



WEST AFRICAN POWER POOL
SYSTEME D'ECHANGES
D'ENERGIE ELECTRIQUE
OUEST AFRICAIN

ANNUAL REPORT 2021

West African Power Pool



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LIST OF ACRONYMS

AFC	Africa Finance Corporation
AFD	Agence Française de Développement (<i>French Development Agency</i>)
AfDB	African Development Bank
AGoSE - AO	Améliorer la Gouvernance du Secteur de l'Energie en Afrique de l'Ouest (<i>Improving Energy Sector Governance in West Africa</i>)
AKSA	AKSA Energy Company Limited
CEB	Communauté Electrique du Bénin
CEET	Compagnie Energie Electrique du Togo
CIE	Compagnie Ivoirienne d'Electricité
CI-ENERGIES	Côte d'Ivoire Energies
CLSG	Côte d'Ivoire-Liberia-Sierra Leone-Guinea
EAGB	Empressa Publica de Electricidad e Agua de Guinée Bissau
EBID	ECOWAS Bank for Investment and Development
ECG	Electricity Company of Ghana
ECOWAS	Economic Community of West African States
EDG	Electricité de Guinée
EDM-SA	Energie du Mali - SA
EDSA	Electricity Distribution Supply Authority
EIB	European Investment Bank
EMS	Energy Management System
ESIA	Environmental and Social Impact Assessment
ESMP	Environmental and Social Management Plan
EU	European Union
FAT	Factory Acceptance Test
GRIDCo	Ghana Grid Company
ICC	Information and Coordination Centre
ICCP	Inter-Control Centre Communications Protocol
IsDB	Islamic Development Bank
JIC	(Project) Joint Implementation Committee
LEC	Liberia Electricity Corporation
MCC	Millennium Challenge Corporation
MMS	Market Management System
NAWEC	National Water and Electricity Company Ltd of The Gambia
NEPAD-IPPF	New Partnership for Africa Development / Infrastructure Project Preparatory Facility
NIGELEC	Société Nigérienne d'Electricité
OJT	On-the-Job Training
OMVG	Organisation pour la Mise en Valeur du fleuve Gambie
OMVS	Organisation pour la Mise en Valeur du fleuve Sénégal
PIPES	Planning, Investment Programming and Environmental Safeguards
PIU	Project Implementation Unit
PMU	Project Management Unit
PMU	Phasor Measurement Unit
PSS	Power System Stabilizer
RAP	Resettlement Action Plan
SAT	Site Acceptance Test
SBEE	Société Béninoise d'Energie Electrique
SCADA	Supervisory Control and Data Acquisition
SDH	Synchronous Digital Hierarchy

Senelec	Société d'Electricité du Sénégal
SOGEM	Société de Gestion de l'Energie de Manantali
SONABEL	Société Nationale d'Electricité du Burkina
SPEC	WAPP Strategic Planning and Environmental Committee (SPEC)
SPS	Special Protection Scheme
S/T	Show and Tell
SVC	Static Var Compensator
TCN	Transmission Company of Nigeria
TFP	Technical and Financial Partners
USAID	United States Agency for International Development
VRA	Volta River Authority
WADB/BOAD	West African Development Bank (<i>Banque Ouest Africaine de Développement</i>)
WAEMU/UEMOA	West African Economic and Monetary Union (<i>Union Economique et Monétaire Ouest Africaine</i>)
WAMS	Wide Area Measurement System
WAPP	West African Power Pool
WB	World Bank



1. OVERVIEW OF WAPP ORGANISATION

The West African Power Pool (WAPP) was created by Decision A/DEC.5/12/99 of the 22nd Summit of the Authority of ECOWAS Heads of State and Government.

The Articles of Agreement for the establishment and functioning of WAPP was adopted by Decision A/DEC.18/01/06 of the 29th Summit of the Authority of ECOWAS Heads of State and Government held in Niamey, which also granted the WAPP General Secretariat the status of a Specialized Institution of ECOWAS through Decision A/DEC.20/01/06.

A Headquarters Agreement was signed between WAPP and the Government of the Republic of Benin on the 5th of July 2006, conferring on WAPP the diplomatic privileges and immunities required to operate effectively. The headquarters of WAPP General Secretariat is presently located at PK6, Zone des Ambassades, Akpakpa, Cotonou, in Republic of Benin.

WAPP VISION: To integrate the operations of national power systems into a unified regional electricity market, which will, over the medium to long term, ensure the citizens of ECOWAS Member States with a stable and reliable electricity supply at competitive costs.

WAPP MISSION: To promote and develop infrastructure for power generation and transmission, as well as, to assure the coordination of electric power exchanges between ECOWAS Member States.

MEMBERS: since the General Assembly held on November 5th, 2021 in Ouagadougou (Burkina Faso), the WAPP has 39 members including one observer member.

WAPP Member Utilities as at 31 December 2021					
1		Aksa Energy Company Ghana Ltd (Ghana)	21		Liberia Electricity Corporation (Libéria)
2		APR Energy (Sénégal)	22		Mainstream Energy Solutions Limited (Nigéria)
3		AXXELA Limited (Nigeria)	23		National Water and Electricity Company Limited (Gambie)
4		BUI Power Authority (Ghana)	24		North South Power Company Ltd (Nigéria)
5		CENIT Energy Limited (Ghana)	25		Northern Electricity Distribution Company Ltd (Ghana)
6		CenPOWER Generation Company Limited (Ghana)	26		*Office National de l'Electricité et de l'Eau Potable du Maroc (Maroc)
7		Communauté Électrique du Bénin (Togo, Bénin)	27		Pacific Energy Company Limited (Nigéria)
8		Compagnie Energie Electrique de Togo (Togo)	28		Paras Energy and Natural Resources Development Ltd (Nigéria)
9		Compagnie Ivoirienne d'Electricité (Côte d'Ivoire)	29		Sahara Power Group Ltd (Nigeria)
10		Contour Global (Togo)	30		SAPELE Power PLC (Nigéria)
11		Côte d'Ivoire Energies (Côte d'Ivoire)	31		Société Béninoise d'Énergie Electrique (Bénin)
12		Cummins Power Generation Ltd (Nigéria)	32		Société de Gestion de l'Energie de Manantali (Mali, Senegal, Mauritanie, Guinée)
13		Empressa Publica de Electricidade e Agua de Guine-Bissau (Guinea Bissau)	33		Société Nationale d'Electricité du Burkina (Burkina)
14		Electricité de Guinée (Guinea)	34		Société Nationale d'Electricité du Sénégal (Sénégal)
15		Electricity Company of Ghana (Ghana)	35		Société Nigérienne d'Electricité (Niger)
16		Electricity Distribution and Supply Company (Sierra Léone)	36		Sunon Asogli Power (Ghana) Ltd. (Ghana)
17		Energie du Mali-SA (Mali)	37		Transcorp Power (Nigéria)
18		GEREGU Power Plc	38		Transmission Company of Nigeria (Nigéria)
19		Ghana Grid Company (Ghana)	39		Volta River Authority (Ghana)
20		Karpowership Ghana Company Ltd (Ghana)			

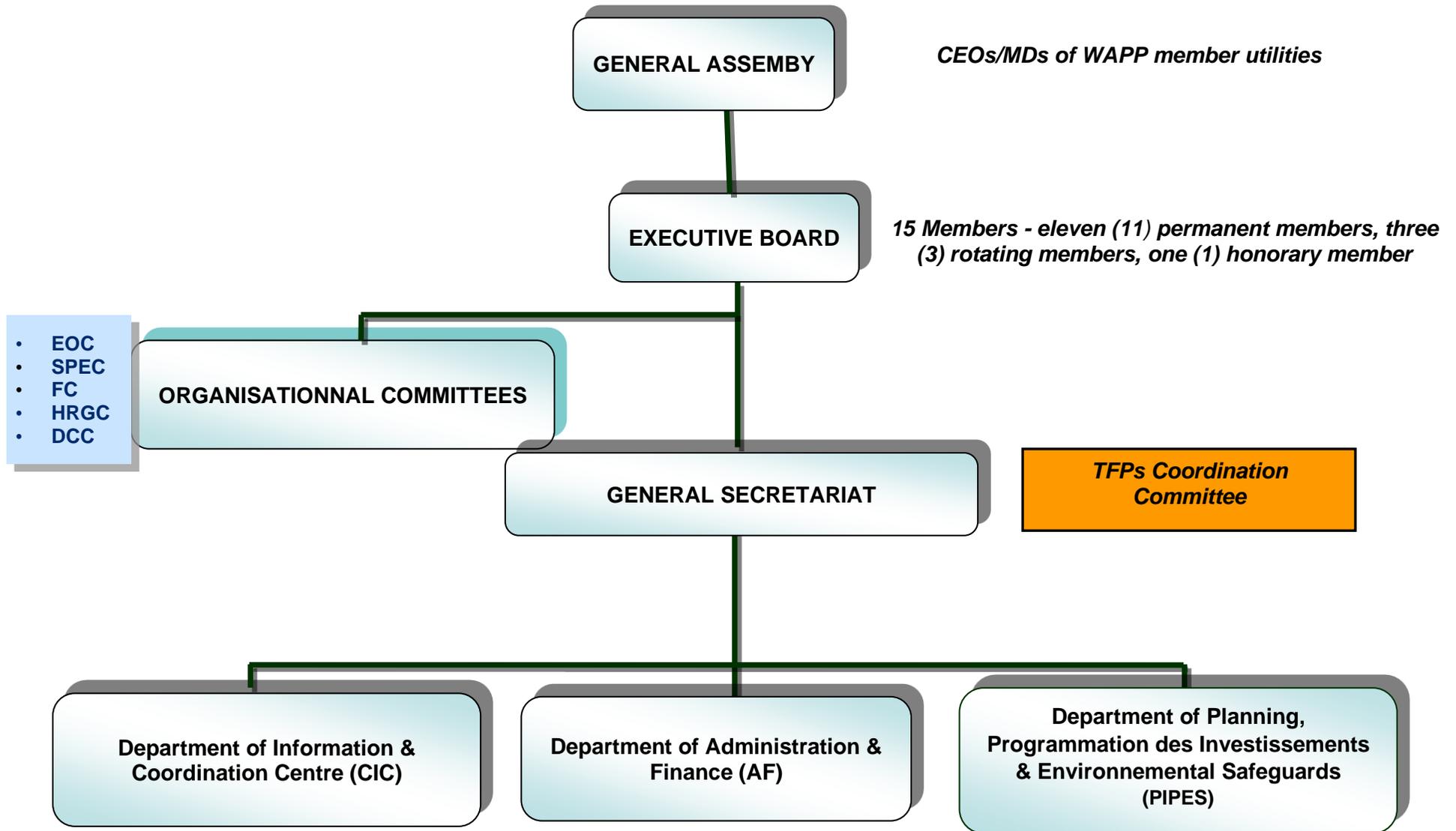
*Observer member

WAPP GOVERNANCE STRUCTURES: WAPP is made up of a total of four (4) governance structures: the General Assembly, the Executive Board, the Organisational Committees and the WAPP General Secretariat.

DIAGRAMMATIC REPRESENTATION OF WAPP MEMBERS



WAPP ORGANISATIONAL STRUCTURE



MEMBERS OF THE WAPP EXECUTIVE BOARD: The Executive Board consists of 15 Members - eleven (11) permanent members, three (3) rotating members (elected for a 2-year term) and 1 honorary member. The rotating members whose mandate began in November 2019 (EDM – SA, Mainstream Energy Solutions Ltd and NEDCo) were replaced during the General Assembly held in November 2021 in Ouagadougou by new members (KARPOWERSHIP, NIGELEC and SUNON ASOGLI).

Permanent Members:

- TCN: Chairperson
- CI-ENERGIES: Vice-Chairperson
- WAPP Secretary General: Member
- CEB: Member
- EDG: Member
- GRIDCO: Member
- SBEE: Member
- Senelec: Member
- SOGEM: Member
- SONABEL: Member
- VRA: Member

Incoming Rotating Members:

- KARPOWERSHIP : Member
- NIGELEC : Member
- SUNON ASOGLI : Member

Outgoing Rotating Members:

- EDM – SA: *Member*
- Mainstream: *Member*
- NEDCO: *Member*

Honorary Member:

- Mr. Joseph MAKOJU

Chairperson of the Executive Board

Vice-Chairperson of the Executive Board



M. Sule Ahmed ABDULAZIZ, CEO et MD TCN

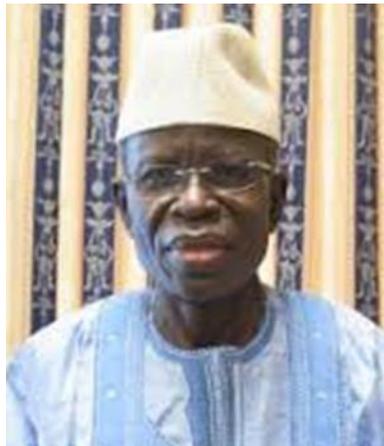


M. Papa Mademba BITEYE, DG Senelec

Permanent Members



M. Siengui A. KI, SG EEEOA



M. Karimou CHABI SIKA, DG CEB



M. Nourmory SIDIBE, DG CI-ENERGIES



M. Bangaly MATY, DG EDG



M. Ebenezer ESSIENYI, CEO GRIDCO



M. Jacques Paradis, DG SBEE



Mr. Tamsir NDIAYE, DG SOGEM



Mr. Baba Ahmed COULIBALY, DG SONABEL



Mr. Emmanuel ANTWI-DARKWA, CEO VRA

Rotating Members



Mr. Oumar DIARRA, CEO EDM – SA



Mr. Lamu AUDU, CEO Mainstream



Mr. Osmani Aliduba AYUBA, MD NEDCO

Honorary Member



Mr. Joseph MAKOJU

2. KEY DEVELOPMENTS

2.1. First MCC Regional Energy Compact with WAPP

After several months of negotiations, the Millennium Challenge Corporation (MCC) signed on 17th May 2021, a Cooperation Agreement with the WAPP. This Cooperation Agreement, the first Regional Compact of its kind between the MCC and a sub-regional institution, shall enable the WAPP to carry out a Feasibility Study, including an ESIA, for the Côte d'Ivoire-Burkina Interconnection Reinforcement Project.

It should be noted that within the framework of this regional compact, the signing of the Memorandum of Understanding between the Governments of Burkina Faso and Côte d'Ivoire on the one hand as well as the MCC on the other took place on 16th June 2021.

The project will enhance the integration of both countries into the ECOWAS energy sector.

2.2. Commencement of equipment works at the ICC

Following an official launch in January 2017, the construction and equipment works of the ICC experienced delays with regard to the civil engineering works for various reasons. Notwithstanding, due to vigorous measures adopted by the WAPP Secretariat as well as the Owners' Engineer and the concerned Donor, things returned to order and works are now going on normally.

Hence, in early 2021, the technical component of the building was handed over to the company that had been awarded the contract for installation of equipment to manage the West African interconnected power system as well as the Regional Electricity Market (i.e., EMS, MMS, WAMS, PMU, Telecoms, etc.). These works commenced on 4th February 2021.

The entire Building works (civil engineering and equipment) will be completed in the first half of 2022.

2.3. Commencement of the energizing of the power lines of the CLSG and OMVG Loop Projects

After delays mainly caused by the impacts of the COVID-19 pandemic, the CLSG Project (225 kV interconnection between Côte d'Ivoire, Liberia, Sierra Leone and Guinea) and the OMVG Loop Project (225 kV interconnection between Guinea, Guinea Bissau, The Gambia and Senegal) have progressed well this year and the sequential commissioning of the works took place as follows:

- For the **CLSG Project**: (i) the Man substation (Côte d'Ivoire) on 27 February 2021; (ii) the Man – Yekepa line and the Yekepa substation (Liberia) on 20 April 2021; (iii) the Yekepa – Buchanan line and the Buchanan substation (Liberia) on 3 May 2021; (iv) the Buchanan – Monrovia line and the Monrovia substation (Liberia) on 23 May 2021; (v) synchronization of Monrovia substation and Mount Coffee dam on 11 August 2021; (vi) the Monrovia – Mano – Kenema line and Kenema substation (Sierra Leone) on 6 September 2021 and (vii) the Kenema – Bikongor line and Bikongor substation (Sierra Leone) on 21 September 2021.
- For the **OMVG Loop Project**: (i) the Kaolack substation (Senegal) on 23 August 2021, (ii) the L1a and L1b line (Kaolack - Birkelane - Tambacounda), the L6b line (Soma - Birkelane), the of Tambacounda (Senegal) and the Soma substation (Gambia) on 14 October 2021.

The Gambia and Senegal are therefore the first two countries to be able to benefit from the OMVG Loop project with the official inauguration of the interconnection between these two countries in Soma in The Gambia on 23 October 2021 in the presence of the Heads of State of The Gambia, Guinea Bissau and Senegal.

2.4. Continued discussions on Securitization of Cross-Border Power Trade – Establishment of the Liquidity Enhancing Revolving Fund (LERF)

Following the adoption in December 2018 of the Directive on Securitization of Cross-Border Power Trade under the ECOWAS Regional Electricity Market, the World Bank affirmed its support for the Directive by providing a US\$300 million Grant to 6 ECOWAS countries in July 2020: Burkina Faso, Côte d'Ivoire, Guinea, Liberia, Mali and Sierra Leone.

This was to be followed by reflections on the establishment of a Liquidity Enhancement Revolving Fund (LERF) which is a collective Guarantee scheme designed to encourage good behaviour among Regional Electricity Market participants and promote adherence to the terms and conditions of power supply agreements. A Working Group has been set up to deliberate on the establishment of the LERF within the sub-region.

This Working Group, comprising regional stakeholders (WAPP and ERERA) and WAPP member utilities, is pursuing its deliberations on the establishment of the LERF. For the year 2021, it held a first meeting via videoconference on 29th June 2021, which brought together, besides the members of the Working Group, experts from the World Bank and Lion's Head, an investment bank.

A second meeting took place in Abidjan, from 26 to 27 October 2021 on the side-line of the ERERA Consultative Committees.

2.5. Admission of new members into the WAPP

During the 16th WAPP General Assembly Session held on 05th November 2021 in Ouagadougou, Burkina Faso, a new member, the company AXELA Limited from Nigeria, was admitted to the WAPP.

This new admission brought the number of WAPP members to thirty-nine (39#).

3. MESSAGE FROM WAPP EXECUTIVE BOARD CHAIRPERSON



Eng. Sule Ahmed ABDULAZIZ,
Executive Board Chairperson

It is a pleasure for me, on behalf of the WAPP Executive Board, to take stock of the activities carried out by the Executive Board of our organisation during the year 2021, a difficult second year due to the COVID-19 pandemic which is rampant throughout the world.

As in 2020 however, the WAPP Secretariat, backed by all WAPP member utilities, was able to conduct most of its business. This was due in part to compliance with pandemic control measures and improved use of remote communication technologies. Nevertheless, some activities were delayed because of the need to be carried out in the field.

Working in line with the COVID-19 requirements, the General Secretariat was able to organise all the statutory meetings of the Executive Board and the Organisational Committees by videoconference or, in hybrid mode such as the 1st – 5th November 2021 General Assembly in Ouagadougou.

These statutory meetings enabled our Institution to achieve significant results. The Organisational Committees considered a number of files which they validated and submitted to the Executive Board for adoption. The Board adopted them and took some of the files to the General Assembly for final

decision. Among the files taken to the General Assembly were:

- The e-learning strategy and the networking strategy of the Regional Centres of Excellence;
- The Regional Electricity Market Participation Fees;
- Guidelines for the secondment of operators to the WAPP Information and Coordination Centre;
- The extension of the WAPP Northcore to Togo, with a new section linking Northern Togo to Eastern Burkina Faso;
- The WAPP Financial Statements for the year 2020;
- The Work Programme and Budget of the WAPP Secretariat for the year 2022. It should be noted that despite the COVID 19 pandemic, the 2022 budget shows a 21% rise due to a significant increase in the investment budget, part of which is financed by our Technical and Financial Partners whom we would like to once again appreciate for their continued support.

Among our achievements for year 2021, we are glad to note, is the admission of one (01) new member to the Pool, by decision of the General Assembly in November 2021, in Ouagadougou, as well as that of three (03) new rotating members of the Executive Board for a two (02) year term, in replacement of those who exercised the 2019 - 2021 term. The new WAPP member is AXXELA Limited from Nigeria, while the new rotating members of the Executive Board are KARPOWERSHIP and SUNON ASOGLI both from Ghana as well as NIGELEC from Niger.

Once again, I would like to welcome the new member and the rotating members of the Executive Board. In the same vein, I truly thank the outgoing members of the Executive Board namely EDM - SA from Mali, Mainstream Energy Solutions Ltd from Nigeria and NEDCo from Ghana, for their valuable contribution to the management of the WAPP.

The studies and preparatory work for the implementation of the priority projects as indicated in the ECOWAS Master Plan and the development of the governance texts of the ECOWAS Regional Electricity Market are underway, without major difficulties.

Works to interconnect the fourteen (14) ECOWAS mainland countries through the CLSG Interconnection Project and the OMVG Loop Project, which had been severely impacted by the COVID 19 pandemic in 2020, resumed in 2021, with the start of sequential commissioning, with the expectation that they will be completed in 2022.

Although work on the ICC Project slowed down towards the end of 2021, we are presently working in earnest to complete the project. Expectedly, the ICC project as well as the WAPP Network Synchronisation Project will be completed in 2022.

The end of these four (04) aforementioned projects, it should be recalled, should allow the beginning of Phase 2 of the ECOWAS Regional Electricity Market.

We are hopeful that all the targets set for the year 2022 will be met, especially since we have a better understanding of the COVID 19 pandemic and of the measures that will enable us to effectively combat its spread and even eradicate it. I therefore call on every member of the WAPP and project executors in every category to accelerate work to ensure we meet projected timelines in order to make the second phase of the Regional Electricity Market a reality.

Eng. Sule Ahmed ABDULAZIZ

4. MESSAGE FROM THE SECRETARY GENERAL



Siengui A. KI,
WAPP Secretary General

It has been two consecutive years that the world has been faced with the COVID-19 pandemic. Despite the delays caused in the progress of works, the WAPP is forging ahead with the implementation of the Regional Competitive Electricity Market as guided by the 2020 - 2023 WAPP Business Plan, which is derived from the 2019-2033 ECOWAS Master Plan for the Development of Regional Power Generation and Transmission Infrastructure.

In its search for new Technical and Financial Partners to assist in the implementation of its priority projects, the WAPP is pleased to announce that it has been able to conclude an agreement with the Millennium Challenge Corporation (MCC) of the USA in this year 2021. This agreement will relate to the implementation of the MCC first Regional Power Compact. It concerns the strengthening of the Côte d'Ivoire - Burkina Faso interconnection.

The main priority projects, whose completion is expected to kick-start the competitive phase of the Regional Electricity Market, are so far progressing satisfactorily according to the updated 2020 activity schedules.

Hence, works on the CLSG Project (225 kV interconnection between Côte d'Ivoire, Liberia, Sierra Leone and Guinea) and the OMVG Loop (225 kV interconnection between Guinea, Guinea Bissau, The Gambia and Senegal) will be completed in 2022 as planned. Sequential commissioning of the two projects began in March

2021 and August 2021 respectively. It should be recalled that these two projects will complete the interconnection of all of the ECOWAS mainland countries.

After agreeing with the civil engineering company on an action plan for the completion of their component of the works, all construction and equipment works for the ICC (Information and Coordination Centre) Project should be completed by the end of the first semester of 2022. The WAPP Secretariat would then move to its new premises, which are included in the ICC Project.

The overall works on the WAPP Power Systems Synchronisation Project are expected to be completed in 2022, with a first synchronisation test envisaged in the first half of 2022.

Projects that are at the preparation or near-kick-off stage in the field are also progressing satisfactorily.

Concerning the WAPP North Core Project (330 kV Nigeria-Niger-Benin/Togo-Burkina Interconnection Project), the bid evaluations for the 330 kV lines and substations as well as the 225 kV lines and substations are almost finalized and some contracts are already signed while others are in the process of being negotiated and signed. The implementation of Resettlement Action Plans (RAP) and Environmental and Social Management Plans (ESMP) is underway in some countries (Benin, Niger and Burkina Faso) or about to start (Nigeria). Auctions to allow Nigerian power generation companies to supply power to the line are being prepared. Recruitment of additional staff for the North Core Project Management Unit (PMU) has been finalized.

It should be noted that a study will be conducted to extend the North Core Project to the north of Togo from Burkina Faso. The terms of reference for recruiting the consultants who will be responsible for the pre-investment studies have been finalized and the funding mobilization process has started with the submission in October 2021 of a funding request to NEPAD-IPPF.

Almost similar progress to the North Core Project has also been made with respect to the Guinea-Mali Interconnection, with contracts either already

signed or in the process of being negotiated and signed.

As for the WAPP Median Backbone Project which should link Nigeria, Benin, Togo, Ghana and Côte d'Ivoire as a first phase of the WAPP Transversal Backbone, the consultants in charge of the feasibility study and the environmental & social impact assessment study have been recruited. The studies are in progress without hindrance. The draft final report on the institutional framework for the implementation of the project was adopted on the sidelines of the WAPP General Assembly on 3rd November 2021 by the Manager Directors of the power utilities involved and the Directors General of Energy from the ministries in charge of energy of the countries.

At the initiative of the African Development Bank (AfDB), a new backbone has been added to the WAPP priority projects: namely the G5-Sahel Trans-Sahelian Backbone, which is expected to link Mauritania to Chad via Mali, Burkina Faso and Niger being the five countries that make up the G5-Sahel. Mauritania and Chad, being non-members of ECOWAS, have however mandated WAPP to undertake the pre-investment studies thereon. The ToRs for the pre-feasibility studies have been finalised and the selection process for the Consultant to carry out these studies has been launched.

Four countries are so far involved in the WAPP regional solar power park development program that have already kicked-off: Burkina Faso, Mali, The Gambia and Niger. The project is most advanced in Burkina Faso, where preparation for the auction process is underway to select companies for the construction of the solar parks on a "plug and play" basis.

Pre-investment studies for the first priority project identified in the Saint Paul River Hydropower Generation Optimization Study in Liberia are underway and progressing well.

With regard to mobilization of new funding, the WAPP Secretariat is directing its efforts towards the Technical and Financial Partners. This year, due to the COVID 19 pandemic, the 36th WAPP TFP Coordination Meeting was held via videoconference on 27th May 2021. Already, as mentioned above, the MCC has joined the list of WAPP TFPs and will

fully fund the pre-investment studies of the Côte d'Ivoire – Burkina Faso interconnection reinforcement project. The USTDA, for its part, will participate in the financing of the pre-investment studies of the Côte d'Ivoire - Liberia interconnection reinforcement project. The mobilisation of financing for the implementation of the Nigeria - Benin interconnection reinforcement project is continuing in order to obtain financing offering concessional conditions for the countries and utilities concerned by the project.

Like last year, this 16th General Assembly Session of our Institution which theme is "**Operationalizing the Electricity Market in a Challenging Environment**" was held in Ouagadougou from 1st to 5th November 2021 in a hybrid mode, due to the COVID-19 pandemic. This theme invites us to increase notably our efforts to operationalize the competitive phase of the electricity market as our sub-region is facing several challenges (health, security, financial, etc.) which are slowing our progress.

The General Assembly was an opportunity for the WAPP to express once again its satisfaction and its sincere gratitude to the TFPs for their constantly renewed support which allows the realization of many projects, bringing the WAPP inexorably closer to its goal, namely the achievement of a competitive regional electricity market. The General Assembly also made it possible to admit for a term of two years, three new rotating members within the Executive Board in replacement of 3 others. Finally, a Nigerian company was admitted as the thirty-ninth member of WAPP.

I would also like to extend my deep gratitude to the ECOWAS Commission, the WAPP Executive Board, the WAPP member utilities, and staff of the WAPP Secretariat for all the sacrifices and efforts deployed that have made it possible for activities to continue in some rather difficult periods and in the furtherance of the implementation of projects.

I wish you a pleasant reading of this 2021 WAPP Annual Report.

Siengui A. KI

5. IMPLEMENTATION OF PRIORITY PROJECTS

The priority projects concerned are those contained in the **2019 – 2033 ECOWAS Master Plan for the Development of Regional Power Generation and Transmission Infrastructure**. This Plan shall guide the implementation of the large-scale power transmission and interconnection lines of ECOWAS Member States as well as the major power generation plants.

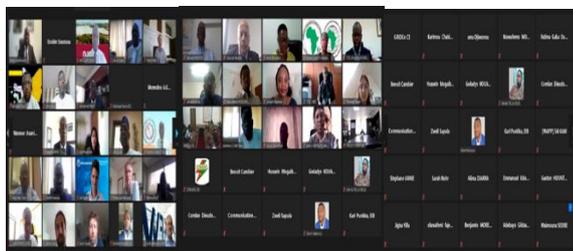
Most of the activities related to priority projects are carried out by the PIPES Department.

5.1. Resource Mobilisation & Project Preparation

Resources mobilisation is an important step in the preparation and implementation of the WAPP Priority Investment Programme and is a core activity of the WAPP Secretariat.

5.1.1. WAPP Coordination Meeting of Technical and Financial Partners (TFP)

The WAPP Secretariat organised the 36th WAPP Coordination Meeting of TFP held on 27th May 2021 via videoconference. During this meeting, the status of the WAPP priority projects was reviewed and the funding requirements were presented. The WAPP Secretariat also organized in hybrid mode (face-to-face and videoconference) on 4th November 2021, the 37th WAPP Coordination Meeting of TFP on the sidelines of the 16th session of the General Assembly. During this meeting, some TFPs presented the facilities and support they can offer to WAPP for the implementation of its regional power program. Financing needs were also presented. These needs amount to an amount equivalent to 16.7 million Euros and 2,946.8 million USD for the period 2021 to 2024. These requirements amounted to the equivalent of 2,946.8 million USD for the period 2021 - 2024.



Zoom photo of participants

5.1.2. 225 kV Côte d'Ivoire - Liberia Interconnection Reinforcement

This project is in its preparation phase and the cost of pre-investment studies is estimated at USD 3,427,993.

The WAPP Secretariat has secured:

- USD 1,786,148 from the NEPAD-IPPF;
- USD 1,475,965 from the USTDA;
- USD 47,004 from each of the beneficiary utilities, LEC and CI-ENERGIES

A funding gap of USD 258,349 is to be sought and discussions with USAID are ongoing to fill this gap.

The way forward of the project is as follows:

- The Consultants recruitment process for pre-investment studies ongoing;
- Expected commencement of Line Route Study and ESIA: 1st Quarter of 2022
- Expected commissioning: 2026.

5.1.3. Ghana – Burkina – Mali Interconnection

This project is in its preparation and financing mobilization phases.

- Re-evaluated cost of pre-investment studies estimated at US\$6,422,720;
- NEPAD-IPPF funding in the amount of US\$583,300 finalized and grant agreement being signed by both parties;
- AFD funding in the amount of US\$2,500,000;
- WB funding in the amount of US\$3,310,000;
- Contribution from the beneficiary utilities (GRIDCo, SONABEL and EDM-SA) to the funding of the study in the amount of US\$10,234 per utility;
- Length: line of about 600 km between Bolgatanga (Ghana) - Bobo Dioulasso (Burkina) - Sikasso (Mali);
- Commencement of studies: 1st Quarter of 2022;
- Expected commissioning: 2025.

5.1.4. 330 kV Nigeria – Benin Interconnection Reinforcement

This project is in its preparation and financing mobilization phases. The pre-investment studies being financed by the NEPAD-IPPF, USAID, GIZ and the beneficiary utilities (CEB and TCN) are almost completed. These studies are behind schedule partly due to COVID-19-related health crisis. The status is as follows:

- Process ongoing for the issuance of environmental certificates in both countries;
- Draft Commercial agreements being finalized;
- Estimated cost of the project: 115.1 million Euros;
- Mobilization of financing underway;
- Following recommendations of the first TFP roundtable, Benin has transmitted its financing requests to the TFPs;
- Process ongoing by Federal Government of Nigeria for the transmission of requests for financing to the TFPs;
- Keen interest shown by BOAD, EBID, AfDB and AFD in financing the project;
- Meeting held with EBID on 1st February 2021 to discuss the modes of financing that could be proposed for the implementation of the project;
- Due diligence commenced by AfDB for project appraisal. Within this framework, a virtual meeting was organized on 22nd September 2021 with AfDB to prepare the project concept note;
- Second meeting of the TFPs to establish a financing plan for the implementation of the project will be organized after submission of Nigeria's requests;
- Expected commissioning: 2023.

5.1.5. G5-Sahel Trans-Sahel Backbone “Desert to Power”

This project is in its preparation phase as part of the African Development Bank (AfDB) assistance to support the implementation of a trans-Sahelian backbone that shall include the construction of regional solar parks to increase electricity access to communities crossed by the transmission lines in the G5 Sahel countries (Mauritania, Mali, Burkina, Niger, Chad). The status is as follows:

- Approval on 1st July 2021 by the AfDB Board of Directors of a US\$ 4 million grant

to fund the pre-feasibility study of the project; Grant agreement signed on 23rd July 2021;

- Memorandum of Understanding defining the cooperation framework for the preparation of the pre-investment studies of the project signed with Mauritania and Chad respectively on 30th August and 24th September 2021;
- ToR for pre-feasibility studies finalized and pending submission to AfDB for no-objection.



Zoom photo of participants

5.1.6. Nigeria – Benin – Togo – Ghana – Côte d'Ivoire Interconnection (WAPP Median Backbone Project)

This project is in its preparation phase. The pre-investment studies are being financed by the World Bank under the "Technical Assistance for Regional Electricity Trade" component as part of the financing for the North Core Project. This is the first section of the East-West (Nigeria-Senegal) Transversal Backbone and this first phase shall link Nigeria, Benin, Togo, Ghana and Côte d'Ivoire.

- Cost of pre-investment studies: US\$6.8 million;
- Recruitment of Consultants for pre-investment studies completed, contracts signed and effective;
- Consultant in charge of the Feasibility Study has commenced work;
- Report on an institutional framework for the implementation of the project prepared.
- Two virtual meetings of experts from the power utilities and ministries in charge of energy of the concerned countries respectively organised on 9th -10th September 2021 and 20th October 2021 to review the report.
- Adoption of the institutional framework for the implementation of the project by the Managing Directors of the utilities concerned and the Directors General of

- Energy from the Ministries in charge of Energy of the countries on 3rd November 2021 in the sidelines of the General Assembly in Ouagadougou;
- Adoption of the draft report on the evaluation of the voltage level of the line submitted by the Consultant by the stakeholders during a meeting organised in Cotonou from 11 to 12 November 2021; voltage level adopted: 330 kV;
- Commencement of the services of the Consultant in charge of the Environmental and Social Impact Assessment (ESIA) Studies planned for November, after submission of the final report on the evaluation of the voltage level of the line by the Consultant in charge of the feasibility study;
- Expected commissioning: 2025.

5.1.7. Optimal Development Plan for the St. Paul River Cascade in Liberia and Feasibility Study of Selected Priority Project

This project is in its preparation phase and is funded by the World Bank. It is the power generation Priority Investment Project (PIP) in Liberia and includes: (i) a hydropower project on the Saint Paul River of about 150 MW (SP2) located about 80 km upstream of Mount Coffee on the Saint Paul River coupled with a 90 MW solar power project and (ii) extension of the Mount Coffee hydropower plant with an additional capacity of 44 MW. It is to be implemented in several stages. The study was launched in 2017 and for the year 2021, the following activities have been completed:

- **As per the Hydropower Component (SP2-150 MW)**
 - Maximum optimal reservoir level and dam design criteria validated;
 - Draft ESIA report for the dam reviewed and commented. Revised report expected;
 - Works on the access road to the dam site completed;
- **As for the Mount Coffee Extension Component**, the technical and economic feasibility study report incorporating stakeholders' comments is still awaiting validation of the ESIA study reports;
- **As per the Solar Power Plant Component**

- Sites for solar power plants selected and validated;
- Study on integration of the power plants into the grid carried out and report validated.
- Feasibility study on the National Network Control Centre also completed and report approved;
- Recruitment of the Strategic Transaction Advisor in charge of structuring the project and advising on the best strategy for the realization of the PIP finalised; he commenced assignment at a virtual meeting organized on 1st - 2nd March 2021.
- Final report on the legal, regulatory and sectoral due-diligence for the realization of the solar PV power plant after taking into account observations provided by the Consultant;
- Draft report on the legal, regulatory and sectoral due-diligence for the realization of the hydropower plant under review;
- The solar power component is expected to be commissioned in 2022/23 and the hydropower component in 2026.

5.1.8. Regional Solar Power Parks

These projects comprise the construction of regional solar parks of 150 MWp each as stipulated in the Master Plan. The preparation of these projects is being funded by the World Bank as part of its assistance to the WAPP Secretariat for the development of solar power generation in sub-Saharan Africa. These parks are to be developed as follows:

- Multi-site and multi-phase approach to park construction;
- "Plug and Play" concept: the energy evacuation facilities are to be built with public funding and the developers of the parks to be selected through an auction (bidding process).
- The projects concerned by the first phase are those in Burkina, Mali, The Gambia and Niger.

5.1.8.1. Regional Solar Park in Burkina

- Technical, economic and financial feasibility studies completed;
- Bidding documents for the connection and reinforcement works are being prepared;

- Environmental and social impact assessment studies and geotechnical studies that are ongoing would have been finalized were it not for the difficulties encountered with the local populations on the site in the Koupéla region;
- Safety audit of the project sites being prepared;
- Bidding documents and draft contracts for the selection of IPPs finalized;
- Briefing meeting organized to present the results of the studies to the Minister in charge of energy and to solicit his support for the second phase, in particular the launching of the auctions;
- Expected commissioning: 2024.



Briefing meeting with the Minister in charge of energy from Burkina

5.1.8.2. Regional Solar Park in Mali

- Technical, economic and financial feasibility studies completed;
- Environmental and social impact assessment studies and geotechnical studies in progress. Interim reports are being finalized and shall be submitted to the agency in charge of environmental safeguards in Mali;
- Bidding documents and draft contracts for the selection of IPPs adopted and being finalized;
- An update of the feasibility study is however required to take into account changes in the basic assumptions used to determine the phasing of the project, in particular, the current development of a new master plan in Mali;
- Consultant recruited for this purpose and data collection and analysis report for the update of the feasibility study submitted; Report under review;
- Expected commissioning: 2024.

5.1.8.3. Regional Solar Park in The Gambia

- Technical, economic and financial feasibility studies in progress;
- Site for the park selected and validated
- Environmental and social impact assessment studies and geotechnical studies in progress;
- Recruitment of the Transaction Advisor is being finalized;
- Expected commissioning: 2024.



Courtesy Call on the Governor of the Region

Group photo at the Report Review Meeting

5.1.8.4. Regional Solar Park in Niger

- Technical, economic and financial feasibility studies in progress;
- Selection of sites for the park in progress;
- Recruitment of Consultant in charge of environmental and social impact assessment studies and geotechnical studies is being finalized;
- ToR for the Transaction Advisor underway;
- Expected commissioning: 2024.

5.1.9. Solar radiation measurement campaign

This activity is being carried out within the framework of the World Bank's assistance to the WAPP Secretariat for the development of solar power production in Sub-Saharan Africa. It will involve conducting a ground-based solar resource measurement campaign in several locations within the region to improve the overall knowledge of the resource at power plant sites and to reduce uncertainties in the resource estimation. The measurement campaign is planned to last two years.

- Campaign implementation plan adopted by the WAPP Strategic Planning and Environmental Committee (SPEC) with 28 sites selected to host the stations in addition to the 5 existing stations in Mali and Burkina;

- Twenty-four (24) solar measurement stations operational at the end of December 2021;
- Nine (9) stations remaining to be installed in Côte d'Ivoire, Guinea-Bissau, Niger and Liberia where civil works and procedures for importing stations are in progress;
- Expected completion of this activity: 2023.



Benin – Malanville

Nigeria – Kano

5.1.10. Study on the challenges of integrating renewable energy into the grid

The aim is to set up a working group spearheaded by the SPEC to reflect on the challenges related to the integration of renewable energy. It is planned to recruit a Facilitator to lead this working group.

- Recruitment of the Facilitator is ongoing;
- Short list established and request for proposals issued.

5.1.11. Solar plant linked to the Manantali Hydropower Facility

The preparation of this project is also funded by the World Bank under its assistance program for the development of solar power generation in sub-Saharan Africa. It consists of a feasibility study for the solar hybridization of the existing Manantali Hydropower Facility.

- ToRs for detailed feasibility studies finalized and approved by the Bank;
- Consultant selection finalized and process ongoing for contract signature.

5.1.12. Climate Markets

In order to take full advantage of the increased renewable energy generation in the ECOWAS energy mix, the WAPP Secretariat and the World Bank have entered into a Memorandum of Understanding through which the World Bank is providing technical and financial support to WAPP to develop certain activities aimed at enabling

WAPP member utilities to capitalize on the benefits offered by climate markets.

In this context, the WAPP Secretariat conducted in 2020 an update of the Grid Emission Factor (GEF) for its interconnected power system and submitted the report thereon with the preliminary values of the GEF to the Secretariat of the United Nations Framework Convention on Climate Change (UNFCCC) on 15th December 2020. After the necessary due diligence, the Executive Board of the Clean Development Mechanism (CDM) of the UNFCCC formally approved the updated standardized baseline (SB/NRN) of the regional grid emission factor (GEF) for the ECOWAS interconnected power system at its 109th meeting held in March 2021. The values are valid from 24th March 2021 to 25th February 2024.

The approved NRN of the GEF is available on the CDM website at:

https://cdm.unfccc.int/methodologies/standard_baseline/2015/sb166.html.

5.1.13. 225 kV Côte d'Ivoire – Burkina Interconnection Reinforcement

This project, which involves the development of a second interconnection line between the concerned countries, is in the pre-investment study phase. The WAPP Secretariat has secured funding from the MCC in the amount of US\$ 3 million.

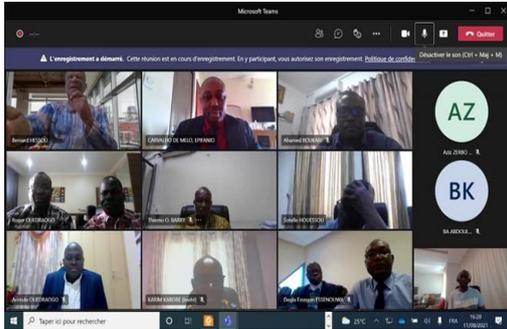
- Selection process for the Consultant to conduct the technical, economic, financial and environmental feasibility studies is ongoing in conformity to MCC guidelines;
- Evaluation of technical proposals finalized and MCC's *No Objection* obtained;
- Expected commissioning: 2026.:

5.1.14. Extension of the North Core interconnection to Togo from Burkina

This project is in its preparation phase. The WAPP Secretariat in collaboration with the power utilities CEB, CEET and SONABEL as well as the Burkina and Togolese Ministries in charge of energy are planning to extend this line to Togo from Burkina.

- Estimated length: 330 kV line spanning over 400 km;
- Cost of pre-investment studies estimated at US\$5.61 million;

- Funding request sent to NEPAD-IPPF on 8th October 2021;
- Pre-investment Study ToR finalized;
- Advance procurement request transmitted to NEPAD-IPPF on 13th October 2021 to expedite the recruitment of Consultants to conduct the pre-investment studies;
- Expected commissioning: 2026.



Zoom photo of participants

5.2. Project coordination and monitoring

The WAPP Secretariat monitored and coordinated the implementation of the following projects:

5.2.1. 330 kV Aboadze-Prestea-Kumasi-Bolgatanga transmission line in Ghana

This project shall reinforce Ghana's internal grid to allow for greater transit capacity to the north of the country.

- Length: 798 km divided into 3 sections:
 - Aboadze – Prestea funded by Armandi;
 - Prestea – Kumasi funded by Korea Exim Bank;
 - Kumasi – Bolgatanga via Kintampo & Tamale funded by AFD.
- Commencement of works: 2015;
- Aboadze - Prestea and Prestea - Kumasi section already commissioned;
- Kintampo - Tamale - Bolgatanga and Aboadze - Prestea - Kumasi section already commissioned;
- Works on the Kumasi-Kintampo section completed and commissioned successfully on 8th October 2021.

5.2.2. 225 kV Guinea – Mali Interconnection

This project is in its implementation phase and is being financed by the African Development Bank (AfDB), European Investment Bank (EIB), World

Bank (WB), ECOWAS Bank for Investment and Development (EBID), European Union (EU), West African Development Bank (BOAD) and the respective Governments concerned.

- Implementation works on the 225 kV N'Zérékoré - Fomi - Bamako section are underway:

- Length of this section: 714 km;
- Cost: 361.32 million Euros (288.09 million Euros for Guinea and 73.23 million Euros for Mali) including electrification of communities along the line route;
- Works contracts signed and put into force except for the contract for the line lot financed by EBID between the Siguiri substation and the Fomi substation as well as the lot for the extension of the Sanankoroba substation financed by the WB for which the procurement process is underway;
- Commencement of detailed engineering design studies for the lots for which the contracts have been signed and put into force;
- Revised Resettlement Action Plan (RAP) Report finalized and submitted to the National Compensation Commission (NCC) set up by the two (2) countries;
- Participation of the WAPP Secretariat from 25th May to 4th June 2021 via videoconference in the AfDB supervision mission;
- Participation of the WAPP Secretariat on 23rd July 2021 via videoconference in the joint donors' supervision mission. During this mission, the status of the project was reviewed and the impact of the COVID-19 and the socio-political situation in Mali on the project implementation schedule were assessed and the necessary joint actions to be undertaken were agreed upon;
- Participation of the WAPP Secretariat on 25th November 2021 by videoconference in the 4th session of the Project Steering Committee during which the 2022 Work Program and Annual Budget (WPAB) were adopted.

- Pre-investment studies for the 225 kV Linsan - Fomi section in Guinea and mobilization of financing for its implementation:

- Length of Linsan – Fomi section: 350 km;

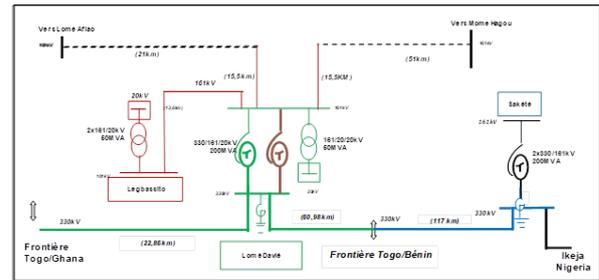
- Studies completed;
- Cost: 170 million Euros including electrification of communities along the line route;
- Financing mobilized and secured from the EIB. The financing agreement was signed and entered into force on 19th May 2021 with the publication of the Ratification Decree.
- Scheduled to be commissioned in 2024.



5.2.3. 330 kV Volta (Ghana) – Lomé “C” (Togo) – Sakété (Benin) Interconnection

This is a section of the WAPP Coastal Backbone stretching from Ghana through Togo to Benin where it connects with the 330 kV Ikeja West (Nigeria) – Sakete (Benin) line.

- Length: 350 km;
- Financing: AfDB, WB, KfW and BOAD;
- Works commenced in 2013;
- Works in Ghana completed in 2015;
- Works on the Ghana/Togo border - Davié substation section completed and line section commissioned in April 2019;
- Works on the Davié - Togo/Benin border (58.5 km) section completed but commissioning pending completion of the Togo/Benin border – Sakété section still in progress;
- Works on the Togo/Benin border – Sakété section completed but commissioning of this line is delayed pending the completion of the necessary works for its connection to the 330/33 kV Sakété substation;
- As at end September 2021, the physical progress of the extension works is estimated at **97%**;
- Commissioning planned for the end of December 2021 without the telecommunications infrastructure.



5.2.4. 225 kV CLSG (Côte d'Ivoire – Liberia - Sierra Leone – Guinea) Interconnection

- Length: 1,303 km;
- Financing: WB, AfDB, EIB, KfW and the Governments concerned by the project;
- Commencement of works: 2017;
- Commissioning delayed due to the COVID-19 health crisis which compelled the companies to reduce their field teams;
- To date, the line and substation works on the sections Man (Côte d'Ivoire) – Yekepa – Buchanan – Monrovia – Mano (Liberia) – Kenema – Bikongor (Sierra Leone) have been fully completed and energised except the Botota (Liberia) substation;
- Line section Yekepa (Liberia) – N'Zérékoré (Guinea) commissioned and operated at 30 kV pending completion of the N'Zérékoré substation;
- Line sections Bikongor – Bumbuna – Yiben and Bumbuna substation (Sierra Leone) completed and awaiting energization;
- According to the new schedule, commissioning of the line (i) Bikongor - Kamakwie in March 2022; and (ii) Kamakwie - Linsan will be in December 2022 with the commissioning of the Linsan substation by OMVG.
- Overall rate of progress of the works was estimated at about 95% at the end of December 2021.





5.2.5. OMVG Energy Project (Senegal, The Gambia, Guinea & Guinea-Bissau)

The project comprises 3 components:

❖ **Kaléta Hydropower Development Project (240 MW), in operation since 2015:**

- Capacity: 240 MW.

❖ **225 kV interconnection loop of the four countries concerned:**

- Length: 1,677 km;
- Financing: AfDB, WB, EIB, AFD, BOAD, KfW, IsDB, Kuwait Fund and the Governments concerned by the project;
- Commencement of works: 2017;
- Sequential commissioning underway and the entire loop expected to be commissioned in 2022.
- A ce jour, les travaux de lignes sur le tronçon L1a (Birkelane – Tambacounda), L1b (Kaolack – Birkelane), L6a (Tanaff – Soma), L6b (Soma – Brikelane) et L7 (Soma – Brikama) et les postes Kaolack, Tambacounda, Kédougou, Tanaff, Soma, Brikama, Bissau Saltinho et extension du poste de Kaléta achevés ;
- Tronçon de ligne L1a (Birkelane – Tambacounda), L1b (Kaolack – Birkelane), et Lot 6b (Soma – Birkelane) et les postes Kaolack, Tambacounda et Soma mis en service ; inauguration officielle le 23 octobre 2021 par SEM Adama BARROW, Président de la République de Gambie, Président de la Conférence des Chefs d'Etat et de Gouvernement de l'OMVG ;
- Taux d'avancement global de la ligne (ingénierie, approvisionnement et construction & installation des

chantiers) estimé à 81,76% à fin décembre 2021 ;

- Yekepa (Liberia) – N'Zérékoré (Guinea) line section commissioned and operated at 30 kV pending completion of the N'Zérékoré substation;
- Sections of the Bikongor – Bumbuna – Yiben line and Bumbuna substation (Sierra Leone) completed and awaiting energization;
- A ce jour, les travaux de lignes sur le tronçon L1a (Birkelane – Tambacounda), L1b (Kaolack – Birkelane), L6a (Tanaff – Soma), L6b (Soma – Brikelane) et L7 (Soma – Brikama) et les postes Kaolack, Tambacounda, Kédougou, Tanaff, Soma, Brikama, Bissau Saltinho et extension du poste de Kaléta achevés ;
- Tronçon de ligne L1a (Birkelane – Tambacounda), L1b (Kaolack – Birkelane), et Lot 6b (Soma – Birkelane) et les postes Kaolack, Tambacounda et Soma mis en service ; inauguration officielle le 23 octobre 2021 par SEM Adama BARROW, Président de la République de Gambie, Président de la Conférence des Chefs d'Etat et de Gouvernement de l'OMVG ;
- Taux d'avancement global de la ligne (ingénierie, approvisionnement et construction & installation des chantiers) estimé à 81,76% à fin décembre 2021 ;
- To date, works on line section L1a (Birkelane – Tambacounda), L1b (Kaolack – Birkelane), L6a (Tanaff – Soma), L6b (Soma – Brikelane), L7 (Soma – Brikama) and substations of Kaolack, Tambacounda, Kédougou, Tanaff, Soma, Brikama, Bissau Saltinho and extension of Kaléta substation completed;
- Line section L1a (Birkelane – Tambacounda), L1b (Kaolack – Birkelane), and Lot 6b (Soma – Birkelane) and substations of Kaolack, Tambacounda and Soma are operational; official inauguration on 23rd October 2021 by HE Adama BARROW,

President of the Republic of The Gambia, President of the Conference of Heads of State and Government of the OMVG;

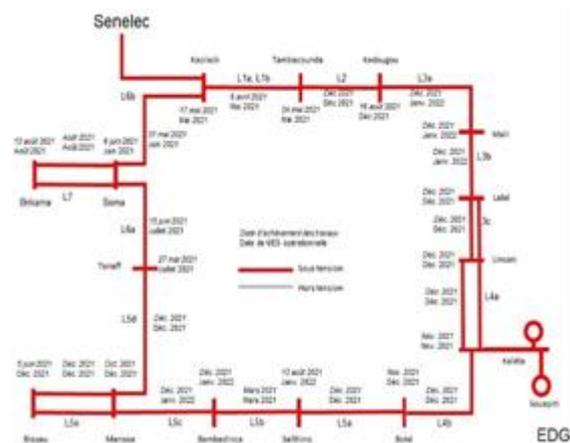
- Overall progress rate of the line (engineering, supply and construction & installation of sites) estimated at 81.76% at the end of December 2021.



Lines in Senegal - L2 stop towers



Linsan substation in Guinea Brikama substation in The Gambia



❖ **128 MW Sambangalou Hydropower Development Project:**

- Partnership Agreement between OMVG and VINCI Group for the execution of the works;
- Phased contract provides for preliminary works and detailed (front-end) engineering design studies in

Phase 1 and project construction works in Phase 2;

- In accordance with the contract, essential services under Phase 1 completed and expected commencement of Phase 2;
- Mobilization and securing of funding ongoing;
- Commencement of works scheduled for 2022;
- Expected commissioning: 2026.

5.2.6. Souapiti Hydropower Project in Guinea

- Capacity: 450 MW;
- Financing: Exim Bank China and Government of Guinea;
- Commissioning trial runs of the four (4) generating units completed;
- Provisional acceptance of the hydropower plant and evacuation line took place on 24th June 2021;
- Given the transit capacity of the Souapiti-Kaléta evacuation line, only two (2) generators are alternately placed on the grid for an average daily generation of 3000 to 4000 MWh.



View of the engine room



View of the dam

5.2.7. 330 kV WAPP North Core Interconnection

This project is in its implementation phase. It consists of the construction of a 330 kV line spanning over 875 km and linking Nigeria to Benin/Togo through Niger and Burkina Faso. The project also provides for the construction of three (3) new substations including one (1) in Niger (Zabori) and two (2) in Burkina Faso (Ouaga-Est & Ouaga-Sud-Est) as well as two (2) extensions including one (1) in Niger (Gorou Banda) and one (1) in Benin (Malanville). It is also planned to electrify 433

localities in Niger and 178 localities in Burkina Faso along the transmission line route.

- Project cost: US\$624.2 million including electrification of communities along the line route;
- Financing: AfDB, WB, AFD, EU and the governments involved in the project;
- Financing Agreements signed and effective;
- Works procurement process underway. First contracts negotiated and signed;
- PMU staff strengthened by recruitment of additional staff;
- First session of the Joint Ministerial Steering Committee (JMSC) of the Project, composed of the Ministers in charge of energy of the five countries, held on 10th June 2021;
- Recruitment of Consultants for the implementation of the RAP in the four (4) countries (Benin, Burkina, Niger and Nigeria) completed and contracts signed;
- Missions for the update of property inventories and the census of PAPs have commenced in the 4 countries where actual works shall occur.

A North Core Commercial Transaction Technical Committee (NC-CTTC) has been established and is working hard to launch the procurement process to recruit energy suppliers for the line. The selection strategy and methodology report has been finalized and submitted to the World Bank for approval. The draft power purchase agreements and transmission service agreements have been prepared and are under review. It is envisaged that the draft bidding documents for the auctions will be launched in May 2022 and the Power Purchase Agreements (PPA) and Transmission Service Agreements (TSA) will be signed in December 2022.

Commissioning is scheduled for 2024.



5.2.8. Gouina Hydropower Development Project

The project comprises of the following components:

- ❖ **Construction of the Gouina hydropower dam**
 - Capacity: 140 MW;
 - Financing: Exim Bank China;
 - Filling of the dam took place on 27th July 2021;
 - Overall completion rate: approximately 95% by the end of September 2021;
 - The new commissioning schedule for the generators is as follows:
 - Generator 1: end of October 2021;
 - Generator 2: end of December 2021; and
 - Generator 3: end of December 2021
 - Completion of the works: 2021.



Engine room



Power plant evacuation substation

❖ **Construction of electric lines**

➤ **225 kV Kayes (Mali) – Tambacounda (Senegal) double-circuit line**

- Length: 288.2 km;
- Funding: WB and SOGEM;
- Overall progress rate of works estimated at 78% at the end of September 2021;
- New schedule provides for commissioning in the first Quarter of 2022.

➤ **225 kV Manantali – Bamako (Kati) double-circuit line in Mali**

- Length: 279 km;
- Financing: AFD, EU and SOGEM;
- Contract for the works signed on 8th July 2021 with the TRANSRAIL LIGHTING Company;
- Detailed engineering design studies in progress;
- Clearing of the rights-of-way is ongoing;
- Commissioning is scheduled for 2023.

6. ESTABLISHMENT OF THE REGIONAL ELECTRICITY MARKET

The establishment of a competitive Regional Electricity Market is the ultimate goal set for WAPP by the ECOWAS Heads of State and Government.

The ICC, a Department within the WAPP General Secretariat, is in charge of activities related to the Regional Electricity Market. The WAPP Information and Coordination Center (WAPP ICC), in its effort to establish the regional electricity market implemented various activities primarily focused on the following strategic projects:

- Implementation of the WAPP ICC Project;
- Implementation of WAPP Market Roadmap;
- Implementation of the Project for Synchronization of WAPP Interconnected Power Systems;
- Distribution utilities performance improvement (distribution loss reduction project).

6.1. Implementation of ICC Project

The WAPP ICC Implementation Project is a European Union-funded project which involves the construction of the ICC Building at Calavi, supply & installation of SCADA / EMS / MMS / WAMS systems for Power System and Electricity Market Management.

The Objectives of the ICC Project are as follows:

- ❖ Enable ICC to fully assume its role of Operator of the Interconnected Power System and the West African Regional Electricity Market;
- ❖ Put in place the infrastructure, technical equipment, organization and capacity building mechanisms required.



ICC Control Room in Calavi

The WAPP Secretariat carried out the following activities within the framework of the project:

- Participation in Site Acceptance Tests (SAT) and trainings:
 - SDH in Senegal (Senelec), Guinea, Côte d'Ivoire (CIE), Ghana (GRIDCo), Mali (Manantali &

SOGEM), Mauritania (SOGEM) from January to July 2021;

- Meters and PMUs in Senegal (Senelec), Guinea, Côte d'Ivoire (CIE), Ghana (GRIDCo), Mali (Manantali & SOGEM), Mauritania (SOGEM) from January to July 2021;
- Voice over IP (VoIP) and cyber security in Senegal (Senelec), Guinea, Côte d'Ivoire (CIE) from June to July 2021;
- Point-to-point tests for Senelec and SONABEL from June to July 2021;
- ICCP links, meters, and telecommunications in Benin, Togo, Mali (SOGEM), Senegal (SOGEM), Mauritania (SOGEM), Niger and Nigeria between August and December 2021.
- One (1) training session on AMR and meter configuration in Massy (France) in October 2021.
- One (1) training session on RTU configuration in Massy-France in November 2021.
- SCADA Taskforce Meetings held from 16th to 18th March 2021, from 15th to 17th September 2021 and from 21st to 22nd December 2021;
- Delivery of Zone A of the Building on 22nd January 2021.



Exterior of the WAPP Building in Calavi

The status of the ICC works is as follows:

- The ICC Building is 85% complete as on 31st December 2021.
- The percentage of completion for Equipment of the Building at Calavi is estimated at 91% on 31st December 2021.
- The overall percentage of completion of the ICC project till date is estimated at 89.5% on 31st December 2021.
- The estimated delays in the implementation of the ICC project milestones are as follows:
 - The WAPP ICC Building B (Administrative Building) is expected to be completed by April 2022.
 - SCADA/EMS/MMS/WAMS installations are expected to be completed by July 2022.
 - SATs and acceptance tests of entire project works are expected to be completed by June 2022.



Patio of the WAPP Building (right wing) in Calavi

6.2. Establishment of the Regional Electricity Market

The objective of the establishment of the ECOWAS Regional Electricity Market is to create a technical, organizational, legal and commercial environment

that will allow the sale and purchase of electricity in a transparent manner and at competitive costs throughout the sub-region, for the benefit of the populations of West Africa.

Following the official launch of the Regional Electricity Market in 2018, the activities carried out from December 2020 to November 2021 are as follows:

- **Registration of Market Participants:** In accordance with Article 8 of the Market Procedures (Resolution 10/ERERA/17), the 46th WAPP Executive Board Meeting adopted the list of twenty-one (21) Transmission System Operators (TSOs) and Power Purchase Agreement (PPA) holders. ERERA has given its approval in principle for the registration of the applicants.



On-site reception of the satellite antenna in Calavi

A registration campaign for applicants is underway. Within this framework, the WAPP is providing support to electricity companies in order to gather all the necessary documents for their effective registration.

Senelec has completed all the documents required for its effective registration and has submitted its registration application to the Market and System Operator. On 12th October 2021, alongside the African Power Pools Forum meeting organized in Saly, Senegal, the Director General of Senelec and the Secretary General of WAPP signed the Agreement for participation in the Regional Market for ECOWAS. Senelec is the first registered market participant.



Signing ceremony of the first Regional Market Participation Agreement

The DGs of Mainstream and SONABEL signed the ECOWAS Regional Market Participation Agreement with the WAPP SG on 05th November 2021, on the sidelines of the WAPP General Assembly organized in Ouagadougou, Burkina Faso.

- **Bilateral Agreement Scheduling Test:** Pending the implementation of the Market Management System (MMS), the WAPP ICC is conducting bilateral agreement scheduling tests on the Marketplace.

Fifteen (15) bilateral cross-border agreements are scheduled and confirmed daily by the Customer and Market Division.

Two new bilateral agreements will be operational during 2021 after the signing of the PPAs and the commissioning of the interconnection lines with Liberia and Sierra Leone of the CLSG project.

- **Training of Market Stakeholders:** A webinar was organized on 23rd, 25th and 27th August 2021 on the theme "*Introduction to the basic principles of Electricity Markets*" with the Technical and Financial support of GIZ and with the participation of more than 200 French and English-speaking participants.
- **Preparation of Regional Market governance documents:** Discussions are ongoing between the WAPP and ERERA on the appropriateness of Resolution WAPP/295/RES.21/10/20, proposing that all participants in the Regional Market should be Members of the WAPP during Phase 1 of the Market.

The WAPP Executive Board adopted and transmitted to ERERA Resolution WAPP/312/RES.17/04/21 on the Methodology for Determining Registration Fees for the

Regional Electricity Market. In application of this Methodology, an amount of 2,700 USD has been proposed as registration fee for the ECOWAS Regional Electricity Market.

The Regional Market Phase 2 rules are being drafted as part of the elaboration of the Regional Grid Code. The initial report was validated by the EOC online meeting that was held in March 2021.

The WAPP and ERERA technical working group met from 6th to 8th April 2021 in Accra for a consultation meeting to define the actions needed to make the Regional Market work better. During the meeting, the top officials agreed that the launch of the Regional Market Phase 2 should take place within one or two years;

The ICC participated in the ERERA Tariff and Performance Working Group (TPWG) meeting which was held online and in-person in Accra from 14th to 16th June 2021. The Regional Energy Transmission Tariff Model is expected in December 2021 and should publish the transmission tariffs between the power systems across the sub-region.

The ICC participated in the meeting of the Working Group tasked with the development of a Functional System Reliability and Electricity Market Model.

This program is funded by Power-Africa and USAID.

6.3.WAPP Interconnected Power Systems Synchronisation Project

The WAPP ICC is currently implementing Phase II of the Synchronization Project.

It should be recalled that Phase II of the project comprises two contracts:

- ❖ **Contract N°1:** Design, supply and installation of Static Reactive Energy Compensator, PMU and Protection System

Scope of Work:

- Installation of one (1) +/- 30 MVar Static Var Compensator (SVC) at the 225/30 kV Matam substation in Senegal, including the extension of a HV bay with related equipment;
- Installation of twenty-two (22) PMUs in interconnection substations to be

integrated in the Wide Area Monitoring System (WAMS) of the ICC and Telecommunications retrofit in 8 locations;

- Special Protection Scheme

The activities relating to Contract N°1 and carried out over the last 12 months are as follows:

- 21 PMUs have been delivered and installed, except the PMU in Volta SS (Ghana) that will not be installed;
- Following the WAMS SAT (as part of the ICC project), NR Electric in collaboration with GE began work to integrate the 21 PMUs into the WAMS at ICC. The integration of PMUs into WAMS is expected to be completed by Q3 2022.
- Amendment N°1 has been drawn up and stipulates that: wireless telecommunications equipment is delivered to all sites and will be installed during the commissioning of the PMUs.
- All protection systems have been installed in Mali (in an EDM-SA substation) and in Nigeria.
- The protection plan was completed on March 15, 2021.
- All SVC equipment is delivered on site
- The civil engineering works have already started at the Matam substation with the contractor NR.

❖ **Contract N°2** involves:

- Power System Stabilizer (PSS) Tuning, Testing of Governors and Power Systems Synchronization Tests.

The following activities were carried out under Contract N°2:

- Power plant testing: first round of tests carried out in 11 out of 31 power plants due to several delays for the following reasons:
 - Delay in confirming test dates by power plant managers and TSOs prior to the start of testing upon receipt of information on test procedures and proposed test dates from WAPP;

- Non timely availability of critical data for model validation and PSS tuning studies;
- Lack of access to the power plants' equipment suppliers for testing;
- Long delay in obtaining work permits and travel documents for works in Nigeria;
- Delays due to travel restrictions for GE Energy Consulting's OEM experts and test teams due to the coronavirus pandemic.
- Power plants with old equipment that are no longer in service;
- Delay in the trade and contractual agreements between WAPP, and power plant operators to allow for site testing.

Contract N°2 has attained a satisfactory execution rate:

- The first synchronization attempt runs are scheduled for first half of 2022;
- The second synchronization attempt runs are scheduled for September 2022;

6.4. Technical working group

The 4th meeting of the System Protection and Coordination Working Group (SPCWG) was held on 22nd January 2021 to discuss the requirements for the commissioning of protection relays and interlocks installed as part of NR Electric.

Another meeting of this Working Group was held on 25th February 2021 to finalize discussions from the 22nd January 2021 meeting.

The 4th meeting of the System Reliability Assessment Working Group (SRAWG) was held on 21st May 2021 to discuss the study on location of phase-shifting transformers (PST) carried out by CESI as part of the technical assistance to the working group.

The 5th meeting of the SRAWG was held on 25th May 2021 to validate the PST location study scenarios, review the report on the analysis of regional needs for tools for analysis and planning of electricity networks and the report on the regional approach to energy development planning.

A joint meeting of the Load Frequency Control and Operations Manual Compliance Monitoring Working Group (3rd LFCWG) and the System Reliability Assessment Working Group (6th SRWG) was held

on 2nd September 2021 to review and adopt the Frequency and Operation Performance Analysis Manual Compliance Investigation Report submitted by the Consultant.

The 7th meeting of the System Reliability Assessment Working Group was held on 7th October 2021 to review and adopt the following:

- Business processes for the common network model (week ahead and year ahead).
- Operational process for outage coordination planning (week ahead and year ahead).
- Operational process for transfer capacity calculation (coming week and coming year).
- 2022 model for studies conducted under the West Africa Energy Program (WAEP).

6.5. Implementation of a Grid Code for WAPP Transmission Grid System

The objective is to develop a sub-regional transmission grid code, including a set of harmonized technical rules, which would help provide a clear legal framework for the development and operation of the sub-regional power system, facilitate the implementation of the ECOWAS Regional Electricity Market, ensure system security, as well as facilitate the integration of renewable energy sources, foster competition and allow efficient and effective use of the grid and energy resources.

The following activities were carried out:

- Elaboration of the Terms and Conditions.
- Elaboration of the Connection Code.
- Elaboration of the Operating Code.
- Elaboration of the Planning Code.
- Elaboration of the Market Code.
- Elaboration of the Measurement Code.

Elaboration of the System Operator Training Code is underway.

The project is almost 80% complete. The schedule of submission of deliverables is as follows:

- Market Design Report by the first week of October 2021.
- Draft Final Report by the end of December 2021.

- Final Report in late January or early February 2022.

6.6. AGoSE: Improving Energy Sector Governance in West Africa (RTEi Technical Assistance to WAPP ICC)

This support programme hinges on three main components:

- Enhancing / establishing a policy, strategic and planning framework at the regional level.
- Development of the Regional Electricity Market, to promote energy efficiency on the one hand and renewable energy resources in the energy mix, on the other hand.
- Strengthening the capacity of key stakeholders to carry out assigned missions

Within the framework of the EU-funded AGoSE programme, RTE International has already initiated actions for the initial operationalisation of the ICC. Business processes and operational procedures for the following activities have been developed and adopted in October:

- Development of a common grid model (forthcoming year and forthcoming week).
- Outage coordination planning (year-ahead and week-ahead).
- Capacity calculation (year-ahead and week-ahead).
- Daily operation, system restoration report, disturbance procedure, maintenance procedure report for SCADA and telecommunications equipment, PMUs & meters, procedure in case of loss of remote information.
- Disturbance report.
- Monitoring and application of voltage level.
- Monitoring and application of energy flow.
- Monitoring and application of frequency level.

Some activities will be undertaken later:

- Day-Ahead activities to be developed in the last Quarter of 2021.
- Implementation of the reliability of coordination activities to begin in February 2022 during the industrial operation phase.

The implementation of activities under the three components was largely impacted by the COVID-19 pandemic.



Delegation of the Beninese Minister of Energy visits the Calavi site

6.7. AGoSE: WAPP ICC PROJECT Cybersecurity Risk Assessment

The purpose of this project is to review the current design of SCADA/EMS/MMS which is implemented within the framework of the WAPP ICC project and

to carry out a cybersecurity assessment: a kick-off was organized on November 09, 2021.

05 control areas (CAC) and an NCC will have to be assessed in addition to the ICC site and the assessment will focus on processes, people and technology.

6.8. Implementation of a renewable energy management system

This system will be integrated into the ICC SCADA/EMS for the management of renewable energy sources in the WAPP interconnected power transmission system.

Following the entry into force of the contract with the successful contractor for the work in March 2021, the statement of work was approved in September and work on the modelling of variable renewable energy and their integration into the system is ongoing.

7. ADMINISTRATIVE AND FINANCIAL MANAGEMENT

The management of human, material and financial resources is core to the performance of any institution. Accordingly, during the period under review, the WAPP General Secretariat continued to ensure sound administrative and financial management with a view to optimizing its performance and achieving its priority objectives.

The activities related to the management of human, administrative and financial resources carried out during the period are as follows:

7.1. Recruitments

As part of the strengthening of its staff, the WAPP Secretariat has undertaken and finalized the following recruitments

- Twelve (12#) Consultants for the WAPP North Core Project Management Unit based in Abuja, Nigeria. The positions filled are as follows:
 - An Internal Auditor
 - An Officer in charge of Administration, Protocol and Logistics
 - An Information Technology Officer
 - A Communication Officer
 - A Bilingual Executive Secretary
 - Two Bilingual Team Assistants
 - A Civil Engineer
 - A Substation Engineer
 - A Transmission Line Engineer
 - A SCADA Engineer
 - A Social Safeguards Expert
- A Superintendent responsible for the maintenance of all electrical systems and installations including generators and all equipment in the modern complex building of the WAPP ICC equipped with various electrical systems, communication, cooling, fire detection and control systems, sanitary-plumbing, emergency generators, etc. The ICC is a strategic Centre linked up with the National Control Centres of the ECOWAS region and which allows for real-time supervision of the WAPP interconnected power systems including cross-border electricity trade;
- An Electrical Engineer in charge of Market Operations to strengthen the Customer and Market Division under the Information and Coordination Centre (ICC);
- An Electrical Engineer in charge of Power System Operations to strengthen the Power

System Operations Coordination Division under the WAPP ICC Department;

- A non-resident Renewable Energy Expert to support the PIPES Department;
- A Planning & Training Delivery Programme Officer to strengthen the WAPP Member Utilities' Capacity Building Programme Coordination Division under the WAPP Administration and Finance Department;
- A Resident Project Coordinator to strengthen the Project Coordinators' Team in the Division for Project Studies, Planning and Financing under the PIPES Department.

7.2. Capacity Building

As part of its Capacity Building Program, the WAPP Secretariat organised various activities consisting of mobilisation of financial resources, preparation of training programs, participation in training and exchange programs. These activities were carried out in accordance with the WAPP Annual Work Plan and those established under the Technical Assistance Agreements with TFPs. In view of the current constraints relating to the management of the worrisome health situation engendered by Covid-19 pandemic, the implementation of some activities is experiencing delays.

7.2.1. Activities/Training carried out with WAPP's own funds

As part of its Continuing Education Program, the Administration and Finance Department has facilitated the participation of the Internal Auditor in the "*Training Workshop on IPSAS*" held from 13th to 15th July 2021. He also took part in the training course "*The Digital Economy: The Roles of Accountants*" which took place from 29th November to 3rd December 2021.

The Administration and Finance Department, following a procurement procedure, organised a training for drivers on the theme: "*The Professional*

Driver of an Administrative Vehicle in an Organisation: Safety-Preventive Maintenance of Vehicles-Ethics and Management of Professional Emergencies-Defensive Driving-First Aid Practices". The training took place in two sessions, from 8th to 11th December 2021 and, from 15th to 18th December in Grand Popo (Benin).

Group photo of some of the participants to the training with the Representative of the DAF



Training of two Bilingual Secretaries on the theme "*Secretaries and Assistants: better use of tools and techniques for more efficiency*" from 22nd November 3rd December 2021.



Delivery of training certificates to secretaries

7.2.2. Activities and Training carried out with TFP funding for the benefit of the WAPP General Secretariat Staff

❖ World Bank (WAPP-ITAP):

- Within the framework of the **WAPP-ITAP (Integration and Technical Assistance Project)**, a Training Workshop on Power Purchase Agreements (PPA) and Transmission Service Agreements (TSA) bordering on "Key Technical Aspects" and "Financial Analysis of PPAs" was conducted in virtual mode from 19th to 21st January & 26th January to 1st February 2021 for the benefit of key stakeholders from the WAPP North Core countries. In

addition, a Dissemination and Training Workshop on the ERERA Power Purchase Agreement (PPA) Model User's Guide (for the CLSG, CEB and North Core countries) was organized in 2 sessions (in-person and virtual) from 28th to 29th June 2021 and from 1st to 2nd July 2021 respectively.



Group photo of trainees with trainers

❖ GIZ Funding / Project: "Promotion of a Climate Friendly Electricity Market (ProMERC)

Training of all female staff of the WAPP Secretariat on "Women Leadership", held from 5th to 7th October 2021. The objective of this exchange forum was on the one hand, to build the skills of women on the general concept of gender, gender equity and gender equality in the energy sector and the ECOWAS region and on the other hand, to make them aware of their intrinsic potential, talents and abilities to build an excellent leadership base in their daily work and encourage them to train themselves to take on greater functions and roles of responsibility in the energy sector.



Group photo of the female staff of the WAPP Secretariat, the Secretary General and the Representatives of GIZ

❖ USAID West Africa Energy Program (WAEP)

The following activities were organized:

- Forum on "*Resettlement Action Plan: A Tool for Social Safeguards*" held on 7th July 2021.
- Participation of two staff of the WAPP Secretariat in the training on "Best practices in monitoring and evaluation and performance reporting of transmission projects including the

use of GIS tools to monitor construction performance" held from 4th to 8th October 2021.

- Participation of three staff from the WAPP Secretariat in the training on "Project Management for Interconnection Projects" held from 18th to 21st October 2021.

❖ European Union (AGoSE)

- Training of three Directors and two staff on Business Continuity and Risk Management held from 27th September to 8th October 2021.
- Training of SPEC members, of PIPES Director and four senior staff of the WAPP Secretariat on "Planning and Implementation of Public-Private Partnerships (PPPs)". The training took place in Dakar (Senegal) in two sessions, from 6 to 8 December 2021 for French-speaking participants and, from 20 to 22 December for English-speaking participants.



Group photo of the trainees with the trainer

❖ European Union (Programme Estimates)

- Training of three Directors and three staff on Planning and Implementation of Public-Private Partnerships (PPP), held from 13th to 17th September 2021.



Training Participants

- Training of ten staff on Project Management, held from 20th to 24th September 2021.



Group photo of trainees with trainer

7.2.3. Activities/Capacity Building on TFP Funding for the benefit of WAPP Member Utilities' Staff

❖ World Bank Funding:

- **Training and Certification in Renewable Solar Energy for the Staff of Power Utilities and Energy Ministries of ECOWAS Member States:**

In line with the objectives of the SAHEL Project (Phase 1) which is to promote the development of regional solar parks in West Africa, this session aims at the training and certification through three (3) programmes ((i) *Planning and Implementation of Solar Renewable Energy Generation Facilities* (ii) *Operation and Integration of Solar Energy Generation into the Grid* and (iii) *Operation and Performance Monitoring of Solar Energy Generation Facilities*) for the benefit of 120 agents of national power utilities, Ministries in charge of Energy in ECOWAS countries and the WAPP Secretariat, 20% of whom are women.

The design report of the training programmes presented by the Consultant (2iE Institute) was validated during the 3rd Coordination Meeting of the Regional Training Centres (RTC) which took place from 31st May to 2nd June 2021 in Dakar.

Following this validation, the official start-up ceremony of the training courses took place on 5th July 2021, at the CME Bingerville, in the presence of officials from WAPP, CIE, CI-ENERGIES and the World Bank. The first training sessions on the theme "Planning and Implementation of Solar Renewable Energy Generation Facilities" were held from 5th to 17th July 2021, for the benefit of two groups of

participants (anglophone and francophone participants) at CME Bingerville (Côte d'Ivoire). Subsequently, the trainings of Programme 2 "Operation and Integration of Solar Energy Generation in the Grid" took place respectively from 2nd to 6th August 2021 online and, from 11th to 16th October 2021 face-to-face at CFPP Cap des Biches, (Senegal) for the benefit of the French-speaking participants; from 9th to 13th August 2021 online and, from 18th to 23rd October 2021 face-to-face at CFPP Cap des Biches, (Senegal) for the benefit of the English-speaking participants.

The trainings of Programme 3 "Operation and Performance Monitoring of Solar Energy Generation facilities" took place respectively from 18th to 22nd October 2021 online and, from 8th to 13th November 2021 face-to-face at VRA-Academy Akuse, (Ghana) for the benefit of the French-speaking participants; from 25 to 29 October 2021 online and, from 8 to 13 November 2021 face-to-face at VRA-Academy Akuse, (Ghana) for the benefit of the English-speaking participants.



Photo of female participants and WAPP staff at the closing of Programme 3 training session held at VRA Academy in Akuse, Ghana

These training sessions were carried out in collaboration with the 2iE Institute (Burkina Faso) and the WAPP Regional Training Centres (RTC). At the end of the training programmes carried out between July and December 2021, 120 agents were trained and 112 agents were certified, 25% of whom were women. The distribution of trained and certified participants by programme is as follows: 56 for programme 1, 34 for programme 2 and 22 for programme 3. The training took place in three (3) WAPP RTCs, namely CME Bingerville in Côte d'Ivoire, CFPP Cap des Biches in Senegal and VRA Academy Akuse in Ghana. The study tours will be organised during the year 2022.



Photo of participants to the Dakar training on December 2021

- **Activities of the CIGRE West Africa National Committee (WANC) / Solar Development Project in Sub-Saharan Africa - Phase 1:**

The CIGRE WANC held its first General Assembly on 11th December 2020 in Lomé (Togo), on the side-line of the 15th WAPP General Assembly Session. This General Assembly was devoted to (i) the review and adoption of the 2020 Activity Report of the CIGRE WANC, (ii) the review and adoption of the CIGRE WA logo, (iii) the review and adoption of the 2021 & 2022 membership fees; (iv) the appointment of the Members of the Steering Committee and information on the biennial session of CIGRE scheduled for August 2021 in Paris.

During the year 2021, the following activities were carried out:

- Finalization of the terms of reference of the 18 Study Groups and the appointment of the members of the said Study Groups;
- Continued sourcing for membership, especially for individual members;
- Finalization of the recruitment of the Administration and Accounting Officer for the CIGRE WANC office;
- Participation of the Acting Secretary General of CIGRE WA (via videoconference) in the opening session of the CIGRE Centennial Congress.

To date, the CIGRE WANC has 13 collective members composed solely of WAPP member utilities.

❖ **GIZ Funding / Project: "Promotion of a Climate Friendly Electricity Market (ProMERC)**

The Administration and Finance Department collaborated with GIZ in the implementation of the following activities:

- **Network of Regional Training Centres (RTCs).** During the 3rd RTC Coordination Meeting held in Dakar from 31st May to 2nd June 2021, the status of implementation of the recommendations of the RTC Network Strategy and the E-learning Strategy of the said Network was examined. During this meeting, the Terms of Reference (ToR) for the recruitment of Individual Consultants for the elaboration of the legal framework for the RTC Network, including the elaboration of quality & certification standards for regional trainings and excellence criteria for the RTCs were validated.
- **The Strategic Plan of the Network of Regional Training Centres (RTC),** adopted by the Executive Board in April 2021, has been operationalised through two (2) consultancy missions: (i) Development of the legal and institutional framework of the RTC Network, (ii) Development of the quality and certification manuals for regional training and for the formatting of the excellence criteria of the RTCs.
The final documents of these missions, i.e. the statutes and internal regulations of the RTC Network as well as the quality and certification manuals for regional training courses and the criteria of excellence and specialisation in strong clusters of RFCs have been validated during the meeting of RTC experts, from 6 to 8 December 2021 in Dakar. These texts were adopted during the 24th meeting of the Human Resources and Governance Committee (HRGC) which took place from 9 to 10 December 2021, in Dakar. At the end of this meeting, the HRGC recommended to the WAPP Executive Board the approval of the texts.
- **The E-learning Strategy for the Regional Training Centres (RTCs),** adopted by the Executive Board, in April 2021, has been operationalised through the following actions: (i) Provision of computer equipment to the RTCs, (ii) Training of trainers and e-learning teams in the RTCs, (iii) Development of a roadmap for

the implementation of the e-learning strategy during the workshop on e-learning activities which took place from 18th to 19th November 2021, in Accra.

- **Delivery of computer equipment to Regional Training Centres**
As part of the implementation of the e-learning strategy of the WAPP Network of Regional Training Centres (RTCs), the GiZ/ProMERC Programme has provided the RTCs with latest generation laptops and associated accessories. This equipment is intended for Trainers and e-learning Teams for the design and implementation of online courses.
The official handover ceremonies for the computer equipment took place on 25th November 2021, for the Centre des Métiers de l'Electricité (CME) of CIE (Côte d'Ivoire) and, on 9th December 2021, for the Centre de Formation et de Perfectionnement Professionnels (CFPP) of Cap de Biches of Senelec (Senegal).
The official handovers for the three other RTCs (CFPP Calavi-CEB-Benin, NAPTIN-Kainji-Nigeria, VRA Academy Akuse-Ghana) will take place in the first half of 2022.
- **Regional training on non-technical losses on power systems.** Training sessions on the theme: "Access to Investment / Ensuring the Bankability of Electricity Infrastructure Projects" were conducted by videoconference in September 2021, with about thirty French-speaking participants and in November 2021, with about fifty English-speaking participants. These trainings were conducted for the benefit of the Executives and Technicians of the WAPP General Secretariat and the WAPP member power distribution utilities.
- **Training of Trainers on e-Learning**
A training programme for about 40 trainers and members of the e-learning teams of the WAPP Regional Training Centres was carried out from July to November 2021.
- **Training on Electrical Network Design with NEPLAN software**
Online training sessions on "Electrical network calculations with NEPLAN software" were held from 7th to 9th December 2021 with 11 French-speaking and 40 English-speaking participants. These training sessions were carried out for the benefit of engineers and technicians from power distribution utilities and trainers from the

WAPP Regional Training Centres (RTC). A one-year renewal of the NEPLAN software licences was carried out for the benefit of the participants.

7.3. Management of the 2019 CORONAVIRUS Pandemic

Under the aegis of the Administration and Finance Department, the WAPP Secretariat has maintained its monitoring and sensitisation strategy against the spread of the virus in order to ensure the staff's safeguard. Indeed, the impacts of the pandemic observed in 2020 prevailed in 2021. Besides, the strategy consisted in the implementation and observance of the recommendations of ECOWAS, WHO and the Government of Benin with regard to established Response Strategies to ward off the spread of the virus, which include the wearing of face mask, hand washing, observance of the distancing measures and vaccination against the Coronavirus disease. Rotation of staff presence in the office was also employed

7.4. Financial Management

The Financial Statements of the WAPP Secretariat for Fiscal Year 2020 have been audited by the international audit firm, PricewaterhouseCoopers (PwC), Ghana.

The audit report indicates that the Financial Statements of the WAPP Secretariat portrayed a true and fair view of the financial position of the Institution and that the financial performance of the WAPP and its cash flows for the period from 1st January to 31st December 2020 were consistent with the International Public Sector Accounting Standards (IPSAS / NICSP).

The audit report was thus validated by the Finance Committee and approved by the WAPP Executive Board.

The WAPP 2020 Financial Statements, which include the financial results of WAPP Donor-funded projects, show a surplus of UA 1,559,161 (WAPP Secretariat: UA 123,978, WAPP Projects: UA

1,435,183) mainly due to the constrained rates of implementation of activities as a result of the impacts of the COVID-19 pandemic on the Organization.

In accordance with the requirements of the Technical and Financial Partners, the financial statements for FY 2020 have been audited for the following projects:

- "The accounts of the EU Programme" funded by the European Union and audited by GCM Sarl;
- "The WAPP Integration and Technical Assistance Project (ITAP)" funded by the World Bank and audited by the international auditing firm, PricewaterhouseCoopers (PwC), Ghana;
- "The Solar Development Project in Sub-Saharan Africa" funded by the World Bank and audited by the international audit firm, COFIMA;
- "The Closing of the AfDB Capacity Building Program under CLSG" funded by the African Development Bank and audited by the audit firm FICADEX-Tate & Associates;
- The World Bank-funded "North Core Project" audited by the international auditing firm, PricewaterhouseCoopers (PwC), Ghana;
- The "GIZ Technical Assistance Accounts" funded by GIZ and audited by BDO.

The audit reports were transmitted within the prescribed deadlines to the concerned donors and were subsequently deemed compliant by the latter.

7.5. Activities of the Liquidity Enhancement Revolving Fund (LERF) Working Group

The Department of Administration and Finance also organized on 29th June 2021 a virtual meeting of the ECOWAS Regional Electricity Market Working Group on Securitization Cross-Border Power Trade under the ECOWAS Regional Electricity Market to consider the establishment of the Liquidity Enhancement Revolving Fund (LERF).

See Appendix 1 for more information on the audit and financial statements of the WAPP.

8. WAPP STATUTORY MEETINGS

In accordance with the statutes governing the Institution, WAPP ensured the organization of its annual statutory meetings. Summarized hereafter is an overview of the meetings held during 2020.

8.1. 15th General Assembly

The WAPP Secretariat, in collaboration with the Ministry of Energy Transition, Mines and Quarries of Burkina Faso and the National Electricity Company of Burkina (SONABEL), the host company, organized the 16th Session of the WAPP General Assembly. It was held on 5th November 2021 in a hybrid form due to the COVID 19 pandemic: Members of the Executive Council, Organizational Committees and TFPs who were able to travel to Ouagadougou attended face-to-face at Hotel Lancaster of Ouaga 2000 while the other participants followed the session by videoconference.



Photo of participants with the Energy Minister of Burkina Faso

It was an opportunity for the WAPP Secretariat to inform the member utilities of the Institution and the Technical and Financial Partners of the progress made and to make recommendations for the development of the Institution as well as the electricity sector in the West African sub-region. This General Assembly was the occasion for the admission of one (01) new member, it is the company AXXELA Limited of Nigeria.



View of the Presidium of the General Assembly, from left to right: Commissioner Energy, EB President, Energy Minister, SG

In addition, the National Committee of CIGRE West Africa held its General Assembly on 05 November 2021 after that of the WAPP.

8.2. Executive Board Meetings

Despite the COVID-19 pandemic, four (4#) Executive Board meetings were organised, three being by videoconference:

- **49th Meeting** held on 17th April 2021 at the Golden Tulip Hotel in Cotonou. The members of the Executive Board (EB) who could not make the trip attended via videoconference. It adopted the following:
 - The E-Learning Strategy and the Networking Strategy for the Regional Centres of Excellence;
 - The Regional Electricity Market Participation Fees and the directives for the secondment of system operators to the WAPP Information and Coordination Centre.

The meeting also authorized the Secretary General to sign various financing agreements with WAPP TFPs.

- **50th Meeting** held on 4th September 2021 via videoconference. The meeting essentially adopted the extension of the WAPP North Core Project to Togo from Burkina. It also allowed the formal introduction of the newly appointed Managing Directors of two member utilities that were on the Board.
- **51st Meeting** held on 25th September 2021 at the Golden Tulip Hotel in Cotonou. EB members that could not make the trip attended via videoconference. The meeting was focused on two key issues namely the WAPP Financial Statements for FY 2020 and the WAPP Work Programme and Associated Budget for FY 2022.

It should be noted that the WAPP 2020 Financial Statements prepared by the External Auditor, PwC Ghana, this time included the accounts of the WAPP Secretariat and those of the TFP-funded

projects. The Board adopted the 2020 Financial Statements which were deemed to be transparent, fair and consistent with international standards.

The 2022 budget portrays a balanced revenue-cum-expenditure of **UA 27,455,912**. In the operating budget, the share borne by members' contributions amounts to **UA 5,164,700** and the share borne by TFPs amounts to **UA 22,291,212**. In view of the recovery of members' contribution arrears, The Board adopted a number of measures against defaulting Members to be implemented by the WAPP Secretariat.

- **52nd Meeting** held on 3rd November 2021 in hybrid form in Ouagadougou as a prelude to the General Assembly. Among others, it made it possible to propose the three new rotating members of the Executive Board and to adopt the agenda for the General Assembly.

8.3. Activities of the Organisational Committees

8.3.1. Strategic Planning and Environmental Committee (SPEC)

A meeting of the WAPP Strategic Planning and Environmental Committee (SPEC) that included participation of members of the Engineering and Operating Committee whose utilities are not represented on the SPEC as well as Representatives of the Ministries in charge of energy of the ECOWAS mainland States was held from 29th – 30th June 2021. This meeting discussed and adopted the implementation plan for the solar measurement campaign with the 28 sites recommended to host the stations in the ECOWAS mainland States.

Within the framework of the development of the Regional Grid Code, the SPEC members participated in meetings held from 8th -10th June 2021 and 15th – 17th June 2021 to review the Draft Grid Code Report submitted by the Consultant.

8.3.2. Engineering and Operating Committee (EOC)

A joint EOC-FC Working Group met virtually on 24th March 2021 and reviewed and validated the methodology for determining the application fee for participation in the ECOWAS Regional Electricity Market.

8.3.3. Finance Committee (FC)

In addition to its participation in the Joint EOC-FC Working Group, the Finance Committee met three times during the year 2021.

The first meeting held virtually on 28th January 2021 to consider the letter from the Electricity Company of Ghana (ECG) to the WAPP Secretariat on the revision of the basis of calculation of its contribution to the WAPP budget;

The second meeting held virtually on 25th June 2021 to report on the outcome of negotiations with the WAPP External Auditor, PwC Ghana, on the extension of the audit engagement for the years 2020 and 2021.

The third meeting held from 20th – 23rd September 2021 in Cotonou, Benin to review and adopt the Financial Results and Internal Control Assessment of the WAPP Organisation (Secretariat and Projects) for the year ending 31st December 2020 as well as the WAPP Work Programme and Associated Budget for FY 2022.

Given that PwC has issued an unqualified opinion on the WAPP 2020 Financial Statements, the Finance Committee thus approved the latter.

Regarding the Draft Work Programme and Associated Budget for FY 2022, the Finance Committee retained a balanced budget in revenue and expenditure of **UA 27,455,912**.

8.3.4. Human Resources and Governance Committee (HRGC)

The HRGC met twice during the year 2021.

The first meeting held, via videoconference, on 26th February 2021 to consider and adopt:

- The E-Learning Strategy Study Report
- The Report on Regional Centres of Excellence (RECs) Networking Strategy Study.

The second meeting held in-person from 4th – 5th June 2021 in Dakar to examine and adopt:

- The Report/Deliverable #2 of the Solar Renewable Energy Training and Certification Program (SRETCP);
- The ToR for the recruitment of an Individual Consultant for the elaboration of the RTC network legal framework;
- The ToR for the recruitment of an Individual Consultant for the elaboration of quality and certification standards for regional trainings and the excellence criteria for the RTCs.

The HRCG adopted all the documents submitted to it.

8.3.5. Joint meeting of the Organisational Committees

As a prelude to the General Assembly, the Organizational Committees held a joint meeting on 1st to 2nd November 2021 at Prestige Hotel in Ouaga

2000. This meeting allowed the 5 Organizational Committees (OEC, SPEC, FC, HRCG and CDC) to take stock of the activities carried out since the General Assembly held in Togo in 2020 and to make recommendations to the Executive Council.



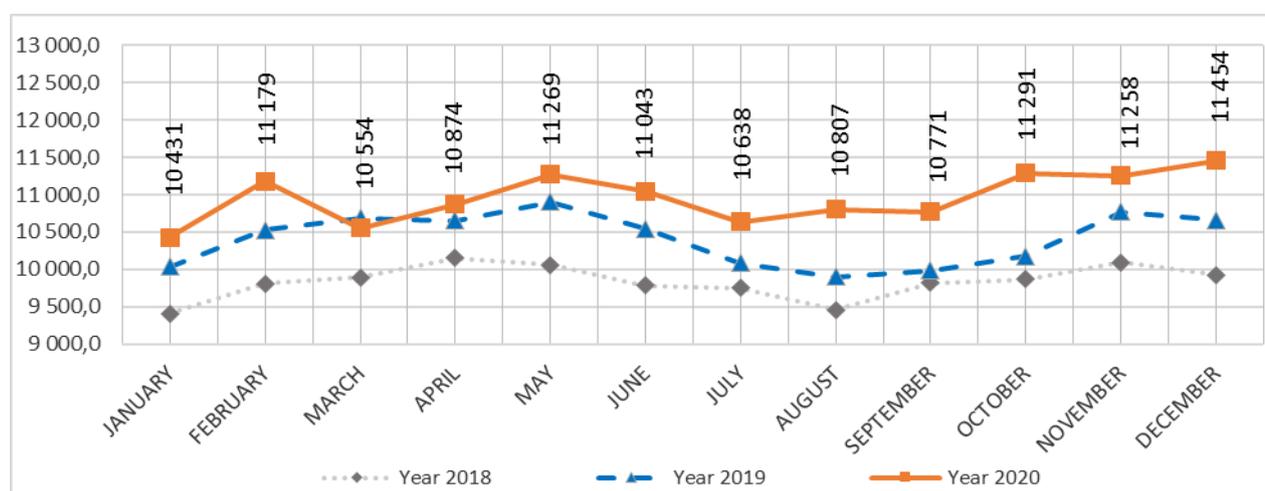
Group photo of participants in the Joint Meeting of the Organizational Committees

9. OPERATING STATISTICS OF WAPP INTERCONNECTED POWER SYSTEM

- Characteristic Data of the WAPP Interconnected System

	Year 2019	Year 2020	Year 2021	Ratio 2021 vs 2020
Installed Capacity (GW)	23,0	23,3	23,7	1,6%
Available Capacity (GW)	13,7	13,6	13,0	-4,7%
Peak Load (GW)	10,9	11,5	12,0	4,8%
Energy Generated (TWh)	70,0	75,3	79,6	5,7%
Energy Exchanged (TWh)	6,0	6,2	5,6	-8,9%
Ratio Exchange vs Generated	8,6%	8,2%	7,0%	

- Monthly Peak Load (MW)



- Exchanged Energy by Country

	Import 2018	Export 2018	Import 2019	Export 2019	Import 2020	Export 2020	Import 2021	Export 2021
Nigeria	0,0	-3 002,6	0,0	-2 327,2	0,0	-2 127,2	0,0	-2 308,2
Côte d'Ivoire	77,6	-1 138,6	76,6	-1 234,8	149,4	-1 308,9	197,1	-888,6
Ghana	143,8	-636,4	127,0	-1 235,4	56,1	-1 759,9	43,7	-1 734,0
Senegal	338,2	-2,1	468,4	0,0	358,0	0,0	413,2	0,0
Burkina Faso	783,4	-0,3	1 024,7	-0,2	1 419,6	0,0	1 222,1	-0,1
Niger	984,2	0,0	1 048,8	0,0	1 099,9	0,0	1 121,9	0,0
Mali	1 186,0	0,0	1 302,2	0,0	1 368,8	0,0	939,0	0,0
Benin/Togo (CEB*)	2 307,4	0,0	1 995,9	0,0	1 692,0	0,0	1 681,4	0,0
Sogem**	0,0	-1 128,9	0,0	-1 057,2	0,0	-1 201,3	0,0	-1 129,2
EEEEOA	5 820,6	-5 908,9	6 043,5	-5 854,7	6 143,8	-6 397,3	5 618,4	-6 060,1

* CEB is a utility owned by Benin and Togo

**Sogem is not a country but a member utility (that belongs to the 3 countries of OMVS)

10. CONCLUSION AND OUTLOOK FOR 2022

Over the past twelve (12) months, the WAPP Secretariat has endeavoured to carry out with enthusiasm the activities assigned to it despite the difficult context marked once again by the COVID-19 pandemic, which has enabled us to make significant progress and to look forward to the future with a little more serenity.

This performance was made possible thanks to the various stakeholders in the West African electricity sector and to whom I would like to reiterate my deep appreciation. These include the ECOWAS Commission, the Ministries in charge of energy, the WAPP member utilities and the TFPs. I would also like to extend a special and personal thanks to the WAPP member utilities that have over the past two consecutive years, despite the adverse impacts of the COVID-19 pandemic on their activities and finances, endeavoured to pay their contributions regularly to ensure the smooth functioning of the WAPP Secretariat. This performance is also to the credit of all staff members of the WAPP Secretariat who, despite the measures put in place to combat the pandemic, spared no effort in carrying out their daily tasks.

For the year 2022, the WAPP Secretariat will deploy more energy, with the support of the aforementioned stakeholders, to ensure the completion of the various priority projects in the pipeline, whose realization is a prerequisite for the flag-off of the competitive phase of the Regional Electricity Market.

Thus for 2022, without being exhaustive, the WAPP will ensure the achievement of the following main specific objectives:

- ⇒ Continue to mobilize funding for priority projects' pre-investment studies as well as financing for their implementation;
- ⇒ Prepare pre-investment studies for priority projects;
- ⇒ Pursue and finalize the implementation of the ICC project in Calavi, Benin;
- ⇒ Ensure the relocation of the WAPP Secretariat to the ICC premises in Calavi;
- ⇒ Finalize the implementation of the WAPP interconnected power system synchronization project;
- ⇒ Implement the WAPP System Operators Certification Program;
- ⇒ Continue the implementation of the Regional Electricity Market Roadmap;
- ⇒ Develop a Regional Grid Code;
- ⇒ Strengthen the capacity of WAPP member utilities and WAPP Secretariat staff;
- ⇒ Coordinate the interventions of the Technical and Financial Partners;
- ⇒ Strengthen cooperation with the ECOWAS Commission;
- ⇒ Continue the operationalization of the CIGRE West Africa National Committee;
- ⇒ Improve technical cooperation and strengthen exchange programs with stakeholders, regional and international institutions.

APPENDIX 1

FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER 2020



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WEST AFRICAN POWER POOL
Annual Report
For the year ended 31 December 2020

GENERAL INFORMATION

Executive

Board Members	Sule Ahmed ABDULAZIZ	Chairman, appointed in June 2020
	Usman Gur MOHAMMED	Chairman, retired in June 2020
	Amidou TRAORE	Vice-Chairman, retired in August 2021
	Noumory SIDIBE	Vice-chairman, appointed in August 2021
	Siengui A. KI	Secretary General
	Joseph O. MAKOJU	Member
	Karimou CHABI SIKA	Member
	Abdenbi ATTOU	Member, retired in February 2020
	Bangaly MATY	Member, appointed in February 2020
	Jonathan AMOAKO-BAAH	Member, retired in August 2021
	Ebenezer Kofi ESSIENYI	Member appointed in August 2021
	Papa Mademba BITEYE	Member
	Tamsir NDIAYE	Member
	Baba Ahmed COULIBALY	Member
	Emmanuel ANTWI-DARKWA	Member
	Lamu AUDU	Member
	Frank AKLIGO	Member, retired in June 2020
	Osmani Aliduba AYUBA	Member, appointed in June 2020
	Jacques PARADIS	Member
	Boubacar Keita	Member, retired in November 2020
	Oumar Barou DIARRA	Member, appointed in November 2020

WAPP Secretariat West African Power Pool
06 BP 2907 Cotonou
République du Benin

Auditor PricewaterhouseCoopers
Chartered Accountants
PwC Tower
A4 Rangoon Lane,
Cantonment City
Accra-Ghana

Bankers Bank of Africa, Benin
Ecobank, Benin

WEST AFRICAN POWER POOL
Annual Report
For the year ended 31 December 2020

REPORT OF THE EXECUTIVE BOARD

The Executive Board has the pleasure in submitting its report and the audited financial statements of the West African Power Pool (WAPP) for the year ended 31 December 2020.

Statement of Executive Board's responsibilities

The Executive Board is responsible for the preparation of financial statements for each financial year which gives a true and fair view of the state of affairs of the Organisation and of the surplus or deficit and cash flows for that year. In preparing these financial statements, the Executive Board has selected suitable accounting policies and then applied them consistently, made judgements and estimates that are reasonable and prudent and followed International Public Sector Accounting Standards (IPSAS).

The Executive Board is responsible for ensuring that the Organisation keeps proper accounting records that disclose with reasonable accuracy at any time the financial position of the Organisation. The Executive Board is also responsible for safeguarding the assets of the Organisation and taking reasonable steps for the prevention and detection of fraud and other irregularities.

Going Concern

The Executive Board has made an assessment of the Organisation's ability to continue as a going concern and have no reason to believe the Organisation will not be a going concern.

Principal activities

The principal activities of the Organisation are stated on page 11 of this report.

Financial results

The Statement of Financial Performance on page 8 shows a surplus of UA 1,559,161 (2019: UA 321,728 surplus) which has been transferred to accumulated fund.

Executive Board's professional development and training

The Board is kept abreast of applicable legislation and regulation, changes to rules, standards and codes, as well as relevant sector developments that could affect the Organisation and its operations.

WEST AFRICAN POWER POOL
Annual Report
For the year ended 31 December 2020

REPORT OF EXECUTIVE BOARD (Cont'd)

Auditor

The auditor, PricewaterhouseCoopers has expressed willingness to continue in office as auditor of the Organisation.

BY ORDER OF THE EXECUTIVE BOARD:

Name: SIENGUI A. KI

Name: ENGR. S. A. ABDULAZIZ

Position: SECRETARY GENERAL

Position: CHAIRMAN

Signature:



.....2021

Signature:



.....2021

**INDEPENDENT AUDITOR'S REPORT
TO THE EXECUTIVE BOARD OF THE WEST AFRICAN POWER POOL**

REPORT ON THE AUDIT OF THE FINANCIAL STATEMENTS

Our opinion

In our opinion, the accompanying financial statements give a true and fair view of the financial position of the West African Power Pool (WAPP) (the "Organisation") as at 31 December 2020, and of its financial performance and its cash flows for the year then ended in accordance with International Public Sector Accounting Standards (IPSAS).

What we have audited

We have audited the financial statements of the West African Power Pool for the year ended 31 December 2020.

The financial statements comprise:

- the statement of financial position as at 31 December 2020;
- the statement of financial performance for the year then ended;
- the statement of changes in net assets for the year then ended;
- the statement of cash flows for the year then ended; and
- the notes to the financial statements, which include a summary of significant accounting policies.

Basis for opinion

We conducted our audit in accordance with International Standards on Auditing (ISAs). Our responsibilities under those standards are further described in the Auditor's responsibilities for the audit of the financial statements section of our report.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Independence

We are independent of the Organisation in accordance with the International Code of Ethics for Professional Accountants (including International Independence Standards) (the Code) issued by the International Ethics Standards Board for Accountants.. We have fulfilled our other ethical responsibilities in accordance with the Code.

Other information

The Executive Board is responsible for the other information. The other information comprises the Report of the Executive Board and the corporate information but does not include the financial statements and our auditor's report thereon.

Our opinion on the financial statements does not cover the other information and we do not express any form of assurance conclusion thereon.

**INDEPENDENT AUDITOR'S REPORT
TO THE EXECUTIVE BOARD OF THE WEST AFRICAN POWER POOL**

REPORT ON THE AUDIT OF THE FINANCIAL STATEMENTS (CONTINUED)

Other information

In connection with our audit of the financial statements, our responsibility is to read the other information identified above and, in doing so, consider whether the other information is materially inconsistent with the financial statements or our knowledge obtained in the audit, or otherwise appears to be materially misstated. If, based on the work we have performed on the other information, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

Responsibilities of the Executive Board for the financial statements

The Executive Board is responsible for the preparation of financial statements that give a true and fair view in accordance with International Public Sector Accounting Standards (IPSAS) and for such internal control as the Executive Board determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, the Executive Board is responsible for assessing the Organisation's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the Executive Board intends to cease operations, or have no realistic alternative but to do so.

The Executive Board is responsible for overseeing the financial reporting process.

Auditor's responsibilities for the audit of the financial statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with ISAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As part of an audit in accordance with ISAs, we exercise professional judgement and maintain professional scepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control;
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the internal control;

**INDEPENDENT AUDITOR'S REPORT
TO THE EXECUTIVE BOARD OF THE WEST AFRICAN POWER POOL**

REPORT ON THE AUDIT OF THE FINANCIAL STATEMENTS (CONTINUED)

Auditor's responsibilities for the audit of the financial statements (continued)

- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the Executive Board;
- Conclude on the appropriateness of the Executive Board's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Organisation to cease to continue as a going concern; and
- Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

We communicate with the Executive Board regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide the Executive Board with a statement that we have complied with relevant ethical requirements regarding independence, and have communicated with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

WEST AFRICAN POWER POOL
Financial Statements
For the year ended 31 December 2020

STATEMENT OF FINANCIAL POSITION

(All amounts are expressed in UA unless otherwise stated)

	Note	Entity (Secretariat and Projects)		Secretariat
		<u>At 31 December</u>		<u>At 31 December</u>
		2020	2020	2019
Non current assets				
Property, plant and equipment	3a and b	<u>14,168,832</u>	<u>333,277</u>	<u>390,835</u>
Current assets				
Cash and bank balances	4a and b	3,523,854	1,816,168	723,886
Receivables from exchange transactions	5	621,179	610,465	596,005
Recoverable from non-exchange transactions	6	30,683	30,683	650,847
Prepayments	7	<u>21,746</u>	<u>21,746</u>	<u>29,040</u>
		<u>4,197,462</u>	<u>2,479,062</u>	<u>1,999,778</u>
Total assets		<u>18,366,294</u>	<u>2,812,339</u>	<u>2,390,613</u>
Current Liabilities				
Accounts payable	8	716,193	716,193	443,507
Non current liabilities				
Separation provision	9	<u>56,471</u>	<u>56,471</u>	<u>31,409</u>
Total liabilities		<u>772,664</u>	<u>772,664</u>	<u>474,916</u>
Net assets		<u>17,593,630</u>	<u>2,039,675</u>	<u>1,915,697</u>
Represented by:				
Accumulated Fund		<u>17,593,630</u>	<u>2,039,675</u>	<u>1,915,697</u>

The financial statements on pages 7 to 31 were approved by the Executive Board on2021 and signed on their behalf by:

Name: SIENGUI A. KI
 Position: SECRETARY GENERAL
 Signature: 
2021

Name: ENGR. S. A. ABDULAZIZ
 Position: CHAIRMAN
 Signature: 
2021

WEST AFRICAN POWER POOL
Financial Statements
For the year ended 31 December 2020

STATEMENT OF FINANCIAL PERFORMANCE
(All amounts are expressed in UA unless otherwise stated)

		Entity (Secretariat and Projects)	Secretariat	
	Note	<u>Year ended 31 December 2020</u>	<u>Year ended 31 December 2020</u>	<u>Year ended 31 December 2019</u>
Revenue				
Revenue from exchange transactions	10	5,109,102	5,109,102	5,414,970
Revenue from non-exchange transactions	11	11,248,996	-	9,186
Other Income		<u>470</u>	-	-
Total Revenue		<u>16,358,568</u>	<u>5,109,102</u>	<u>5,424,156</u>
Expenses				
Project Expenses	12	9,615,148	-	-
Personnel expenses	13	2,976,755	2,976,755	2,488,929
General expenses	14	325,669	325,669	614,244
Administrative expenses	15	376,307	376,307	817,608
Executive Board and Committee Meetings	16	<u>225,153</u>	<u>225,153</u>	<u>465,879</u>
Expenses before depreciation and impairment charge		<u>13,519,032</u>	<u>3,903,884</u>	<u>4,386,660</u>
Add: Depreciation charge for the period	3	57,559	57,559	65,718
Add: Impairment charge	17	<u>477,137</u>	<u>477,137</u>	<u>400,236</u>
Total expenses		<u>14,053,728</u>	<u>4,438,580</u>	<u>4,852,614</u>
Net finance expense	18	<u>(745,679)</u>	<u>(546,544)</u>	<u>249,814</u>
Surplus for the year transferred to accumulated fund		<u>1,559,161</u>	<u>123,978</u>	<u>321,728</u>

The notes on pages 11-31 are an integral part of these financial statements.

WEST AFRICAN POWER POOL
Financial Statements
For the year ended 31 December 2020

STATEMENT OF CHANGES IN NET ASSETS
 (All amounts are expressed in UA unless otherwise stated)

	Entity (Secretariat and Projects)	Secretariat
Year ended December 31, 2020	Accumulated fund	Accumulated fund
Balance at January 1, 2020	16,034,469	1,915,697
Surplus for the year	<u>1,559,161</u>	<u>123,978</u>
Balance at December 31, 2020	<u>17,593,630</u>	<u>2,039,675</u>
Year ended December 31, 2019		
Balance at January 1, 2019	-	1,593,969
Surplus for the year	-	<u>321,728</u>
Balance at December 31, 2019	-	<u>1,915,697</u>

WEST AFRICAN POWER POOL
Financial Statements
For the year ended 31 December 2020

STATEMENT OF CASH FLOWS

(All amounts are expressed in UA unless otherwise stated)

		Entity (Secretariat and Projects)	Secretariat	
		<u>Year ended 31 December</u>	<u>Year ended 31 December</u>	
	Note	2020	2020	2019
Cash flows from operating activities				
Cash generated from/ (used in operations)	19	2,516,754	1,092,281	(88,819)
Cash flows from investing activities				
Purchase of property, plant and equipment		-	-	(113,440)
WAPP ICC project recognised as capital work in progress	3	<u>(1,367,669)</u>	-	-
Net cash used in investing activities		<u>(1,367,669)</u>	-	<u>(113,440)</u>
Increase/Decrease in cash and cash equivalents		<u>1,149,085</u>	<u>1,092,281</u>	<u>(202,259)</u>
Movement in cash and cash equivalents				
Balance at beginning of year		2,374,769	723,886	926,145
Increase in the year		<u>1,149,085</u>	<u>1,092,281</u>	<u>(202,259)</u>
Balance at end of year	4a and b	<u>3,523,854</u>	<u>1,816,167</u>	<u>723,886</u>

WEST AFRICAN POWER POOL
Financial Statements
For the year ended 31 December 2020

NOTES

1. General and legal information

The West African Power Pool is a specialised institution of ECOWAS headquartered in the Republic of Benin.

The West African Power Pool (WAPP) was created by Decision A/DEC.5/12/99 during the 22nd Summit of the Authority of ECOWAS Heads of State and Government in order to address the issue of power supply deficiency within West Africa. The 29th Summit of the Authority of ECOWAS Heads of State and Government held in Niamey January 2006, adopted the Articles of Agreement establishing the new WAPP Organisation by Decision A/DEC.18/01/06. The new Organisation began actual operations in July 2006.

WAPP's mandate is to ensure the establishment of a Regional Electricity Market in West Africa in order to provide the citizens of the Community with increased access to stable and reliable electricity supply at competitive costs.

During the year, WAPP implemented the following donor funded projects in pursuance of its mandate:

- Integrated and Technical Assistance Project (ITAP);
- North Core Project;
- Solar Development Project;
- Coted D'Ivoire-Liberia-Sierra Leone-Guinea (CLSG) Project; and
- Information and Coordination Centre (ICC) and Electricity Market in ECOWAS Region Project.

2. Summary of significant accounting policies

The principal accounting policies applied in the preparation of these financial statements are set out below. These policies have been consistently applied to all the years presented, unless otherwise stated.

2.1 Basis of preparation

The financial statements of WAPP have been in accordance with International Public Sector Accounting Standards (IPSAS). The measurement base applied is historical cost adjusted for revaluations of assets.

In the absence of an International Public Sector Accounting Standard that specifically applies to a transaction, other event or condition, management uses its judgement in developing and applying an accounting policy that results in information that is relevant to the decision-making needs of users that the financial statements:

- (i) represent faithfully the financial position, financial performance and cash flows of the entity;
- (ii) reflect the economic substance of transactions, other events and conditions and not merely the legal form;
- (iii) are neutral, i.e., free from bias;
- (iv) are prudent; and
- (v) are complete in all material respects.

NOTES (CONTINUED)

2. Summary of significant accounting policies (continued)

The policies have been consistently applied to all years presented.

The preparation of financial statements in conformity with IPSAS requires the use of certain critical accounting estimates. It also requires Executive Board to exercise judgement in the process of applying the institution's accounting policies. Changes in assumptions may have a significant impact on the financial statements in the period the assumptions changed. The areas involving a higher degree of judgement or complexity, or areas where assumptions and estimates are significant to the financial statements are disclosed appropriately.

2.2 Adoption of newly published standards and interpretations and revised reporting standards and interpretations

a. New standards and amendments not applicable to the Institution

IPSAS 40, Public Sector Combinations

IPSAS 40, 'Public Sector Combinations' was issued by the International Public Sector Accounting Standards Board (IPSASB) in January 2017. The objective of the standard is to improve the relevance, faithful representation and comparability of the information that a reporting entity provides in its financial statements about a public sector combination and its effects. This standard is effective for financial statements beginning on or after 1 January 2019 and was not applicable to the Institution in preparing its IPSAS financial statements for the year ended 31 December 2020.

b. Standards issued but not yet effective

IPSAS 36 (Amended), Long Term interest in Associates and Joint Ventures

Long-term Interests in Associates and Joint Ventures (Amendments to IPSAS 36) was issued in January 2019 by International Public Sector Accounting Standards Board (IPSASB). The objective is to make amendments to IPSAS to converge with the narrow-scope amendments to IAS 28, Investments in Associates and Joint Ventures, made by the IASB in Long-term Interests in Associates and Joint Ventures (Amendments to IAS 28) (issued October 2017). An entity shall apply these amendments retrospectively in accordance with IPSAS 3, Accounting Policies, Changes in Accounting Estimates and Errors, for annual financial statements covering periods beginning on or after 1 January 2022 with an option for earlier adoption and have not been applied by the Institution in preparing its IPSAS financial statements for the year ended 31 December 2020.

IPSAS 41, Financial Instruments

IPSAS 41 'Financial Instruments' was issued by the International Public Sector Accounting Standards Board (IPSASB) in August 2018. The standard addresses the classification, measurement and derecognition of financial assets and financial liabilities, introduces new rules for hedge accounting and a new impairment model for financial assets. This standard is effective for financial statements beginning on or after 01 January 2023 and have not been applied by the Institution in preparing its IPSAS financial statements for the year ended 31 December 2020.

WEST AFRICAN POWER POOL
Financial Statements
For the year ended 31 December 2020

NOTES (CONTINUED)

2. Summary of significant accounting policies (continued)

IPSAS 42, Social Benefits

IPSAS 42 'Social Benefits' was issued by the International Public Sector Accounting Standards Board (IPSASB) in January 2019. The standard provides guidance on accounting for social benefits expenditure. It defines social benefits as cash transfers paid to specific individuals and/or households to mitigate the effect of social risk. This standard is effective for financial statements beginning on or after 01 January 2023 and have not been applied by the Institution in preparing its IPSAS financial statements for the year ended 31 December 2020.

2.3 Foreign currencies translation

(a) Functional and presentation currency

Items included in the financial statements are measured using the currency of the primary economic environment in which the Organisation operates (the functional currency which is FCFA). The financial statements are presented in Unit of Account (UA) which is the presentation currency of WAPP.

(b) Transactions and balances

Transactions during the period are translated into the presentation currency, Unit of Account (UA) using rates at the date of the transaction. Monetary assets and liabilities denominated in foreign currencies at the reporting date are translated into UA at the rates of exchange ruling at that date. Gains or losses realised or incurred are recognised in the statement of financial performance.

2.4 Financial instruments

Financial assets and liabilities are recognized by WAPP when the Organisation becomes a party to the contractual provisions of the instrument. Financial assets are derecognized when the rights to receive cash flows from the assets have expired, have been waived or have been transferred and the Organisation has transferred substantially all risks and rewards of ownership. Financial liabilities are derecognized when the obligation specified in the contract is discharged, waived, cancelled, or expired. Financial assets and financial liabilities are initially recognised at fair value.

(i) Classification

Financial assets and liabilities have been recognised in the statement of financial position and measured in accordance with their classification. The classification of financial instruments at initial recognition depends on the purpose for which the financial instruments were acquired and their characteristics. At initial recognition, the Organisation classifies its financial instruments in the following categories:

NOTES (CONTINUED)

2. Summary of significant accounting policies (continued)

2.4 Financial instruments (continued)

Financial assets

Financial assets held at amortised costs: These are assets measured at fair value at initial recognition less principal repayments plus accrued interest, net of any impairment loss. WAPP's financial assets comprise cash at bank, receivables from exchange transactions, recoverable from non-exchange transactions and prepayments and are included in current assets due to their short-term nature. These assets are initially recognized at fair value (the amount expected to be received) plus any transaction cost, and subsequently measured at amortized cost using the effective interest method less any provision for impairment.

Financial liabilities

WAPP's financial liabilities represent mainly account payables and separation provision. These are initially recognised at fair value (the amount at which the obligation is expected to be settled) including any direct transaction cost and subsequently measured at amortised cost using the effective interest method. WAPP's financial liabilities are classified as current liabilities if payment is within twelve months. Otherwise, they are presented as non-current liabilities.

(ii) *Offsetting financial instruments*

Financial assets and liabilities are offset and the net amount reported in the statement of financial position when there is a legally enforceable right to offset the recognised amounts and there is an intention to settle on a net basis or realise the asset and settle the liability simultaneously.

(iii) *Fair value*

As at 31 December 2020, the carrying amounts of financial assets and liabilities held by WAPP approximate their fair values.

2.5 Property, Plant and Equipment

Property, plant and equipment (PPE) are stated at acquisition cost less accumulated depreciation and accumulated impairment losses.

Depreciation is calculated on the straight-line basis at rates estimated to write off the cost of each item over the estimated term of its useful life. A full year's depreciation is charged in the year of acquisition. No depreciation is charged in the year of disposal.

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Financial Statements
For the year ended 31 December 2020

NOTES (CONTINUED)

2. Summary of significant accounting policies (continued)

2.5 Property, Plant and Equipment (continued)

The annual rates used for this purpose are as follows:

Computers	25%
Equipment	14.20%
Furniture and Fixtures:	
Residence	33.33%
Office	25%
Vehicles	20%
Building	2.86%

Impairment

The carrying values of PPE are reviewed for impairment if events or changes in circumstances indicate that they may not be recoverable. If any such indication exists, the recoverable amount of the asset is estimated in order to determine the extent of the impairment loss (if any). Any provision for impairment is charged against the Statement of Financial Performance in the year in which the impairment is identified.

Gains and losses on disposals are determined by comparing the proceeds with the carrying amount and are included in profit or loss.

2.6 Intangible assets

Intangible assets mainly comprise of patented and non-patented technology, know-how and software.

Intangible assets acquired separately are measured on initial recognition at cost.

Following initial recognition, intangible assets are carried at cost less any accumulated amortization and any accumulated impairment losses.

The carrying values of intangible assets are reviewed for indications of impairment annually, or the events or changes in circumstances indicate the carrying value may not be recoverable. If any such indication exists and where the carrying values exceed the estimated recoverable amounts, the assets are written down to their recovery amount.

An intangible asset is derecognised upon disposal or when no future economic benefits are expected to arise from the continued use of the asset. Any gain or loss arising on derecognition of the intangible asset (calculated as the difference between the net disposal proceeds and the carrying amount of the intangible asset) is included in surplus or deficit when the intangible asset is derecognised.

WEST AFRICAN POWER POOL
Financial Statements
For the year ended 31 December 2020

NOTES (CONTINUED)

2. Summary of significant accounting policies (continued)

2.6 Intangible assets (continued)

Intangible assets with finite lives are amortised over the useful economic life. Useful lives and methods of amortizations are reviewed, adjusted if appropriate, at each financial year-end. The annual rate used for this purpose is as follows:

Software	25%
----------	-----

2.7 Accounts receivables from exchange transactions

Receivables are stated at their nominal value as reduced by appropriate allowances for estimated irrecoverable amounts or losses. Allowance for loss is established based on a review of outstanding amounts at the reporting date in accordance with the below policy developed by the Finance Committee and approved by the Executive Board.

Provision for doubtful debts

An evaluation of the financial situation of all members is done before setting the provisions for doubtful debts below:

- 100% provision for the category of members in financial difficulty with claims (receivables) of two or more years.
- 40% provision for the category of members who have one-year old receivables.
- 20% provision for regular members in the payment of their arrears.

2.8 Recoverable from non-exchange transactions

Recoverable from non-exchange transactions are recognized at fair value (the amount expected to be received) less any provision for impairment.

2.9 Cash and cash equivalents

For the purposes of the cash flow statement, cash and cash equivalents include cash in hand and deposits held at call with banks.

2.10 Employee benefits

WAPP's contribution to staff (except the Secretary General) retirement benefit schemes are recognised in the statement of financial performance as the obligation falls due. The scheme consists of a monthly contribution of 17% of employees' basic salary as pension fund by the employer.

WAPP sets aside 25% of the Secretary General's annual salary to cater for his separation payment at the end of his service period. This is recognised in the statements of financial performance annually.

NOTES (CONTINUED)

2. Summary of significant accounting policies (continued)

2.11 Provision

Provision for liabilities and charges are recognised when WAPP has a present legal or constructive obligation as a result of a past event, and it is probable that WAPP will be required to settle the obligation. Provisions are measured at managements' best estimate of the expenditure required to settle the obligation at the date of the Statement of Financial Position.

2.12 Leases

Assets leased to or from third parties under agreements, which do not transfer substantially all the risks and rewards of ownership, are classified as operating leases. The Organisation is only involved in operating lease arrangements where it leases its assets to third parties or leases assets from third parties. Rental expense from leased assets of third parties are recognised in the statement of financial performance on a straight-line basis over the period of the lease.

2.13 Revenue recognition

Revenue from exchange transactions

Contributions from member utilities

Assessed contributions from member utilities are recognised when they are approved by the Executive Board. Unpaid contributions during the period are recognised as receivables after netting off any provisions.

Revenue from non - exchange transactions

Grants from donors

Donor grants are recognized as revenue to the extent they are used to meet expenditures in the reporting period. Unused grant income is recorded as liability (deferred income). Cash donations are recognised as income in the statement of financial performance when received.

2.14 Expenses

Expenses are recognised when the transaction or event causing the expense occurs. The Organisation's expenses consist of personnel expenses, general expenses, administrative expense and executive board and committee meetings expenses.

WEST AFRICAN POWER POOL
Financial Statements
For the year ended 31 December 2020

NOTES (CONTINUED)

(All amounts are expressed in UA unless otherwise stated)

3 Property, plant and equipment

3a. Entity (Secretariat and Projects)

Year ended 31 December 2020	Equipment and Furniture	Motor Vehicles	Buildings	*Capital work in progress	Total
Cost					
At 1 January	108,462	641,503	335,161	12,467,886	13,553,012
Additions	-	-	-	1,367,669	1,367,669
Disposals	-	-	-	-	-
At 31 December	<u>108,462</u>	<u>641,503</u>	<u>335,161</u>	<u>13,835,555</u>	<u>14,920,681</u>
At 1 January	95,394	512,713	86,183	-	694,290
Charge for the year	6,535	41,448	9,576	-	57,559
Disposals	-	-	-	-	-
At 31 December	<u>101,929</u>	<u>554,161</u>	<u>95,759</u>	-	<u>751,849</u>
Net book amount at 31 December 2020	<u>6,533</u>	<u>87,342</u>	<u>239,402</u>	<u>13,835,555</u>	<u>14,168,832</u>

* Capital work in progress

This represents direct payments by the European Commission towards the WAPP ICC project which involves the construction of an Information Coordination Centre and the installation of equipment both at the ICC and National Utilities Control Centres.

WEST AFRICAN POWER POOL
Financial Statements
For the year ended 31 December 2020

NOTES (CONTINUED)

(All amounts are expressed in UA unless otherwise stated)

Property, Plant and Equipment (continued)

3b. Secretariat

Year ended 31 December 2020	Equipment and Furniture	Motor Vehicles	Buildings	Total
Cost				
At 1 January	108,462	641,503	335,161	1,085,126
Additions	-	-	-	-
Disposals	-	-	-	-
At 31 December	<u>108,462</u>	<u>641,503</u>	<u>335,161</u>	<u>1,085,126</u>
At 1 January	95,394	512,713	86,183	694,290
Charge for the year	6,535	41,448	9,576	57,559
Disposals	-	-	-	-
At 31 December	<u>101,929</u>	<u>554,161</u>	<u>95,759</u>	<u>751,849</u>
Net book amount at 31 December 2020	<u>6,533</u>	<u>87,342</u>	<u>239,402</u>	<u>333,277</u>

3b. Secretariat

Year ended 31 December 2019	Computers	Equipment and Furniture	Motor Vehicles	Buildings	Total
Cost					
At 1 January	216,772	108,462	528,062	335,161	1,188,457
Additions	-	-	113,440	-	113,440
Disposals	-	-	-	-	-
At 31 December	<u>216,772</u>	<u>108,462</u>	<u>641,502</u>	<u>335,161</u>	<u>1,301,897</u>
At 1 January	216,772	88,859	463,106	76,607	845,344
Charge for the year	-	6,535	49,607	9,576	65,718
Disposals	-	-	-	-	-
At 31 December	<u>216,772</u>	<u>95,394</u>	<u>512,713</u>	<u>86,183</u>	<u>911,062</u>
Net book amount at 31 December 2019	<u>-</u>	<u>13,068</u>	<u>128,789</u>	<u>248,978</u>	<u>390,835</u>

WEST AFRICAN POWER POOL
Financial Statements
For the year ended 31 December 2020

NOTES (CONTINUED)

(All amounts are expressed in UA unless otherwise stated)

	Entity (Secretariat and Projects) 2020	2020	Secretariat 2019
4. Cash and bank balances			
4a. Bank balances			
WAPP Secretariat: Cash at bank	1,804,929	1,804,929	720,895
ITAP	91,890	-	-
North Core Project	255,744	-	-
Solar Development Project	766,059	-	-
CLSG Project	413,519	-	-
Information and Coordination Centre (ICC) Project	<u>171,132</u>	<u>-</u>	<u>-</u>
	<u>3,503,273</u>	<u>1,804,929</u>	<u>720,895</u>
4b. Cash balances			
WAPP Secretariat: Cash on hand	11,238	11,238	2,991
ITAP	7,629	-	-
North Core Project	1,440	-	-
Solar Development Project	<u>274</u>	<u>-</u>	<u>-</u>
	<u>20,581</u>	<u>11,238</u>	<u>2,991</u>
5. Receivables from exchange transactions			
Members' contribution receivable	3,033,138	3,033,138	2,563,955
Provision for doubtful debts	<u>(2,452,976)</u>	<u>(2,452,976)</u>	<u>(1,975,839)</u>
	580,162	580,162	588,116
Staff advances	30,303	30,303	7,889
Project Advances	<u>10,714</u>	<u>-</u>	<u>-</u>
	<u>621,179</u>	<u>610,465</u>	<u>596,005</u>

WEST AFRICAN POWER POOL
Financial Statements
For the year ended 31 December 2020

NOTES (CONTINUED)

(All amounts are expressed in UA unless otherwise stated)

	Entity (Secretariat and Projects) 2020	2020	Secretariat 2019
6. Recoverable from non - exchange transactions			
World Bank Projects	9,397	9,397	394,764
Other Projects	<u>21,286</u>	<u>21,286</u>	<u>256,083</u>
	<u>30,683</u>	<u>30,683</u>	<u>650,847</u>
These are expenses incurred on various donor funded projects which are yet to be refunded to WAPP.			
7. Prepayment			
Insurance	3,094	3,094	4,719
Rent	12,105	12,105	12,251
Internet	<u>6,547</u>	<u>6,547</u>	<u>12,070</u>
	<u>21,746</u>	<u>21,746</u>	<u>29,040</u>
8. Accounts payables			
Auditors Remuneration	20,338	20,338	16,680
Others*	<u>695,855</u>	<u>695,855</u>	<u>426,827</u>
	<u>716,193</u>	<u>716,193</u>	<u>443,507</u>

* Others: this includes payables to Benin telecom, staff refunds, Omed voyage among others for various services rendered to WAPP.

WEST AFRICAN POWER POOL
Financial Statements
For the year ended 31 December 2020

NOTES (CONTINUED)

(All amounts are expressed in UA unless otherwise stated)

	Entity (Secretariat and Projects)	Secretariat	
	2020	2020	2019
9. Separation provision			
Balance as at January 1	31,409	31,409	82,268
Charge and interest for the year	<u>25,062</u>	<u>25,062</u>	<u>22,200</u>
	<u>56,471</u>	<u>56,471</u>	<u>104,468</u>
Payment to Secretary General	-	-	(73,059)
Balance as at 31 December	<u>56,471</u>	<u>56,471</u>	<u>31,409</u>

This represents funds set aside annually by WAPP to cater for the Secretary General's separation payment at the end of his service period.

10. Revenue from exchange transactions

Contributions from members

This represents assessed contributions from member utilities approved by the Executive Board. An amount of UA 5,109,102 was recognized at the year ended 31 December 2020 (2019:UA 5,414,970).

11. Revenue from non- exchange transactions

Grants received

Support from donors to WAPP Secretariat Integrated and Technical Assistance Project	-	-	9,186
North Core Project	6,266,495	-	-
Solar Development Project	1,090,348	-	-
CLSG	2,341,562	-	-
Information and Coordination Centre (ICC) Project	-	-	-
	<u>1,550,591</u>	-	-
	<u>11,248,996</u>	-	<u>9,186</u>

WEST AFRICAN POWER POOL
Financial Statements
For the year ended 31 December 2020

NOTES (CONTINUED)

(All amounts are expressed in UA unless otherwise stated)

	Entity (Secretariat and Projects) 2020	2020	Secretariat 2019
12. Project Expenses			
ITAP	6,364,227	-	-
North Core Project	1,424,058	-	-
Solar Development Project	1,548,783	-	-
CLSG Project	245,822	-	-
ICC Project	<u>32,258</u>	=	=
	<u>9,615,148</u>	=	=
13. Personnel expenses			
Staff salaries	1,217,421	1,217,421	1,154,493
Salary for contractors and temporary staff	232,514	232,514	272,332
Initial travel and accommodation	2,477	2,477	5,415
Educational expenses	364,722	364,722	273,265
Other expenses	856,061	856,061	468,416
Pension fund contributions	210,803	210,803	192,062
Separation provision for SG	20,135	20,135	20,135
Medical expenses	49,301	49,301	28,314
Training Costs	<u>23,321</u>	<u>23,321</u>	<u>74,497</u>
	<u>2,976,755</u>	<u>2,976,755</u>	<u>2,488,929</u>
14. General expenses			
Administration Expenses	129,318	129,318	99,001
Repairs and Maintenance	51,761	51,761	61,997
Utility Expenses	9,098	9,098	16,776
Rent	24,445	24,445	32,473
Transportation	48,348	48,348	85,341
Audit Fees and expenses	18,988	18,988	24,130
Legal fees	370	370	237,044
Consultancy services	-	-	2,109
Software licenses	<u>43,341</u>	<u>43,341</u>	<u>55,373</u>
	<u>325,669</u>	<u>325,669</u>	<u>614,244</u>

WEST AFRICAN POWER POOL
Financial Statements
For the year ended 31 December 2020

NOTES (CONTINUED)

(All amounts are expressed in UA unless otherwise stated)

	Entity (Secretariat and Projects) 2020	2020	Secretariat 2019
15. Administrative expenses			
Public Relations, Publicity and Adverts	35,754	35,754	44,778
Postages and Communications	80,197	80,197	56,610
Official Missions	219,148	219,148	593,082
Conference materials	860	860	4,233
Linguistic Services	26,034	26,034	35,159
Entertainment/ reception/ retreats	14,209	14,209	77,867
Recruitment	105	105	1,597
Technical Coop with International Organizations	-	-	4,282
	<u>376,307</u>	<u>376,307</u>	<u>817,608</u>
16. Executive Board and Committee expenses			
Executive Board Meetings	104,121	104,121	245,206
Engineering and Operating Committee Meetings	28,052	28,052	73,658
Strategic Planning and Environmental Committee Meetings	11,019	11,019	42,939
Finance Committee Meetings	67,846	67,846	32,507
Human Resources and Governance Committee Meetings	6,529	6,529	71,287
Distribution and Commercial Committee	7,586	7,586	282
	<u>225,153</u>	<u>225,153</u>	<u>465,879</u>
17. Impairment charge			

This represents provision for member contribution receivables as at each year end. An amount of UA (477,137) was recognized at the year ended 31 December 2020 (2019:UA (400,236)).

WEST AFRICAN POWER POOL
Financial Statements
For the year ended 31 December 2020

NOTES (CONTINUED)

(All amounts are expressed in UA unless otherwise stated)

	Entity (Secretariat and Projects) 2020	2020	Secretariat 2019
18. Net finance expense			
Bank Interest*	(23,516)	(23,516)	(27,780)
Bank charges	2,999	2,999	5,791
Exchange rate differences (losses):			
Secretariat	567,061	567,061	271,803
Exchange rate differences (losses):			
Projects	<u>199,135</u>	<u>-</u>	<u>-</u>
	<u>745,679</u>	<u>546,544</u>	<u>249,814</u>
* Bank interest: This relates to interest earned on the accounts created for the fixed deposits of the Secretary General's separation payment at the end of his service period as well as fixed deposit for payment of staff salaries.			
19. Cash generated from operations			
Net surplus for the year	1,559,161	123,978	321,728
Adjustments for non-cash items:			
Depreciation of tangible assets and amortisation of intangible assets	57,559	57,559	65,719
Amortisation of capital grant	-	-	-
Loss on disposal of fixed assets	-	-	-
Capital Work-in-progress written off	-	-	16,914
Changes in working capital:			
Increase in Receivables from exchange transactions	(25,172)	(14,462)	(431,097)
Decrease/(Increase) in Recoverable from non-exchange transactions	620,164	620,164	(159,041)
Decrease in Prepayments	7,293	7,293	2,681
Increase in accounts payables	272,687	272,687	145,136
Increase/(Decrease) in separation provision	<u>25,062</u>	<u>25,062</u>	<u>(50,859)</u>
Cash generated from /used in operations	<u>2,516,754</u>	<u>1,092,281</u>	<u>(88,819)</u>

WEST AFRICAN POWER POOL
Financial Statements
For the year ended 31 December 2020

NOTES (CONTINUED)

(All amounts are expressed in UA unless otherwise stated)

20. Related party transactions

a. Directors remuneration

Those in charge of governance for West African Power Pool (WAPP) is the Executive Board as indicated on page 1. Members of the Board are entitled to payment of honoraria and other travel related expenses when participating in WAPP meetings or any other WAPP business.

b. Remuneration of key management personnel

Except the Secretary General who is remunerated by the organisation, no other board member received any remuneration or loans other than the above entitlements during the year under review. For the year under review, the Secretary General's total emolument was **UA 93,016** (2019: UA 91,200).

21. Financial risk management

The Organisation's activities expose it to a variety of financial risks: credit risk, liquidity risk and market risk.

The Organisation's overall risk management programme focuses on minimising the potential adverse effects on its financial performance. Financial risk management is overseen by the Finance Committee. The Organisation does not hedge any of its risk exposures.

21.1 Credit risk

Credit risk arises from cash and cash equivalents and deposits with banks and financial institutions as well as credit exposures to customers, including outstanding receivables and committed transactions. Credit risk is the risk that a counterparty will default on its contractual obligations resulting in financial loss to the Organisation.

The Organisation's maximum exposure to credit risk at the end of the reporting date is as follows:

	Entity (Secretariat and Projects)	31 December 2020	31 December 2020	Secretariat 31 December 2019
Cash and bank balances	3,523,854	1,816,168		723,886
Receivables from exchange transactions	621,179	610,465		596,005
Recoverable from non-exchange transactions	30,683	30,683		650,847
Prepayments	<u>21,746</u>	<u>21,746</u>		<u>29,040</u>
	<u>4,197,462</u>	<u>2,479,062</u>		<u>1,999,778</u>

WEST AFRICAN POWER POOL
Financial Statements
For the year ended 31 December 2020

NOTES (CONTINUED)

(All amounts are expressed in UA unless otherwise stated)

21.1 Credit risk (Continued)

WAPP manages its exposure to credit risk by:

- Holding bank balances and short-term deposits (demand deposits) with reputable banking institutions registered in The Republic of Benin; and
- Maintaining credit control procedures over accounts receivable.

The Organisation has no credit risk exposures relating to off balance sheet items.

WAPP does not require any collateral or security to support financial instruments and other receivables it holds due to the low risk associated with the realisation of these instruments.

21.2 Liquidity risk

Liquidity risk is the risk that the Organisation will not be able to meet its financial obligations as they fall due. The Organisation manages liquidity risk by maintaining adequate cash reserves.

21.3 Market risk

The Organisation takes on exposure to market risks, which is the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in market prices. Market risks arise from open positions in interest rate, currency and equity products, all of which are exposed to general and specific market movements and changes in the level of volatility of market rates or prices such as interest rates, foreign exchange rates and equity prices. The objective of market risk measurement is to manage and control market risk exposures within acceptable limits while optimising the return on risk. The management is responsible for the development of detailed risk management policies and for day-to-day implementation of those policies.

21.3.1 Foreign exchange risk

Foreign exchange risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in foreign exchange rates. The positions of currencies held are monitored on a regular basis. The objective of monitoring the position in foreign currency is to manage foreign exchange risk due to movements in rates.

WAPP operates separate bank accounts in CFA and US\$ currencies. WAPP incurs currency risk as a result of the conversion of foreign currency balances held in these bank accounts to UA at period end. The currency risk associated with this balance is considered minimal and therefore WAPP does not hedge its foreign currency exposure. Foreign currency transactions are translated to UA at exchange rates at the dates of the transactions.

WEST AFRICAN POWER POOL
Financial Statements
For the year ended 31 December 2020

NOTES (CONTINUED)

(All amounts are expressed in UA unless otherwise stated)

21.3.2 Interest rate risk

Interest rate risk is the exposure of current and future earnings to adverse changes in the level of interest rates. The Organisation does not hold any financial instrument subject to interest rate risk.

21.3.3 Price risk

The Organisation does not hold any financial instrument subject to price risk.

22. Capital commitments

There were no capital commitments at 31 December 2020 (2019: nil).

23. Contingent liabilities

The organisation is involved in some ongoing legal suits at the Court of Justice of the Economic Community of West African States (ECOWAS) in Abuja, with possible financial impact totalling FCFA 575,271,380 (2019: FCFA 473,027,360) in the event of adverse decisions against the Organisation.

24. Impact of COVID-19

The World Health Organisation characterised the spread of COVID-19 as a pandemic on 11 March 2020. Although the spread of COVID-19 and the necessary containment measures being taken has impacted on the economy within the year under review, the Organisation does not expect the pandemic and its aftermath to have a significant impact on its program activities.

Based on assessments performed, the Executive Board concludes that there is no material uncertainty over going concern for the Organisation as result of COVID-19.

25. Comparatives

This is the first year of reporting all other projects implemented by the WAPP, thus there are no comparatives for the Entity (Secretariat and Projects).

WEST AFRICAN POWER POOL
Financial Statements
For the year ended 31 December 2020

NOTES (CONTINUED)

(All amounts are expressed in UA unless otherwise stated)

Presentation of Budget Information in Financial Statements

Basis of preparation

The budget information has been prepared on a cash basis since it is the policy of WAPP to apply the cash basis of accounting for its budgets during the fiscal year.

On the other hand, the financial statements have been prepared on accrual basis of accounting. The accrual basis of accounting is one under which transactions, other events and conditions are recognised when they occur (and not only when cash or its equivalent is received or paid). Therefore, the concept recognises revenue when earned and expenses when incurred.

Key assumptions include:

- Funding available throughout the periods
- Member utilities will pay their contributions regularly

Budget Approval

WAPP's highest decision-making body is the General Assembly which provides the overall strategic direction of the institution and adoption of Executive Board's reports.

The functioning of WAPP is entrusted to the Executive Board whose functions include: "Examination and recommendation to the General Assembly, the entry, exit and re-entry of Members to the Pool, authorisation of major contracts, Approval or revision of the operating and capital budgets and any additional expenditure and approval of audit reports among others. The Executive Board reviews, approves or disapproves actions of the various Organisational Committees of WAPP.

The approval of the Budget by the Executive Board and its adoption at the General Assembly empowers the Secretariat (through the Secretary General), subject to any special conditions to:

- Commit and authorise expenditure and to make all payments to be borne by the Organisation, for the purposes assigned and within the limits of the appropriations and the commitment authority, as the case may be; and
- Provide the Executive Board with monthly budget and variance for review and approval.

WEST AFRICAN POWER POOL
Financial Statements
For the year ended 31 December 2020

NOTES (CONTINUED)

(All amounts are expressed in UA unless otherwise stated)

**Comparison of budget and actual – WAPP Entity (Secretariat and Projects)
as at 31 December 2020**

Introduction

WAPP's financial statements are prepared on accrual basis whilst the budget is on cash basis. The Statement of Financial Position, Statement of Financial Performance, Statement of Changes in Net Assets and Statement of Cash Flow Statements are prepared on a full accrual basis. The financial statements and the budget are therefore prepared using different basis.

To enable users and funders derive the needed benefit and make this presentation useful, management has decided to present a budget/actual comparison. This form of presentation as indicated is to ensure management achieves the reporting requirement of IPSAS 24 and also meet the needs of stakeholders within WAPP for effective decision making.

The approved budget for the expense categories outlined below covers the fiscal period 1 January to 31 December 2020.

Budget/ Actual analysis for the year under review

The budget and actual analysis of WAPP is presented below.

DESCRIPTION	BUDGET	ACTUAL	VARIANCE	VARIANCE	COMMENTS
	UA (1)	UA (2)	UA (3)=(1)-(2)	% (4)=(3)/ (1)	
Operating Revenue					
Contribution from members	5,119,346	5,109,102	10,244	-	
Grants	12,521,066	11,248,996	1,272,070	10%	
Operating Expenses					
Project Expenses	24,580,793	9,615,144	14,965,649	61%	A
Personnel Expenses	2,934,264	2,976,755	(42,491)	-1%	
General Expenses	377,890	325,669	52,221	14%	A
Administrative Expenses	703,249	376,307	326,942	46%	A
Executive Board/Committee Meetings	792,319	225,153	567,166	72%	A

WEST AFRICAN POWER POOL
Financial Statements
For the year ended 31 December 2020

NOTES (CONTINUED)

(All amounts are expressed in UA unless otherwise stated)

DESCRIPTION	BUDGET	ACTUAL	VARIANCE	VARIANCE	COMMENTS
	UA (1)	UA (2)	UA (3)=(1)-(2)	% (4)=(3)/ (1)	
CAPEX	111,624	-	111,624	100%	B
Total Operating and Capital Expenses	29,500,139	13,519,028	15,981,111	54%	

A – The decrease is a result of generally low activity levels due to the effects of the COVID-19 Pandemic on the operations of WAPP during the year.

B- The procurement process for the purchase of vehicles delayed as a result of the COVID-19 Pandemic.

