  - Economic and financial evaluation;
  - Preparation of tender documents for implementation under the framework of a Special Purpose Company;
  - Environmental impact assessment studies, Environmental and Social Management Plan;

- Institutional framework for power interconnection and generation projects under a SPC
  - Principles for the establishment of a Special Purpose Company, applied to concrete representative cases: CLSG, Maria Gleta…;
  - Negotiations on Power Purchase Agreements (PPA) or Energy Conversion Agreements (ECA): technical, legal, financial and environmental aspects.

- Monitoring the Implementation of projects
  - Supervision and monitoring of technical aspects of the HV network projects (mainly);
  - Supervision and monitoring of technical aspects of the thermal power generation facility projects (Diesel, Gas-fired Turbines, Combined Cycle Plants, Coal-fired;
  - Supervision and monitoring of technical aspects of the hydropower generation facility projects (new development/construction and retrofitting of existing facilities);
  - Monitoring of the implementation of the Environmental and Social Management Plans;
  - Administrative follow-up of infrastructure projects: procurements of goods and works, reporting in conformity with standard international organization rules.

Training activities in the area of system planning will be strengthened through the acquisition of appropriate computerized tools (WASP software for power generation (supply and demand) studies).

<u>Establishment of a regional electricity market</u>

The findings of the training needs assessment study (CBPI - Capacity Building Initiative Program) reveal the need to strengthen the capacity of the staff of the WAPP Secretariat

and member utilities of the WAPP on the concept of market operation, regional power regulation and fixing of tariffs and the information exchange protocols.

Indeed, the significant evolution of the existing power systems, arising from the creation of a regional electricity market, requires a radical change in the way of thinking of the stakeholders of the electricity sector. It is therefore essential for WAPP to plan ahead of such changes and have a thorough grasp of the basic concepts governing electricity market operation whose implementation constitutes a major institutional development since the different power supply related activities will have to be managed within specific independent entities under the control of a regulatory body.

Furthermore, the multiplicity of stakeholders will lead to a significant increase in information exchange with stringent security requirements. Moreover, the necessity of installing an efficient and interactive Information System will require comprehensive training of staff of the Information and Coordination Center (ICC) which must rapidly become fully operational.

The training activities relating to the establishment of a regional electricity market will focus on the following topics:

- The Concepts of market operation and regulation;
- Modus operandi of different market entities: Market Operator, System Operator, Network Operator, marketing, Regulators, Producers;
- Standard Contracts;
- Fixing of Tariffs ;
- Rules and procedures for market operation;
- Management Information Systems.

Particular emphasis should be placed on the functioning of the ICC as a System Operator and a Network Operator:

- Interface with the market participants (market operators, producers, transmission system operators, distributors, ...);
- Compensation mechanism, compensation market;
- Management of ancillary services, balance power payment, congestion management, management of network access contracts;
- Technical standards.

VII. STRUCTURE FOR IMPLEMENTING THE 2012-2015 ACTION PLAN

The implementation of the WAPP Action Plan for the period 2012-2015 is aimed at achieving the priority goals. This calls for a through reorganization of the various Departments of the Secretariat. In fact, given the magnitude of the tasks to be performed during this critical transition period and the effective kick-off new activities in its capacity as a regional market operator, the WAPP Secretariat will require strong dynamic structures and an effective enhancement of its operational capacities.

The new organization of the WAPP Secretariat describing their role in the achievement of the priority goals is described below.

VII.1. STRENGTHENING OF THE DEPARTMENT OF PLANNING, INVESTMENT PROGRAMMING AND ENVIRONMENTAL SAFEGUARDS (PIPES)

This Department, whose main goal is to realize within the prescribed time schedule the implementation of WAPP priority projects, will be strengthened with adequate capacities for the preparation, coordination and monitoring of projects in order to ensure that:

- All required pre-investment studies are executed on schedule to enable timely commencement of mobilization of funds;
- Project implementation is consistent with agreed implementation schedule in accordance with the requirements and procedures of donors as well as national environmental protection laws and regulations.

The main activities of the PIPES Department over the period 2012-2015 will revolve around the following actions:

a) Continue with the preparation of pre-investment studies and mobilisation of funding for the priority projects contained in Annex;

b) Coordinate, monitor and assess the development and implementation of the priority projects contained in Annex;

c) Develop and implement the medium voltage cross-border projects contained in Annex.

The proposed organizational structure for the period 2012 - 2015 assumes full-time personnel for the PIPES Department whose activities would revolve around two divisions (Studies, Planning and Funds Mobilisation; Coordination, Monitoring and Evaluation).

The energy crisis prevailing in the region since the establishment of the WAPP Secretariat in 2006 has impacted adversely on the capability of WAPP members to contribute effectively to the operating budget of the Secretariat. Consequently, the strategy for

increasing WAPP human resources must take into account this constraint, while ensuring that the work programme of the Department over this given period is successfully implemented. As such, funding permitting, the practice of soliciting WAPP Member Utilities to “second” appropriate staff to support the WAPP Secretariat and manage portfolio of projects shall still be employed over the period of implementation of this Business Plan. However, as the situation of WAPP Member Utilities improves, the seconded staff shall gradually be replaced by permanent staff.

In addition, WAPP shall continue to engage its Partners such as USAID, World Bank and European Union to provide resident Technical Assistance to the WAPP. In this regard, the EU has already put in place a 1-year resident Technical Assistance at the WAPP Secretariat for the period September 2012 to August 2013 that shall hopefully be followed by a 3-year Technical Assistance program. The World Bank in May 2012, approved a Technical Assistance program to the WAPP that foresees among others, four resident experts at the WAPP Secretariat to provide support on project development, monitoring and coordination, environmental safeguards, and power pool operations. The on-going Technical Assistance program of USAID that supports the secondment of staff among others is expected to conclude in 2013. Discussions have nonetheless commenced for a continuation of the program, which according to current indications, would have to focus on clean energy issues.

The expected Organogram of PIPES over the period of the Business Plan is indicated in Annex 2

VII.2. REORGANISATION OF THE DEPARTMENT OF THE INFORMATION AND COORDINATION CENTER (ICC)

The ICC is the Department that will in the coming years undergo significant transformation within the General Secretariat, basically due to the development of the regional electricity market. The advent of a regional electricity market and interconnected network operations will require a strong coordination between the ICC and the five Control Areas Centers (CACs). Against this background, the roles and new activities of the ICC shall include:

1. Implementation of a Regional Electricity Market and its management
2. Implementation of the WAPP ICC Project
3. Implementation of the WAPP Dark Fibre Project
4. Collect, analyse and disseminate reliable information on the state of the regional power system and its evolution.
5. Ensure its monitoring mission by developing and implementing the necessary measures required for the efficient performance of the system (Directives, Operating Instructions, Technical Standards, recommendations from system studies and analysis using the appropriate tools, implementation of recommendations etc);

6. Develop and coordinate in collaboration with the Control Centres the Operation Plans (generation and electricity network) within the framework of a reliable regional operation system;
7. Plan and carry out day to day transactions relating to the operation of the interconnected regional network in collaboration with the Control Centres;
8. Evaluate the performance of the electric system;
9. Strengthen the capacity of WAPP in monitoring and evaluation;
10. Ensure regular monitoring and evaluation;
11. Enhance the WAPP database;
12. Improve the WAPP Website;
13. Organize fora on Best Practices including energy efficiency;
14. Facilitate exchange programme among the WAPP Member utilities to share experiences;
15. Evaluate modalities for adjusting electricity tariffs prevailing in ECOWAS Member States and propose a harmonised tariff methodology;
16. Define the performance criteria of the distribution network;
17. Develop a standard finance document for the electricity distribution companies;

The entire activities have been grouped into different sub-programmes set out below:

A	**Programme 1: Implement a functioning Information Coordination Centre**
1	Implementation of the WAPP ICC
2	Implementation of the WAPP Dark Fibre project
3	Implementation of the WAPP Operational Manual
4	○ Preparation towards the synchronisation of WAPP Zone A interconnected power system ○ Development of Technical Norms and Standards for the efficient operation of the interconnected system (standardization of protection system, communication and emergency plan etc) with the studies and analysis ○ Development of Operating Instructions and Procedures (Policy 1 -7) ○ Development of Certification Programme for System Operators (Policy 8) ○ Improvement of the operation of the interconnected system
5	Develop the Market Rules
6	Reinforce technical cooperation with stakeholders of the power sector
B	**Programme 2: Implementation of Monitoring and Evaluation System**
1	Strengthening of WAPP M & E
2	Improvement the WAPP Database
3	Strengthening of the electronic archive system of WAPP
4	Improvement of the WAPP Website
5	Publish the operation indicators of the electric system

C	**Programme 3: Energy Efficiency of the WAPP Member Utilities**
1	Organise fora on the best practice of energy efficiency
2	Facilitate exchange programme amongst the WAPP Member Utilities
3	Collect and propose modalities for tariff adjustment
4	Develop a model for monitoring the load balance on the high voltage network
5	Create a database on distribution equipment
6	Develop a standard financing document for the electricity distribution companies
D	**Programme 4: Preparation towards the operation of the Power Pool**
1	Implementation of an exchange programme with other power pools
2	Capacity Building for ICC Staff and Staff of the Dispatching Centre
3	Implementation of a Road Map for the establishment of a Regional Electricity Market

With regard to the CACs – Control Area Centre the activities to be undertaken include:

1. Prepare annual, monthly, weekly and daily operation schedules.
2. Operate network within CAC in a safe and reliable manner.
   - Monitor load flow, voltage and frequency of the system;
   - Coordinate in collaboration with ICC planned outages that has an impact on the security of the interconnected system;
   - Manage the procedures for restoration of power in the event of a contingency.

In order to perform its tasks effectively, the Information and Coordination Centre headed by a Director, the ICC will be organized as follows over the period 2012-2015.

Subdivisions	Functions	Divisions
Programming Subdivision	Short term system operations planning Coordination of scheduled outages, (coordination of the maintenance)	Market
Supply/demand Subdivision	Planning and operation of Supply/demand, (regional load flow projections)	
Dispatch Operators	Distribution of load so as to maintain balance of supply and demand ; Operation and maintenance dispatch equipment	Operations
Market Operators	Coordination of Energy transactions	
Power system control Subdivision	Analysis of system protection and network contingencies	
ICT	IT, SCADA, Communications, LAN, servers, database, M&E, Management Information System, Management of Website	ICT

The setting-up of the new workforce for the functioning of the Information and Coordination Centre (ICC) will be conducted in three phases:

Phase 1: Strengthening the capacity of the current ICC department to prepare the launching of the new ICC project through:

- Recruitment in 2012 of a Webmaster;
- Recruitment of an Expert in System Monitoring and Evaluation;
- Secondment of a Database Specialist from one of the power utilities;

Phase 2: Recruitment of staff in 2013 for the implementation of the ICC project: two Operation Supervisors, two Dispatching Operators, two Market Operators, two Database Administrator and two Communication / SCADA Specialists;

Phase 3: For a fully operational ICC in 2015, completion of staff recruitment in order to attain the total staff strength of 34.

VII.3. STRENGTHENING OF THE ADMINISTRATION AND FINANCE DEPARTMENT

The Department of Administration and Finance is designed to strengthen the organizational structure of the WAPP and manage the human resource, financial and accounting systems of the WAPP Secretariat. Its Roles and responsibilities are defined below:

1. Maintain records of financial transactions in accordance with the WAPP Financial Regulations and Financial and Accounting Manual;

2. Prepare WAPP annual budgets and provide information on the actual status of budget implementation and advice on gaps identified;

3. Organize and manage (staff and systems) resources and procedures, prepare reports in accordance with WAPP policies and regulations and provide useful information to the Secretary General;

4. Develop and maintain, for the staff, an environment that fosters productivity and motivation;

5. Determine, in collaboration with the Office of the Secretary General and the two Departments (PIPES and ICC), the human resources requirements of the WAPP and take appropriate steps to recruit staff with the required qualifications, skills and competencies;

6. Manage the human resources of the WAPP Secretariat according to the WAPP status as well as internal standards for human resources management;

7. Reinforce the capacities of WAPP Member Utilities by among others, establishing Centres of Excellence and Regional Training Centres;

8. Develop policies and procedures to ensure good governance and accomplish the goals of the organization;

9. Provide support to the Finance and Human Resources Committee in the accomplishment of its duties.

The Department of Administration and Finance is organized (Annex 4) into four Divisions, each supervised by a Head of Division and whose areas of responsibility are defined below:

1. Administration Division: General administration, fleet management, maintenance of buildings and equipment, management of WAPP - ICC headquarters construction, security guard, documentation, translation, management of lease contracts.

2. Finance & Accounts Division: Budget preparation and monitoring, finance and accounting, disbursement, payroll, petty cash, cash management, procurement and stock management.

3. Human Resources Division: Staff management, recruitment, guidance, training, integration, performance appraisal, separation, departure programming, staff contract management, maintenance of staff files. A Human Resources Officer will be recruited in 2013.

3. Protocol Division: Travel arrangements, visa applications, reception and accommodation of guests, meeting logistics, social receptions and events, Government relation. The protocol unit, which is directly under the Director, will be under the responsibility of a Protocol Officer. In anticipation of increased activities of the Secretariat, an Assistant Protocol Officer will be recruited in 2013.

VIII. BUDGET AND FINANCING PLAN FOR 2013 – 2015 ACTIVITIES

The Budget of the WAPP Secretariat during the period 2013 – 2015, is estimated at **US$ 4,108,036,000**. The breakdown is as follows:

- **US$ 3,877,309,000** for the implementation of WAPP Priority Projects which fall within the remit of the PIPES Department;
- **US$ 202,790,000** for the implementation of the Regional Electricity Market and the acquisition of equipment for the ICC;
- **USS 11,169,000** for Capacity Building Programme;
- **US$ 16,769,000** as the operating budget of the Secretariat.

The amount of US$3,877,309,000 reflects the expected annual disbursements from Funding Agencies on the implementation of WAPP Priority Projects during the period 2013 – 2015. The **actual funding gap** that needs to be covered by WAPP Partners over the period for the implementation of WAPP Priority Projects is **US$5,329,547,000.**

Summary Budget for the Business Plan ('000 US$)

OBJECTIVES	ACTIVITIES	2013-2015	2013	2014	2015
Priority Projects	WAPP	*2,238*	971	781	486
	Donors	*3,872,771*	350,836	1,217,701	2,304,234
	Utilities	*2,300*	1,586	714	-
	Sub-Total	***3,877,309***	**353,393**	**1,219,196**	**2,304,720**
Establishment of Regional Electricity Market	WAPP	*5,313*	2,205	1,689	1,418
	Donors	*197,477*	98,834	67,165	31,477
	Sub-Total	***202,790***	**101,039**	**68,855**	**32,896**
Training Program	WAPP	*300*	100	100	100
	USAID	*2,243*	1,721	521	-
	AfDB	*2,660*	1,153	915	592
	EU	*2,462*	431	1,016	1,016
	WB	*3,504*	1,603	1,403	498
	Sub-Total	***11,169***	**5,009**	**3,955**	**2,205**
Operating Budget of WAPP Secretariat	**Sub-Total**	***16,769***	**5,452**	**5,589**	**5,728**
Total		***4,108,036***	**464,893**	**1,297,594**	**2,345,549**

WAPP 2013 BUDGET AND PROJECTIONS FOR 2014 & 2015			
	2013	**2014**	**2015**
Item Description	**Budget (UA)**	**Budget (UA)**	**Budget (UA)**
Revenues			
Members Contribution	3,621,687	3,712,229	3,805,035
Total Revenues (UA)	**3,621,687**	**3,712,229**	**3,805,035**
Expenditures			
Personnel Expenses	1,718,646	1,761,612	1,805,652
General Expenses	315,547	323,436	331,522
Administrative Expenses	797,891	817,838	838,284
Executive and Committee Meetings	612,998	628,323	644,031
Capital Expenditure (WAPP Secretariat)	108,175	110,879	113,651
Contingencies	68,430	70,141	71,895
Total Expenditures (UA)	**3,621,687**	**3,712,229**	**3,805,035**
Total Expenditure (USD)	***5,452,226***	***5,588,532***	***5,728,245***

1 UA = 1.551788 USD

VIII.2. BUDGET FOR THE ACTIVITIES OF PIPES DEPARTMENT

Sub-programs	Priority projects	PIPES Activities*		Cost (US$ '000s)				Cost (US$ '000s)		
				2012	2013	2014	2015	Project Cost (Donors)		WAPP
								Mobilised / Secured	Required	
Coastal Transmission Backbone	330 kV Riviera (Cote d'Ivoire) - Prestea (Ghana) Interconnection Reinforcement Project	Feasibility study, ESIA, Bidding Documents, Funding Mobilisation; Monitoring of project implementation	WAPP		40	7	7			54
			Donors		1,225	28,500	28,500	2,450	57,000	
	330 kV Volta (Ghana) – Lome C (Togo) – Sakete (Bénin) Interconnection Project	Following up on implementation	WAPP		4	4				8
			Donors		113,667	113,667		341,000		
	330 kV TCN (Nigeria) - CEB (Benin) Interconnection Reinforcement Project	Feasibility study, ESIA, Bidding Documents, Funding Mobilisation; Following up on project implementation	WAPP		68	62	7			137
			Donors		1,700	1,700	19,500		42,400	
	WAPP 760 kV Super Grid Project in Nigeria:	Following up on preparation and implementation	WAPP		6	6	6			18
			Donors				400,000		2,000,000	
	Total Sub-program		**WAPP**	-	**118**	**79**	**20**	-	-	**218**
			Donors	-	**116,592**	**143,867**	**448,000**	**343,450**	**2,099,400**	-
Interzonal Transmission Hub	225 kV Bolgatanga-Ouagadougou Interconnection Project	Following up on project implementation	WAPP		8	8				16
			Donors		37,000	37,000		112,900		
	225 kV Ghana – Burkina – Mali Interconnection Project	Finalization of complementary Pre-investment Studies, Securing of Financing, Following up on project	WAPP		72	7	7			86
			Donors		538	79,787	79,787	219,778	19,582	
	330 kV Aboadze-Prestea- Kumasi - Bolgatanga & 161kV Tumu-Han-Wa Transmission Line Projects	Following up on project implementation	WAPP		4	4	4			12
			Donors		62,267	62,267	62,267	186,800		
	225 kV Guinea – Mali Interconnection Project	Feasibility study, ESIA, Bidding Documents, Funding Mobilisation; Following up on project implementation	WAPP		61	51	7			118
			Donors		2,030	2,030	125,000	4,060	375,000	
	Total Sub-program		**WAPP**	-	**145**	**70**	**18**	-	-	**232**
			Donors	-	**101,834**	**181,083**	**267,053**	**523,538**	**394,582**	-

North Core Transmission	Birnin Kebbi (Nigeria) - Malanville (Benin) - Niamey (Niger) - Ouagadougou (Burkina)	Recruiting Consultants, Finalizing complementary Pre-investment Studies, Securing of Financing, Following up on project implementation	WAPP		79	140	7			226
			Donors				180,000		540,000	
	Total Sub-program		**WAPP**	-	**79**	**140**	**7**	-	-	**226**
			Donors	-	-	-	**180,000**	-	**540,000**	-
Development of the OMVS/OMVG Power System	OMVS :Felou (60MW), Gouina (140MW), and reinforcement of transmission network	Following up on project preparation and implementation	WAPP		5	5	5			15
			Donors		78,667	109,667	109,667	236,000	329,000	
	Integration of the power systems of Senelec (Senegal) and NAWEC (The Gambia) in collaboration with OMVG Secretariat as accelerated implementation of the OMVG Energy Project. --- Sambangalou (128MW), 225 kV Interconnection Line among Senegal, The Gambia, Guinea Bissau, Guinea	Securing of Financing, Following up on project implementation	WAPP		110	7	7			124
			Donors			71,400	71,400	32,256	110,544	
	Total Sub-program		**WAPP**	-	**115**	**12**	**12**	-	-	**139**
			Donors	-	**78,667**	**181,067**	**181,067**	**268,256**	**439,544**	-
Re-development of CLSG Power System	Cote d'Ivoire - Liberia - Sierra Leone - Guinea Interconnection line	Establishing Project Implementation Unit, Establishing Special Purpose Company, Recruiting Owners' Engineer, Following up on project implementation,	WAPP		43	7	7			57
			Donors			107,500	107,500	430,000		
	Rehabilitation of the 64 MW Mount Coffee Hydrpower Project in Liberia	Following up on project implementation	WAPP		4	4	4			12
			Donors			69,667	69,667	209,000		
	128 MW Kassa B Hydropower Project in Guinea	Pre-feasibility study, Feasibility study, ESIA, Bidding Documents, Funding Mobilisation;	WAPP		21	26	32			79
			Donors		181	181	182	544	214,000	
	86 MW Bikongor Hydropower Project in Sierra Leone	Pre-feasibility study, Feasibility study, ESIA, Bidding Documents, Funding Mobilisation;	WAPP		21	26	32			79
			Donors		227	226	227	680	78,000	
	Total Sub-program		**WAPP**	-	**90**	**64**	**74**	-	-	**227**
			Donors	-	**408**	**177,574**	**177,576**	**640,224**	**292,000**	-

Strategic Generation	450 MW WAPP Maria Gleta (Benin) Regional Power Generation Facility within framework of EPSSP	Update Pre-investment studies, Fuel Supply Agreements, Power Purchase Agreements, EPC, Monitoring of project implementation	WAPP			7	7			14
			Private Partner		1,146	217,333	217,333	652,000	1,146	
			Concerned Utiltites		873				873	
	450 MW WAPP Domunli (Ghana) Regional Power Generation Facility within framework of EPSSP	Prepare Pre-investment studies, Fuel Supply Agreements, Power Purchase Agreements, EPC, Monitoring of project implementation	WAPP			7	7			14
			Private Partner		1,146	217,333	217,333	652,000	1,146	
			Concerned Utiltites		714				714	
	150 - 450 MW WAPP Regional Power Generation Facility in Senegal within framework of EPSSP	Secure Private Partner, Prepare Pre-investment studies, Fuel Supply Agreements, Power Purchase Agreements, EPC, Monitoring of project implementation	WAPP		76		7			83
			Private Partner			1,146	217,333		653,146	
			Concerned Utiltites			714			714	
	147 MW Adjarala Hydropower Project	Securing of Financing, Following up on project implementation	WAPP			7	7			14
			Donors			94,250	94,250	377,000		
	Rehabilitation of the Kainji and Jebba Hydropower Plants in Nigeria	Following up on project implementation	WAPP		4					4
			Donors		42,517			127,550		
	515 MW Souapiti Hydropower Project in Guinea	Feasibility study, Bidding Documents, Funding Mobilisation; Following up on project implementation	WAPP		21	21	7			49
			Donors		816	816	265,333	1,632	796,000	
	30 MW Solar Power Plant in Mali	Feasibility study, ESIA, Bidding Documents, Funding Mobilisation; Following up on project implementation	WAPP		24	47	7			78
			Donors		945	945	36,667		111,890	
	220 MW Tiboto Hydropower Project	Pre-feasibility study, Feasibility study, ESIA, Bidding Documents, Funding Mobilisation;	WAPP		50	105	90			246
			Donors		227	227	227		680	
	Total Sub-program		**WAPP**	**-**	**175**	**194**	**132**	**-**	**-**	**501**
			Donors	**-**	**46,795**	**532,050**	**1,048,477**	**1,810,182**	**1,564,007**	**-**
			Concerned Utiltites	**-**	**1,586**	**714**	**-**	**-**	**2,300**	**-**

MV Cross-Border Electrification	Ghana- Southern Togo and Benin- Northern Togo MV Cross Border Projects	Monitoring and coordination of project implementation, commissioning	WAPP		15	15	15			44
			Donors		2,053	2,053	2,054	6,160		
	Cote d'Ivoire-Liberia MV Cross Border Project	Monitoring and coordination of project implementation, commissioning	WAPP		28					28
			Donors		4,480			13,440		
	Total Sub-program		**WAPP**	**-**	**42**	**15**	**15**	**-**	**-**	**72**
			Donors	**-**	**6,533**	**2,053**	**2,054**	**19,600**	**-**	**-**
Other Activities	Donor Coordination Meetings	Coordinating the interventions of Donors and mobilizing funding for the development and execution of WAPP Priority Projects	WAPP		129	129	129			
			Donors							
	WAPP Strategic Planning and Environmental Committee	Evaluate and adopt program of PIPES and examine pace of implementation of WAPP Priority Projects	WAPP		62	62	62			
			Donors							
	Technical cooperation	Reinforcing relations in the domain of power exchanges	WAPP		18	18	18			
			Donors							
	Technical Assistance	Reinforcing the capacity of PIPES	WAPP							
			Donors		7	7	7	7	14	
	Total Sub-program		**WAPP**	**-**	**208**	**208**	**208**	**-**	**-**	**-**
			Donors	**-**	**7**	**7**	**7**	**7**	**14**	**-**
Total Program			**WAPP**	**-**	**971**	**781**	**486**	**-**	**-**	**1,614**
			Donors	**-**	**350,836**	**1,217,701**	**2,304,234**	**3,605,257**	**5,329,547**	**-**
			Concerned Utiltites	**-**	**1,586**	**714**	**-**	**-**	**2,300**	**-**

**The sum for Donors includes the participation of the Private Partner in the Maria Gleta and Domunli Projects.*

	Activity	2012 (Project)	2013 (Project)	2014 (Project)	2015 (Project)
A1	**Implement pre-investment studies and mobilise funding for WAPP Projects**	330 kV Riviera (Cote d'Ivoire) – Prestea (Ghana) Interconnection Reinforcement Project;	330 kV Riviera (Cote d'Ivoire) – Prestea (Ghana) Interconnection Reinforcement Project;	330 kV Riviera (Cote d'Ivoire) – Prestea (Ghana) Interconnection Reinforcement Project;	
		Han (Ghana) – Bobo Dioulasso (Burkina Faso) – Sikasso (Mali) – Bamako (Mali) Interconnection Project;	Han (Ghana) – Bobo Dioulasso (Burkina Faso) – Sikasso (Mali) – Bamako (Mali) Interconnection Project;		
		Cote d'Ivoire – Liberia – Sierra Leone – Guinea Interconnection Project;			
		Guinea - Mali Interconnection Project;	Guinea - Mali Interconnection Project;	Guinea - Mali Interconnection Project;	
		450 MW WAPP Maria Gleta Power Generation Facility;			
		450 MW WAPP Domunli Power Generation Facility;			
		150 - 450 MW WAPP Power Generation Facility within OMVS Zone;	150 - 450 MW WAPP Power Generation Facility within OMVS Zone;		
		330 kV Northcore Interconnection Project;	330 kV Northcore Interconnection Project;	330 kV Northcore Interconnection Project;	

	Activity	2012 (Project)	2013 (Project)	2014 (Project)	2015 (Project)
A2	**Implement pre-investment studies and mobilise funding for WAPP Projects**	330 kV TCN (Nigeria) - CEB (Togo/Benin) Interconnection Reinforcement Project	330 kV TCN (Nigeria) - CEB (Togo/Benin) Interconnection Reinforcement Project	330 kV TCN (Nigeria) - CEB (Togo/Benin) Interconnection Reinforcement Project	
		Integration of power systems of Senelec and NAWEC (OMVG Energy Project)	Integration of power systems of Senelec and NAWEC (OMVG Energy Project)		
		Reconstruction of 64 MW Mount Coffee Hydropower Project			
		Development of 515 MW Souapiti Hydropower Project;	Development of 515 MW Souapiti Hydropower Project;	Development of 515 MW Souapiti Hydropower Project;	
		Development of 128 MW Kassa 'B' Hydropower Project;	Development of 128 MW Kassa 'B' Hydropower Project;	Development of 128 MW Kassa 'B' Hydropower Project;	Development of 128 MW Kassa 'B' Hydropower Project;
		Development of 86 MW Bikongor Hydropower Project;	Development of 86 MW Bikongor Hydropower Project;	Development of 86 MW Bikongor Hydropower Project;	Development of 86 MW Bikongor Hydropower Project;
		Development of 220 MW Tiboto Hydropower Project;	Development of 220 MW Tiboto Hydropower Project;	Development of 220 MW Tiboto Hydropower Project;	Development of 220 MW Tiboto Hydropower Project;
		Development of 30 MW Solar Power Plant in Mali;	Development of 30 MW Solar Power Plant in Mali;	Development of 30 MW Solar Power Plant in Mali;	

	Activity	2012 (Project)	2013 (Project)	2014 (Project)	2015 (Project)
B1	**Coordinate and Monitor Implementation of WAPP Priority Projects**	330 kV Volta (Ghana) – Lome 'C' (Togo) – Sakete (Benin) Interconnection Project;	330 kV Volta (Ghana) – Lome 'C' (Togo) – Sakete (Benin) Interconnection Project;	330 kV Volta (Ghana) – Lome 'C' (Togo) – Sakete (Benin) Interconnection Project;	
		330 kV Aboadze (Ghana) – Prestea (Ghana) – Bolgatanga (Ghana) Transmission Line Project;	330 kV Aboadze (Ghana) – Prestea (Ghana) – Bolgatanga (Ghana) Transmission Line Project;	330 kV Aboadze (Ghana) – Prestea (Ghana) – Bolgatanga (Ghana) Transmission Line Project;	330 kV Aboadze (Ghana) – Prestea (Ghana) – Bolgatanga (Ghana) Transmission Line Project;
		161 kV Tumu (Ghana) – Han (Ghana) – Wa (Ghana) Transmission Line Project;	161 kV Tumu (Ghana) – Han (Ghana) – Wa (Ghana) Transmission Line Project;		
		OMVG Energy Project: Sambangalou (128MW), 225 kV Interconnection Line among Senegal, The Gambia, Guinea Bissau, Guinea;	OMVG Energy Project: Sambangalou (128MW), 225 kV Interconnection Line among Senegal, The Gambia, Guinea Bissau, Guinea;	Integration of power systems of Senelec and NAWEC (OMVG Energy Project) + Sambangalou (128MW), 225 kV Interconnection Line among Senegal, The Gambia, Guinea Bissau, Guinea;	Integration of power systems of Senelec and NAWEC (OMVG Energy Project) + Sambangalou (128MW), 225 kV Interconnection Line among Senegal, The Gambia, Guinea Bissau, Guinea;
			450 MW WAPP Maria Gleta Power Generation Facility;	450 MW WAPP Maria Gleta Power Generation Facility;	450 MW WAPP Maria Gleta Power Generation Facility;
			450 MW WAPP Domunli Power Generation Facility;	450 MW WAPP Domunli Power Generation Facility;	450 MW WAPP Domunli Power Generation Facility;
				150 - 450 MW WAPP Power Generation Facility within OMVS Zone;	150 - 450 MW WAPP Power Generation Facility within OMVS Zone;
		60 MW Felou Hydropower Project, 140 MW Gouina Hydropower Project;	60 MW Felou Hydropower Project, 140 MW Gouina Hydropower Project;	140 MW Gouina Hydropower Project;	140 MW Gouina Hydropower Project;
		Reconstruction of 64 MW Mount Coffee Hydropower Project	Reconstruction of 64 MW Mount Coffee Hydropower Project	Reconstruction of 64 MW Mount Coffee Hydropower Project	Reconstruction of 64 MW Mount Coffee Hydropower Project

	Activity	2012 (Project)	2013 (Project)	2014 (Project)	2015 (Project)
B2	**Coordinate and Monitor Implementation of WAPP Priority Projects**	Rehabilitation of 760 MW Kainji and 578 MW Jebba Dams;	Rehabilitation of 760 MW Kainji and 578 MW Jebba Dams;		
		225 kV Bolgatanga (Ghana) – Ouagadougou (Burkina Faso) Interconnection Project;	225 kV Bolgatanga (Ghana) – Ouagadougou (Burkina Faso) Interconnection Project;	225 kV Bolgatanga (Ghana) – Ouagadougou (Burkina Faso) Interconnection Project;	
		147 MW Adjarala Hydropower Project;	147 MW Adjarala Hydropower Project;	147 MW Adjarala Hydropower Project;	147 MW Adjarala Hydropower Project;
			Cote d'Ivoire – Liberia – Sierra Leone – Guinea Interconnection Project;	Cote d'Ivoire – Liberia – Sierra Leone – Guinea Interconnection Project;	Cote d'Ivoire – Liberia – Sierra Leone – Guinea Interconnection Project;
				Han (Ghana) – Bobo Dioulasso (Burkina Faso) – Sikasso (Mali) – Bamako (Mali) Interconnection Project;	Han (Ghana) – Bobo Dioulasso (Burkina Faso) – Sikasso (Mali) – Bamako (Mali) Interconnection Project;
					330 kV Riviera (Cote d'Ivoire) – Prestea (Ghana) Interconnection Reinforcement Project;
					Guinea - Mali Interconnection Project;
					330 kV Northcore Interconnection Project;
					330 kV TCN (Nigeria) - CEB (Benin) Interconnection Reinforcement Project
					Development of 515 MW Souapiti Hydropower Project;
					Development of 30 MW Solar Power Plant in Mali;

	Activity	2012 (Project)	2013 (Project)	2014 (Project)	2015 (Project)
C	**Develop and implement medium voltage cross-border projects**	Ghana - Burkina Faso MV cross border project			
		Cote d'Ivoire - Liberia MV cross border project	Cote d'Ivoire - Liberia MV cross border project		
		Ghana - Togo South MV cross border project	Ghana - Togo South MV cross border project	Ghana - Togo South MV cross border project	
		Benin - Togo North MV cross border project	Benin - Togo North MV cross border project	Benin - Togo North MV cross border project	
			3rd Energy Facility MV cross border projects	3rd Energy Facility MV cross border projects	3rd Energy Facility MV cross border projects

VIII.3. BUDGET FOR THE ACTIVITIES OF THE ICC

S/N	WAPP ICC BUSINESS PLAN	WAPP FUNDED			DONOR FUNDED		
	ICC Work Programme	2013 Cost US$	2014 Cost US$	2015 Cost US$	2013 Cost US$	2014 Cost US$	2015 Cost US$
1	Implementation of ICC Project	20,000	50,000	-	60,000,000	50,000,000	20,000,000
2	Implementation of WAPP Dark Fibre	59,000	35,000	15,000	30,000,000	10,000,000	-
3	Preparation of Power Pool Operations	998,000	300,000	100,000	-	-	600,000
4	Development of WAPP System Models	98,352	108,187	119,005	-	-	-
5	Power System Reliability assessment and models	55,808	61,388	67,526	-	-	-
6	Synchronization of WAPP interconnected power systems	123,000	80,000	160,000	8,000,000	6,000,000	10,000,000
7	Capacity Building in M&E for WAPP member utilities	63,000	80,000	-	102,000	80,000	-
8	Development of Specific Operating Instructions and Procedures	58,436	60,000	66,000	-	-	-
9	Implementation of Transmission Tariff		140,800	70,400	-	316,800	70,400
10	Staff Requirement	586,800	616,400	647,210	648,000	680,400	714,420
11	Technical Assistance				84,000	88,200	92,610
12	Statutory Meetings	143,050	157,355	173,090			
	Total Cost - Work Programme	***2,205,446***	***1,689,130***	***1,418,231***	***98,834,000***	***67,165,400***	***31,477,430***

2013 ICC Programme Details				
Objectives	**ICC Activities**	**Cost (US$'000s)**		
		Donors		**WAPP**
		Mobilized	**Required**	
Preparation of Power Pool Operations	Engagement of recruiting Agency			105
	Exchange programme with Power Pools			116
	Implementation of market Road Map			127
	Capacity Building for CACs &ICC			471
	ICC staff reinforcement			129
	Finalization of ICC Architectural Design			50
	Total Sub- Program			**998**
Implementation of ICC Project	Data Centre Hardware	2148		
	Data Centre Software	6305		
	ICC Data Link	4940		
	Telecommunication	27580		
	Tools &Test Equipment	996		
	Power Network Stabilization Equipment	9376		
	Project Implementation Unit	1532		
	ICC Building Construction	6500		
	Total Sub- Program	**59377**		
Establishment of WAPP Dark Fibre Consortium	Engagement of Management Company and signing of Consortium Agreement			59
	Total Sub- Program			**59**
Synchronization of WAPP Interconnected Power System (Implementation of	Development of Harmonized Protection Plan for WAPP Interconnected Power Systems		604	

WAPP Operation Manual)	Technical Assistance for the development of Specific Operating procedures		406	
	Infrastructure to increase reliability within WAPP Power System in conformity with WAPP Operation manual		14430	
	Total Sub- Program		**15440**	
Monitoring &Evaluation Strengthening for WAPP	Capacity Building in M&E for WAPP member utilities		103	58
	Total Sub- Program		**103**	**58**
Energy Efficiency Sub-Programme	Enhancement of best practices among Distribution Companies	72		
	Development of Models for Distribution Companies	219		
	Implementation of Geographical Information Systems	245		
	Total Sub- Program	**536**		
TOTAL		**59913**	**15543**	**1115**

WAPP CAPACITY BUILDING PROGRAM						
			YEARLY BUDGET			
No	**FUND**	**PROGRAM /ACTIVITY**		**YEAR**		
				2013	**2014**	**2015**
1	USAID	CLEAN ENERGY PROGRAM		USD	USD	USD
1.1			SECONDMENT OF STAFF	94,500	94,500	
1.2			TRAINING & WORKSHOP	676,897	123,344	
1.3			EXCHANGE PROGRAM		303,264	
1.4			CONSULTANCY SERVICES	950,000		
			S/TOTAL PER YEAR in USD	1,721,397	521,108	-
			S/TOTAL in USD		**2,242,505**	
2	AFDB	CLSG CAPACITY BUILDING PROGRAM		Euros	Euros	Euros
2.1			TRAINING & WORKSHOP FOR WAPP SECRETARIAT & CLSG COUNTRIES	677,485	688,040	444,960
2.2			IT HARDWARE & SOFTWARE	69,515		
2.3			VEHICLES	120,000		
			S/TOTAL PER YEAR in Euros	867,000	688,040	444,960
			S/TOTAL in Euros		**2,000,000**	
3	WB	WAPP INTEGRATION PROGRAM & TA		USD	USD	USD
3.1			TECHNICAL ASSISTANCE	434,667	234,667	234,667
3.2			WORKSHOP AND TRAINING	755,000	905,000	150,000
3.3			CONSULTANCY SERVICES	300,000	150,000	
			CONTINGENCIES	113,333	113,333	113,333
			S/TOTAL PER YEAR in USD	1,603,000	1,403,000	498,000
			S/TOTAL in USD		**3,504,000**	
4	EU	WAPP - EU CAPACITY BUILDING PROGRAM		Euros	Euros	Euros
4.1			TECHNICAL ASSISTANCE	324,222	763,556	763,556
			PHASE 1	*133,333*		
			PHASE 2	*190,889*	*763,556*	*763,556*
			S/TOTAL PER YEAR in Euros	324,222	763,556	763,556
			S/TOTAL in Euros		**1,851,334**	
5	WAPP	WAPP TRAINING PROGRAM		USD	USD	USD
3.1			TRAINING PROGRAM FOR WAPP STAFF	100,000	100,000	100,000
			S/TOTAL PER YEAR in USD	100,000	100,000	100,000
			S/TOTAL in USD		**300,000**	
			TOTAL 1+3+5 in USD	**3,424,397**	**2,024,108**	**598,000**
			TOTAL 2+4 in Euros	**1,191,222**	**1,451,596**	**1,208,516**
			TOTAL 1+2+3+4+5 in USD	**5,008,723**	**3,954,730**	**2,205,326**

CONCLUSION

An evaluation of the implementation of the 2009 – 2012 WAPP Business Plan has indicated that **83%** of the Priority Objectives that were outlined were achieved. Prominent among these were the Update of the ECOWAS Revised Master Plan for the Generation and Transmission of Electrical Energy, the implementation of a capacity building program for WAPP Member Utilities and Secretariat, and the establishment of a common utility-wide Monitoring & Evaluation System for WAPP. A similar analysis conducted on the preparation and implementation of WAPP Priority Projects indicated that approximately **70%** of the activities envisaged in the 2009 – 2012 Business Plan were realized. Key among the challenges encountered that affected the pace of implementation of the priority projects were delays in securing funding and the socio-political situations witnessed in the sub-region. Furthermore, the non-ability of the WAPP Secretariat to attain the required level of staffing as indicated in its approved Organogram for the period had an impact on the realization of the various programs. This could largely be attributed to budgetary constraints as a result of financial challenges faced by WAPP Member Utilities.

For the 2012 – 2015 WAPP Business Plan, it is expected that with the increased level of interconnectivity between the national power systems within ECOWAS Member States, the regional electricity market shall be to a large extent be established. As such, the Objectives to be pursued within the period shall include the effective and efficient implementation of WAPP Priority Projects, realization of the WAPP ICC Project, and a continued reinforcement of the capacity of the WAPP. The infrastructure program under this Business Plan, whilst reflecting a drive to increase the number of interconnected systems through the various transmission line projects, also has a focus on augmenting the available generation capacity through the accelerated development of regional hydropower projects and the WAPP EPSSP Projects. In this regard, the WAPP shall continue to strongly advocate and deploy the SPC Model that would facilitate participation of the private sector in order to address among others, the constraints related to securing funding to implement Priority Projects. The capacity building featured in the Business Plan features intensive training programs for the WAPP that envisages the establishment of regional Centres of Excellence and a strengthening of the Departments within the WAPP Secretariat to enable them develop and implement the Investment Program outlined in the Business Plan, and also establish soonest the regional electricity market.

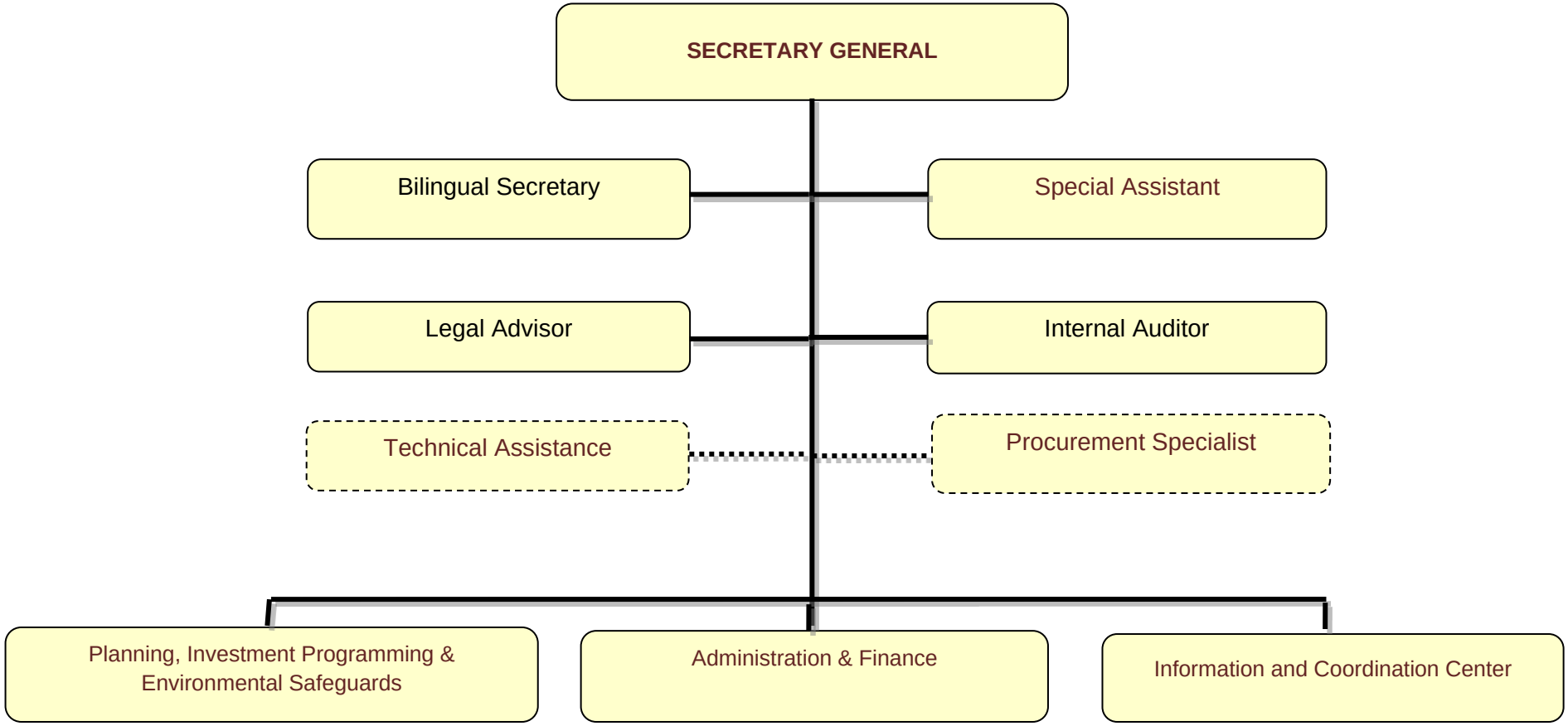
The Budget for this Business Plan is estimated at [2]US$4,108,036,000 and it is expected that its funding shall be through contributions from the WAPP Member Utilities, the ECOWAS Commission and Donors. The contributions from WAPP Member Utilities include secondment of staff, provision of office space, vehicles, equipment, support during workshops, land, and also financial participation as provided for in the WAPP Articles of Agreement. The contributions from Donors shall continue to be towards funding Technical Assistance programmes, project preparation and implementation.

Consequently, the timely support and financial contributions of WAPP Member Utilities and Funding Agencies remains a Critical Success Factor for the successful attainment of the objectives set out in this Business Plan. In addition, a reinforced collaboration within the WAPP and with ECOWAS Commission, Funding Agencies and other key stakeholders, shall be vital for the successful implementation of the Business Plan.

[2] *Assuming that an amount of **US$5,329,547,000** can be secured from Funding Agencies over the period to realize the projects*

ANNEXES

ANNEX 1 ORGANOGRAM OF THE WAPP SECRETARIAT

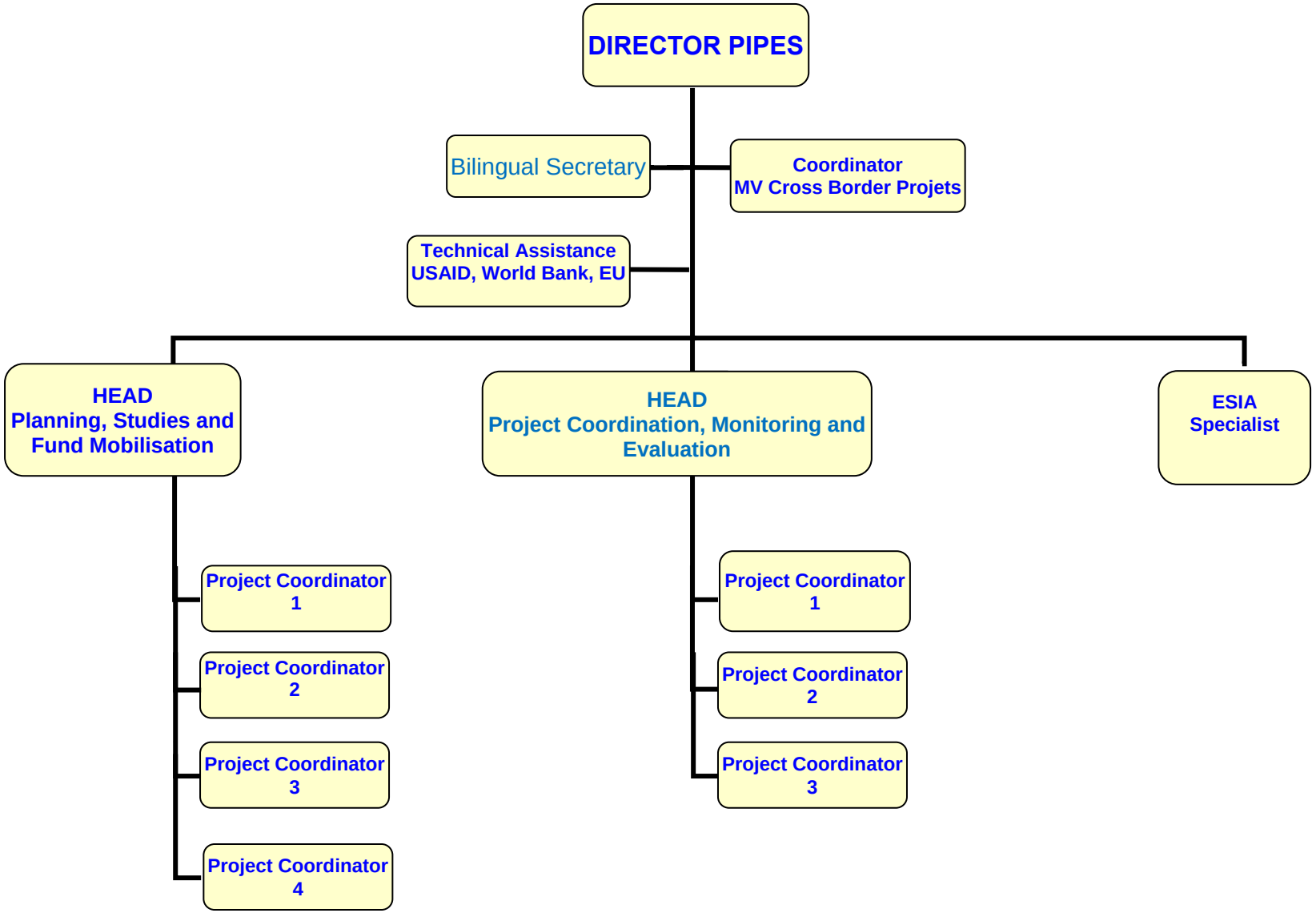


ANNEX 2

ORGANISATION OF THE DEPARTMENT OF PLANNING, INVESTMENT PROGRAMMING AND ENVIRONMENTAL SAFEGUARD

(PIPES)

ORGANOGRAM OF THE PIPES DEPARTMENT



	Position	Staffing	Action
*2012	-	-	-
1	Director	***Vacant***	***Acting by HEAD, Planning, Studies and Funds Mobilisation since Jan. 2011***
2	HEAD, Planning, Studies and Funds Mobilisation	Full time	
3	Project Coordinator 1	Seconded from VRA	
4	Project Coordinator 2	Seconded from ECG	
5	Project Coordinator 3	Seconded from EDG	
6	MV Cross Border Coordinator	Seconded from ECG	Contract
7	Projects Administrator	Full time	Contract
8	Secretary	Full time	
2013			
1	Director	Full time	
2	HEAD, Planning, Studies and Funds Mobilisation	Full time	Recruitment
3	Project Coordinator 1	Full time	Secondment
4	Project Coordinator 2	Full time	Secondment
5	Project Coordinator 3	Full time	Secondment
6	Project Coordinator 4	Full time	Secondment
7	HEAD, Projects Coordination, Monitoring and Evaluation	Full time	Recruitment
8	Project Coordinator 1	Full time	Secondment
9	Project Coordinator 2	Full time	Secondment
10	MV Cross Border Coordinator	Contract	
11	Projects Administrator	Full time	Contract
12	ESIA Expert	Full time	Secondment
13	Pool Secretary	Full time	
14	Bilingual Secretary	Full time	Recruitment
2014			
1	Director	Full time	
2	HEAD, Planning, Studies and Funds Mobilisation	Full time	
3	Project Coordinator 1	Full time	Secondment
4	Project Coordinator 2	Full time	Secondment
5	Project Coordinator 3	Full time	Secondment
6	HEAD, Projects Coordination, Monitoring and Evaluation	Full time	
7	Project Coordinator 1	Full time	Secondment
8	Project Coordinator 2	Full time	Secondment
9	Project Coordinator 3	Full time	Secondment
10	MV Cross Border Coordinator	Full time	Secondment
11	ESIA Expert	Full time	Secondment
12	Projects Administrator	Full time	Contract
13	Pool Secretary	Full time	
14	Bilingual Secretary	Full time	

2015			
1	Director	Full time	
2	HEAD, Planning, Studies and Funds Mobilisation	Full time	
3	Project Coordinator 1	Full time	Secondment
4	Project Coordinator 2	Full time	Secondment
5	Project Coordinator 3	Full time	Secondment
6	HEAD, Projects Coordination, Monitoring and Evaluation	Full time	
7	Project Coordinator 1	Full time	Secondment
8	Project Coordinator 2	Full time	Secondment
9	Project Coordinator 3	Full time	Secondment
10	MV Cross Border Coordinator	Full time	Secondment
11	Projects Administrator	Full time	Contract
12	ESIA Expert	Full time	Secondment
13	Pool Secretary	Full time	
14	Bilingual Secretary	Full time	

* In 2012, the resident EU Technical Assistance also supported PIPES

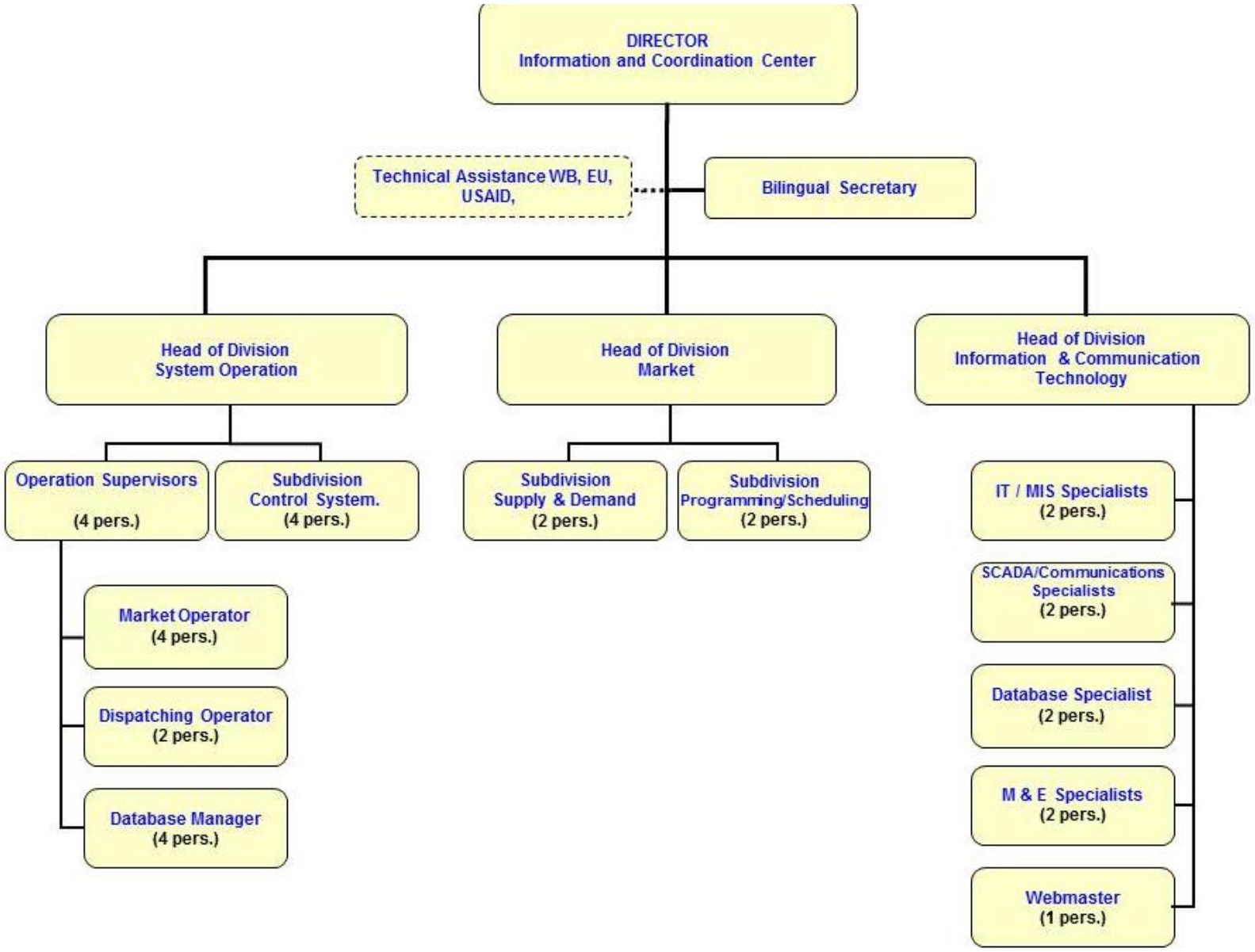
ANNEX 3

ORGANISATION OF THE

INFORMATION AND COORDINATION CENTRE

(ICC)

PLANNED ORGANOGRAM OF THE INFORMATION AND COORDINATION CENTRE



ANNEX 4

ORGANISATION AND RESOURCES OF THE ADMINISTRATION AND FINANCE DEPARTMENT

ORGANOGRAM OF THE ADMINISTRATION AND FINANCE DEPARTMENT