ANNUAL REPORT
2019

VOLTA RIVER AUTHORITY

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OUR VALUE STATEMENT

Vision Statement

To be a Model of Excellence for Power Utilities in Africa

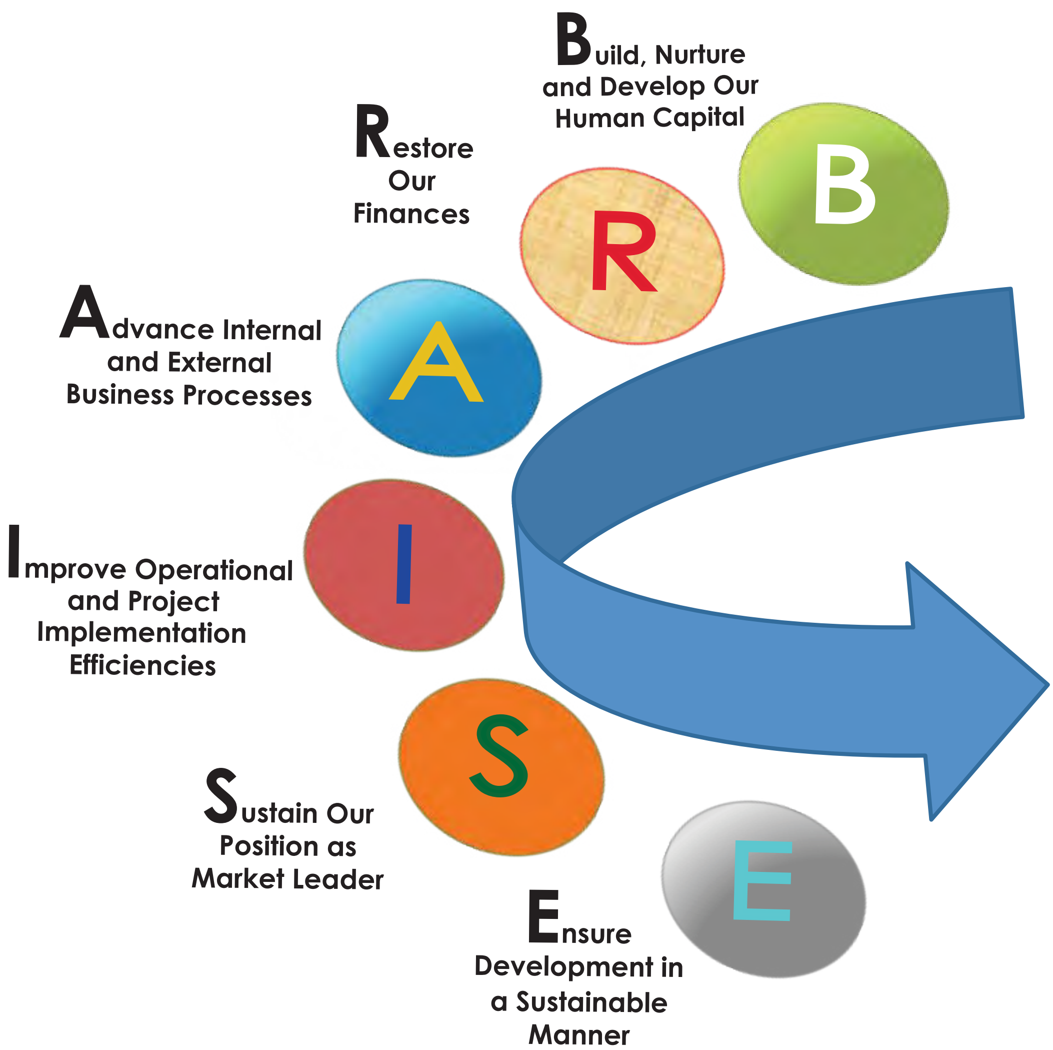
Mission Statement

The Volta River Authority exists to power economies and raise the living standards of the people of Ghana and West Africa. We supply electricity and related services in a reliable, safe and environmentally friendly manner to add economic, financial and social values to our customers and meet stakeholders' expectations.

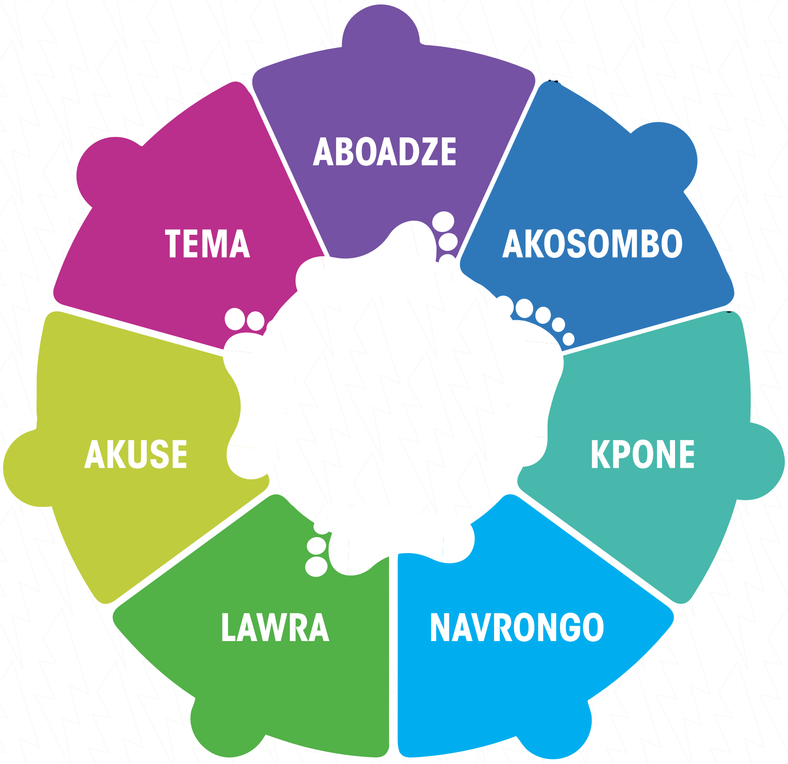
Our Core Values

Accountability
Commitment
Trust
Integrity
Teamwork

OUR STRATEGY



OUR FOOTPRINTS



GENERATION CAPACITY

SOLAR - 9MW

THERMAL - 1,330MW

HYDRO - 1,180MW

OUR COMMITMENT, RESILIENCE AND PERSEVERANCE EARNED US THE FOLLOWING DURING THE YEAR

1. Best in Public Procurement and Supply Chain Compliance (Gold)
2. Excellence in Public Procurement (Gold)
3. Innovative use of Technology in Public Procurement and Supply Chain (Silver)
4. Procurement and Supply Chain Team of the Year - Public Sector (Silver)
5. Outstanding Public Sector
6. HR Team of the Year - Public Sector (Bronze)
7. Most People Focused CEO of the Year - Public Sector (Silver)
8. Clean Energy Initiative of the Year
9. Innovation Project of the Year

PROFILE OF THE VOLTA RIVER AUTHORITY

The Volta River Authority (VRA) was established on April 26, 1961 under the Volta River Development Act, Act 46 of the Republic of Ghana, with the mandate to generate, transmit and distribute electricity. However, following the promulgation of a major amendment to the VRA Act in the context of the Ghana Government Power Sector Reforms in 2005, VRA's mandate has been largely restricted to the generation of electricity. The amendment has the key function of creating the enabling environment to attract Independent Power Producers (IPPs) onto Ghana's energy market. Following the amendment, the transmission function was hived off into an entity, designated Ghana Grid Company (GRIDCo) while VRA's distribution agency, the Northern Electricity Department (NED), has been transformed into the Northern Electricity Distribution Company (NEDCo), a wholly owned subsidiary of VRA.

Restructuring and Realignment

The Authority has rolled out a new corporate strategy to champion the transformation of the Authority into "THE NEW VRA". Key pillars of the strategy with the acronym "BRAISE" are:

- Build, Nurture and Develop our Human Capital
- Restore our Finances
- Advance Internal and External Business Processes
- Improve Operational & Project Implementation Efficiencies
- Sustain VRA's Position as a Market Leader
- Ensure Development in a Sustainable Manner.

The overarching objective of the strategy is to refocus and reorient business operations and organisational mind-set and transform the Authority into a resilient and viable public sector organisation, with private sector business mindset.

As a precursor to the implementation of the new strategy, we introduced and implemented a Financial Recovery Plan (FRP) to drive the Restoration of the Authority's finances. Again, to facilitate our restructuring agenda, we undertook realignment of some Units and Departments within the organisation. Specifically, we aligned the Corporate Communications Section by integrating it into the Corporate Strategy Department. The goal is to ensure effective dissemination, sensitisation and collaboration in the execution of our corporate strategy. Similarly, Corporate Social Responsibility and the Community Relations Sections have been integrated into the Environment & Sustainable Development Department. The rationale is to facilitate the effective and efficient synchronisation of our sustainable development initiatives and interventions, particularly in our impacted communities. Finally, the remit of the Technical Services Department has been extended to include the transport fleet and refrigeration maintenance units.

Power Activities

Over the years, we have strategically diversified our power generation portfolio to take advantage of available sustainable sources of energy, mainly hydro, natural gas, liquefied petroleum products and renewables.

Consequently, we operate a total installed generation capacity of 2,512MW. The two hydroelectric plants at Akosombo and Kpong have installed capacities of 1,020MW and 160MW respectively. The thermal generating facilities at Aboadze and Tema enclaves have installed total capacity of 1,330MW and a 2.5MW Navrongo Solar Power Plant to complement our hydro generating facilities.

(continued)

PROFILE OF THE VOLTA RIVER AUTHORITY

Capacity Expansion Programme

Our corporate mandate is to provide reliable, affordable, safe and competitively priced electricity to meet stakeholders' expectation. This we hope to achieve by focusing on measures that would facilitate diversification and expansion of our generation infrastructure.

Renewable Energy Development

In line with the renewable energy development programme approved by the VRA Board, and in accordance with the Government of Ghana's policy on renewable energy development, we aggressively pursued the development of identified solar and wind energy projects. Successful implementation of these projects would inure to sustainable power generation, and reduce our carbon footprints, as well as positively influence global climate change. The overarching objective is to ensure we achieve our corporate objective of developing in a sustainable manner.

Northern Electricity Distribution Company Ltd.

The Northern Electricity Distribution Company (NEDCo), a wholly owned subsidiary of the VRA, is the sole distributor of electricity in the Upper East, Upper West, North East, Savannah, Northern, Brong-Ahafo, Bono East, parts of Oti, Ashanti and Western North regions respectively. NEDCo, which manages VRA's electricity supply to some border towns in Burkina Faso, Cote d'Ivoire and Togo, has a customer population of 938,475 and a maximum load demand of 325.3MW. NEDCo originally was developed as an integral part of the larger Northern Electrification and System Reinforcement Project (NESRP).

Customers and Power Interconnectivity

The Northern Electricity Distribution Company (NEDCo) and the Electricity Company of Ghana (ECG) are the Authority's two major regulated bulk customers. Power sold to these entities cater mainly for domestic, industrial and commercial demands in the Upper East, Upper West, North East, Savannah, Northern, Brong-Ahafo, Bono East, parts of Oti, Ashanti and Western North, and the Southern parts of the country respectively. Bulk sales are also made to mining companies and industries across the country including Newmont Ghana Gold Ltd, Diamond Cement Ghana Ltd., AngloGold Ashanti, Golden Star Resources Group, Aluworks, and Akosombo Textiles Ltd.

Sub-Regional Cooperation

We reach our customers in Ghana and neighbouring countries through the Ghana Grid Company (GRIDCo's) transmission system, which covers the entire country and links up with the national electricity grids of Cote d'Ivoire (Compagnie Ivoirienne d'Electricité), Togo and Benin (Communauté Électrique du Benin), and Burkina Faso (Société Nationale d'Electricité du Burkina Faso).

In addition, we are a shareholder in the development of the West African Gas Pipeline (WAGP), which guarantees our competitiveness in power delivery in the sub region. Additionally, VRA is a founding/principal member of the Association of Power Utilities of Africa (APUA), contributing significantly to policies on power development and accessibility on the African continent. APUA is a permanent member of the Executive Council of the African Energy Commission and a preferred partner of the New Partnership for Africa's Development (NEPAD). The VRA is also a member of the West African Power Pool (WAPP).

PROFILE OF THE VOLTA RIVER AUTHORITY

(continued)

Relations with Statutory Bodies

We have working relations with the following statutory bodies:

- Ministry of Energy – Supervisory Ministry providing policy direction for the energy sector.
- Public Utilities Regulatory Commission (PURC) – An independent regulatory commission with oversight responsibility for tariff and rate setting and ensuring the provision of the highest quality of electricity to consumers.
- Energy Commission - Provides advice to the Government of Ghana on energy policy, conducts indicative planning/least cost expansion planning of wholesale supply of electricity, regulates licenses, establishes and monitors standards of performance as well as industry rules of practice for electric utilities.

NON-POWER ACTIVITIES

Subsidiary Companies

In keeping with our responsibility of developing the Volta Basin, we operate four subsidiary companies: Akosombo Hotels Limited, Kpong Farms Limited, VRA Property Holding Accompany (PROPCo) and the Volta Lake Transport Company Limited.

Akosombo Hotels Ltd.

Akosombo Hotels Limited (Volta Hotel), incorporated in 1991, runs a 3-star hotel, restaurant and modern conference/seminar facilities and offers pleasure activities including cruises on the Volta Lake by MV Dodi Princess to promote tourism.

VRA Property Holding Company (PROPCo)

The Property Holding Company Ltd (PROPCo) was incorporated on November 30, 2013, and commenced operations in June 2018, with a core mandate in property development, investment and asset management. Its focus is the optimisation of the VRA's non-core real estate assets by converting them into commercially viable investment assets for income and capital growth. In the long term, it aims at creating a diversified portfolio of income generating real estate assets to strategically diversify VRA's income portfolio.

Kpong Farms Ltd.

Kpong Farms Limited (KFL) was incorporated in May 1982 as a wholly owned agricultural commercial venture, to carry out mechanised commercial farming, agro-processing, and provision of machinery services. It was established to harness the water resources of the Volta Lake at Kpong for use in viable agricultural ventures and for the Farm to serve as a demonstration project in a modern agricultural system. KFL over the years has evolved into a commercial venture, with a huge potential for expansion with the private sector.

PROFILE OF THE VOLTA RIVER AUTHORITY

(continued)

Volta Lake Transport Company Ltd.

Volta Lake Transport Company Limited (VLTC), incorporated in 1970, provides river transportation for passengers, bulk haulage of petroleum products and significant quantities of cement, and cross-lake ferry services along the Volta Lake.

Akosombo Management Committee

Furthermore, in accordance with the Executive Instrument (EI) 42, 1989, we oversee and exercise Local Authority functions in the Akosombo Township by enforcing Local Authority enactments, resolutions and by-laws. We continued to run our first and second cycle schools as well as provide for the health needs of staff, their dependents and the communities within our operational areas in Accra, Akosombo, Akuse and Aboadze.

We also maintain a dredging programme at the estuary of the Volta River at Ada to reduce the incidence of bilharzia and to restore the ecosystem of the area. There is also an afforestation programme, targeted at reducing siltation of the Volta Lake through the restoration of permanent vegetative cover on the slopes bordering the lake.

Corporate Social Responsibility (CSR)

We continued to demonstrate commitment to our social responsibility through initiatives outlined to enhance the socio-economic and physical environment of the lakeside and downstream communities. Notably, the VRA Resettlement Trust Fund, set up in 1995, supports development initiatives in the Fifty-Two (52) resettlement townships around the Volta Lake. Further to that, in 2003, we established the Community Relations Unit (CRU) to promote our CSR activities. The CRU was to strengthen engagements with the communities impacted by our operations but not captured under the Trust Fund.

To enhance our partnership with our impacted communities, in 2012, we introduced the Community Development Programme (CDP), as a measure to empower the affected communities and stimulate economic development. The CDP, which focuses on six (6) thematic areas including Social Infrastructural Projects, Environmental Protection Activities, Industrial Attachment, Educational Scholarship, Healthcare, and Support for Cultural Activities, has the goal of capturing beneficiary expectations and strengthening our partnerships with the communities and the District Assemblies.

BOARD CHAIRMAN'S STATEMENT

Dear Stakeholders,

It is my pleasure to present to you today, the Volta River Authority's 2019 Financial and Operational report. On behalf of the Board of Directors, permit me to share with you our achievements, challenges and expectations as the Authority continues to pursue its financial recovery and restructuring program.

2019 was another challenging year in the power business. However, with determination and resilience, we succeeded in making positive gains in our financial recovery efforts. This achievement is attributed to the Board's commitment and Management's focus on meeting the targets outlined in our Financial Recovery Plan (FRP). These gains have also been made possible following the receipt of payments from ESLA Plc. during the year.

Operations Review

The Authority's generating plants in Akosombo and Akuse played a key role in the country's electric power generation in 2019. Generation from our hydro sources increased by 1,164GWh from 5,044GWh in 2018 to 6,208GWh in 2019. This represents an increase of 23 percent. Our thermal generation, including 1,483GWh of energy from the AMERI Plant, increased by 55 percent from 2,237GWh in 2018 to 3,460GWh in 2019. We also sold a total of 1,744GWh of energy contracted from the Takoradi International Company of Ghana (TICO) as well as through power exchanges with Compagnie Ivoirienne d'Electricite (CIE). This was, however, 26 percent – or 607GWh - lower than the energy contracted in 2018.

Operational Maintenance

Keeping a strict maintenance culture is a key priority for the Authority. Accordingly, we followed through our maintenance schedules to guarantee optimal operation of our Plants and system reliability.

However, in 2019, we could not achieve our thermal plant availability targets, due to delays in the restoration of the second unit (32G2) of the Takoradi Thermal Plant, resulting in the unavailability of about 150MW of power to the national grid.

The Authority's decision to operate on natural gas led to an increase in the use of natural gas from 44.4 Million MMBtu in 2018 to 69.0 Million MMBtu in 2019. Similarly, Distillate Fuel Oil (DFO) usage also increased from 13.04 million litres in 2018 to 33.20 million litres in 2019. The increase in DFO usage was to prevent load-shedding during the movement of the Karpowership after the completion of the Takoradi-Tema Interconnection Project, which led to the reduction of about 450MW of power from the national grid.

BOARD CHAIRMAN'S STATEMENT

(continued)

It is our expectation that the completion of the Takoradi-Tema Interconnection Project will enhance our thermal operations, particularly in the Tema enclave, by increasing the reliability of gas supply, and ultimately support our efforts to deliver competitively priced electricity to all our customers.

Financial Health

In 2019, revenue (Group) from sale of electricity increased by 27 percent - or GH¢ 852.7 million - to GH¢ 4.012 billion over the previous year's sale of GH¢ 3.160 billion. The above is attributed to the combined effects of a 19.20 percent (1,733GWh) increase in the quantity of energy sold, from 9,025GWh in 2018 to 10,758GWh in 2019, and an increase in the average tariff for regulated customers, from GH¢ 0.2499/kWh in 2018 to 0.2813/kWh in 2019.

Also, the quantity of electricity sold to deregulated customers, which attracts relatively better margins, increased by 55.8 percent from 3,003GWh in 2018 to 4,679GWh in 2019. This includes sales to SONABEL over the new Bolgatanga-Ouagadougou 330 kV transmission line, which increased from 222GWh in 2018 to 576GWh in 2019, representing an increase of 297GWh - or 135 percent. Additionally, sales to CEB also increased by 102 percent, from 385GWh in 2018 to 777GWh in 2019. The quantity of energy sold to regulated customers also increased by 11 percent (687GWh) from 6,022GWh in 2018 to 6709GWh in 2019.

Financial Recovery Efforts

Last year, I reported on the status and progress of the three-year Financial Recovery Plan (FRP), approved by the Board at the start of its tenure in late 2017. The FRP has the key objective of restoring and ensuring the Authority's financial sustainability, which had severely been impaired as at 2017.

The successful implementation of the FRP and our new corporate strategy with the acronym "BRAISE" have led to great successes in the areas of cost control; signing-off on new commercial opportunities; improving our internal business processes, as well as improving the efficiency of our thermal operations. It is my expectation that, the principles underlying these initiatives will remain in place after the FRP ends in 2020.

Our commitment to reducing our losses continued in 2019. Net losses reduced from GH¢220.1 million in 2018 to GH¢127.1 million at the end of 2019 representing a 42 percent reduction. The Authority is expected to reduce losses even further in 2020 and possibly post a modest profit, on track to meet our financial recovery targets set in 2018.

The Authority's commitment to use natural gas; increase power sales to the export market; underpinned by the Government's payment of GH¢344 million through the ESLA bond issued to substantially reduce legacy debts, also contributed to the progress achieved in the Authority's Financial Recovery Programme.

I wish to acknowledge the Government and all our Stakeholders for their support to the Authority's operations during the period. This progress in implementing the FRP would not have been possible without it. I can assure you that, the Board, Management and Staff will remain focused on achieving our goal of financial sustainability, the fulcrum on which the restructuring into the "NEW VRA" is hinged.

BOARD CHAIRMAN'S STATEMENT
(continued)

Industrial Relations

Last year, Management and Staff collaborated to ensure a healthy working industrial climate. This climate has been essential to ensuring the enabling environment for both Management and Staff to work towards attaining the objectives of the business. A key initiative undertaken by Management with the approval of the Board was the review of the Authority's Scheme of Service and Reward Management Scheme. Our expectation is that, when fully rolled out, it will provide targeted skills development for the staff and facilitate the implementation of the Authority's succession planning programme. We also continued the implementation of our High Impact Leadership Development Programme; as well as provided organisational skills development programmes for the Staff.

Corporate Social Responsibility

The Volta River Authority takes pride in its role as a responsible corporate social citizen. We have consistently achieved this by collaborating with the communities we operate in, to improve their living standards and develop the life skills of the indigenes to enhance their income earning potential. The Authority achieves this through the implementation of our Community Development Programme (CDP).

The CDP, which focuses on six (6) thematic areas, was developed in partnership with the communities through their District and Municipal Assemblies, and other development agencies. Throughout the year, the Authority provided support for social infrastructural projects, environmental protection, industrial attachments, healthcare, and cultural activities, among others.

The implementation of the Free Senior High School policy by the Government of Ghana, compelled the Authority to end the award of Scholarship at the Senior High School level. In view of this new development, key Stakeholders in all Eighteen Municipal/District Assemblies impacted by our operations were engaged to discuss and outline a framework and strategy to enable the Authority to introduce a Technical/Vocational Education and Training (TVET) programme. It is my expectation that by the end of next year, we would have gone through all the modalities to kick-start the programme. Nevertheless, during the same period, we spent Two Hundred and Forty Two Thousand Eight Hundred and Twenty Two Ghana Cedis and Thirty Three pesewas (GH¢242,822.33) as tuition and hostel fees for sixty-five (65) students at tertiary institutions from level 100 to 600 (level 500 and 600 being students studying Medicine).

In the area of healthcare, major interventions undertaken to ensure reduction or eradication of bilharzia in the impacted communities include provision of potable water and sanitation facilities. Beneficiary communities include Sedorm, Korankyi, Amlalokope, Teikpitikorpe, Kebenu, Dzebetato, West Kpong, Supomu Dunkwa, Atrobinya and Volo.

Portfolio Growth

Although no new power expansion projects were completed in 2019, the Authority remained focused on its commitment to expanding its footprint in the development of new renewable energy sources. These include feasibility studies carried out on the 17MWp Kaleo-Lawra solar power projects, the yet to be developed 40MWp Bongo Solar Project, as well as our proposed two (2) 75MWp Wind Power Projects, to be located in the Keta and Ada West Municipalities respectively. I am pleased to report that after several years on the drawing board, sod cutting for the construction of the Pwalugu Multipurpose Dam took place

BOARD CHAIRMAN'S STATEMENT

(continued)

during the year. The completion of the project will present many benefits to the people of the area, not just in the provision of additional power to the area, but also in irrigation and flood control; vital in light of the challenges posed by the annual spillage of the Bagre Dam after heavy rainfalls.

Also in 2019, VRA collaborated with the Ministry of Energy, the Ghana Atomic Energy Commission and the Nuclear Power Institute to support the development of nuclear power in Ghana.

Furthermore, the Authority engaged the Government and other interested stakeholders in the development and conversion of our simple cycle plants into combined cycle operations. The targeted plants include the Kpone Thermal Power Station; Tema Thermal 1 Power Plant (TT1PP); as well as working towards the transfer of ownership of the T3 Power Plant by Government to enable us re-power and operate it in a combined cycle mode.

Restructuring of subsidiaries

During the year, the Authority put in place a timetable and action plan towards restructuring of our non-power subsidiaries into stand-alone, financially self-sustaining entities. These non-power subsidiaries include the Akosombo Hotel Ltd. (AHL), Kpong Farms Ltd. (KFL), Volta Lake Transport Company Ltd. (VLTC), VRA International Schools Ltd., and VRA Health Services Ltd. The target set in 2019 was to identify majority equity partners before the end of 2020 who, in turn, would bring much needed capital injection and management focus. Modest progress has been made in this important area, with a better resourced investment directorate leading current efforts.

Challenges

The year 2019 presented its share of challenges in the energy sector that impacted the Authority's operations. The financial debt overhang brought about by the overcapacity in the power system, exacerbating the poor payment record to the VRA for power supplied to the regulated market, remains a key concern. It is our continuing expectation that Government will find solutions to these critical on-going concerns.

The unavailability of the steam turbine at Aboadze due to major damage following a grid disturbance, contributed largely to the under-utilisation of the facility. In response, the Authority has developed a programme to assure the long-term sustainability of operations of the Aboadze thermal plant. This is to enable us to achieve our objective to remain relevant in the current competitive market, and to sustain our position as an industry leader.

The continued movements in the foreign exchange markets also affected the Authority's fiscals. The 13.7 percent depreciation of the average GH¢/US$ exchange rate from GH¢4.59 in 2018 to GH¢5.22/US$ in 2019, significantly contributed to an increase in our foreign exchange losses and severely impacted our net financial position. It is our hope that the Ministry of Finance and Bank of Ghana will continue to work together to ensure stability in the exchange rate regime to ease our cost of doing business.

Finally, the absence of a competitively priced electricity tariff regime that incorporates financial compensation for the various ancillary services that the Authority provides for the stability and reliability of the national power system needs to be addressed. We are of the considered opinion that the time has come for the mandated institutions to consider and incorporate the provision of ancillary services in the tariff methodology.

BOARD CHAIRMAN'S STATEMENT

(continued)

The Way Forward

I would like to assure our stakeholders that VRA is committed to executing its public sector mandate, but with a private sector mindset, by providing reliable and competitively priced electricity to support national development. This is our COMMITMENT on our steady journey to the "NEW VRA".

Conclusion & Appreciation

I conclude by thanking my colleagues on the Board for their support and leadership. I am certain that with good governance, discipline and focus, this Board will provide the right guidance to ensure VRA remains a sustainable entity as we strive to maintain our position as the industry leader in the years ahead.

I would also like to thank all our stakeholders for their contributions towards our quest to restructure into a resilient, viable, and financially sustainable entity with multiple business interests. In particular, I wish to thank the newly established State Interests and Governance Authority (SIGA), led by their Director-General, Mr. Stephen Asamoah-Boateng, for their support and encouragement during their first year of existence. I also want to acknowledge the role of Government towards our financial recovery efforts through the contributions of ESLA Plc.

Finally, I would like to commend the Chief Executive and his Management Team for their support and dedication in guiding VRA through the challenges of the past years. I look forward with optimism to 2020, as we begin planning towards our 60th anniversary in 2021, and to our next sixty (60) years.

Thank you.

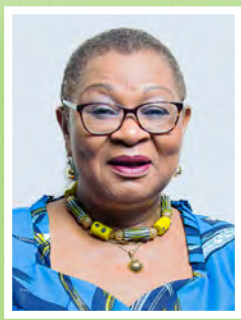
Kweku Andoh Awotwi
Board Chairman

CORPORATE GOVERNANCE

BOARD CHAIRMAN & MEMBERS AS AT DECEMBER 31, 2019

Mr. Kweku Andoh Awotwi
Chairman

Mr. Emmanuel Antwi-Darkwa
Chief Executive



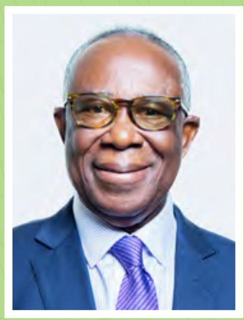
Rev. Dr. Joyce Rosalind Aryee
Member

Nana Kobina Nketsia V
Member

Chief Musa Badimsugru Adam
Member

Janet Anane (Mrs.)
Member

Mr. El-Farouk Umar
Member



Mr. Richard O. Okrah
Member

Claudia Gyeke-Aboagye (Mrs.)
Board Secretary, VRA

EXECUTIVE AND MANAGEMENT TEAM

OFFICE OF THE CHIEF EXECUTIVE

Name	Position
Ing. Emmanuel Antwi-Darkwa	Chief Executive
Mr. Ebenezer Kwadwo Omari-Mireku	Director, Internal Audit
Ing. Alfred D. Sackeyfio	Director, Corporate Strategy

ENGINEERING & OPERATIONS BRANCH

Name	Position
Ing. Emmanuel Dankwa Osafo	Deputy Chief Executive
Ing. Charles H.B. desBordes	Director, Hydro Generation
Ing. Edward Ekow Obeng-Kenzo	Director, Thermal Generation SBU
Ing. Eugene Ada Asomontsi	Director, Engineering Services
Vacant	Director, Environment & Sustainable Development
Ing. Ebenezer Apau Koramoa	Director, Technical Services
Dr. Isaac Adjei Doku	Director, Commercial Services

FINANCE BRANCH

Name	Position
Mr. Ebenezer Tagoe	Deputy Chief Executive
Miriam Darke (Mrs.)	Director, Procurement
Mr. Richard Ahenkora Osei	Director, Investment
Mr. Paul Seniagya	Director, Finance
Vacant	Director, Management Information Systems

(continued)

EXECUTIVE AND MANAGEMENT TEAM

SERVICES BRANCH

Name	Position
Ing. Bernard Kofi Ellis	Deputy Chief Executive
Bevelyn Asamoah (Mrs.)	Advisor, VRA Academy
Ellen Bannerman-Quist (Mrs.)	Director, Legal Services
Mr. James Napour	Director, Real Estate and Security
Dr. (Mrs). Irene Stella Agyenim-Boateng	Director, Human Resources
Mr. Eric Mensah-Bonsu	Chief Learning Officer, VRA Academy
Vivian Jennifer Yebuah	Akosombo Management Committee

SUBSIDIARIES & STRATEGIC BUSINESS UNITS

Name	Position	Registered Company
Dr. Osman Ayuba	Managing Director	Northern Electricity Distribution Company
Dr. Mrs. Rebecca Acquaah-Arhin	Medical Director	VRA Health Services Ltd.
Mr. William Bobie	Managing Director	Property Holding Company (PROPCo)
Mr. Edwin Adi Aryitey	General Manager	Volta Hotel Ltd.
Lilian Arhinful (Mrs.)	Ag. Farm Manager	Kpong Farms Ltd.
Vacant	General Manager	VRA International Schools Ltd.
Mr. Young Agyeman Kyei	Managing Director	Volta Lake Transport Company

STAFF ON SECONDMENT

Name	Designation	Organisation
Alexandra Totoe (Ms.)	Chief Financial Advisor	State Interest and Governance Authority
Ing. Theophilus Nii Okai	Executive Director	Ghana Nuclear Power Project
Mr. Kwasi A. Prempeh	General Manager	West Africa Gas Pipeline Company

CORPORATE GOVERNANCE STATEMENT

The Volta River Authority (VRA) is a corporate body governed by the Volta River Development Act, 1961 (Act 46), as amended by the Volta River Development Act (Amendment) Act, 2005 (Act 692). Though not a company limited by shares, the enabling Act and other relevant regulations have, over the years, provided the structure, systems and processes of good governance to enable VRA operate in a sound and competitive environment to promote efficiency and sustainability.

1.0 The Board of Directors

As stipulated by the Volta River Development Act, 1961 (Act 46), and as amended by the Volta River Development Act (Amendment) Act, 2005 (Act 692), the Authority consists of the Chairperson, the Chief Executive and seven (7) other Directors appointed by the President. A Member of the Board, other than the Chief Executive, holds office for a period not exceeding four years, and is eligible for re-appointment. All Members, with the exception of the Chief Executive, are non-Executive Members.

2.0 Membership of the Board

Membership of the incumbent Board, which has been in office since October 2017 is eight (8), with the ninth Member yet to be appointed to fill the vacancy. Section 7(3) of Act 46 states that the validity of any proceedings of the Volta River Authority shall not be affected by any vacancy amongst the Members, or by any defect in the appointment of a Member.

The Board's Members are drawn from diverse backgrounds. Their diversity, independence and skills represented on the Board ensures objective and balanced decision making.

The Members are:

Mr. Kweku Andoh Awotwi
Chairman

Mr. Kweku Andoh Awotwi is currently the Chief Executive of Tullow Ghana Ltd and Executive Vice President of Tullow Oil plc. He is also the Principal of Africa Power Systems Management (APSM). Prior to these, he was the Chief Executive of VRA from June 2009 to December 2013. He has been involved in a number of entrepreneurial ventures in energy and mining across Africa serving in various capacities. He was the Chief Executive Officer of Midway Resources International, a company in the Oil and Energy industry, and Founder/Director of Cenpower Generation. He also served as Ag. President, Ghana Chamber of Mines from 2003–2004. Currently he serves on a number of Corporate Boards in Ghana and abroad, including the United Nations Global Compact Advisory Board, and has been a Trustee of the World Affairs Council of Northern California, USA.

Mr. Awotwi has an MBA from the Stanford Graduate School of Business, Stanford, California, and a Bachelor of Science in Electrical Engineering, Economics and Political Science from Yale University in New Haven, Connecticut.

Mr. Emmanuel Antwi-Darkwa
Chief Executive

Mr. Emmanuel Antwi-Darkwa is the Chief Executive of VRA, a position he has held since February 2017. Prior to this, he was involved in private engineering consultancy services. Mr. Antwi-Darkwa commenced his career with VRA and served in various capacities until 2002, when he was seconded to the Ministry of Energy as Director of Power, until 2009. With over thirty years' experience in the energy sector, he has detailed knowledge in functional and infrastructural developments, regulatory influences in Ghana's energy sector, and the dynamics of international power system development. He possesses tremendous expertise in strategic planning, policy formulation and evaluation, contract negotiations as well as the management of several multi-disciplinary power projects.
He serves as a Member on several professional bodies including the Ghana Institution of Engineers (GhIE), International Hydropower Association (IHA), Society of Petroleum Engineers (SPE), and the Editorial Advisory Board of the Hydro Review Worldwide, an international professional magazine on hydropower development.

Mr. Antwi-Darkwa holds a Master of Business Administration (MBA) in International Oil & Gas Management, University of Dundee, UK. He also holds a Master of Public Administration (MPA) from Harvard University, USA, and a Bachelor of Science (Hons) (Civil Engineering) from the Kwame Nkrumah University of Science and Technology, Ghana.

Mr. Richard Obeng Okrah
Member

Mr. Richard Okrah, has professional training in Human Resource Management, Public Procurement and has worked in various capacities. He was the Managing Director of Intravenous Infusions Ltd. from 2001 to 2016. Prior to that, he worked for 27 years with VRA, serving in various capacities to the highest position of Deputy Chief Executive in charge of Resources & Services.

Mr. Richard Obeng Okrah holds a Master of Public Administration (MPA) from Harvard University and a B.A. Hons. Sociology from the University of Ghana, Legon, in 1995 and 1969 respectively.

Chief Musa Badimsugru Adam
Member

Chief Musa B. Adam is currently the Board Chairman of RegencyNem Insurance Company Ltd. and the Managing Director of Primary Resources Ghana Ltd. Prior to this, he had been Managing Director of the Electricity Company of Ghana from May 1998 to October 2000. Chief Musa Adam is a renowned Engineer who started his career at Ohio Bell Telephone Company and later at the General Electric Co. Lamp Division both in the USA. He became the General Manager of GECAD Ghana in 1995. Chief Adam has served on the Boards of several government agencies, commissions and private companies including Tema Development Corporation, National Commission on Culture, Presidential Commission on Pension and Advisory Council of the Institute of Economic Affairs among others. He has also chaired the Board of Trustees, Volta River Resettlement Trust and the West Mamprusi Community Bank.

He holds a Master of Business Administration from the Harvard Business School, Cambridge, Massachusetts, USA and a Bachelor of Science in Electrical Engineering from the Case Institute of Technology, Cleveland, Ohio. He has undertaken various management courses and an International training in Utility Regulation and Strategy.

Rev. Dr. Joyce Rosalind Aryee
Member

Rev. Dr. Joyce Aryee is the Founder and an Executive Director of Salt & Light Ministries, a Christian organization, where she serves as a resource for other faith-based initiatives and organisations. Rev. Dr. Aryee is a Senior Executive with over 40 years' experience in various capacities, and excellent record of accomplishment in strategic leadership and management, executive coach and a passionate advocate for positive social change. She has played multiple roles in a variety of industries including mining, education, government and media. She served as the Chief Executive Officer of Ghana Chamber of Mines and as Secretary (Minister) of Information and Education and Local Government respectively. She serves on the Boards of diverse organisations including Central University College, University of Mines and Technology and Ghana Chamber of Mines, to mention but a few. She serves as the Chairman of Databank Ark Fund, Global Media Alliance and Newmont Gold Ghana, among others.

She is a recipient of myriad awards for excellence in leadership at community and national levels including the Chartered Institute of Marketing, Ghana (CIMG), Marketing Woman of the Year Award for 2007 and the African Leadership on Centre for Economic Development's African Female Business Leader of the Year Award for 2009. Rev. Dr. Aryee was awarded the Order of the Volta of Ghana (Companion) (CV) in 2006.

Rev. Aryee is an Honorary Fellow of the Ghana Institution of Engineers as well as the Institute of Directors. She received an Honorary Doctorate from the University of Mines and Technology in recognition of her immense contributions to the growth of the mining industry. She holds a Post Graduate Certificate in Public Administration from the Ghana Institute of Management and Public Administration and a Bachelor of Arts in English from the University of Ghana, Legon.

Mrs. Janet Anane
Member

Mrs. Janet Anane is currently the Managing Director of Gentle Giant Company Limited. She is an astute entrepreneur. Prior to unlocking her entrepreneurial potential, she worked with the Ghana Police Service and Canada Trust Bank respectively. Mrs. Anane holds a Certificate in Banking from the Humber College, Canada.

Mr. El-Farouk Umar
Member

Mr. El-Farouk Umar is currently the Chief Executive of Board Advisory Limited, after serving as the Chief Information Officer of the GCB Bank Ltd. from 2012 to 2019. Mr. Umar has a well-rounded background and professional exposure in Information Technology Leadership, Business Finance, Customer Relationship Management and Information Security from the private and public sectors, mostly in the United States of America. He has over twenty-five (25) years of experience as an Information Technology Operations professional and over twelve (12) years as a Business Executive providing global business solutions in the different enterprise areas of Telecommunications, Public Sector Management, Management Information Systems, e-Commerce, Business start-ups, and financial services. He has practical operational experience in the design and build-up of enterprise operational capacity and capability in diverse industries and disciplines with a record of business process improvement and operational cost rationalisation.

Mr. Umar holds an Executive Master of Business Administration from the College of William & Mary, Virginia, a Bachelor of Science in Criminal Justice Administration from John Jay College of Criminal Justice, New York and a Bachelor of Science in Business Administration from the University of Ghana.

Nana Kobina Nketsia V
Member

Nana Kobina Nketsia V is currently the Omanhene of the Essikado Traditional Area. He is also the Chairman of the Nana Kobina Nketsia V Trust and Dr. Robert Mitchell Memorial Foundation and serves on the Advisory Board of Care Ghana, all of which are non-profit organizations. He is a Member of the Historical Society of Ghana. Nana has chaired both the Ghana Museums and Monuments Board and the Ghana Broadcasting Corporation and served on the Board of the Public Utilities Regulatory Commission (PURC), among others.

Nana Nketsia V holds a PhD in African History from the University of Calabar, Nigeria and a Bachelor of Arts Degree in History from University of Ghana.

CORPORATE GOVERNANCE STATEMENT

(continued)

3.0 Mandate

The Board is responsible for formulating policies necessary for the achievement of the primary function of the Authority – the generation of electrical power for the operation of industrial and domestic uses in Ghana.

4.0 Board Committees, Mandate and Membership

The Board discharges its responsibilities through Board Committees, with Membership from amongst its Members to perform specific tasks to facilitate efficient decision-making. The Executives of the Authority are required to attend meetings of the Board Committees. Other Staff only attend the meetings, at the Committee's request or at the Chief Executive's discretion as may be required.

The Board has established the following Standing Committees to assist in carrying out its functions:

- Engineering & Operations Committee
- Finance & Investment Committee
- Audit & Risk Committee
- Services & Employee Relations Committee

Ad-Hoc Committees are constituted as and when necessary.

4.1 Engineering & Operations Committee

The work of the Committee is to provide broad guidance to the Board and the Chief Executive on strategic engineering and technical undertakings of the VRA's power generation system, namely the Planning, Development, Operation & Maintenance, and make appropriate recommendations for the consideration of the Board. The Committee has a Membership of three (3) and is chaired by Chief Musa B. Adam.

4.2 Finance & Investment Committee

The Committee has the mandate to advise the Board on measures that will ensure the prudent and judicious management of the Authority's finances and investments towards achieving the objectives envisaged under Part II of the Volta River Authority Development Act 1961 (Act 46) as amended by Act 2005 (Act 692). The Committee has a Membership of four (4) and is chaired by Mr. Richard Obeng Okrah.

4.3 Audit & Risk Committee

The mandate of the Committee is to advise the Board on matters relating to VRA's risk management and audit functions as they impact on VRA's operations. The Committee has a Membership of four (4) and is chaired by Mr. El-Farouk Umar.

4.4 Services & Employees Relations Committee

The mandate of the Committee is to advise the Board on issues generally relating to non-power assets and the wellbeing of the Staff in the Authority. The Committee has a Membership of four (4) and is chaired by Rev. Dr. Joyce R. Aryee.

5.0 Management

The Chief Executive, together with his team of Executives and Senior Management, is responsible for the day-to-day management of the business. There is a well clear line of authority and accountability for key responsibilities at all levels and in all areas of the Authority.

CORPORATE GOVERNANCE STATEMENT

(continued)

6.0 Board Calendar

At the end of each year, the Board approves the Calendar of the Board and Committee meetings for the ensuing year. In 2019, six (6) Board meetings were held to consider issues of strategic and business performance importance. Nineteen (19) Committee meetings were also held prior to these Board meetings, providing the platform for selected Board Members to engage more with the Executive and other Management Staff on issues and thereafter make recommendations to the Board.

The Board also held a two (2) day Strategy Meeting at the beginning of 2019 to consider the strategy of restructuring the non-core activities of VRA into self-financing and sustainable subsidiary companies.

7.0 Transparency, Accountability and Stakeholder Relations

To ensure transparency and accountability, the Board maintains active communication and engagements with its shareholder, key stakeholders and the public by providing information regarding Company strategy, operations and performance. Disclosures on performance are communicated to relevant stakeholders in compliance with the Public Financial Management Act, 2016 (Act 921) and other regulations. The financial statements are audited annually by qualified and Independent External auditors and submitted to the State Interests & Governance Authority (SIGA), with a copy to the Ministry of Finance.

Each year, an Annual General Meeting dubbed, "Annual Stakeholders' Interface" is convened by the Board to share information on the performance of the Authority for the previous year to our Shareholder, now represented by the State Interests & Governance Authority and other key stakeholders.

The Board continues to strengthen its engagements with other key stakeholders through specific requests for meetings to discuss issues of mutual benefit.

8.0 Board Remuneration

Being Non-Executive Members, Members are entitled to a sitting allowance for Board and Committee meetings as well as official events attended on behalf of the Authority. The sitting allowances are in line with rates set by Government.

9.0 Governance Improvements

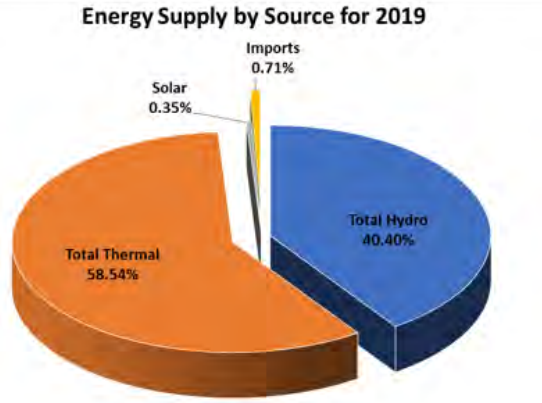
In 2017, the Ministry of Finance, under a World Bank Project, undertook a review of the governance framework of five (5) State Owned Enterprises, of which VRA was included, and outlined Corporate Governance Action Plans for implementation. The Action Plans are intended to address gaps in the corporate governance regimes of the selected SOEs. The implementation of actions specific to VRA, under the guidance of the Board, has seen VRA, over the last year review its governance polices to reflect best practices and provide the foundation for improved performance.
The Board continues to report quarterly to the Ministry of Finance on actions taken in line with outlined Corporate Governance Action Plans.

10.0 Board Evaluation

The Board carried out an evaluation of its work in 2018 at the beginning of the year 2019.

POWER OPERATIONS

Electricity Demand and Supply



For 2019, Ghana's power system recorded a system peak demand of 2,881MW compared to the peak demand of 2,525MW achieved in 2018. The peak demand attained for the year represents an increase of 356MW (14) percent over the previous year's of 2,525MW. The average peak demand for 2019 was 2,643MW, and is consistent with the country's energy demand profile.

Total energy consumed in 2019 (including losses) was 17,890GWh compared to the 15,964GWh recorded in 2018. This figure represents an annual growth in energy consumption of about 12.10 percent.

Meanwhile, it is imperative to state that, though VRA's total planned supply for the year was 10,870GWh, the actual energy supplied was 11,414GWh, which is five (5) percent higher than the projected. Total generation from Akosombo Generating Station (AGS) was 5,366GWh, which is approximately 1,107GWh or 26 percent higher than the planned generation of 4,258GWh. Kpong Generating Station (KGS) on the other hand generated 842GWh of energy, approximately 30GWh or 3.8 percent higher than the projected generation of 812GWh. The Navrongo Solar Power Plant (NSPP) generated 3.317GWh, representing 10.55 percent above the forecast generation of 3GWh. Overall, the estimated planned supply from VRA thermal portfolio was 5,797GWh. However, the actual supplied was 5,076GWh, which represents 12.4 percent or 721GWh lower than the projected. This comprises 376.95GWh from TT1PC, 138GWh from TT2PC, 393GWh from KTPS, and 1,067GWh from the Takoradi Thermal Power Station (TTPS) respectively. The Government contracted AMERI plant, and our joint venture TICO plant also generated 1,483GWh and 1,616GWh respectively.

By the end of the year, our thermal/hydro mix was 44.5/54.4 percent respectively, whereas thermal/hydro mix for the entire system was 58.7/40.5 percent respectively. Meanwhile, Imports from (CIE) in Cote d'Ivoire and generation from our Navrongo Solar Power Plant (NSPP) accounted for the 0.8 percent difference in the energy supplied. As anticipated, the higher contribution from hydro to the system is an overwhelming indication of the significance of hydro generation in the entire power system.

POWER OPERATIONS

(continued)

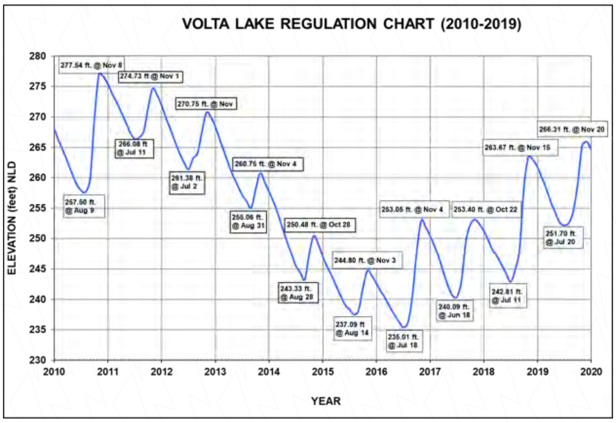
Volta Lake Management

Hydrology Report

For purposes of ensuring VRA's hydro generation resources were operated in a sustainable manner, reservoir management was stringently undertaken during the period under review.

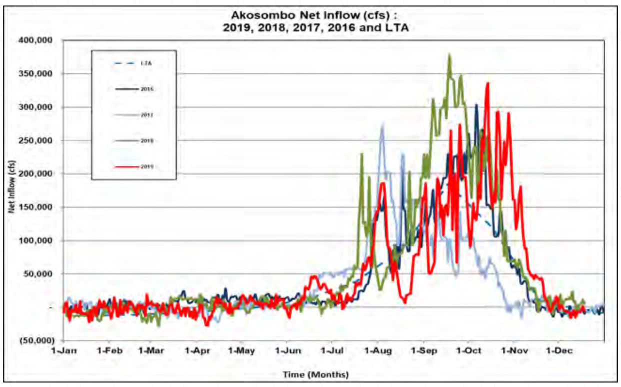
The year begun with a reservoir level of 79.80m (261.80ft) and ended with a level of 80.70m (264.76ft), recording a change in Lake Level (rise) of 0.90m (2.96ft). The year's lowest water level of 251.70ft was recorded on July 16, 2019.

The maximum water level attained at the end of the inflow season was 266.31ft. This was recorded on November 20, 2019.



Meteorology

Rainfall activities within the southern part of the Volta Basin in 2019 was near average. This led to near average rainfall in Ghana for the period under consideration. Consequently, annual rainfall for the seven (7) selected rainfall stations of interest to VRA for 2019 was 1,189mm. This was lower than the Long-Term Average by 0.5 percent.

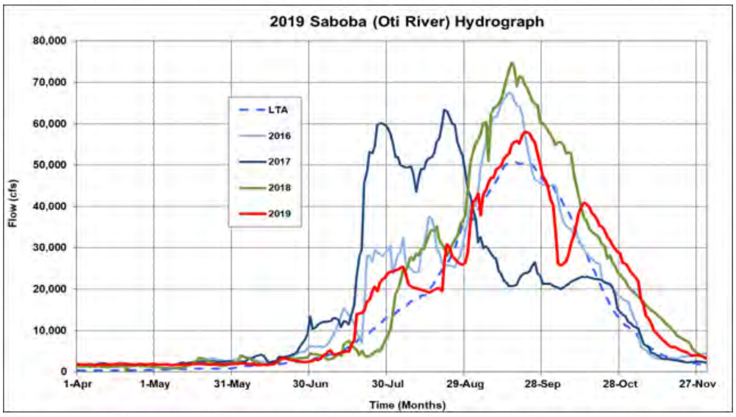


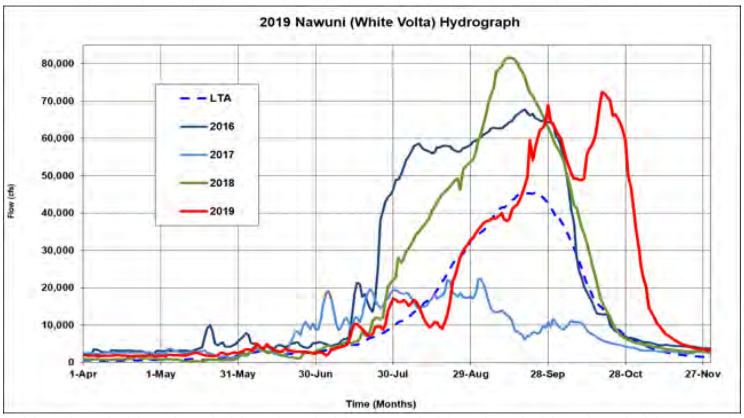
POWER OPERATIONS

(continued)

Tributary Flows

Stream flow data from designated gauging stations on the three major tributaries of the Volta Lake namely: Nawuni on the White Volta River, Bui on the Black Volta River, and Saboba on the Oti River, were recorded during the period. Inflow at Nawuni was 8.80 Million Acre Feet (MAF). This was 56 percent higher than the Long-Term Average (LTA) for the White Volta at Nawuni. The flow recorded on the Oti River at Saboba for the period was 7.85 MAF. This was also higher than the LTA for the Oti River by 18 percent. The inflow recorded on the Black Volta due to energy generation at Bui Hydropower station from January to December was 11.59 MAF.





POWER OPERATIONS

(continued)

Hydro Generation

Operational Maintenance

In line with our corporate objective of guaranteeing the reliability of our Plants with the ultimate goal of ensuring asset value maximization, we aggressively executed all planned maintenance programmes at our generating facilities. The objective is to ensure optimal operation. Accordingly, the Akosombo and Kpong Generating Stations (AGS & KGS), as well as the Navrongo Solar Power Plant (NSPP) executed 100 percent of all planned maintenance activities.

The two hydro Stations also recorded 100 percent and 99.72 percent of Auxiliary equipment maintenance respectively. In addition, both Plants successfully completed all outside service equipment maintenance, thus attaining a 100 percent accomplishment rate.

Availability and forced outage factor analysis

In 2019, Plant availability and forced outage factors for AGS, were 96.42 percent and 0.095 percent respectively. KGS on the contrary achieved Plant availability and forced outage factors of 73.25 percent and 0.440 percent respectively as a result of ongoing retrofit works. The, consolidated availability targets for both Plants was 93.28 percent, which was above the planned annual target of 90 percent. Overall, both Plants achieved a forced outage factor of 0.142 percent, which is within the set target of One (1) percent, and well within the Electricity Utility Cost Group's (EUCG) industrial average of 4.25 percent.

Comparatively, this year's performance is an improvement over last year's, and is attributable to swift responses to situations, and the excellent maintenance practices exhibited by the technical teams.

POWER OPERATIONS

(continued)

Kpong Generating Station Retrofit Project

The Kpong Generating Station Retrofit Project (KGSRP) site works commenced in October 2014 with Unit 2. Dismantling, rehabilitation, assembling and commissioning of Unit 2 was completed in August 2016. Units 1 & 3 were subsequently completed in March 2018 and March 2019 respectively. Unit 4, the last unit to be retrofitted, was fully isolated and handed over to the Contractor on May 7, 2019 for commencement of rehabilitation activities. Dismantling, refurbishment and assembling works have been completed. Pre-commissioning activities have commenced and are ongoing. Wet commissioning is scheduled to start in March 2020, and operational acceptance expected in April 2020. The key objective for the retrofit is to ensure modernisation of the Plant and prolong its life.

Thermal Generation SBU

In furtherance to Government of Ghana's decision to convert the Authority's thermal generation portfolio into a subsidiary, we pursued our commitment to reposition that portfolio into an effective, efficient and viable entity ahead of the planned organisational restructuring into the "NEW VRA". As part of the efforts, we continued our engagement with key stakeholders including Government with respect to the possible retooling of the Takoradi 3 Power Plant in Takoradi as well as converting our simple cycle plants at Tema and Kpone into combined cycle mode. The major objective is to reduce our thermal generation cost, as well as expand our power export frontiers in the sub region.

Operations and Maintenance

Total generation from the Thermal Generation SBU (TGS) in 2019 was 1964.47GWh. The year's performance was achieved with an operational average Plant availability and capacity utilisation of 83.21 percent and 36.07 percent respectively. Meanwhile, consistent with our corporate resolve to run our thermal facilities solely on gas, there was no Light Crude Oil (LCO) combustion during the year. Accordingly, fuel usage for the period included 206,238,132 MMBtu of Natural Gas and 82,040 barrels of Distillate Fuel Oil (DFO).

Generation from the Takoradi Thermal Power Station's (TTPS) for the year was 1,051.11GWh. This was accomplished at an availability rate of 63.98 percent (32G2 excluded) or 47.49 percent (due to the extended outage on 32G2), and an end-of-year capacity utilisation of 40 percent. At Kpone, total generation for KTPS was 320.24GWh, and was achieved with an availability and end-of-year capacity utlisation of 86.70 and 18.01 percent respectively.

A forced outage rating of 10.1 percent was recorded at the Station at the end of the year. At the Tema Thermal Power Complex, a total of 515.65GWh of energy was generated by TT1PC whiles TT2PC generated 138.70GWh. TT1PC's performance was achieved at the back of an availability and capacity utilisation of 95.18 and 40.98 percent, whilst TT2PC on the other hand operated at 74.52 percent availability.

POWER OPERATIONS

(continued)

It is instructive to state that System Control Centre (SCC) dispatched Plants at TTPC as and when natural gas was available to the enclave. The regime in the area was for TTPC and KTPS to operate every other month. The purpose was to enable us to manage the usage of the limited natural gas supplied during the period to avoid keeping a plant shutdown for prolonged periods. For the period under review, a total of 30mmScf/d of gas was secured.

In terms of maintenance and consistent with our excellent maintenance culture, we successfully executed 98 percent and 96.3 percent of our preventive and corrective maintenance accomplishment respectively.

Renewable Energy Development

Pursuant to Government of Ghana's policy to promote the development and utilisation of renewable energy, and consistent with our corporate objective of ensuring development in a sustainable manner, development of our renewable energy potentials continued to remain at the front burner of the Authority's business. Providing clean energy, reducing our carbon footprint, providing energy security and ensuring systematic development of the related infrastructure is the bedrock of our commitment in pursuing the renewable energy programme.

Solar Power Projects

Furtherance to our commitment towards sustainable development, as well as clearly projecting our new work culture of working in a green and smart environment, we successfully executed our maiden 74.6kW Head Office Rooftop Solar PV project. The facility, by our projections, would reduce our consumption in the building by 9.5 percent. We also commenced the processes to replicate the facility on our residential and institutional buildings at Akuse. At the national level, we have signed a contract with Elecnor S.A. for the construction of our second utility scale, 17MW Kaleo-Lawra Solar PV project. The feasibility report for phase two of the Kaleo-Lawra project has also been completed and we will soon start working on the feasibility report for the proposed 40MW Bongo Solar Project. Our expectation is that, when these projects are completed, it would increase our footprints in renewable energy development and largely contribute to achieving our outlook of commanding at least 70 percent of the country's renewable energy space.

Wind Power Projects

In line with our corporate objective of diversifying our generation portfolio and bolstering up our renewable energy capacity, we vigorously pursued our interest in developing our Wind Power Projects (WPP). Towards this end, we held stakeholder engagements with the Keta Municipal Assembly, pending EPA's approval of the Environmental Social Impact Assessment (ESIA) Report submitted for the 75MW WPP1. On the other hand, due to issues related to site overlap with developers such as Upwind and Solar Park, activities on the second 75MW WPP2 reduced significantly. Notwithstanding, we submitted the ESIA report on the WPP2 to EPA for their approval and followed up with stakeholder engagements with the Ada West District Assembly. Completion of the project in our view would not only increase our generation capacity in the long term, but also make VRA one of the front-runners of wind power in the country.

POWER OPERATIONS

(continued)

Nuclear Power Programme

During the year, Nuclear Power Ghana (NPG), the entity set up as the owner/operator organisation of Ghana's nuclear power programme was registered as a limited liability company. Key milestones attained include assisting the Ghana Nuclear Power Programme Organisation (GNPPO) to prepare the Nuclear Power Programme Comprehensive Report. The report, which seeks to present a summary of the pre-feasibility study on nuclear power in Ghana, will be presented to the Government in 2020. Again, in collaboration with Nuclear Power Institute (NPI), NPG evaluated a number of potential nuclear power plant options that comply with local and international standards. In addition, NPG supported GRIDCo to conduct a preliminary assessment of the national grid as well as undertake an evaluation of the impact of a 1000MW nuclear power plant on the stability of the grid. Furthermore, NPG contracted the Institute of Statistical, Social and Economic Research (ISSER) to undertake an assessment of the perception of businesses and households towards the introduction of nuclear power into Ghana's energy mix. NPG also supported NPI to identify candidate sites for the construction of the proposed nuclear power plant. Finally, to create more awareness, NPG held stakeholder engagements with the media to sensitise them on the potential of nuclear power.

Capacity Expansion Activities

We focused on our resolve to carry out bold initiatives towards converting our simple cycle power plants into combined cycle by engaging with Government and other relevant stakeholders. In view of this, we continued our engagement with Government towards the transfer of ownership of the Takoradi 3 Power Plant, to enable us to retool and operate it in a combined-cycle mode. Moreover, we held discussions with SSNIT/CENIT, a private partner, on the conversion of the TT1PP plant into combined cycle. Our motivation is to not only ensure capacity expansion, but also most importantly, reposition and strengthen our thermal portfolio with the view to making us more competitive in the midst of the emerging competition from the IPPs.

Pwalugu Multipurpose Dam Project

The Pwalugu Multipurpose Dam Project is an integral part of our developmental plan to improve power supply particularly in the northern parts of the country. To be completed in 50 months, the Pwalugu project comprises a 60MW hydro dam, 50MW hybrid solar facility as well as a 25,000ha irrigation scheme. Upon completion, the project would enhance our renewable energy portfolio and by extension, impact positively on Ghana's climate change efforts. It would also help in accelerating development efforts in the northern regions and reduce the frequency of floods in the surrounding areas.

POWER BUSINESS

Energy Sales

In the year 2019, power sold to customers was 10,758GWh. This is 19.20% higher than the 2018 figure of 9,025GWh. Total power sales in 2019 comprised 6,093GWh to electricity distribution companies, 1,429GWh to export customers, 2,384GWh to bulk customers, 843GWh to GRIDCo as transmission losses and 9GWh as substation use.

Out of the power sold to distribution companies, 5,011GWh was sold to Electricity Company of Ghana (ECG), 846GWh to Northern Electricity Distribution Company (NEDCo) and 236GWh to Enclave Power Company (EPC).

For export customers, the Authority sold 48GWh to Communauté Electrique du Bénin (CEB), 640GWh to Compagnie Energie Electrique du Togo (CEET), 89GWh to Societe Beninoise d'Energie Electrique (SBEE), 576GWh to Société Nationale d'électricité du Burkina (SONABEL) via the Bolga-Ougadougou line, and 76GWh to Compagnie Ivoirienne d'Electricite (CIE).

Power sold to bulk customers consisted of 1,319GWh to mining companies, 893GWh to VALCO and 172GWh to industrial customers. The mining companies include AngloGold Ashanti (AAGL), Newmont Ghana Gold Ltd (NGGL), Newmont Golden Ridge Ltd (NGRL), Goldfields Ghana Ltd (GFGL), Golden Star Resources Group, Perseus Mining Ghana Ltd (PMGL), Adamus Resources Ltd, Owere Mines, Prestea Sankofa Gold Ltd (PSGL), Adansi Gold Ltd, Earl International Group (Ghana) Gold Limited, AngloGold Ashanti (Iduapriem), Drillworx and Great Consolidated Diamonds Ghana Ltd.

The industrial/commercial customers included Aluworks Ghana Ltd, Akosombo Textile Ltd, Diamond Cement Ghana Ltd, Savanna Diamond Company Ltd, VALCO, and others.

Gas Supply

To ensure we have sustained gas supply for the operation of our thermal assets, we continued to engage and manage natural gas supplies from existing principal gas suppliers namely: N-Gas Limited of Nigeria, Ghana National Gas Company (GNGC) Limited and Ghana National Petroleum Corporation (GNPC). For the year 2019, GNGC supplied 14,707.5MMscf; GNPC supplied 21,924.36MMscf, with N-Gas providing 21,744.92MMscf.

Total gas supplied to VRA and received at the various Metering stations for the year 2019 stood at 58,376.78MMscf, with domestic supply accounting for 36,631MMscf representing 62.75 percent of gas used for thermal power generation. Other non-domestic supply totaling 21,744.92MMscf came from N-Gas Nigeria and represents 37.23 percent of the total supply.

POWER BUSINESS

(continued)

Gas Supply Security

The following projects were carried out to ensure that domestic gas supply could be transferred from suppliers in the west to the eastern power enclave:

- Upgrading and refurbishment of VRA's Interconnection Gas Facility (VGIF) to improve metering and evacuation of gas to VRA thermal plants, as well as other IPPs located in the East. The project was completed in April 2019.
- The first phase of the Takoradi-Tema Interconnection Project (TTIP), expected to ensure a reverse flow of 60 MMscf/d of gas on a firm basis and an additional 60MMscf/d on an interruptible basis from Sankofa/Jubilee gas fields to the Tema Enclave, was successfully completed and commissioned in April 2019. TTIP Phase II, which was to expand West Africa Pipeline Company's Tema R&M station from a capacity of 140MMscf/d to 235MMscf/d, also commenced in 2019 and is expected to be completed in Q2 2020.
- The arrangement between VRA and N-Gas for the renewal and upgrade of the Stand-by Letter of Credit (SBLC), as a payment security for approximately 70,000MMBtu/d of gas from Nigeria, is still in force. It is expected that legacy debts owed N-Gas and other fuel suppliers will be taken care of by the continued issuance of the energy sector recovery bond. The Government through ESLA Plc has settled a total of about US$128m of VRA's indebtedness to N-Gas. The remaining amount of US$42m is expected to be settled by the end of Q2 2020 barring any unforeseen circumstances.

In addition, VRA continued to engage GNPC concerning the proposed Tema LNG Project. The project is earmarked to deliver up to 250MMscf/d of gas to the Tema enclave with a new timeline set at first quarter 2021.

Tariffs

In 2019, electricity tariffs for bulk and export customers were adjusted based on the terms and conditions of the respective Power Sale and Purchase Agreements. The Public Utilities Regulatory Commission (PURC), in the year under review, approved a VRA Bulk Generation Charge (BGC) of GHp28.0370/kWh and GHp 29.9467/kWh effective July 1, 2019 and October 1, 2019 respectively.

Sale Contracts

In 2019, we continued with our efforts at reviewing and executing Power Sale and Purchase Agreements (PSPAs) with our customers. As at December 2019, we had concluded and executed twenty-four (24) PSPAs. This includes the signing of one new customer (Sunda Ghana Limited), as well as the execution of a PSPA with an already existing customer (Diamond Cement Ghana Limited), in the year under review.

POWER BUSINESS

(continued)

Business Development and Power Trading

Following our strategic decision to maximise the use of our assets, we enthusiastically pursued our programme to commercialise our tank farms. During the year, we executed a Memorandum of Understanding (MoU) with the Bulk Oil Storage and Transportation Company Limited (BOST), that would enable us to lease our tank farms used for storing crude oil and associated equipment at Aboadze to them. Our commercialisation policy hinges on the strategic decision to operate our thermal plants on Natural Gas as well as the improvements in the availability of natural gas.

Again, as the power supplier of choice, we engaged with the Ghana Investment Promotion Centre (GIPC) as part of our strategy to attract new businesses that have plans of entering the Ghanaian market. This follows Government's initiatives to boost industrial growth. Subsequently, we approached the automobile companies that had publicly made pronouncements on their intention to establish assembly plants in the country. The engagement was to assure them of our preparedness to meet their power needs. The companies contacted include Nissan, Volkswagen, Toyota, Renault and Sinotruk.

FINANCIAL HEALTH

In 2019, revenue from sale of electricity increased by 27 percent - or GH¢852.7 million - to GH¢ 4.012 billion over the previous year's sale of GH¢3.160 billion. The above is attributed to the combined effects of a 19.20 percent (1,733GWh) increase in the quantity of energy sold, from 9,025GWh in 2018 to 10,758GWh in 2019, and an increase in the average tariff for regulated customers, from GH¢ 0.2499/kWh in 2018 to 0.2813/kWh in 2019.

Also, the quantity of electricity sold to deregulated customers, which attracts relatively better margins, increased by 55.8 percent from 3,003GWh in 2018 to 4,679GWh in 2019, largely on account of sales to SONABEL over the new Bolgatanga-Ouagadougou 330kV transmission line, which increased from 222GWh in 2018 to 519GWh in 2019, representing an increase of 297GWh - or 135 percent. Additionally, sales to CEB also increased by 102 percent, from 385GWh in 2018 to 777GWh in 2019. The quantity of energy sold to regulated customers increased by 11 percent (687GWh) from 6,022GWh in 2018 to 6,709GWh in 2019.

SUPPORT ACTIVITIES

Management Information System (Support Services)

Pursuant to the implementation of the Financial Recovery Programme, and consistent with our quest to ensure that relevant, reliable, accurate and timely information was available to the Authority to support decision-making, we leveraged on our ICT infrastructure including Electronic Document and Records Management System (EDRMS), Oracle ERP (eBusiness), Transport Management System (TMS), Email and Skype for Business among others, to facilitate our internal business processes, improve business efficiency and reduce operational cost. The EDRMS was enhanced by adding the document validation feature, which eliminated manual signatures for a wide range of internal correspondences (memos) leading to further reduction in paper usage and faster processing times.

Cyber Security

During the year under review, the Authority worked with a Cyber Security Consultant to assess vulnerabilities in the Authority's ICT system, which either could or are being exploited to the detriment of the Authority. The exercise brought to the fore, a number of recommendations, which are being assessed and implemented to improve the security of our ICT systems. It is our expectation next year to subscribe to a Security Operations Centre (SOC) as a service to provide visibility of events and happenings within the ICT environment. The Objective is to ensure a more secured ICT environment. This service would enable us combat cyber security risks as well as facilitate easy identification of security incidents to inform the appropriate response and remediation method.

- ### Support to Subsidiaries/SBUs

We provided the Authority's Subsidiaries/SBUs with various ICT services as part of measures to improve information management and service delivery. Application hosting services were extended to Volta Transport Lake Company (VLTC) Limited while Internet domain establishment services were provided to NEDCo and the VRA Health Services Limited (VHSL). Staff of VLTC and VRA Schools Limited were trained in both basic and advanced computing skills to empower them to work in a digital-transforming business environment.

SUPPORT ACTIVITIES

(continued)

Corporate Strategy

We kept track with initiatives rolled out in the "BRAISE" strategy aimed at facilitating our transformation into a viable, sustainable and resilient organisation. This was ensured by effectively and efficiently monitoring implementation of the Financial Recovery Plan (FRP), which has the key objective of restoring our finances and ensuring our long-term financial sustainability. Others include monitoring budgetary spending, managing costs, as well as submitting situational operational reports to the relevant stakeholders. Most importantly, we signed our 2019 Performance Contract with the State Interest and Governance Authority (SIGA). The contract has the objective of ensuring we deliver on our mandate of achieving our strategic objectives and consequently show positive financial returns. Again, we submitted all mandatory reports including the 2018 Audited Accounts, 2019 Budget, Maintenance Plans, and Training Programmes. In addition, quarterly reports comparing the agreed targets and achievements for the period were also submitted. Further to that, we continuously monitored and evaluated our annual assessment of the Authority's performance based on the corporate, departmental and special unit scorecards. Going forward, to ensure the timely submission of reports to our stakeholders and improve decision making, we hope to automate our performance reporting and assessment processes.

Industrial Relations

Following our commitment to developing our human resource to reflect the needs of the business, we continued to provide opportunity and programmes for the advancement of knowledge and skills of our Staff. Accordingly, we pursued various initiatives including our High Impact Leadership Development Programme, Talent Management, as well as our recruitment and succession planning strategies. The overriding objective is to ensure we have a core of dedicated, committed and well-motivated Staff with the appropriate customer-centric attitudes that would engender our strategy of sustaining our market leadership and inch towards our vision of becoming a Model of Excellence for Power Utilities in Africa.

- **Employee Relations**

Management engaged Leadership of the Staff Groups on issues of common interest with the key objective of promoting cordiality and collaboration. The discussions held included Management/ SSA/ Union Consultative Committee meetings, negotiations and consultations to review 2019/2020 collective agreements, informal meetings with the Chief Executive and Management, as well as joint interactions between the Human Resource Directorate and the Staff Groups. The objective of these engagements is to facilitate effective and excellent employee-employer relations, while promoting good corporate governance.

SUPPORT ACTIVITIES

(continued)

- **Reward Management System (RMS)**

Further to the Board's approval to review the existing Reward Management System (RMS), Management constituted a joint team comprising representatives of the Human Resources Department, Senior Staff and the Unions to address the inherent challenges that had been identified in the existing RMS and recommend ways to address them. The Committee's mandate, among others, was to review the existing Cadre/Job levels, address challenges with career progression, resolve wrong entry points and other salary related issues affecting Staff at all levels in the Authority.

- **Scheme of Service**

Management in acknowledgement of the need for Staff to be equipped with the relevant knowledge, skills and attitudes for efficient and effective service delivery sought Board approval to review the Scheme of Service (SOS), which had been in existence since 2005.
A team comprising HR and the VRA Academy has completed the review, which has been approved by the Board for implementation. Job requirements have been reviewed and expanded to include the following: Minimum Qualification for the Job, Technical Competency, Behavioural Competency, Mandatory/Continuous Learning, Business Knowledge and Job Rotation.

The revised SOS is in tandem with the execution of the "BRAISE" Strategy of the "NEW VRA" and at pace with emerging business trends and practices.

- **Staff Strength**

Staff strength as at the close of the year stood at 2,086. This constitutes a 1.16 percent increase compared to the 2018 figure of 2,062. Similarly, the number of Contract Staff in 2019 reduced drastically from 107 in 2018 to 29 in 2019, representing a decrease of 72.90 percent. The reduction is as a result of the enforcement of Management's policy to allow Contract Staff to compete for available vacant permanent positions and regularize their appointments to encumber such permanent positions.

The harmonious industrial relations between Management and Staff contributed significantly to our ability to achieve our outlined corporate objectives for the year.

SUPPORT ACTIVITIES

(continued)

Real Estates & Security Department

The Akosombo Management Committee (AMC) on behalf of the VRA continued to manage the Akosombo Township as a Local Authority in accordance with Executive Instrument (EI) 42 of May 1989. Total revenue the AMC generated from its local council activities amounted to **GH¢313,252.68.** This local authority receipts would be shared equally between the Authority and the Asuogyaman District Assembly in accordance with the existing agreement.

Income from rent in 2019 amounted to **GH¢1,369,395.25,** compared to **GH¢1,477,744.85** in 2018 resulting in a percentage decrease of 7.3%. Income from Catering Services, Club House and accommodation also amounted to **GH¢4,774,695.36** in 2019, an increase of 50% over 2018 amount of **GH¢3,173,761.57.** The overall total revenue generated by the Department during the period under review was **GH¢6,584,888.18.**

Below is the summary of 2019 as against 2018 Actual Revenue line items for the year:

Revenue Lines	2019 Revenue	2018 Revenue	Increase/Decrease
Rentals	1,369,395.25	1,477,744.85	(108,349.60)
Catering & Club House	3,151,371.86	2,984,973.87	166,397.99
Accommodation	1,623,323.50	1,888,787.89	(265,464.39)
Miscellaneous	440,797.57	207,702.25	233,095.32
Total	**6,584,888.18**	**6,559,208.86**	**25,679.32**

The significant reduction of ground rent income in 2019 was the main cause of revenue decline for the period under review. There was, however, a revenue growth of 0.4% over 2018.

- ### Security Concerns

To ensure adequate security at our generating facilities following emerging security concerns in the sub region, VRA in concurrence with TICO deployed the military at the Aboadze enclave to beef up security at the installations in the Area. Similar arrangements to have the military deployed at other strategic installations such as AGS, KGS, TTPC and KTPS are ongoing. In addition, we initiated the installation of CCTV cameras in all our operational areas to boost internal security. The installation for Aboadze has been completed and is operational. Installation works at TTPC, KTPS and KGS are underway and have reached various stages of completion.

SUPPORT ACTIVITIES

(continued)

Safety & Health

Safety continued to be a key tenet of our operational excellence strategy. To ensure this, we continued the promotion of safety culture activities during the year. These include the holding of safety and awareness sessions as well as fire drills in the operational areas. These activities culminated in the celebration of the Safety Week in November. Akosombo GS, Bolga Operational Area and KTPS emerged best Work Area Safety Committees (WASACOs) in the Operational Areas. VRA Academy, Real Estate, Akuse, and TSD emerged Best WASACOs in the Non-Operational Areas.

Again, and further to the Authority's ill-health policy, which provides that Staff undertake mandatory Annual Medical Examination, we continued our Annual Medical Examination for the Staff. The medical exam, which forms the basis of determining the physical and mental fitness of Staff has the overall objective of ensuring that employees' standard of health is higher, resulting in increased productivity, and fewer cases of absenteeism and employee turnover.

During the period, VHSL and the Authority's Panel of Doctors diagnosed and treated Staff in line with best practice as and when necessary. The service was extended to our cherished retirees to ensure their continued well-being.

Environment & Sustainable Development

As the country's leading power generator, we are committed to environmental conservation, sustainability, and the safeguarding of the environment we share with communities impacted by our operations. We continued to invest in long term programmes dedicated to the sustainable conservation and development of these areas, as well as improving the livelihoods of the people in the riparian communities. The key objective is to ensure the mitigation of the adverse effects of the Authority's operations on the environment and on the people in the communities. The mitigation activities include afforestation and reforestation, environmental education, bush fire prevention and management, and alternative livelihood programs, etc.

- ### Acquisition of Environmental Permits

For the period under review and in accordance with the requirements of the environmental assessment regulations, 1999 (LI 1652), we received environmental permits for all our operational plants with the exception of the AMERI power plant. This follows the submission of the environmental monitoring progress reports and environmental management plans for the Plants covering the period 2019-2021.The beneficiary power plants include:

- 330MW Takoradi 1 Thermal Power Station(T1)
- 49MW Tema Thermal 2 Power Station (TT2PS)
- 110MW Tema Thermal 1 Power Station (TT1PS)
- 220MW Kpone Thermal Power Station (KTPS)
- 126MW Tema Thermal 1 Power Station (TT1PS)
- 2.5MW Navrongo Solar Power Station (NSPS)

The E&SDD is working to complete the draft AMERI EMP for finalisation and application for issuance of the permit.

SUPPORT ACTIVITIES

(continued)

- **Environmental Management Plan for Akosombo & Kpong Hydroelectric Power Plants**

We have been implementing an Environmental Management Plan (EMP) for the continued operation of the Akosombo and Kpong Hydroelectric Power Plants since 2011. One key activity in the implementation of the EMP is the creation of awareness of VRA's activities within its operational areas as defined in the EMP. In this regard, annual sensitization workshops are organised for impacted Assemblies where activities undertaken within a calendar year are presented and discussed with stakeholders. The workshops serve as a platform for us to highlight activities on key components of the EMP, such as the Emergency Preparedness Plan (EPP), which specifies roles and responsibilities of stakeholders, when emergencies occur or when expected operational flow releases threaten downstream life, property or economic activities. In 2019, thirteen workshops covering thirteen Assemblies were held from April 01-June 14, 2019. Five Hundred and Four (504) participants took part in the workshops.

A key feature of the 2019 engagement was the commissioning of two (2) safe haven signages each in the eight (8) districts. Mounting of the signage(s) is to direct Potentially Affected People (PAP) to move to the earmarked safe havens during an emergency.

- **Lower Volta Dredging & Aquatic Weeds Management**

As part of efforts to secure the buy-in of relevant stakeholders in respect of the scheduled dredging and management of aquatic weeds in the Lower Volta Area, we engaged the project affected communities in Lots 2, 3, 4 & 5 at Bator and Sogakope, in the North and South Tongu District Assemblies. The engagement had the objective of sustaining their interest and addressing their concerns prior to the implementation of the project. Again, during the year, we engaged the Water Resources Commission (WRC) to establish easement for the acquisition of water rights for contractors under the Lower Volta Dredging Project. Successful dredging and harvesting of the weeds in the Lower Volta Area has the potential of positively affecting the livelihoods and welfare of the downstream communities.

- **Bamboo for the Protection of the Volta Lake**

Further to initial discussions with the Forestry Commission (FC) to develop natural stands of bamboo to protect the shoreline of the Volta Lake, we signed a memorandum of understanding and Collaborative Framework Agreement (CFA) to kick-start the execution of the "Bamboo for the Protection of the Volta Lake Project" in April 2019. The first phase (pilot phase) of the project to be funded by both entities at an estimated cost of GH¢556,836.00, would result in the establishment of a 10Ha of bamboo along specific areas within the Banks of the Volta Gorge. The primary objective of the initiative is to ensure continued protection of the gorge.

SUPPORT ACTIVITIES

(continued)

The maiden meeting to discuss and review the implementation strategy as captured in the project concept paper in order to kick start the project and to ensure adherence to the requirements of the CFA was held on May 16, 2019. This was followed by capacity building of the Authority's Staff to undertake the bamboo project. Subsequently, the Authority received 1,500 seedlings of Bambusa multiplex, a selected bamboo specie for the project, for nursing. It has been transported into nursery beds and polythene bags for replication.

Carbon Footprint Management Programme (CFMP)

Our Carbon Footprint Management Programme (CFMP) started in 2016 in response to the global call on nations and organisations to assist in combating climate change and its impacts. Our programme aims at improving the environmental sustainability of our business, as well as help strengthen our green credentials in the market place. Towards this end, we collected fuel data from mobile and stationery combustion to compute our Greenhouse Gas (GHG) emissions. We voluntarily maintained and updated our GHG emissions inventory and used the inventory to develop and publish our GHG emissions reduction strategy. Our initial GHG inventory report covered the period of 2012-2015. The reporting duration was chosen to coincide with the Fourth National Communication Report and the Second Biennial Update Report to the United Nations Framework Convention on Climate Change (UNFCC). The report was prepared in accordance with the Greenhouse Gas Protocol – A Corporate Accounting and Reporting Standard, Revised Edition (Greenhouse Gas Protocol), which allows for direct integration with Ghana's and International Greenhouse Gas Registries.

Following submission of the 2012-15 report, EPA was requested to verify and audit the Greenhouse Gas Inventory Report to ensure conformity to international best practice prior to its publication. Accordingly, EPA conducted a site verification and audit during the fourth quarter of 2019. The audit recommendations are to be issued in 2020 for incorporation and finalisation of the GHG report.

- **Alternative Livelihood Interventions**

To prevent persistent forest degradation by the riparian communities through farming, charcoal burning and firewood harvesting around the Volta Lake, we rolled out interventions including beekeeping, fruit tree development and Climate Smart Stove (CSS) technology as alternative livelihood ventures. In 2019, Sixteen (16) hectares of fruit plantation was set up in the Buffer Zone to serve as buffer against erosion, siltation and water pollution in the Volta Lake Basin. In addition, indigenes from five communities including Odomitor, Adope, Kpeve, Dafor, and New Adomi, were provided with about 200 grafted mango seedlings for planting. Additionally, to ensure the curtailment of the negative impacts of the harvesting and utilisation of trees as wood fuel on the Volta Lake, we continued with our CSS initiative. One hundred and twenty (120) stoves were installed in the gorge and buffer zone areas in 2019. This brings the number of installed stoves since its inception to Four Hundred and Twenty (420). The initiative is aimed at re-enforcing attitudinal change among the community members.

SUPPORT ACTIVITIES

(continued)

- **Surveillance Monitoring on the Volta Lake**

A joint team of VRA and external stakeholders comprising Environmental Protection Agency (EPA), Water Resources Commission (WRC), Fisheries Commission (FC) and the Asuogyaman District Assembly jointly undertook the 2019 surveillance monitoring activities on the Volta Lake. Following our engagement with a team from the Bui Power Authority during the year, we committed ourselves to deploying drone technology services to improve our surveillance monitoring on the Volta Lake. Towards this end, we finalised the request for proposal document to be used to invite firms to submit proposals to provide drone technology consulting services for the following surveillance monitoring activities:

- Encroachment within VRA acquired lands on the Volta Lake
- VRA Reforestation Programmes
- Monitoring of Aquatic vegetation on the Volta Lake system
- Land use & spatial planning within Akosombo Township
- Right of Way Monitoring of electrical distribution line system with Akosombo and its environs.

Adoption of the drone technology would facilitate and improve our surveillance activities and eventually avert encroachment of our acquired lands.

- **Solid Waste Segregation Programme**

Consistent with our corporate objective of averting environmental pollution and ensuring development in a sustainable manner, we pursued a wastepaper exchange programme with the Akosombo Paper Mill Ltd. A total of 3,399kg of paper was exchanged for Two Hundred and Forty (240) pieces of unwrapped toilet rolls at a market value of GH¢255.00. The initiative is a function of the Authority's paperless agenda aimed at reducing the Authority's administrative cost and contribute to improving our sustainable development credentials.

Social Sustainability

As part of our Social sustainability efforts to support the capacity of current and future generations, we continued executing comprehensive corporate social interventions to create healthy and livable communities. The rationale is to ensure improvement in the livelihoods of the indigenes and empower them to take action for themselves. The key areas of focus as outlined in our Community Development Programme (CDP) framework document includes; social infrastructure projects, environmental protection activities, educational scheme (scholarships), industrial attachment, health and support for cultural activities.

SUPPORT ACTIVITIES

(continued)

- ## Support for Education

In line with our commitment towards education as enshrined in our Community Development Programme, we awarded Fifty (50) scholarships to brilliant but needy students at the Tertiary level within the Authority's impacted communities. Further to that, and pursuant to the introduction of Government's Free Education policy, which commenced in the 2017/18 academic year, we engaged stakeholders with the hope of transferring our scholarship budget initially intended for brilliant but needy students at the Senior High School (SHS) to support Technical/Vocational Educational & Training (TVET) as part of our Community Development Programme (CDP) education Scheme.

Finally, as part of efforts to inspire our students to aim high and contribute to the career development of the students in our operational areas, we continued with our Employee Volunteer Programme (EVP). Vakpo and Asesewa Senior High Schools in the North Dayi and Upper Manya Krobo Districts respectively, were the beneficiaries in the year 2019. The programme mobilised a number of Staff to take up a day's career guidance, counselling and teaching exercise in various subjects. The objective is to promote volunteerism among our employees.

- ## Infrastructure Projects

Following our affirmed obligation to minimize the risk of schistosomiasis infection, enhance overall health and improve personal hygiene habits, we provided water and improved sanitary facilities to some communities within our impacted communities. Specifically, we provided Five (5) Microflush Biofil Toilet facilities to the Kpong Methodist Primary School in the Lower Manya Krobo Municipal Assembly at the cost of GH¢25,340.00, whereas; Dzebeto in the South Tongu District of the Volta Region benefited from thirty (30) Standalone Micro flush Biofil Toilet facilities costing GH¢141,000. Similarly, Supomu-Dunkwa, near Aboadze in the Shama District, benefited from the same facility at a cost of GH¢128,500.00. In terms of provision of water, we provided potable water facility for the people of Teikpitikope (Ada East) at a cost of GH¢14,000.00 and a cedi equivalent of US$ 7,560. In addition, Atrobinya, a community in the Shai Osudoku District benefitted from a Solar-Powered Mechanized Borehole provided at the cedi equivalent of US$9,530. A similar undertaken is being executed for the people of Volo in the North Tongu District of the Volta region at a cost of US$7,380. The project would be commissioned in 2020.

- ## Cultural Activities

As an Authority, we give credence to the role of corporate governance in our operations as a subject of growing importance, as our impacted communities constitute our social capital. During the period under review, the Authority continued to maintain and promote sustainable partnerships with the impacted communities by actively participating in their cultural activities, especially festivals and funerals. This projected the Authority as a socially responsible institution.

SUPPORT ACTIVITIES

(continued)

- **Public Health Services**

As part of our strategy to promote public health in the impacted communities downstream of the Volta Lake, the VRA undertook a field release of two thousand seven hundred and forty (2,740) weevils (Neochitina eichhorniae) at Aforkpakope, a riverine community along the Kpong Head pond area as a biological means of controlling Water hyacinth.

The Bilharzia Control and Health Education Unit undertook post treatment evaluation of Mass Drug Administration in forty-three (43) beneficiary communities in Asuogyaman, Ada East and South and, South Tongu districts. Out of a total of one thousand five hundred and five (1,505) urine samples and two hundred and ninety-one (291) stool samples examined during the year, one hundred and twenty-two (122), representing an average prevalence of 8.1 percent, who were diagnosed positive for schistosomiasis were treated appropriately.

VRA Hospitals Limited (VHSL)

The Authority continued to give high priority to the health needs of the employees and their dependants as well as the communities in the environmental catchment area of her operations, through the VHSL four (4) facilities in Accra, Akosombo, Aboadze and the Akuse Clinic. Additionally, our designated panel of doctors provided quality medical services to Staff of the Northern Electricity Company (NEDCo) and their dependents. Specialised services and general medicine in obstetrics & gynaecology, ophthalmology, general surgery, orthopedics, ear, nose and throat, physiotherapy and dental care were provided in the Accra and Akosombo facilities. Other cases, however, were referred to selected hospitals; 37 Military Hospital, Korle Bu Teaching Hospital, St. Joseph's Hospital in Koforidua, etc.

The VRA Health Services Limited (VHSL) also continued to operate the GRIDCo Infirmary, established in February 2017, by assisting with procurement of drugs and provision of manpower. Locum Personnel including a Physician Assistant, Dispensing Technician, Laboratory Technician and a Nursing Officer manage the infirmary.

Total Outpatient attendance at our facilities was 189,844, which is a 6.2 percent reduction compared to last year's figure of 202,317. Admissions for the year was 5,283, which is 33 percent lower as compared to the 7,993 recorded in 2018. VHSL's paying public population constituted about 37 percent of the overall outpatient load and 6.1 percent for the in-patent load in all the medical facilities. Sixty-three (63) percent of out-patients and 93.9 percent of in-patients were on National Health Insurance. The total revenue recorded for 2019, was GH¢25,586,853 compared to 20,841,641 recorded in 2018. This represents an increase of 22.77 percent.

Notable milestone for the year includes completion of the Eye Clinic at the medical enclave. Finally, we continued to support the training of medical professionals from medical schools, nursing training schools and other tertiary institutions.

VRA Academy

In November 2019, the Association of Power Utilities in Africa (APUA) confirmed the VRA Academy as one of its Centres of Excellence. The Accession agreement signed on December 9, 2019 makes the VRA Academy the eighth member of the African Network of Centers of Excellence in Electricity (ANCEE). Our elevation affords us the opportunity to provide tailor-measured training to bridge the competency gaps in the power utilities in Africa.

NON-POWER ACTIVITIES

SUBSIDIARIES

As part of the mandate to transform the subsidiaries into self-sustaining profitable enterprises: Akosombo Hotels Limited (AHL), Kpong Farms Limited (KFL), Volta Lake Transport Company (VLTC), VRA Health Services Limited (VHSL), VRA Property Holding Company (PROPCo); as well as VRA International Schools Limited (VISL); proposals are being prepared for suitable Strategic Business Partners to invest and bring on board capital and expertise to improve the performance of the subsidiaries.

Akosombo Hotels Limited (AHL)

In 2019, the Akosombo Hotels Limited (AHL), which operates the three-star Volta Hotel, restaurant, modern conference and seminar facilities, in addition to leisure facilities including the renovated cruise boat, MV Dodi Princess II and the Dodi Resort, issued an Expression of Interest (EOI) and received responses from three (3) businesses.

The cruise vessel, "Dodi Princess II", which had formerly been under construction, commenced commercial trials on June 21, 2019 and successfully undertook weekend cruise trips with satisfactory patronage. For the purpose of compliance, we engaged the vessel builders to obtain the final certification for the vessel. To support the operations of the vessel, AHL Management has been entrusted with the management and operation of the newly completed "Dodi Princess Lounge".

Kpong Farms Limited (KFL)

With financial assistance from VRA and internally generated funds, proceeds from the sale of obsolete assets and the sale of rice crop, KFL carried out its scheduled operational activities by growing and harvesting rice throughout the season. To increase brand visibility, KFL participated in the Eastern Regional Hoteliers Association conference to promote its brand of rice. During the same period, an Expression of Interest (EOI) and Investment Memorandum was issued to select a strategic partner for KFL. Four (4) firms were notified into the Request for Proposal (RFP) stage of the selection process. In addition, for the purposes of good corporate governance, KFL registered two new Board Members at the Registrar General's Department.

Volta Lake Transport Company (VLTC)

With the huge potential to increase its activities in the transit and port services, VLTC continued to undertake activities and initiatives to expand its business, taking advantage of emerging opportunities within the sector. The activities include re-negotiating of existing Memorandum of Understanding (MoUs) with GHACEM and BOST to ensure the transactions were beneficial to both entities. Following that, BOST resumed the transportation of liquid cargo with the VLTC. As part of efforts to grow the business, VLTC also signed a new business deal with Amoben Mining Company for the transportation of their supplies. To attract strategic partners to turnaround the fortunes of VLTC, we advertised an Expression of Interest (EOI) in the national dailies. Eight (8) entities expressed interest. We expect that following an extensive due diligence process, a competent partner with the right expertise and resources will be selected to partner with the VLTC.

NON-POWER ACTIVITIES

(continued)

VRA Property Holding Company (PROPCo)

Following successful completion of its maiden office investment project, "Volta Place", Airport Residential Area in 2018, PROPCo in 2019 focused on managing the building. Its "hands on" asset management approach led to its success in achieving 100 percent occupancy. Based on the full year trading results for 2019, "Volta Place" has delivered circa 9 percent return on its investment.

On the back of successfully completing its maiden "Volta Place" project, PROPCo initiated the following pipeline projects in 2019:

- **The East Cantonments Village Limited:**

The oversupply in the residential market and some differences with the development partner delayed preparatory activities on the 6.2-acre mixed residential development in East Cantonments, themed on a "live, work, and play" design concept. The development process got back on track and based on market dynamics; we hope that the final design process would be completed in 2019 to allow full marketing of the town homes in 2020.

- **Energy Exchange Square, Ridge:**

PROPCo's proposal to its parent company (VRA) to consolidate its Accra office requirement into one building to anchor the proposed "Grade A" office development christened as the Energy Exchange Square at Ridge received approval in the first quarter of 2019. PROPCo commenced the development process for the proposed "Grade A" office and is far advanced in sourcing for funding for the 10,000 sq. Gross Lettable Office (GLA) office building.

- **NEDCo Head Office:**

PROPCo engaged VRA-NEDCo in their quest to consolidate their corporate office currently spread in eight (8) different locations, into a purpose-built "Grade A" office building. Site identification and initial feasibility studies have been completed. A viable development funding solution is currently being worked on for their consideration.

- **Akuse Guest House Project:**

PROPCo submitted a proposal for the refurbishment of 17 houses and an existing motel to provide a 60-room guest house accommodation in Akuse. The objective of this project is to optimise VRA's assets in Akuse, address accommodation requirements by the VRA Academy to support its growing business, as well as leverage on Akuse's infrastructure and ambiance to support the hospitality business. Project concept and feasibility study were completed in December 2019 in readiness for implementation in 2020.

NON-POWER ACTIVITIES

(continued)

VRA Health Services Limited (VHSL)

To facilitate operationalisation of VHSL into a self-sustaining, commercially oriented limited liability company, the Restructuring Advisory Committee (RAC) submitted their report for operationalisation to the Executive in March 2019, with the "Go Live" date slated for April 2020. Configuration and testing of inventory migration and financial separation, which would enable VHSL operate separate chart of accounts as well as organisational chart and operating unit general ledger (finance) were completed within the year.

During the year, financial models for the Aboadze Ward Expansion and Nursing Training College projects were developed. The VHSL Board also approved the financial analysis report for the proposed Accra Clinic prefabricated project. Completing the outlined projects would be an expression of VHSL's commitment to bridge its infrastructural development gap, promote capacity building and enable it to compete favourably in its area of specialty.

Strategic Business Units

VRA International Schools Limited (VISL)

The Board deferred operationalisation of VISL to 2020. To ensure VISL was compliant with the companies act, VISL's registered auditors submitted completed certification of nil returns for the year 2018. Finally, in August 2019, VISL was aligned with the VRA Academy as part of the Authority's realignment and restructuring efforts.

CORPORATE INFORMATION

BOARD OF DIRECTORS	Mr. Kweku Andoh Awotwi - Chairman Mr. Emmnuel Antwi-Darkwa - Chief Executive Mr. Richard Obeng Okrah Rev. Dr. Joyce Rosalind Aryee Nana Kobina Nketsia V Chief Musa Badimsugru Adam Mrs. Janet Anane Mr. El-Farouk Umar
SECRETARY	Mrs. Claudia Gyeke-Aboagye
REGISTERED OFFICE	Electro Volta House P. O. Box MB 77 Accra
AUDITORS	Ghana Audit Service P. O. Box M96 Accra
BANKERS	Access Bank Ghana Limited Bank of Africa Ghana Limited Bank of Ghana Barclays Bank Ghana Limited CAL Bank Limited Consolidated Bank Ghana Limited Ecobank Ghana Limited Fidelity Bank Ghana Limited First Atlantic Bank Limited GCB Bank Limited Ghana International Bank Plc Guaranty Trust Bank Ghana Limited SG Bank Ghana Limited Stanbic Bank Ghana Limited Standard Chartered Bank Ghana Limited United Bank for Africa Ghana Limited Universal Merchant Bank Limited Zenith Bank Ghana Limited

CORPORATE EVENT

TS IN PICTURES

FINANCIAL REVIEW FOR THE YEAR ENDED DECEMBER 31, 2019

Power Production

The total electricity generated from both hydro and thermal sources increased by 2,386 GWh (33%) from 7,281GWh in 2018 to 9,667 GWh in 2019; this includes generation and transmission substations use of 50GWh (2018: 37GWh). Generation from hydro sources increased by 1,164GWh (23%) from 5,044GWh in 2018 to 6,208GWh in 2019. Thermal generation however increased by 55% (1,223GWh) from 2,237GWh in 2018 to 3,460GWh in 2019. The Thermal generation includes 1,483GWh of energy from the AMERI Plant (2018: 873GWh). VRA's 2019 generation from solar plants was 3 GWh (2018: 2GWh).

To supplement generation from VRA's own plants, gross power of 1,744GWh (2018: 2,351GWh) was purchased from Compagnie Ivoirienne d' Electricite (CIE) of Cote d' Ivoire and Takoradi International Company Limited (TICO) of Ghana representing a decline of 26% (607GWh) from the 2018 power purchase from TICO and CIE.

Summary of energy generated and purchased in 2018

	Change		2019		2018	
	GWh	%	GWh	%	GWh	%
VRA Hydro:						
Akosombo	1,093	26%	5,366	47%	4,273	44%
Akuse	71	9%	842	7%	771	8%
	1,164	23%	6,208	54%	5,044	52%
VRA Thermal:						
TTPS	337	46%	1067	9%	730	8%
TTIPP	63	14%	377	3%	314	3%
TT2PP	135	0%	138	1%	3	-
T3	-	0%	-	-	-	-
MRPP	-	0%	-	-	-	-
KTPS	76	24%	393	3%	317	3%
AMERI	610	70	1,483	13%	873	9%
	1,223	55	3,460	30%	2,237	23%
Total VRA Hydro & Thermal	2,386	33%	9,667	85%	7,281	76%
VRA Solar:						
NSPS	1	0%		0%	2	0%
	1	68%	3	0%	2	0%
Total Energy by VRA	2,388	33	9,671	85%	7,283	76%
Purchases & Imports						
TICO	(595)	-27%	1616	14%	2211	23%
CIE	(13)	-9%	127	1%	140	1%
	(607)	-26%	1,744	15%	2,351	24%
Total Energy Generated & Bought	1,780	18%	11,414	100%	9,634	100%

FINANCIAL REVIEW FOR THE YEAR ENDED DECEMBER 31, 2019

(continued)

Revenue

Revenue from sale of electricity in 2019 increased by 26.98% (GH¢852.73 million) to GH¢4,012.89 million over the previous year's sales of GH¢3,160.16 million. This was mainly due to the combined effect of a 19.20% (1,733GWh) increase in the volume of energy sold from 9,025 GWh in 2018 to 10,758 GWh in 2019 and an 18.97 % increase in the average tariff of regulated customers from GH¢0.249954/kWh in 2018 to GH¢0.28129/kWh in 2019.

The volume of energy sold to regulated customers however, declined by 0.94% (57 GWh) from 6,022 GWh in 2018 to 6,079 GWh in 2019. The volume of electricity sold to deregulated customers which attract relatively higher tariff increased by 55.81% (1,676 GWh) from 3,003 GWh in 2018 to 4,679 GWh in 2019 largely on account of sales to SONABEL Bolga-Ougadogou which increased from 222 GWh in 2018 to 519 GWh in 2019 representing an increase of 297GWh(134.78%). Sales to CEB also increased by 102% from 385 GWh in 2018 to 777 GWh in 2019.

Cost of Sales

Cost of sales consisting of fuel usage, power purchase, depreciation, salaries, materials, repairs and maintenance and other operating cost, increased by GH¢278.96 million (9.18%) from GH¢3,047.63 million in 2018 to GH¢3,327.59 million in 2019.

This is attributable to the combined effect of the following;

- Increase in energy generation by 18.47% (1,780 GWh) from 9,634 GWh in 2018 to 11,414 GWh in 2019.
- Gas consumption in line with the increase in generation also increased from 44,393,972.76 MMBtu in 2018 to 68,975,325.36 MMBtu in 2019.
- DFO usage also increased by 156.4% from 13.04 million litres in 2018 to 33.20 million litres in 2019
- A 13.65% depreciation of the average GH¢/US$ exchange rate from GH¢4.5885/US$1 in 2018 to GH¢5.2150/US$1 in 2019 also contributed to the increase in cost of sales
- Depreciation also reduced from GH¢512 million in 2018 to GH¢494 million in 2019 due to the useful lifes of some of the assets been fully exhausted.
- Power importation (actual and inadvertent) from CIE dropped significantly by 9% (13 GWh) from 140 GWh in 2018 to 127 GWh in 2019.

FINANCIAL REVIEW FOR THE YEAR ENDED DECEMBER 31, 2019

(continued)

Administrative Expenses

Administrative expenses increased by GH¢10.90 million (1.94%) from GH¢560.74 million in 2018 to GH¢571.64 million in 2019. The increase in administrative expenses was largely driven by transaction costs incurred in securing a facility from AFREXIM Bank to refinance the Authority's debt obligataions. There was a reduction in depreciation from GH¢116.99 million in 2018 to GH¢59.79 million in 2019 due to the expiration of the useful lives of the assets used in administrative operations.

Staff related cost also increased by 15.51% from GH¢282.47 million in 2018 to GH¢326.8 million in 2019. Repairs and maintenance also declined from GH¢34.92 million in 2019 to GH¢31.57 million in 2019.

Other Operating Income

Other operating income increased by GH¢16.71(10.76%) from GH¢155.33million in 2018 to GH¢172.05 million in 2019. There was an increase of 20.29% (GH¢6.73 million) in service charges in respect of increased volumes of gas supplied to IPPs from GH¢33.14 million in 2018 to GH¢39.87 million in 2019. Income from Operating Units and subsidiaries such as Real Estate Department, Health Services Department, Property Holding Company Limited (PROPCo), Akosombo Hotel Limited, Volta Lake Transport Limited increased by 16.2% (GH¢9.77 million) from GH¢70.06 million in 2018 to GH¢60.30 in 2019. There was a reduction in gas sales proceeds from GH¢32.63 million in 2018 to GH¢26.09 million in 2019.

Operating profit / (Loss)

The operating profit of the Group in 2019 was GH¢426.00 million in 2019 million compared to a operating profit of GH¢244.10 million in 2018. The increase in operating profit was mainly due to an increase in total operating income by GH¢611.06 million (15.86%) from GH¢3,852.47 million in 2018 to GH¢4,463.53 million in 2019 as against an increase of GH¢289.86 million (8.03%) in total operating cost from GH¢3,608.37 million in 2018 to GH¢3,898.23 million in 2019. Included in total operating income is a GH¢139.30 million support by the Government of Ghana in respect of the shortfall on tariffs to be received for power generated by the AMERI plant. (2018: GH¢536.97 million). The reduction was due to the renegotiated AMERI deal which resulted in a reduced monthly capacity charge from USD8.5m to USD6.375m and the increase in the AMERI Bulk Generation Charge from 5 cents in 2018 to 12 cents in 2019 which resulted in higher energy sales and consequently lower tariff shortfall recoverable from the Government of Ghana.

Net Loss

The Group ended the year 2019 with a net loss of GH¢253.05 million (2018: GH¢393.16 million). The loss for the year is after charging depreciation on fixed assets of GH¢619.02 million (2018: GH¢628.35million), exchange loss of GH¢385.05 million (2018: GH¢286.90million), and financial expenses of GH¢368.24 million (2018: GH¢427.55 million).

FINANCIAL REVIEW FOR THE YEAR ENDED DECEMBER 31, 2019

(continued)

2020 Operational & Financial Outlook

The expected national system demand for 2020 is 19,370GWh, comprising customer demand of 18,489GWh, GRIDCo substation usage of 10GWh and transmission losses of 872GWh.

The Authority plans to generate a total of 10,999GWh whilst Bui Hydro Plant 1,058GWh and the Independent Power Producers would generate 8,372GWh. The Authority's generation breakdown is as follows: 6,000GWh from hydro sources, 1,408GWh from the Takoradi Thermal Plant, 318GWh from the TT1PP, None from the Mines Reserved Plant, 354GWh from the Kpone Thermal Power Plant, 5GWh from the Solar Plant, 1,206GWh from AMERI and 30GWh power imports. The Takoradi International Company (TICO) is forecast to supply 1,559GWh. Thus, VRA is forecast to generate 56.78% of the national electricity load whilst Bui Hydro Generating Plant and the IPPs will supply 43.22% with no additional supply required.

The expected power sale for 2020 is GH¢4,341 million assuming a Bulk Generation Tariff of GHp27.58/kWh. The Other income of about GH¢111 million, includes a premium of GH¢28 million revenue meant for administrative charges on gas supply to SAPP. The estimated direct operating cost to be incurred on system generation by the Authority and supply from TICO is estimated at GH¢3,093 million.

However, total administrative cost is estimated at GH¢509 million (excluding the Strategic Business Units- SBUs) whilst interest expense is forecast at GH¢343 million and loss on exchange fluctuation on foreign debt amount to GH¢252 million.

FINANCIAL SUMMARY (VRA)

	2015	2016	2017	2018	2019
	GH¢'000	GH¢'000	GH¢'000	GH¢'000	GH¢'000
Income from Sale of Electricity	2,340,520	2,562,276	2,632,802	3,000,712	3,890,946
Other Operating Income	97,132	91,351	353,976	132,919	110,837
Operating and General Expenses including depreciation	2,874,211	3,367,921	2,910,118	3,079,293	3,310,366
Depreciation	190,437	249,556	421,369	432,317	424,903
Operating Profit/(Loss)	(436,559)	(168,866)	771,765	591,311	830,713
Financial Expenses	519,881	840,051	363,726	422,850	363,726
Financial Income	6,465	6,736	9,788	14,101	10,939
Exchange Fluctuation	(407,540)	(392,680)	(396,380)	(402,663)	(605,046)
Government Assistance/Subvention/ Subsidy	303,569	545,428	651,153	536,973	139,296
Net Profit/(Loss)	(1,357,515)	(1,319,682)	(430,544)	(220,101)	(127,120)
Property, Plant and Equipment(Cost/ Valuation)	11,013,893	12,369,942	13,329,637	15,062,532	17,778,816
Property, Plant and Equipment (Net Book Value)	6,318,146	7,569,243	6,948,350	7,502,118	8,469,329
Capital Work in Progress	1,696,303	759,715	834,031	743,927	815,969
Current Assets	4,404,978	5,018,419	6,110,609	7,495,142	8,864,931
Current Liabilities	5,611,585	7,373,160	6,187,043	6,419,391	7,626,322
Investment by the Rep. of Ghana	495,449	495,449	2,924,652	3,960,933	4,305,586
Capital Surplus	4,502,991	4,495,064	4,560,176	4,893,838	5,899,375
Retained Earnings	(1,469,378)	(1,904,023)	(1,854,085)	(1,526,999)	(1,326,931)
Principal portion of long term loans	1,344,960	937,996	962,447	962,447	824,691
Ghana Cedi (GH¢) to US$ Exchange Rate	3.7944	4.1811	4.4142	4.8200	5.2150

FINANCIAL REVIEW FOR THE YEAR ENDED DECEMBER 31, 2019

(continued)

		2015	2016	2017	2018	2019
Return on Average Equity	%	(11.27)	(5.00)	16.49	9.07	10.20
Return on Average Net Fixed Assets -Plant in Operation	%	(10.12)	(2.43)	10.47	8.18	10.40
Current Assets Ratio	Times	0.79	0.68	0.99	1.17	2.45
Debt Service Ratio	Times	0.07	0.02	0.61	0.71	0.90
Gearing Ratio	%	37.43	26.1	27.00	27.11	9.25
GWh Generated and Purchased less Station Use (X 106)	GWh	9.245	9,873	9,503	9,597	11,364
Total Production Expense including depreciation per MWh	GH¢	311	341	306	407	291
Total cost of production including depreciation and interest but excluding Debt Fluctuation per MWh	GH¢	367	426	364	385.96	323.00
Average Revenue/MWh Generated and Purchased	GH¢	264	260	273	321.69	352.00
Total Installed Capacity	MW	2,104	2,684	2,684	2,684	2,520
Ratio of gross hydro generation to firm capability of Akosombo and Kpong	%	145	88	94.98	95.71	117.13
System Peak Demand	MW	1,853	1,997	2,077	2,371	2881
Ratio of System Peak Demand to Installed Capacity	%	84	74	77	88.34	114.33

REPORT OF THE DIRECTORS TO THE MEMBERS OF THE VOLTA RIVER AUTHORITY

The Directors present their report and the consolidated and separate financial statements of the Authority for the year ended 31 December 2019.

The Authority's Directors are responsible for the preparation of the consolidated and separate financial statements that give a true and fair view of the consolidated and separate financial statements of Volta River Authority, comprising the consolidated and separate statement of financial position at 31 December 2018, and the consolidated and separate statements of comprehensive income, changes in equity and cash flows for the year then ended, and the notes to the financial statements which include a summary of significant accounting policies and other explanatory notes, in accordance with International Financial Reporting Standards and in the manner required by the Volta River Development Act 1961, (Act 46), as amended by Act 692, (2005). In addition, the Directors are responsible for the preparation of the Report of the Directors

The Authority's Directors are also responsible for such internal control as the Directors determine necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error, and for maintaining adequate accounting records and an effective system of risk management.

The auditor is responsible for reporting on whether the financial statements give a true and fair view in accordance with the applicable financial reporting framework.

FINANCIAL STATEMENTS

The results for the year are as set out in the attached Financial Statements.

NATURE OF BUSINESS

The Authority's primary function is to generate and supply electrical energy for industrial, commercial and domestic use in Ghana. The Authority is also responsible for safe-guarding the health and socio-economic well-being of inhabitants of the communities alongside the lake, and management of any incidental issues including maintenance of the environment. The Authority also provides ferry and hospitality services through its subsidiaries.

There was no change in the nature of business of the Authority during the year.

STATE OF AFFAIRS OF THE AUTHORITY

The Directors consider that the challenges in the finances of the Authority and its Subsidiaries have started a gradual turn around as shown by the positive current ratio. They have also made an assessment of the Authority's ability to continue as a going concern. Given that the VRA is the State's sole electric generation utility, and Government's recent and on-going initiatives to remedy these financial challenges, the Directors are confident and believe the Authority will be a going concern in the years ahead.

FINANCIAL REVIEW FOR THE YEAR ENDED DECEMBER 31, 2019

(continued)

The gradual improvement in the bottom line of the Authority emanated from Management's strategic decision to switch to the use of relatively cheaper natural gas for power generation as opposed to Light crude oil and Distillate crude oil. Additionally, the Authority received GH¢344.65 million from ESLA PLC for the repayment of debts owed to some local banks and Suppliers leading to a reduction in financial expenses. The Authority's adherence to strict budgetary limits led to a reduction in costs and also accounted for the improvement in the financial performance.

To further improve the liquidity position and avert the recurrence of a debt build up, the implementation of the Cashflow Waterfall Mechanism, which is being led by the Ministries of Energy and Finance, will ensure that all stakeholders in the power supply chain benefit proportionately from the total revenue collected by the distribution company, Electricity Company of Ghana (ECG)/Power Distribution System, thereby reducing the liquidity risk concerns that have plagued the power sector in recent years.

APPROVAL OF THE FINANCIAL STATEMENTS

The financial statements were approved by the Board of Directors on OCTOBER 29, 2020 and are signed on their behalf by:

Kweku Andoh Awotwi
Board Chairman

OCTOBER 29 2020

Emmanuel Antwi-Darkwa
Chief Executive

OCTOBER 29 2020

CORPORATE GOVERNANCE STATEMENT

Introduction

The Authority is committed to the principles and implementation of good corporate governance. The Authority recognises the valuable contribution that it makes to long-term business prosperity and to ensuring accountability to its stakeholders. The Authority is managed in a way that maximises long term stakeholders value and takes into account the interests of all of its stakeholders.

The Authority believes that full disclosure and transparency in its operations are in the interests of good governance. As indicated in the statement of responsibilities of directors and notes to the accounts, the business adopts standard accounting practices and ensures sound internal control to facilitate the reliability of the financial statements.

The Board of Directors

The board is responsible for setting the Authority's strategic direction, for leading and controlling the Authority and for monitoring activities of executive management. The board presents a balanced and understandable assessment of the Authority's progress and prospects. The board consists of the Chairman, six non-executive directors and one executive director who is the Chief Executive. The board members, except the Chief Executive are independent of management and free from any constraints, which could materially interfere with the exercise of their independent judgement. They have experience and knowledge of the industry, markets, financial and other business information to make a valuable contribution to the Authority's progress. The Chief Executive is a separate individual from the chairman who implements the strategies and policies adopted by the board. The board meets at least four times each year.

The Risk and Audit Committee

The Risk and Audit committee as a sub-committee of the Board is made up of four non-executive directors. The main board determines its terms of reference and they report back to the board. The role of the Risk and Audit Committee among others includes providing oversight of the independence of financial reporting process and objectivity of the external auditor, internal financial process, compliance with laws and regulations and the safeguarding of assets.

Systems of Internal Control

The Authority has well-established internal control systems for identifying, managing and monitoring risks. These are designed to provide reasonable assurance that the risks facing the business are being controlled. The internal audit function of the Authority plays a key role in providing an objective view and continuing assessment of the effectiveness of the internal control systems in the business. The systems of internal control are implemented and monitored by appropriately trained personnel and their duties and reporting lines are clearly defined.

Code of Business Ethics

Management has communicated the principles in the Authority's Code of Conduct to its employees in the discharge of their duties. This code sets the professionalism and integrity required for business operations which covers compliance with the law, conflicts of interest, environmental issues, obligations of business partners, reliability of financial reporting, bribery and strict adherence to the principles so as to eliminate the potential for illegal practices.

Conflict of Interest

The Authority, as part of its progressive step to ensuring that there is no abuse of authority in the discharge of duties by the Directors, ensures full disclosure of directors with regards to their relationship with other competitors by virtue of other directorships held as well as other business engagements. With regards to internal dealings, none of the non- executive directors has placed himself or herself in situations that give rise to conflict of interest by virtue of being awarded a contract or taking up any significant role(s) in the general operations of the business.

AUDITOR-GENERAL'S REPORT TO THE MEMBERS OF THE VOLTA RIVER AUTHORITY

Report on the audit of the Consolidated and Separate Financial Statements

Opinion

We have audited the consolidated ("the Group") and separate ("VRA") financial statements of Volta River Authority, which comprise the consolidated and separate Statements of Financial Position at 31 December,2019,and the Consolidated and separate Statements of Comprehensive Income, Statement of Changes in Equity and Statement of Cash Flows for the year then ended, and the notes to the Financial Statements which include a summary of significant accounting policies and other explanatory notes, as set out on pages 23 to 68.

In our opinion, these consolidated and separate financial statements give a true and fair view of the consolidated and separate financial position of Volta River Authority as at 31 December, 2019, and of its consolidated and separate financial performance and consolidated and separate cash flows for the year then ended in accordance with International Finance Reporting Standards and in the manner required by the Volta River Development Act, 1961 (Act 46), as amended by Act 692 (2005) and the Companies Act 2019, (Act 992).

Basis of Opinion

We conducted our audit in accordance with International standards for Supreme Audit Institutions. Our responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the Consolidated and Separate Financial Statements section of our report. We are independent of the Group in accordance with the International Ethics Standards Board for Accountants' Code of Ethics for Professional Accountants (IESBA Code), together with the ethical requirements that are relevant to our audit of the financial statements in Ghana and we have fulfilled our other ethical responsibilities in accordance with these requirements and the IESBA Code. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Other Information

The Directors are responsible for the other information. The other information comprises the information included in the Annual Report and the Report of the Directors as required by Volta River Development Act 1961, (Act 46), as amended by Act 692, (2005) but does not include the consolidated and separate financial statements and our auditor's report thereon. Our opinion on the consolidated and separate financial statements does not cover the other information and we do not express any form of assurance conclusion thereon.

In connection with our audit of the consolidated and separate financial statements, our responsibility is to read the other information 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, we concluded that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regards.

FINANCIAL REVIEW FOR THE YEAR ENDED DECEMBER 31, 2019

(continued)

Responsibilities of the Directors for the Consolidated and Separate Financial Statements

The Directors are responsible for the preparation of the Financial Statements that give a true and fair view in accordance with International Financial Reporting Standards and in the manner required by the Volta River Development Act 1961, (Act 46) as amended by Act 692, (2005) and for such internal control as the directors determine is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated and separate Financial Statements, the Directors are responsible for assessing the Group and its subsidiaries' ability to continue as going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the Directors either intend to liquidate the Group or to cease operations, or have no realistic alternative but to do so.

The Directors are responsible for overseeing the Group's financial reporting process.

Auditor's Responsibilities for the Audit of the Consolidated and Separate Financial Statements

Our objectives are to obtain reasonable assurance about whether the Consolidated and separate Financial Statements as a whole are free from material misstatements, 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 it is not a guarantee that an audit conducted in accordance with International Standards on Auditing (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 skepticism throughout the audit. We also;

- Identify and assess the risk of material misstatement of the Consolidated and Separate Financial Statements, whether due to fraud or error, design and perform audit procedures responsive to those risk, and obtain 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 Group's internal control.

- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the management.

- Conclude on the appropriateness of the Directors' use of the going concern basis of accounting and based on the audit evidence obtained, whether a material uncertain 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 uncertain exists, we are required to draw attention in our auditors report to the related disclosures in the Financial Statements or, if such disclosure are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditors report. However future events or conditions may cause the Group to cease to continue as a going concern.

- 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.

- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the consolidated and separate financial statements. We are responsible for the direction, supervision and performance of the Group audit. We remain solely responsible for our audit opinion.

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

We also provide the Directors with a statement that we have complied with relevant ethical requirement regarding independence and to communicate with them all relationship and other matters that may reasonably be thought to bear on our independence and where applicable related safeguard.

From the matters communicated with the Directors, we determine those matters that were of most significance in the audit of the Financial Statements of the current period and are therefore the key audit matters. We describe these matters in our auditors report unless laws or regulations preclude public disclosures about the matter or when in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

Report on other legal and Regulatory Requirements.

The Companies Act, 2019 (Act 992) as amended requires that in carrying out our audit we consider and report on the following matters. We confirm that:

i. we have obtained all the information and explanations which to the best of our knowledge and belief were necessary for the purpose of our audit;

ii. in our opinion proper books of account have been kept by the Authority and its subsidiaries, so far as appears from our examination of those books; and

iii. the Authority's Balance Sheet (included in as the statement of financial position) and profit and loss account (included in as the Statement of Comprehensive Income) are in agreement with the books of account.

JOHN GODFRED KOJO ADDISON
ASST. AUDITOR-GENERAL/CAD
for: Ag. AUDITOR-GENERAL

30 October, 2020

FINANCIAL REVIEW FOR THE YEAR ENDED DECEMBER 31, 2019

(continued)

		VRA		GROUP	
		2019	2018	2019	2018
Assets	Note	GH¢'000	GH¢'000	GH¢'000	GH¢'000
Property, Plant and Equipment	8b	9,285,298	8,246,045	10,320,117	9,509,039
Intangible Assets	8d	-	-	59.00	-
Investment in Subsidiaries	9	498,631	445,806	-	-
Investment in Equity Securities		-	-	14,104	14,104
Other long term investments	10	38,921	38,921	1,394,052	1,115,384
Trade and other Receivables	12	15,356	15,150	15,356	15,150
Non-Current Assets		9,838,206	8,745,922	11,743,688	10,653,677
Inventory	11	369,732	367,426	389,823	389,720
Trade and Other Receivables	12	7,771,998	6,508,511	8,320,930	6,953,791
Current Tax Assets	7b		-	521	565
Short term investments	13	74,081	2,647	137,295	83,487
Cash and Cash Equivalents	14	649,120	616,558	757,240	706,309
Current Assets		8,864,931	7,495,142	9,605,809	8,133,872
Total Assets		18,703,137	16,241,064	21,349,497	18,787,549
Equity					
Investment by Republic of Ghana	17	4,305,586	3,960,933	4,305,586	3,960,933
Retained Earnings Account		(1,326,931)	(1,526,999)	(1,286,644)	(1,429,650)
Revaluation Surplus	18	5,899,375	4,893,838	7,671,284	6,798,395
Debt Contingency Fund Reserve	21	38,921	38,921	38,920	38,921
Government of Ghana Grant	20	-	-	1,232	1,232
Total Equity		8,916,951	7,366,693	10,730,378	9,369,831
Liabilities					
Employee Benefit Obligations	19	194,614	188,070	232,109	222,454
Trade and other Payables	15	269,740	269,740	256,743	225,196
Capital Grant	15	-	-	48,712	25,257
Deferred Tax	7c	-	-	671	816
Borrowings	16	1,695,510	1,997,170	1,695,510	1,997,170
Non-Current Liabilities		2,159,864	2,454,980	2,233,745	2,470,892
Trade and Other Payables	15	6,587,936	5,391,821	7,024,293	5,679,131
Current Tax	7b	-	-	321,879	237,570
Borrowings	16	1,038,386	1,027,571	1,039,202	1,030,125
Current Liabilities		7,626,322	6,419,392	8,385,374	6,946,826
Total Liabilities		9,786,186	8,874,372	10,619,119	9,417,718
Total Equity and Liabilities		18,703,137	16,241,064	21,349,497	18,787,549

The notes on pages 19 to 61 form an integral part of the Financial Statements.
The Financial Statements were approved by the Board of Directors on ....OCTOBER 29....2019
and are signed on their behalf by:

Kweku Andoh Awotwi
Board Chairman

Emmanuel Antwi-Darkwa
Chief Executive

FINANCIAL REVIEW FOR THE YEAR ENDED DECEMBER 31, 2019

(continued)

		VRA		GROUP	
		2019	2018	2019	2018
	Note	GH¢'000	GH¢'000	GH¢'000	GH¢'000
Revenue	2a	3,890,946	3,000,712	4,012,892	3,160,164
Cost of Sales	3	(2,877,684)	(2,630,447)	(3,326,587)	(3,047,627)
Gross Profit/(Loss)		1,013,262	370,265	686,305	112,537
Other Operating Income	2b	110,837	132,919	172,045	155,333
Government of Ghana Support on AMERI tariff shortfall	2c	139,296	536,973	139,296	536,973
Administrative Expenses	4	(432,682)	(448,846)	(571,638)	(560,740)
		(182,549)	221,046	(260,297)	131,566
Operating profit/(Loss)		830,713	591,311	426,008	244,103
Financial Income	5a	10,939	14,101	158,629	133,029
Financial Expenses	6	(363,726)	(422,850)	(368,240)	(427,547)
Net Exchange Loss	10	(605,046)	(402,663)	(385,047)	(286,903)
Loss before taxation		(127,121)	(220,101)	(168,650)	(337,318)
Taxation	7a			(84,401)	(55,839)
Loss for the year		(127,121)	(220,101)	(253,051)	(393,157)
Other Comprehensive Income					
Items that will not be reclassified to profit or loss:					
Revaluation of Property, Plant and Equipment	18	1,332,725	784,011	1,177,670	897,758
Other Comprehensive Income, net of tax		1,332,725	784,011	1,177,670	897,758
Total Comprehensive Income		1,205,605	563,910	924,619	504,601

FINANCIAL REVIEW FOR THE YEAR ENDED DECEMBER 31, 2019

(continued)

VRA	Rebublic of Ghana Contribution	Retained Earnings Surplus	Revaluation Surplus	Debt Contingency Fund Reserve	Total Equity
2019	GH¢'000	GH¢'000	GH¢'000	GH¢'000	GH¢'000
Balance at 1st January, 2019	3,960,933	(1,526,999)	4,893,838	38,921	7,366,693
Loss for the year	-	(127,121)	-	-	(127,121)
Other Comprehensive Income	-	-	1,332,725	-	1,332,725
					-
Total Comprehensive Income	-	(127,121)	1,332,725	-	1,205,605
Additional Investments in VRA	344,653	-	-	-	344,653
Transfer to Retained Earnings (Note 18)	-	327,188	(327,188)	-	-
Transfer to Debt Contingency					-
Fund Reserve	-				
Balance at 31st December, 2019	4,305,586	(1,326,931)	5,899,375	38,921	8,916,951
2018					
Balance as at 1st January 2018	2,924,652	(1,854,085)	4,560,176	35,572	5,666,315
* Prior Year Adjustment		100,187			100,187
Loss of the year	-	(220,101)	-	-	(220,101)
Other Comprehensive Income	-	-	784,011	-	784,011
Total Comprehensive Income	2,924,652	(1,973,999)	5,344,187	35,572	664,097
Additional Investments in VRA	1,036,281	-	-	-	1,036,281
Transfer to Retained Earnings (Note 18)	-	450,349	(450,349)	-	-
Transfer to Debt Contingency					
Fund Reserve	-	(3,349)	-	3,349	-
Balance at 31st December, 2018	3,960,933	(1,526,999)	4,893,838	38,921	7,366,693

* Prior year adjustment relates to interest on outsanding Ghana National Gas Company invoices from April 2016 to December 2018 waived by Government of Ghana.

FINANCIAL REVIEW FOR THE YEAR ENDED DECEMBER 31, 2019

(continued)

GROUP	Rebublic of Ghana Contribution	Retained Earnings Surplus	Revaluation	Debt Contingency Fund Reserve	Government of Ghana Grant	Other Reserves	Total Equity
2019	GH¢'000	GH¢'000	GH¢'000	GH¢'000	GH¢'000	GH¢'000	GH¢'000
Balance at 1st January, 2019	3,960,933	(1,429,650)	6,798,395	38,920	1,232	-	9,369,830
Loss for the year	-	(253,051)	-	-		-	(253,051)
Other Comprehensive Income	-	-	1,177,670	-		-	1,177,670
Total Comprehensive Income	-	(253,051)	1,177,670	-	-	-	924,619
Additional Investments in VRA	344,653	-	-	-	-	-	344,653
*Prior year adjustments	-	91,276	-	-	-	-	91,276
Government of Ghana Grant	-	-		-	-	-	-
Transfer to Retained Earnings (Note 18)	-	304,781	(304,781)	-	-	-	-
Balance at 31st December, 2019	4,305,586	(1,286,644)	7,671,284	38,920	1,232	-	10,730,378
2018							7,762,097
Balance at 1st January, 2018	2,924,652	(1,574,881)	6,337,221	35,571	1,232	38,302	105,153
*Prior year adjustments		105,153					-
Loss for the year	-	(393,157)	-	-	-	-	(393,157)
Other Comprehensive Income	-	-	897,758	-			897,758
Total Comprehensive Income	-	(288,004)	897,758	-	-	-	504,601
Additional Investments in VRA	1,036,281						1,036,281
Government of Ghana Grant		-					-
Transfer to Retained Earnings (Note 18)		436,584	(436,584)				-
Transfer							-
Transfer to Debt Contingency Fund Reserve	-	(3,349)	-	3,349	-	(38,302)	(38,302)
Balance at 31st December, 2018	3,960,933	(1,429,650)	6,798,395	38,920	1,232	-	9,369,830

* **2018 Prior year adjustment relates predominantly to interest on outsanding Ghana National Gas Company invoices from April 2016 to December 2018 waived by Government of Ghana.**

FINANCIAL REVIEW FOR THE YEAR ENDED DECEMBER 31, 2019

(continued)

		VRA		GROUP	
		2019	2018	2019	2018
	Note	GH¢'000	GH¢'000	GH¢'000	GH¢'000
Net Cash from Operating Activities	23	904,785	129,607	930,558	152,275
Cash Flows from Investing Activities					
Interest Received			-	11,923	13,499
Purchasing of Property, Plant and Equipment		(64,354)	(202,856)	(101,521)	(258,378)
Proceeds from sales of Property, Plant and Equipment	8c	174	4,646	174	4,756
Deferred expenditure		-	-	53	53
Acquisition of short term investment		(71,434)		(71,434)	
Acquisition of long term investments		52,825	-	52,825	-
Payments towards Capital Work-In-Progress		(136,580)	(143,099)	(143,298)	(142,854)
Net Cash used in investing activities		(219,369)	(341,309)	(251,278)	(382,924)
Cash flows from Financing Activities					
Net inflows from increase in stated capital		344,653	1,036,281	345,286	1,036,281
Proceeds from loans and borrowings		986,324	76,812	989,015	113,264
Repayment of borrowings		(922,334)	(648,711)	(922,334)	(648,711)
Payment of finance lease obligations		(930,732)	(198,223)	(930,732)	(198,223)
Shareholders advance		-	-	3,517	35,479
Net Cash used in financing activities		(522,089)	266,159	(515,248)	338,090
Net increase/(decrease) in Cash and cash equivalents		163,327	54,457	164,032	107,441
Cash and cash equivalents at the beginning of the year	14	619,205	543,426	789,753	661,096
Exchange rate fluctuation on cash and cash equivalents		(59,331)	21,322	(59,250)	21,216
Cash and cash equivalents at the end of the year		723,201	619,205	894,535	789,753

The notes on pages 23 to 68 form an integral part of the Financial Statements.

NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2019

1.0 REPORTING ENTITY

The Authority was incorporated by the Volta River Development Act 1961, (Act 46), as amended by Act 692, (2005) and it is domiciled in Ghana. These consolidated financial statements comprise of the Authority and its subsidiaries (together referred to as the "Group") for the year ended 31st December 2018 and the Group's interest in associates. The separate financial statements as at and for the year ended 31st December, 2018 comprise the financial statements of the Authority.

1.1 Basis of measurement

The Consolidated and separate Financial Statements ("Financial Statements") have been prepared on the historical cost basis, except for property, plant and equipment and available-for-sale financial assets that have been measured at fair value.

1.2 Statement of Compliance

The Financial Statements have been prepared in accordance with the International Financial Reporting Standards (IFRS) and its interpretations adopted by the International Accounting Standards Board (IASB) in the manner required by the Volta River Development Act (Act46), as amended by Act 692 (2005).

1.2.1 Functional and Presentation Currency

The financial statements are presented in Ghana Cedis which is the Authority's functional currency. All financial information presented in Ghana Cedis have been rounded to the nearest thousands, except where otherwise indicated.

1.2.2 Use of judgements and estimates

In preparing these consolidated and separate Financial Statements, management has made judgements, estimates and assumptions that affect the application of the Group's accounting policies and the reported amounts of assets and liabilities, income and expenses. Actual results may differ from these estimates.

Estimates and underlying assumptions are reviewed on an ongoing basis. Revisions in estimates are recorgnised prospectively.

Information about judgements made in applying accounting policies that have the most significant effects on the amounts recognised in the Consolidated Financial Statements is included in the following notes:

- Note 16c - leases: whether an arrangement contains a lease.
- Note 16c - lease classification.

Information about judgements made in applying accounting policies that have the most significant effects on the amounts recognised in the Consolidated Financial Statements is included in the following notes:

-Note 19 - measurement of defined benefit obligation: key actuarial assumptions.
-Note 1.8.2.9 - impairment losses.

Indexation revaluation of property, plant and equipment

In line with international best practice, it has been the Authority's policy to have its assets revalued by independent, professional valuers every five years. However, in order to avoid sudden large changes in the value of the assets base, and consequently in the return that the Authority is covenanted to achieve for both the International Lending Agencies and the Government of Ghana, the Authority applies indices to revalue its assets monthly.

The composite index used for the annual revaluation is therefore based on the premise that the Authority's assets base increase by the general price levels in the US Dollar and translated into Ghanaian Cedi terms for finance reporting. The computation of a composite index is based on the exchange rate between the GH¢ and the US dollar, and the annual CPI in the US.

NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2019

(continued)

The assumption underlying the selection of the US inflation base is that the Authority's assets base is about 85% foreign-currency procured from the United States and Europe. Furthermore, most of the items are obtained from advanced countries like the United States, Europe and Asia (China) where price levels are fairly stable or increase marginally. The Authority thus assumed that the US inflation rates fairly represents the general price levels for foreign purchases made by the VRA.

1.3 Basis of Consolidation

The Authority's 2019 Consolidated Financial Statements include the results of the Authority and its subsidiaries.

Business combinations

Business combinations are accounted for using the acquisition method when control is transferred to the Group. The consideration transferred in the acquisition is measured at fair value, as are the identifiable net assets acquired. Any goodwill that arises is tested annually for impairment. Any gain on a bargain purchase is recognized in profit or loss immediately. Transaction costs are expensed as incurred, except where they relate to the issue of debt or equity securities.

The consideration transferred does not include amounts that relate to the settlement of pre-existing relationships, such amounts are generally recognized in profit or loss. Any contingent consideration payable is measured at fair value at the acquisition date. If the contingent consideration is classified as equity, then it is not re-measured and settlement is accounted for within equity. Otherwise, subsequent changes in the fair value of the contingent consideration are recognised in profit or loss.

Subsidiaries

Subsidiary is an entity which the Group has power over, rights to variable returns and the ability to use its power to affect those returns. The accounting policies of subsidiaries have been changed when necessary to align them with the policies adopted by the Group. The financial statements of subsidiaries are included in the consolidated financial statements from the date on which control commences until the date when control ceases. The financial statements of the subsidiaries used to prepare the consolidated financial statements were prepared as of the Authority's reporting date.

The subsidiaries consolidated are Volta Lake Transport Company Limited (VLTC), Akosombo Hotels Limited (AHL), Northern Electricity Distribution Company (NEDCo), Takoradi Power Company Limited (TAPCO), VRA Property Holding Company Limited (PROPCo) and Volta River Authority Health Services Limited (VHSL)

Transactions eliminated on Consolidation

Intra-group balances and transactions, and any unrealized income and expenses (Except foreign currency transaction gains or losses) rising from intra-group transactions, are eliminated in preparing the consolidated financial statements. Unrealized gains arising from transactions with equity-accounted investees are eliminated against the investment to the extent of the Group's interest in the investee. Unrealized losses are eliminated in the same way as unrealized gains, but only to the extent that there is no evidence of impairment.

Loss of Control

When the Group losses control over a subsidiary, it derecognizes the assets and liabilities of the subsidiary, any related non-controlling interests and other components of equity. Any surplus or deficit arising on the loss of control is recognized in profit or loss. Any retained interest in the former subsidiary is accounted for as an equity-accounted investee or in accordance with the Group's accounting policy for financial instructions.

Interests in investees

The investment in associates is recorded at historical cost. Any distribution from profits or dividends are recognized as income.

Separate financial statements

In the separate financial statements, investments in subsidiaries and associates are accounted for at cost less impairment. Cost also includes direct attributable costs of investment.

1.4 New and amended standards

1.4.1 New and amended standards adopted

The Group has applied the following standards for the first time for the reporting period commencing on 1 January 2019.

IFRS 16 "Leases'

The Group adopted IFRS 16 during the year and changed its accounting policy for leases where the Group is a lessee. IFRS 16 removes the distinction between operating and finance leases as was the case up to 31st December, 2018 and requires recognition of an asset (right of use the leased item) a financial liability to pay rentals for virtually all lease contracts.

In adopting the standard, the Group exempted certain lease contracts in accordance with the optional exemption which exists for short term and low-value leases. The adoption of the standard did not have any significant impact on the Group's financial statements.

IFRIC 23, "Uncertainty over income tax treatments"

The interpretation explains how to recognise and measure deferred and current income tax assets and liabilities when there is uncertainty over a tax treatment. The adoption of IFRIC 23 did not result in any material impact on the financial statements.

Annual improvements to IFRS standards 2015 - 2017 cycle

The following improvements were finalised in December 2017 and effective for accounting period beginning on or after January 1, 2019. These did not have any material impact on the results or financial position of the Authority and its subsidiary for the year ended December 31, 2019.

- IFRS 3 Business Combinations - clarified that obtaining control of a business that is a joint operation is a business combination achieved in stages.
- IFRS 11 Joint Arrangements - clarified that the party obtaining joint control of a business that is a joint operation should not remeasure its previously held interest in the joint operation.
- IAS 12 Disclosure of Interests in Other Entities - clarified that the income tax consequences of dividends on financial instruments classified as equity should be recognised according to where the past transactions or events that generated distributable profits were recognised.
- IAS 23 Borrowing Costs - clarified that if a specific borrowing remains outstanding after the related qualifying asset is ready for its intended use or sale, it becomes part of general borrowings.

The directors have assessed the effects of other new and amended standards and interpretations that are effective for reporting period commencing January 1, 2019, and have determined that the new and amended standards and interpretations do not have any material impact on the Groups's financial statements or are not relevant to the Group.

1.4.2 New and amended standards not yet adopted

A number of new standards, amendments to standards and interpretations are not yet effective for the year ended December 31, 2019, and have not been applied in preparing these financial statements. These are disclosed as follows:

The IASB has made amendments to IAS 1 Presentation of Financial Statements and IAS 8 Accounting Policies, Changes in Accounting Estimates and Errors which use a consistent definition of materiality throughout International Financial Reporting Standards and the Conceptual Framework for Financial Reporting, clarify when information is material and incorporate some of the guidance in IAS 1 about immaterial information.

In particular, the amendments clarify:

- that the reference to obscuring information addresses situations in which the effect is similar to omitting or misstating that information, and that an entity assesses materiality in the context of the financial statements as a whole, and
- the meaning of 'primary users of general-purpose financial statements' to whom those financial statements are directed, by defining them as 'existing and potential investors, lenders and other creditors' that must rely on general purpose financial statements for much of the financial information they need.

Revised Conceptual Framework for Financial Reporting

The IASB has issued a revised Conceptual Framework which will be used in standard-setting decisions with immediate effect.
Key changes include:

- increasing the prominence of stewardship in the objective of financial reporting
- re-instating prudence as a component of neutrality
- defining a reporting entity, which may be a legal entity, or a portion of an entity
- revising the definitions of an asset and a liability
- removing the probability threshold for recognition and adding guidance on derecognition
- adding guidance on different measurement basis, and
- stating that profit or loss is the primary performance indicator and that, in principle, income and expenses in other comprehensive income should be recycled where this enhances the relevance or faithful representation of the financial statements.

No changes will be made to any of the current accounting standards. However, entities that rely on the Framework in determining their accounting policies for transactions, events or conditions that are not otherwise dealt with under the accounting standards will need to apply the revised Framework from 1 January 2020.

These standards are mandatory for financial years commencing on or after January 1, 2020.

There are no other IFRSs or IFRIC interpretations that are not yet effective that would be expected to have a material impact on the Authority.

IFRS 4 Insurance Contracts

IFRS 4 "Insurance Contracts" applies, with limited exceptions, to all insurance contracts (including reinsurance contracts) that an entity issues and to reinsurance contracts that it holds. In light of the IASB's comprehensive project on insurance contracts, the standard provides a temporary exemption from the requirements of some other IFRSs, including the requirement to consider IAS 8 "Accounting Policies, Changes in Accounting Estimates and Errors" when selecting accounting policies for insurance contracts. The IASB tentatively decided to defer the effective date of IFRS 17, Insurance Contracts to annual periods beginning on or after January 1, 2022. The IASB also tentatively decided to defer the fixed expiry so that all insurance entities must apply IFRS 4 for annual periods on or after January 1, 2023.

IFRS 17

IFRS 17 establishes the principles for the recognition, measurement, presentation and disclosure of insurance contracts within the scope of the standard. The objective of IFRS 17 is to ensure that an entity provides relevant information that faithfully represents those contracts. This information gives a basis for users of financial statements to assess the effect that insurance contracts have on the entity's financial position, financial performance and cash flows. The IASB also tentatively decided to defer the fixed expiry date so that all insurance entities must apply IFRS 17 for annual periods on or after January 1, 2023.

1.5.0 SUMMARY OF SIGNIFICANT ACCOUNTING STATEMENTS

1.5.1 Revenue

(i) Sale of Electricity

Revenue from sale of electricity is recognised when the significant risk and rewards of ownership have been transferred to the customer, recovery of the consideration is probable, the associated costs and possible return of goods can be estimated reliably, there is no continuing management involvement with the goods and the amount of revenue can be measured reliably. Revenue from the sale of electricity is measured net of returns, trade discounts, taxes and volume rebates. Revenue from the sale of electricity is recognised when the electricity is transmitted to the customer.

1.5.2 Income from rendering of services

Revenue from rendering of services is recognised when the services have been rendered, recovery of the consideration is probable and the amount of revenue can be measured reliably.

1.5.3 Finance income and expenses

The Group's finance income and finance expenses include:

- interest income on funds invested or held in bank accounts
- interest expenses on loans and borrowings
- interest cost on finance lease obligation
- interest on delayed invoices
- Interest income and expense is recognised, as it accrues in profit or loss, using the effective interest method. Income and expenses are presented on a net basis only when permitted under IFRS, or for gains and losses arising from the Groups of similar transactions.

1.5.4 Government Grant

Grant and assistance from the government are recognised as deferred income at fair value if there is reasonable assurance that the grant will be received and that the Group will comply with the conditions associated with the grant; they are then recognised in profit or loss as other income on a systematic basis over the useful life of the asset.

A grant tied to non-current asset is deducted from the gross cost of the related asset to get the carrying value of the asset. A grant intended to cover expenses is reported in profit or loss on a systematic basis in the periods in which the expenses are recognised.

1.5.5 Foreign currency translations

Foreign currency transactions are translated into the functional currency using exchange rates prevailing at the dates of the transactions. Foreign exchange gains and losses resulting from the settlement of such transactions, and from the translation at year-end exchange rates of monetary assets and liabilities denominate in foreign currencies, are recognised in profit or loss.

Non-monetary assets and liabilities are translated at historical exchanges rates, if held at historical cost or exchange rates at the date that fair value was determined, if held at fair value and the resulting foreign exchange gains and losses are recognised in profit or loss.

(i) Foreign Operations

The assets and liabilities of foreign operations are translated into Ghana Cedi at the stock exchange rates at the reporting date. The income and expenses of foreign operations are translated into Ghana Cedi at the average exchange rates for the period.

Foreign currency differences arising on the translation of assets and liabilities of foreign operations are recognised in other comprehensive income and presented within equity.

When a foreign operation is disposed off, the cumulative amount in equity related to that foreign operation is reclassified to profit or loss as part of the gain or loss on disposal.

1.5.6 Financial Instruments

The Group classifies non-derivative financial assets into the loans and other receivables category and classifies non-derivative financial liabilities into the other financial liabilities category.

The Group initially recognises loans and receivables and debt securities on the date when they originate and all other financial assets and financial liabilities on the date of trade when the entity becomes a party to contractual provisions of the instrument.

The Group derecognises a financial asset when the contractual rights to the cash flow from the asset expire, or it transfers the rights to receive the contractual cash flows in a transaction in which substantially all risk and rewards of ownership of the financial asset are transferred, or it retain control over the transferred asset.

Any interest in such derecognised financial asset that is created by the Group is recognised as a separate assets or liability. The Group derecognises a financial liability when its contractual obligation are discharged, cancelled or expire. The Authority's financial assets include cash and bank balances, trade and other receivables, short term investment and investments in equity securities.

1.5.7 Financial Assets

Loans and receivables comprise of Cash and Bank Balances, short term investments, shareholder advance to NEDCo and trade and other receivables.

Loans and receivables are non-derivative financial assets with fixed or determinable payments that are not quoted in an active market. These assets are initially measured at fair value plus any directly attributable transaction cost. Subsequent to initial recognition, they are measured at amortised cost using the effective interest method. Short-term receivables with no stated interest rate are measured at the original invoice amount if the effect of discounting is immaterial.

Impairment

Financial assets not classified at fair value through profit or loss are assessed at each reporting date to determine whether there is objective evidence of impairment.

Objective evidence that financial assets are impaired includes default or delinquency by a debtor, restructuring of an amount due to the Group on terms that the Group would not consider otherwise, indications that a debtor will enter bankruptcy, adverse changes in the payment status of borrowers, economic conditions that correlate with defaults.

An impairment loss in respect of a financial asset measured at amortised cost is calculated as the difference between the asset's carrying amount and the present value of the estimated future cash flows discounted at the asset's original effective interest rate. Losses are recognised in profit or loss and reflected in an allowance account against loans and receivables. When the Group considers that there are no realistic prospects of recovery of the asset, the relevant amounts are written off. Interest on the impaired asset continues to be recognised. When an event occurring after the impairment was recognised caused the amount of impairment loss to decrease, the decrease in impairment loss is reverse through profit or loss.

The Group considers evidence of impairment for these assets at both individual and collective level. All individually significant financial assets are assessed for impairment on an individual basis. Those found not to be impaired are then collectively assessed for any impairment that has been incurred but not yet individually identified. Assets that are not individually significant are collectively assessed for impairment. Collective assessment is carried out by grouping together assets with similar risk characteristics.

In assessing collective impairment, the Group uses historical information on the timing of recoveries and the amount of loss incurred, and makes an adjustment if current economic and credit conditions are such that the actual losses are likely to be greater of lesser than suggested by historical trends.

1.5.8 Financial Liabilities

Non-derivative financial liabilities are initially measured at fair values less any directly attributable transaction cost. Subsequent to initial recognition, these liabilities are measured at amortised cost using the effective interest method.

Other financial liabilities comprise of loans and borrowing and trade and other payables.

1.5.9 Offsetting of financial instruments

Financial assets and financial liabilities are offset and the net amount reported in the statement of financial position if, and only if, there is a currently enforceable legal right to offset the recognised amounts and there is an intention to settle on a net basis.

1.5.10 Property, Plant and Equipment

(i) Recognition and Measurement

Property, Plant and Equipment are measured at revalued amount less accumulated depreciation and any accumulated impairment losses. Cost includes expenditures that are directly attributable to the acquisition of the asset. Purchased software that is integral to the functionality of the relate equipment is capitalised as part of that equipment. When parts of an item of property, plant and equipment have different useful lives, they are accounted for as separate items (major components).

Any accumulated depreciation at the date of revaluation is adjusted to equal the difference between the gross carrying amount and the carrying amount of the assets after taking into account accumulated impairment losses. An increase in the carrying amount of property, plant and equipment as a result of a revaluation is recognised in other comprehensive income and accumulated in equity under revaluation reserve.

However, the increase is recognized in profit or loss to the extent that it reverses are valuation decrease of the same asset previously recognised in profit or loss.

A valuation decrease is recognise in profit or loss. However, the decrease is recognised in other comprehensive income to the extent of any credit balance existing in the revaluation reserve in respect of that asset. The surplus on revaluation is transferred to retained earnings as the relevanter valued assets is used. The amount transferred is the difference between depreciation based on the revalued carrying amount of the asset and depreciation based on the asset's original cost.

Valuations are performed with sufficient regularity to ensure that the fair value of a revalued asset does not differ materially from, its carrying amount.

Any gain or loss on the disposal of an item of property, plant and equipment (calculated as difference between the proceeds from disposal and carrying amount of the item) is recognised in profit or loss.

(ii) Subsequent cost

The cost of replacing part of an item of property, plant and equipment is recognised in the carrying amount of the item if it is probable that the future economic benefits embodied within the part will flow to the Authority and its cost can be measured reliably. The costs of the day-to-day servicing and maintenance of property, plant and equipment are recognised in profit or loss as incurred.

(iii) Depreciation

Depreciation is calculated and recognised in profit or loss on a straight-line basis over the estimated useful lives of each part of an item of property, plant and equipment. Freehold land is not depreciated.

Depreciated is charged in the year in which an asset is acquired or a capital work-in-progress is available for use. The annual depreciation rate and estimated useful lives for the current and comparative years of significant items of major classes of depreciation property, plant and equipment are as follows;

Rate of Depreciation (%)		Useful life
Dam, Powerhouse and Civil Works	Between 0.67 and 2.2	45 - 150
Transmission Network	Between 2.2 and 3.3	30 -45
Akosombo/Akuse Township	2.5	40
Buildings	2.5	40
Hydro Generating Plant and Machinery	Between 2.2 and 3.0	33 - 45
Aviation and Marine Equipment	12.5	8
Motor Vehicles	Between 10.0 and 25.0	4 -10
Equipment and Furniture	Between 12.5 and 25.0	4 -8
Meters/Consumer Connections	Between 4.0 and 5.0	20 - 25
Thermal Generating Plants and Machinery	Between 4.0 and 10.0	10 - 25
Distribution Network	Between 2.5 and 4.0	25 -40
Computer Equipment	Between 20.0 and 25.0	4 -5
Communication Equipment	Between 3.3 and 6.7	15 -30

Leased assets are amortised over the useful life of the asset. However, if there is no reasonable certainty that the Group will obtain ownership by the end of the lease term, the asset is amortise over the shorter of the estimate useful life or leased term. Depreciation methods, useful lives and residual values are reassessed at each reporting date and adjusted if appropriate.

(iv) Capital work-in-progress

Property, plant and equipment under construction are stated at initial cost and depreciated from the date the asset is available for use over its estimated useful life. Cost of capital work-in-progress include the cost of materials and direct labour, and any other cost directly attributable to bringing the asset to a working condition for its intended use.

Assets are transferred from capital work-in-progress to an appropriate category of property, plant and equipment when they become ready for its intended use.

(v) Impairment of Non-Financial Assets

The carrying amount of the Group's non-financial assets, other than inventories and deferred tax assets are reviewed at each reporting date to determine whether there is any indication of impairment. If any such indication exists, then the asset's recoverable amount is estimated. An impairment loss is recognised if the carrying amount of an asset or Cash Generating Unit (CGU) exceeds its recoverable amount.

For impairment testing, assets are grouped together into the smallest group of assets that generated cash inflows from continuing use that are largely independent of the cash inflows of other assets.
The recoverable amount of the asset is the greater of its value in use and its fair value less cost to sell. Value in use is based on the estimated future cash flows, discounted to their present value using a pre- tax discount rate that reflects current market assessments of the time value of money and risks specific to the asset of CGU.

An impairment loss is recognised if the carrying amount of the asset or CGU exceeds its recoverable amount.

All impairment losses are recognized in profit or loss. They are allocated to reduce the carrying amount of assets in the CGU on a pro rata basis.

An impairment loss is reversed only to the extent that the asset's carrying amount does not exceed the carrying amount that would have been determined, net of depreciation or amortisation, if no impairment loss had been recognised.

1.5.11 Intangible Assets

Software acquired by the Group is stated at cost less accumulated amortisation and accumulated impairment losses. Subsequent expenditure on software assets is capitalised only when it increased the future economic benefits embodied in the specific asset to which it related. All other expenditure is expensed as incurred. Amortisation is recognised in profit of loss on a straight-line basis over the estimated useful life of the software, from the date that it is available for use. The estimated useful life of software is up to five-years.

1.5.12 Borrowing Costs

Borrowing costs are recognised, as an expense, in the period in which they are incurred, except to the extent that they are capitalised. Borrowing costs that are directly attributable to the acquisition, construction or production of a qualifying asset are capitalised as part of the cost of that asset when it is probable that they will result in future economic benefits to the entity and that the costs can be measured reliably.

Borrowing cost that are not directly attributable to the acquisition, construction or production of a qualifying asset are recognised in profit or loss using the effective interest method.

1.5.13 Inventories

Inventories are measured at the lower of cost and net reralizable value. The cost of inventories is based on the weighted average principle, and includes expenditure incurred in acquiring the inventories and bringing them to their existing location and condition.

Net realizable value is the estimated selling price in the ordinary course of business, less estimated costs of completion and the estimated costs necessary to make the sale.

1.5.14 Cash and Cash Equivalents

In the statement of cash flows, cash and cash equivalents includes short term investments and bank overdrafts that are repayable on demand and from an integral part of the Group's cash management. Cash and short-term deposits in the statement of financial position comprises cash at bank and on hand and short-term deposits with an original maturity of three months or less.

1.5.15 Employee Benefits

Short-term employee benefit obligations are measured on an undiscounted basis and are expensed as the related service is provided. A liability is recognised for the amount expected to be paid under short-term cash bonus or profit-sharing plans if the Authority has a present legal or constructive obligation to pay this amount as a result of past service provided by the employee, and the obligation can be estimated reliably.

Defined Contribution Plans

A defined contribution plan is a post-employment benefit plan under which the Group pays fixed contributions to a separate entity and will have no legal or constructive obligation to pay further amounts. Obligations for contributions to defined contribution pension plans are recognised as an expenses in profit or loss in the periods during which services are rendered by employees.

The Group has the following defined contribution schemes:

Social Security and National Insurance Trust

Under the national pension scheme, the Group contributes 13% of employees' basic salary to the Social Security and National Insurance Trust (SSNIT) for employee pensions. The Group's obligation is limited to the relevant contributions, which have been recognised in the financial statements. The pension liabilities and obligations, however, rest with SSNIT.

Provident Fund

The Group has a Provident Fund Scheme for all employees who have completed their probation period with the Group. The Group contributes 10% of their basic salary to the Fund. Obligations under the plan are limited to the relevant contributions which have been recognised in the financial statements and are settled on due dates to the fund manager.

Defined benefit plans

The Group's obligation in respect of defined benefit plans is calculated separately for each plan by estimating the amount of future benefits that employee have earned in the current and prior periods, discounting that amount and deducting the fair value of any plan assets.

The calculation of defined benefit obligations is performed annually by a qualified actuary using the projected unit credit method.

Re-measurements of the net defined benefit liability, which comprise actuarial gains and losses is recognised immediately in other comprehensive income.

The Group determines the net interest expense (income) on the defined benefit liability for the period by applying the discount rate used to measure the defined benefit obligation at the beginning of the annual period to the defined benefit liability at the period end, taking into account any changes in the defined benefit liability during the period as a result of contributions and benefit payments.

Net interest expenses and other expenses related to defined benefit plants are recognised in personnel expenses in profit or loss. When the benefits of a plan are changed or when a plan is curtailed, the resulting change in benefits that relate to past services or the gain or loss on curtailment is recognised immediately in profit or loss. The Group recognises gains and losses on the settlement of a defined benefit plan when the settlement occurs.

The Group has the following defined benefit plans:

Long-service awards

The defined benefit scheme entitles employee to a benefit package at the end of their service with the Group. This benefit package is paid at the point of exit on scale that have been graduated based on the length of services ranging from 10 to 40 years and more.

Severance benefits

This relate to reward (packages) paid to employees who attain certain milestone with the Group and exit before their due date of retirement.

Post-retirement medical benefit

There is no contribution by the employee toward this benefit and no insurance scheme. The employer simply bears the medical costs (no cap defined) of the retiree and their spouse for as long as the retiree is alive. After the death of the retiree, the spouse will be taken care of for 6 months after which they will be removed from the scheme.

1.6.0 Leases

The Group has adopted IFRS 16 using the modified retrospective approach and therefore the comparative information has not been restated and continues to be reported under IAS 17 and IFRIC 4. The standard introduces a single lessee accounting model and requires a lessee to recognise assets and liabilities for all leases with a term of more than 12 months, unless the underlying asset is of low value.

The Authority as a lessee

A lease is defined as 'a contract, or part of a contract, that conveys the rights to use an asset (the underlying asset) for a period of time in exchange for consideration'. The Group assesses whether the contract meets the key evaluations which are whether:

- the contract contains an identified asset, which is either explicitly identified in the contract or implicitly specified by being identified at the time the asset is made available to the Group.
- the Group has the right to obtain substantially all of the economic benefits from use of the identified asset throughout the period of use
- the Group has the right to direct the use of the identified asset throughout the period of use.

Measurement and recognition of leases as a lessee

At lease commencement date, the Group recognises a right-of-use asset and a lease liability on the balance sheet.

The right of use asset is measured at cost, which is made up of the initial measurement of the lease liability, any initial direct costs incurred by the Group, an estimate of any costs to dismantle and remove the asset at the end of the lease, and any lease payments made in advance of the lease commencement date (net of any incentives received).

The Group depreciates the right-of-use assets on a straight-line basis from the lease commencement date to the earlier of the useful life of the right-of use asset or the end of the lease term. The Group also assesses the right-of-use asset for impairment when such indicators exist.

At the commencement date, the Group measures the lease liability at the present value of the lease payments unpaid at that date, discounted using the interest rate implicit in the lease if that rate is readily available or the Group's incremental borrowing rate.

Lease payments included in the measurement of the lease liability are made up of fixed payments (including in substance fixed), variable payments based on an index or rate, amounts expected to be payable under a residual value guarantee and payments arising from options reasonably certain to be exercised.

Subsequent to initial measurement, the liability will be reduced for payments made and increased for interest. It is remeasured to reflect any reassessment or modification, or if there are changes in in-substance fixed payments.

When the lease liability is remeasured, the corresponding adjustment is reflected in the right of-use asset, or profit and loss if the right-of-use asset is already reduced to zero.

The Group has elected to account for short-term leases and leases of low-value assets using the practical expedients. Instead of recognising a right-of-use asset and lease liability, the payments in relation to these are recognised as an expense in profit or loss on a straight-line basis over the lease term.

On the statement of financial position, right-of use assets have included in property, plant and equipment (except those meeting the definition of investment property) and lease liabilities have been included in trade and other payables.

The Authority as a lessor

The Group's accounting policy under IFRS 16 has not changed from the comparative period. As a lessor the Group classifies its leases as either operating or finance leases. A lease is classified as a finance lease if it transfers substantially all the risks and rewards incidental to ownership of the underlying asset, and classified as an operating lease if it does not.

1.6.1 Tax Expense

Tax expense comprise current and deferred tax. Income tax is recognise in profit or loss except to the extent that it relates to items recognised directly in equity or in other comprehensive income.

(a) Current Tax

Current tax comprises the expected tax payable or receivable on taxable incomes or losses for the year and any adjustment to the tax payable or receivable in respect of previous years. It is measured using tax rates enacted or substantively enacted at the reporting date. Current tax also includes any tax arising from dividends.

(b) Deferred Tax

Deferred tax is recognised in respect of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the corresponding amounts used for taxation purposes. However, deferred income tax is not accounted for if it arises from initial recognition of an asset or liability in a transaction other than a business combination that at the time of the transaction affects neither accounting nor taxable profit or loss.

Deferred tax is measured at tax rates that are expected to be applied to temporary difference when they reverse, using tax rates enacted or substantively enacted at the reporting date. A deferred tax asset is recognised only to the extent that it is probable that future taxable profit will be available against which the asset can be utilised. Deferred tax assets are reviewed at each reporting date and are reduced to the extent that it is no longer probable that the related tax benefit will be realised.

Deferred tax assets and liabilities are offset if there is a legally enforceable right to offset current tax liabilities and assets, and they relate to taxes levied by the same tax authority on the same taxable entity, or on different tax entities, but they intend to settle current tax liabilities and assets on a net basis or the tax assets and liabilities will be realised simultaneously.

1.7.0 Determination of fair values

A number of the Group's accounting policies and disclosures require the measurement of fair values, for both financial and non-financial assets and liabilities.

Significant valuation issues are reported to the Group's Board of Directors.

When measuring the fair value of an asset or a liability, the Group uses observable market data as far as possible. Fair values are categorised into different levels in a fair value hierarchy based on the inputs used in the valuation techniques as follows:

(a) Level 1: quoted prices (unadjusted) in active markets for identical assets or liabilities

(b) Level 2: inputs other than quoted prices included in Level 1 that are observable for the assets or liability, either directly (i.e. prices) or indirectly (i.e. derived from prices).

(c) Level 3: inputs for the asset or liability that are not based on observable market data (unobservable inputs).

If the inputs used to measure the fair value of an asset or a liability fall into different levels of the fair value hierarchy, then the fair value measurement is categorised in its entirety in the same level of the fair value hierarchy as the lowest level input that is significant to the entire measurement.

The Group recognises transfers between levels of the fair value hierarchy at the end of the reporting period during which the change occurred.

1.8.0 Business and Financial Risk Management

The Group's operations are exposed to a number of risks. To address these risks. The Authority has established a risk management process that is based on the following components:

- Standardised risk definition
- Reliable methods for measuring risks
- Identifying the origination of risks
- Effective risk management for manageable risks
- Reporting in accordance with established routines
- Management in accordance with establish strategies and fixed rules

1.8.1 Risk Mandate and Risk Management Structure

The Board of Directors has overall responsibility for internal control and risk management at Volta River Authority. The Board has, in turn, given Volta River Authority's Management a risk mandate. Management allocates this mandate to Volta River Authority's business units in accordance with a delegation structure.

Each unit manages its own risks and has some room to manoeuvre within its respective mandate. The results achieved by the units are followed up on a continuous basis and reported to the executive management by an independent risk control function, Internal Audit, which is also responsible for monitoring the Group's overall risk mandate.

1.8.2 Risk

Political risks, operational risks, environmental risks and legal risks are general in nature and exist in all units throughout the Group. Insurable risks are managed centrally by Volta River Authority's Legal Services Department. The more specific risks in each part of the value chain are discussed below:

1.8.2.1 Political Risk

This refers to the commercial risk that can arise as a result of political decisions. Examples of this are price regulations in electricity distribution and transmission, uncertainty regarding changes in government, or changes in finance and energy policies.

A change in the rules governing the energy industry is another type of political risk faced by the group. These may include factors such as changes in taxation, introduction of environmental surcharges and changes in the political goals in respect of the energy sector. This type of risk is more difficult to predict and manage. To mitigate this, the group conducts active business intelligence activities and maintains contacts with key decision makers and relevant stakeholders. The group also belongs to various national and international trade organisations.

1.8.2.2 Operational Risk

Operation risk refers to the risk of incurring financial loss, or loss of trust, due to errors or defects in the Authority's administrative routines. Operational risk can be divided into the following categories:

- Administrative risk - the risk of loss due to defects in the Group's division of responsibility, competence, reporting routines, risk measurement and evaluation models and controls and follow-up routines.
- Legal risks -this includes risk of loss arising from the non-fulfilment of contracts due to
- shortcomings in documentation, counterparties lacking the right to enter into contracts or uncertainties regarding contract validity.
- IT risks - the risk of loss due to defects in IT systems.
- Safety risks - the risk of outages due to deficient safety work.

1.8.2.3 Electricity Price Risk

Electricity Price Risk is the risk that has the greatest bearing on the Group's operations. Electricity prices are determined by the Public Utilities Regulatory Commission (PURC).
To determine the value of electricity price risk in electricity generation, the Group simulates an anticipated outcome in the electricity tariffs. Forecasts of anticipated generation levels are drawn up, which then serve as the basis for how much is to be anticipated as losses due to tariffs.

1.8.2.4 Price Category Risk

Price Category risk arises when the price of electricity differs between various customer categories. Volta River Authority's price categories risk is controlled centrally and is managed by the Group's Business Development and Sales Department.

1.8.2.5 Volume Risk

Volume Risk consists of deviations in anticipated and actually delivered volumes to a customer. This is managed by improving and developing forecasts of electricity consumption. In addition, volume risk is considered when drawing up the terms of contracts with customers.

1.8.2.6 Fuel Price Risk

Measurement and management of fuel price risk is conducted within the Finance Department. Fuel prices are affected by macroeconomic factors, among other thing. The Group manages fuel price risk by forecasting and analysing price trends.

1.8.2.7 Investment Risk

The Group is a highly capital-intensive institution and, consequently, has an extensive capital investment program. Prior to every investment decision, a risk analysis is performed by simulating outcomes of price, cost, delays and cost of capital, the risk associated with each individual investment are assessed.

1.8.2.8 Plant Risk

The Group's largest insurable risks are associated with the operation of power generation plants. The Group's plants can be damaged as a result of incidents and breakdowns which, as a rule, give rise to substantial costs due to shutdowns. Such plant risks are minimised through loss-prevention measures, good maintenance, training and effective administrative outlines. The plants are also insured against unforeseen occurrence.

1.8.2.9 Credit Risk

Credit Risk is the risk of financial loss to the Authority if a customer or counter party fails to meet its contractual obligations and arises principally from the Authority's receivables from customers.

The Group's principal exposure to credit risk is in its trade and other receivables, and loans to related parties. Trade receivables principally represent amounts owing to the Authority by their customers and credit risk is managed at that level. Credit evaluations are performed on all customers requiring credit over a certain amount. The Group has no significant concentration of credit risk, with exposure spread over a large number of customers.

Exposure to Credit Risk

The carrying value of the Group's financial assets represents its maximum exposure to credit risk. The maximum exposure to credit risk at the reporting date was:

	VRA		GROUP	
	2019	2018	2019	2018
	GH¢'000	GH¢'000	GH¢'000	GH¢'000
Trade Receivables	4,844,583	4,104,078	5,944,426	5,067,678
Receivables from related parties	1,101,225	811,224	-	-
Other receivables including receivable from Government of	1,102,747	1,051,748	1,616,801	1,353,142
Ghana but excluding fuel receivable from Tema Oil Refinery	30,839	31,835	36,890	42,360
Staff Debtors	649,120	616,558	757,240	706,309
Cash and cash equivalents (excluding cash-on-hand)	38,921	38,921	1,394,052	1,115,384
Long-term investments	74,081	2,647	137,295	83,487
Short-term investments	7,841,516	6,657,011	9,886,704	8,368,360

The maximum exposure to credit risk for trade receivables at the reporting date by type of counter party was:

	VRA		GROUP	
	2019	2018	2019	2018
	GH¢'000	GH¢'000	GH¢'000	GH¢'000
Wholesale (ECG)	1,234,837	915,803	1,234,837	915,803
Distribution to end-users	3,609,746	3,188,275	4,709,589	4,151,875
	4,844,583	4,104,078	5,944,426	5,067,678

The ageing of trade receivables at the reporting date was:

VRA	Gross	Impairment allowance	Gross	Impairment allowance
	31-Dec-19	31-Dec-19	31-Dec-18	31-Dec-18
	GH¢'000	GH¢'000	GH¢'000	GH¢'000
Not past due nor impaired	802,387	-	552,470	-
Past due 30-60 days	126,209	-	403,022	-
Past due 60-90 days	231,552	-	211,966	-
Past due 90-120 days	506,561	-	466,022	-
Past due 120 days and above and impaired	3,177,874	280,751	2,470,599	280,751
	4,844,583	280,751	4,104,078	280,751

GROUP	Gross	Impairment allowance	Gross	Impairment allowance
	31-Dec-19	31-Dec-19	31-Dec-18	31-Dec-18
	GH¢'000	GH¢'000	GH¢'000	GH¢'000
Not past due nor impaired	802,387	-	577,735	-
Past due 30-60 days	126,209	-	427,418	-
Past due 60-90 days	231,552	-	236,875	-
Past due 90-120 days	515,402	-	489,324	-
Past due 120 days and above and impaired	4,268,876	307,072	3,336,327	308,168
	5,944,426	307,072	5,067,678	308,168

Impairment losses have been recognise for specific customers whose debts are considered impaired.

Management believes that the unimpaired amounts that are past due by more than 30 days are still collectible in full, based on historical payment behaviour and extensive analysis of customer credit risk.

No impairment loss was recognised for financial assets other than trade receivables.

1.8.2.10 Liquidity Risk

Liquidity risk is the risk that the Authority will not be able to meet its financial obligations as and when they fall due. The Authority has had liquidity challenges and defaulted in some repayment obligations.

December 31, 2019 - VRA

	Total amount	Less than 6 months	6-12 months	1-2 years	3-4 years	More than 5 years
	GH¢'000	GH¢'000	GH¢'000	GH¢'000	GH¢'000	GH¢'000
Trade payables	6,457,706	6,435,402	22,304	-	-	-
Payable to related parties	33,016		33,016	-	-	-
Accrued Expenses	14,865	14,865	-	-	-	-
Sundry creditors, excluding statutory obligations	82,415	57,691	24,725	-	-	-
Borrowings, excluding finance lease obligations	2,045,898	280,780	336,016	307,275	875,827	246,000
Other payables- non-current	256,743	-	-	256,743	-	-
Finance Lease Obligations	688,128	405,376			282,752	-
	9,578,771	7,194,114	416,061	564,018	1,158,579	246,000

December 31, 2018 - VRA

	Total amount	Less than 6 months	6-12 months	1-2 years	3-4 years	More than 5 years
	GH¢'000	GH¢'000	GH¢'000	GH¢'000	GH¢'000	GH¢'000
Trade payables	5,070,748	5,048,444	22,304	-	-	-
Payable to related parties	33,016	-	33,016	-	-	-
Accrued Expenses	32,486	32,486	-	-	-	-
Sundry creditors, excluding statutory obligations	255,570	178,899	76,671	-	-	-
Borrowings, excluding finance lease obligations	1,764,683	280,780	214,181	307,275	875,827	86,620
Other payables- non-current	269,740	-	-	269,740	-	-
Finance Lease Obligations	1,260,058	499,237	168,914	309,155	282,752	-
	8,686,301	6,039,846	515,086	886,170	1,158,579	86,620

December 31, 2019 - GROUP

	Total amount	Less than 6 months	6-12 months	1-2 years	3-4 years	More than 5 years
	GH¢'000	GH¢'000	GH¢'000	GH¢'000	GH¢'000	GH¢'000
Trade payables	6,913,628	5,355,553	1,558,075	-	-	-
Payable to related parties	-	-	-	-	-	-
Accrued Expenses	82,415	82,415	-	-	-	-
Sundry creditors, excluding statutory obligations	268,750	192,079	76,671	-	-	-
Borrowings, excluding finance lease obligations	1,764,683	288,294	216,292	307,275	866,202	86,620
Other payables- non-current	251,269	-	-	251,269	-	-
Finance Lease Obligations	1,260,058	499,237	168,914	309,155	282,752	-
	10,540,803	6,417,578	2,019,952	867,699	1,148,954	86,620

December 31, 2018 - GROUP

	Total amount	Less than 6 months	6-12 months	1-2 years	3-4 years	More than 5 years
	GH¢'000	GH¢'000	GH¢'000	GH¢'000	GH¢'000	GH¢'000
Trade payables	5,377,857	5,355,553	22,304	-	-	-
Payable to related parties	-	-	-	-	-	-
Accrued Expenses	32,523	32,523	-	-	-	-
Sundry creditors, excluding statutory obligations	268,750	192,079	76,671		-	-
Borrowings, excluding finance lease obligations	1,764,683	288,294	216,292	307,275	866,202	86,620
Other payables- non-current	251,269	-	-	251,269	-	316,558
Finance Lease Obligations	1,260,058	499,237	168,914	309,155	282,752	-
	8,955,140	6,367,686	484,182	867,699	1,148,954	403,178

1.8.2.11 Market Risk

Market risk is the risk that changes in market prices, such as foreign currency and interest rates etc. will affect the Authority's income or the value of its holdings of financial instruments. The objective of market risk management is to manage and control market risk exposures within acceptable parameters, while optimising the return on risk.

(i) Currency Risk

Currency risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate due to the changes in the foreign exchange rates.

NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2019

(continued)

Exposure to Currency Risk

Group's exposure to foreign currency risk was as follows based on notional amount:

2019-in thousands	USD	EUR	SDR	KD	CHF	GBP	SKR	CAD	ZAR	UA
Account receivable	747,286									-
Cash and Bank balances	78,940	2,509				5.17				-
Investments	20,080									-
Account payables	(1,121,260)	(5,559)	-	(261.22)	-	(34)	(286)	(93)	(11)	-
Borrowings	(242,221)	(51,494)		(4,234)			(5,393)			-
	(517,174)	(54,543)	-	(4,495)	-	(29)	(5,679)	(93)	(11)	-

2018-in thousands	USD	EUR	SDR	KD	CHF	GBP	SKR	CAD	ZAR	UA
Account receivable	706,923	-	0	0	0	0	0	0	0	-
Cash and Bank balances	109,078	2,791	0	0	0	8	0	0	0	-
Investments	8,075	-	0	0	0	0	0	0	0	-
Account payables	(1,105,414)	(5,557)	0	-	-	(98)	(286.00)	(98)	(11)	-
Borrowings	(179,652)	(94,975)	(5,395)	(4,234)	0	0	-	0	0	-
	(460,991)	(97,741)	(5,395)	(4,234)	-	(90)	(286)	(98)	(11)	-

December 2019	USD	EUR	SDR	KD	CHF	GBP	SKR	CAD	ZAR	UA
Reporting date spot rate	5.5378	6.2031	7.8817	18.7690	5.7131	7.2651	0.5936	4.2405	0.3929	7.6522
Average rate	5.2150	5.8344	7.3987	17.6048	5.2469	6.6504	0.5513	3.9289	0.3613	7.0245

December 2018	USD	EUR	SDR	KD	CHF	GBP	SKR	CAD	ZAR	UA
Reporting date spot rate	4.8200	5.5149	6.8097	16.1389	4.9132	6.1113	0.5374	3.5310	0.3341	6.6478
Average rate	4.5885	5.4159	6.6415	15.5164	4.6885	6.1212	0.5268	3.5386	0.3477	6.4437

Sensitivity

A 5% strengthening of the GH¢, as indicated below, against the currencies above at 31st December, 2019 would have increased (decreased) profit or loss and equity by the accounts shown below. This analysis is based on foreign currency exchange rate variances that the Authority considered to be reasonably possible at the end of the reporting period. The analysis assumes that all other variable, in particular interest rates, remain constant. The analysis is performed on the same basis for 2018, albeit that the reasonably possible foreign exchange rate variance were different, as indicated below:

Effect in thousands of GH¢

	USD	EUR	SDR	KD	CHF	GBP	SKR	CAD	ZAR	UA
2019	(134,853)	(15,911)	-	(3,957)	-	(10)	(157)	(18)	(0)	-
2018	(111,099)	(12,133)	(1,837)	(3,416)	-	(28)	(8)	(17)	0	-

A 5% weakening of the Ghana Cedi against the currencies above at 31st December 2019 would have had the equal but opposite effect on the amounts shown above.

(ii) Interest rate Risk

Interest rate risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate due to the changes in market interest rates.

At the reporting date the interest rate profile of the Group's interest-bearing financial instruments was:

	VRA		GROUP	
	2019	2018	2019	2018
	GH¢'000	GH¢'000	GH¢'000	GH¢'000
Fixed Rate Instruments				
Financial Liabilities	688,129	1,260,058	688,129	1,260,058
Variable rate Instruments				
Financial Assets	83,487	83,487	1,198,871	1,198,871
Financial Liabilities	2,045,898	1,764,683	2,045,898	1,764,683

Fair value sensitivity analysis for fixed-rate instruments

The group does not account for any fixed rate financial assets or financial liabilities at fair value through profit or loss. Therefore, a change in interest rate at the reporting date would not affect profit or loss.

Cash flow sensitivity analysis for variable-rate instruments

A reasonably possible change of 10 basis points in interest rates at the reporting date would have increased (decreased) profit or loss by the amounts shown below. This analysis assumes that all other variables, in particular foreign currency exchange rates, remain constant.

	VRA		GROUP	
	2019	2018	2019	2018
	GH¢'000	GH¢'000	GH¢'000	GH¢'000
31st December, 2019				
Financial Liabilities	(688,129)		(1,260)	
31st December, 2018				
Variable rate instruments	(1,260)	1,260	(1,260)	(1,260)

Changes in market interest rates would not have any effect on equity.

NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2019

(continued)

Revenue

2a. Sale of Electricity

	VRA			
	2019		2018	
	GWh	GH¢'000	GWh	GH¢'000
Electricity Company of Ghana	5,011	1,425,497.5	4,549	1,281,072
Mines	1,319	827,496	1,091	611,185
Akosombo Textiles	3	1,181	2	183
Aluworks	6	2,752	6	2,883
Diamond Cement	31	13,665	42	19,168
Volta Aluminium Co. Ltd.	893	138,008	815	129,674
Others	132	41,897	147	46,161
GRIDCo (Transmision Loss Recoveries)	843	267,962	707	194,739
Substation Use (GRIDCo.)	9	2,297	9	2,195
Northern Electircity Dept.(NED)	1,414	452,716	1,329	369,797
Local Customers	9,661	3,173,472	8,697	2,657,057
Communaute Electrique Du Benin	777	326,195	385	138,753
Compagne Ivoirienne d'Electricité	76	22,298	77	-
Société National D'elect Du Burkina	18	11,049	16	9,099
Sonabel Youga Mines	39	24,536	39	21,370
Sonabel Bolga-Ougadougou	519	243,448	222	117,129
Fee Zone Companies	236	89,948	161	57,304
Foreign Customers	1,665	717,474	900	343,655
Total Sale of Electricity	11,326	3,890,946	9,597	3,000,712

NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2019

(continued)

Revenue

2a. Sale of Electricity

	GROUP			
	2019		2018	
	GWh	GH¢'000	GWh	GH¢'000
Electricity Company of Ghana	5,011	1,425,498	4,549	1,281,072
Mines	1,319	827,496	1,091	611,185
Akosombo Textiles	3	1,181	2	183
Aluworks	6	2,752	6	2,883
Diamond Cement	31	13,665	42	19,168
Volta Aluminium Co. Ltd.	893	138,008	815	129,674
Others	132	41,897	147	46,161
GRIDCo (Transmision Loss Recoveries)	843	267,962	707	194,739
Substation Use (GRIDCo.)	9	2,297	9	2,195
Northern Electricity Dept.(NED)	846	574,662	757	529,249
Local Customers	9,093	3,295,418	8,125	2,816,509
Communaute Electrique Du Benin	777	326,195	385	138,753
Compagne Ivoirienne d'Electricité	76	22,298.00	77	-
Société National D'elect Du Burkina	18	11,049	16	9,099
Sonabel Youga Mines	39	24,536	39	21,370
Sonabel Bolga-Ougadougou	519	243,448	222	117,129
Fee Zone Companies	236	89,948	161	57,304
Foreign Customers	1,665	717,474	900	343,655
Total Sale of Electricity	10,758	4,012,892	9,025	3,160,164

NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2019

(continued)

2b. Other Operating Income	VRA 2019	VRA 2018	GROUP 2019	GROUP 2018
	GH¢'000	GH¢'000	GH¢'000	GH¢'000
Real Estates	15,366	14,667	20,647	14,667
Health Services	2,915	20,841	19,477	20,841
Schools	13,084	11,162	13,084	11,162
Service Charge	39,066	33,144	39,869	33,144
Profit on Sale of Fixed Assets	223	3,865	223	3,865
Gas Sales Proceeds	26,090	32,631	26,090	32,631
Decrease in provision	-	-	1,142	-
Other Income	14,093	16,609	34,660	25,398
Ferry Services			10,969	9,514
Hospitality Services			5,884	4,111
Total	110,837	132,919	172,045	155,333

2c. Government of Ghana support on AMERI Shortfall

This relates to expected refund from the Government of Ghana on account of the AMERI tariff shortfall on the Build Own Operate Transfer (BOOT) arrangement between Government of Ghana and AMERI. The Ministry of Energy has confirmed that it would support VRA's application to the Ministry of Finance for the refund.

3. Cost of Sales/ Operating Costs	VRA 2019	VRA 2018	GROUP 2019	GROUP 2018
	GH¢'000	GH¢'000	GH¢'000	GH¢'000
Analysis by budget center:				
Generation: Hydro	44,317	42,569	44,317	42,569
Thermal	1,264,782	1,130,726	1,230,329	1,130,726
Distribution(NEDCo)	-		288,002	262,789
Purchase of Electricity	1,178,722	1,112,262	1,204,546	1,099,090
Depreciation	389,863	344,890	559,393	512,453
Total	2,877,684	2,630,447	3,326,587	3,047,627
Analysis by cost element:				
Salaries and Related Expenses	115,209	112,359	254,801	227,872
Materials and Spares Consumed	45,663	23,539	89,559	89,621
Repairs and Maintenance	-	7,178	4,344	13,059
Fuel Handling and Usage	1,131,678	978,144	1,097,225	978,144
Purchase of Electricity	1,178,722	1,112,262	1,204,546	1,099,090
Transmission Service Charge	-	-	65,869	47,026
Depreciation	389,863	344,890	559,393	512,453
Other Operating Costs	16,549	52,075	50,850	80,362
Total	2,877,684	2,630,447	3,326,587	3,047,627

NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2019

(continued)

4. Administrative Expenses

	VRA		GROUP	
	2019	2018	2019	2018
	GH¢'000	GH¢'000	GH¢'000	GH¢'000
Analysis by budget center:				
Central Services	295,819	233,352	374,933	316,773
Schools	29,637	27,287	29,637	27,287
Real Estates	60,543	55,762	60,543	55,762
Health Services	11,643	45,018	46,896	45,018
Depreciation	35,040	87,427	59,629	115,900
Total	432,682	448,846	571,638	560,740
Analysis by cost element:				
Salaries and Related Expenses	245,579	240,139	326,277	282,371
Material and Spare Consumed	-	15,163	3,595	18,260
Repairs & Maintenance	20,859	6,720	31,574	17,739
Other Administrative Cost	122,359	82,246	139,207	109,150
Depreciation	35,040	87,427	59,629	115,900
Employees Benefits	8,646	16,979	10,948	16,979
Audit Fees and Expenses	199.00	172	408	341
Total	432,682	448,846	571,638	560,740
Total Operating & Admin Cost	3,310,366	3,079,293	3,898,225	3,608,367

5a. Financial Income

	VRA		GROUP	
	2019	2018	2019	2018
	GH¢'000	GH¢'000	GH¢'000	GH¢'000
Interest & Investment Income	10,939	14,101	158,629	133,029
	10,939	14,101	158,629	133,029

6. Financial Expenses

	VRA		GROUP	
	2019	2018	2019	2018
	GH¢'000	GH¢'000	GH¢'000	GH¢'000
Interest on Long Term Loans	3,003	3,551	3,003	3,551
Interest on Medium Term Loans	69,271	47,181	69,271	47,181
Interest on Short Term Loans	16,066	41,470	16,066	41,470
Finance Cost on Ameri Finance Lease	215,429	263,440	215,429	263,440
Finance Cost on Defined Benefit Obligations	25,573	21,955	30,087	26,652
Interest on Overdrafts	-	-	-	-
Interest on Delayed Invoices	34,384	45,253	34,384	45,253
Total	363,726	422,850	368,240	427,547

NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2019

(continued)

7. Taxation (Group)

The Authority is set up as a state owned corporation and is not subject to corporate income tax. Its subsidiaries are however set up as profit making organizations and are therefore subject to corporate income tax. The tax position in the financial statements represent that of the subsidiaries of the Authority.

7a. Income Tax Expense

Income tax expense recognized in profit or loss includes:

	GROUP	
	2019	2018
	GH¢'000	GH¢'000
Current Tax Expense - Note 7 (b)	84,547	55,297
Deferred Tax Expense - Note 7 c.	(145)	542
	84,401	55,839

7b. Current Tax

Movement in current tax balance are shown below:

2019	Bal. at Jan 1	Payment	Charge for the year	Adjustments	Bal. at Dec.31
	GH¢'000	GH¢'000	GH¢'000	GH¢'000	GH¢'000
Before 2016	99,912				99,912
2016	43,130				43,130
2017	38,070				38,070
2018	56,458				56,458
2019	-	(322)	84,547	84	84,309
	237,570	(322)	84,547	84	321,879

2018	Bal. at Jan 1	Payment	Charge for the year	Adjustments	Bal. at Dec.31
	GH¢'000	GH¢'000	GH¢'000	GH¢'000	GH¢'000
Before 2016	99,912	-	-	-	99,912
2016	43,130	-	-	-	43,130
2017	38,070	-	-	-	38,070
2018	-	(89)	55,297	1,250	56,458
	181,112	(89)	55,297	1,250	237,570

The Group does not have the right to offset tax assets and liabilities. The current tax balance is made up of:

	GROUP	
	2019	2018
	GH¢'000	GH¢'000
Current tax payable	321,879	237,570
Current tax receivable	(521)	(565)
Total	321,358	237,005

7c. Deferred tax

Movements in deferred taxes are shown below.

	GROUP	
	2019	2018
	GH¢'000	GH¢'000
Balance at 1 January	816	274
Charged to profit or loss	(145)	542
Balance at 31st December	671	816

8a. Capital Work-in-Progress

GROUP 2019	Generation Assets	Power Distribution Network	Others	Total
	GH¢'000	GH¢'000	GH¢'000	GH¢'000
Balance as at Jan 1, 2019	643,889	14,588	102,467	760,944
Reclassification	-	29,160	(29,160)	-
	643,889	43,748	73,307	760,944
Additions during the year	108,899	22,001	28,910	159,810
Write off	-	-		0
Transfers	(49,015)	-	(15,511)	(64,526)
Balance as at Dec 31, 2019	703,773	65,749	86,706	856,228
2018				
Balance as at Jan 1, 2018	738,907		140,453	895,673
Additions during the year	101,305	26,040.00	41,794	169,139
Write off	-	-	(118.00)	(118)
Transfers	(196,323)	(27,765)	(79,662)	(303,750)
Balance as at Dec 31, 2018	643,889	(1,725)	102,467	760,944

8a. Capital Work-in-Progress

VRA

2019	Generation Assets	Power Distribution Network	Others	Total
	GH¢'000	GH¢'000	GH¢'000	GH¢'000
Balance as at Jan 1, 2019	643,889	299	99,739	743,927
Reclassification	-	29,160	(29,160)	-
	643,889	29,459	70,579	743,927
Additions during the year	108,899	2,581	25,100	136,580
Write off	-	-	-	-
Transfers during the year	(49,015)	-	(15,523)	(64,538)
Transfer to PROPCo	-	-	-	-
Balance as at Dec 31,2019	703,773	32,040	80,156	815,969

2018	Generation Assets	Power Distribution Network	Others	Total
Balance as at Jan 1, 2018	738,907	299	94,825	834,031
Additions during the year	101,305		41,794	143,099
Write of				-
Transfers	(196,323)	-	(36,880)	(233,203)
Transfer to PROPCo	-	-	-	-
Balance as at Dec 31, 2018	643,889	299	99,739	743,927

8b. Property, Plant and Equipment

GROUP 2019

	Dam Power House and Civil Works	Generating Plant & Machinery	Power Distribution Network	Townships	Building	Floating Craft	Motor Vehicles	Equipment & Furniture	Total
A. Valuation	GH¢'000	GH¢'000	GH¢'000	GH¢'000	GH¢'000	GH¢'000	GH¢'000	GH¢'000	GH¢'000
Balance as at Jan 1, 2019	7,815,078	6,052,572	3,550,896	605,906	592,472	531,742	153,427	70,797	19,372,890
Transfers/Adjustments				(12,994)	(3,173)		(5,493)	(962)	(22,622)
Disposal						(3,258.00)	(2,697.00)		(5,955)
Revaluation surplus	1,374,158	1,101,187	625,396	104,668	78,659	14,517	27,239	9,988	3,335,812
Additions (including transfers from CWIP	32,437	16,578	4,415	17,720	10,434	633	27,654	8,042	117,913
Bal as at Dec. 31, 2019	9,221,673	7,170,337	4,180,707	715,300	678,392	543,634	200,130	87,865	22,798,038
B. Depreciation									
As at Jan. 1, 2019	4,286,725	2,748,319	2,625,624	283,891	73,128	411,988	139,955	55,165	10,624,795
Prior Year Adjustment		(64,501)							(64,501)
Disposal/Transfers						(570)	(2,739)		(3,309)
Charge for the period	95,093	292,365	165,932	27,463	8,393	10,929	14,016	4,831	619,022
Revaluation surplus	753,481	503,766	797,883	48,753	8,361	14,441	22,952	8,505	2,158,142
As at Dec 31, 2019	5,135,299	3,479,949	3,589,439	360,107	89,882	436,788	174,184	68,501	13,334,149
C. NET BOOK VALUE As at Dec 31, 2019	4,086,374	3,690,388	591,268	355,193	588,510	106,846	25,946	19,364	9,463,889
Work-in-Progress as at Dec 31, 2019(Note 8a)									856,228
									10,320,117

NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2019

(continued)

8b. Property, Plant and Equipment

GROUP 2018	Dam Power House and Civil Works	Generating Plant & Machinery	Power Distribution Network	Townships	Building	Floating Craft	Motor Vehicles	Equipment & Furniture	Total
A. Valuation	GH¢'000	GH¢'000	GH¢'000	GH¢'000	GH¢'000	GH¢'000	GH¢'000	GH¢'000	GH¢'000
Balance as at Jan 1, 2018	7,017,797	5,241,812	3,163,348	542,636	464,330	248,664	138,000	61,602	16,878,189
Disposal	-	-	-	-	(918)	-	(2,627)	(764)	(4,309)
Revaluation surplus	794,507	615,023	359,783	61,293	57,025	282,812	18,054	7,630	2,196,127
Additions (including transfers from CWIP	2,774	195,737	27,765	1,977	72,035	266	-	2,329	302,883
Balance as at Dec 31, 2018	7,815,078	6,052,572	3,550,896	605,906	592,472	531,742	153,427	70,797	19,372,890
B. Depreciation									
As at Jan 1, 2018	3,764,861	2,224,819	2,237,628	198,161	42,509	89,511	104,042	39,577	8,701,108
Disposal/Transfers	-	-	-	-	(219)	-	(2,511)	(305)	(3,035)
Charge for the period	95,846	244,241	133,896	63,361	6,496	50,502	23,133	10,878	628,353
Revaluation surplus	426,018	279,259	254,100	22,369	24,342	271,975	15,291	5,015	1,298,369
As at Dec 31,2018	4,286,725	2,748,319	2,625,624	283,891	73,128	411,988	139,955	55,165	10,624,795
C. NET BOOK VALUE As at Dec 31,2018	3,528,353	3,304,253	925,272	322,015	519,344	119,754	13,472	15,632	8,748,095
Work-in-Progress as at Dec 31, 2018(Note 8a)									760,944
									9,509,039

8b. Property, Plant and Equipment

VRA 2019	Dam Power House and Civil Works	Generating Plant & Machinery	Townships	Building	Floating Craft	Motor Vehicles	Equipment & Furniture	Total
	GH¢'000	GH¢'000	GH¢'000	GH¢'000	GH¢'000	GH¢'000	GH¢'000	GH¢'000
A. Valuation								
Balance as at Jan 1, 2019	7,815,078	6,052,572	605,906	358,235	82,740	102,673	45,328	15,062,532
Transfer & Adjustments	-	-	(12,994)	(3,173)	-	(5,493)	(962)	(22,622)
Disposal	-	-	-	-	-	(2,188)	-	(2,188)
Revaluation surplus	1,374,158	1,101,187	103,289	61,970	14,517	16,722	4,897	2,676,740
Additions (including transfers from CWIP	32,437	16,578	2,025	2,763	0	5,456	5,095	64,354
Balance as at Dec. 31, 2019	9,221,673	7,170,337	698,226	419,795	97,257	117,170	54,358	17,778,816
B. Depreciation								
As At Jan.1, 2019	4,286,725	2,748,319	283,891	23,433	82,307	94,232	41,507	7,560,414
Disposal/Transfers	-	-	(11,280)	(172)	-	(7,548)	(845)	(19,845)
Charge for the period	95,093	292,365	27,236	4,607	386	3,980	1,236	424,903
Revaluation surplus	753,481	503,766	46,965	3,775	14,441	15,034	6,553	1,344,015
Balance as at Dec 31, 2019	5,135,299	3,544,450	346,812	31,643	97,134	105,698	48,451	9,309,487
C. Carrying Amount								
Balance as at Dec. 31, 2019	4,086,374	3,625,887	351,414	388,152	123	11,472	5,907	8,469,329
Work-in-Progress as at Dec 31, 2019 (Note 8a)								815,969
								9,285,298

NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2019

(continued)

8b. Property, Plant and Equipment

VRA 2018

	Dam Power House and Civil Works	Generating Plant & Machinery	Townships	Building	Floating Craft	Motor Vehicles	Equipment & Furniture	Total
A. Valuation	GH¢'000	GH¢'000	GH¢'000	GH¢'000	GH¢'000	GH¢'000	GH¢'000	GH¢'000
Balance as at Jan 1, 2018	7,017,797	5,241,812	542,636	318,959	74,344	94,838	39,251	13,329,637
Disposal	-	-	-	-918	-	(2,112)	-	(3,030)
Revaluation surplus	794,507	615,023	61,293	39,822	8,396	9,947	4,081	1,533,069
Additions (including transfers from CWIP	2,774	195,737	1,977	372			1,996	202,856
Balance as at Jan 31, 2018	7,815,078	6,052,572	605,906	358,235	82,740	102,673	45,328	15,062,532
B. Depreciation								
As At Jan.1, 2018	3,764,861	2,224,819	198,161	17,722	70,258	74,174	31,293	6,381,288
Disposal/Transfers	-	-	-	-219	-	(2,030)	-	(2,249)
Charge for the period	95,846	244,241	63,361	3,943	4,114	13,748	7,064	432,317
Revaluation surplus	426,018	279,259	22,369	1,987	7,935	8,340	3,150	749,058
As at Dec 31, 2018	4,286,725	2,748,319	283,891	23,433	82,307	94,232	41,507	7,560,414
C. Carrying Amount								
Balance as at Dec. 31, 2018	3,528,353	3,304,253	322,015	334,802	433	8,441	3,821	7,502,118
Work-in-Progress as at Dec 31, 2018 (Note 8a)								743,927
								8,246,045

NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2019

(continued)

The net carrying amount of generating plant and machinery acquired under finance leases at the end of the year was Gh¢1,253.80million (2018: Gh¢1,066.65 million). There were no restrictions on the Group's title to items of property, plant and equipment at the end of the year. No equipment had been pledged as security for liabilities.

8c. Disposal of Property, Plant and Equipment

	VRA		GROUP	
	2019	2018	2019	2018
	GH¢'000	GH¢'000	GH¢'000	GH¢'000
Cost	2,188	3,030	2,188	4,309
Accumulated Deprecation	(2,188)	(2,249)	(2,188)	(2,249)
Carrying amount	-	781	-	2,060
Revaluation on disposed assets	-	-	-	-
Net Carrying Amount	-	781	-	2,060
Proceeds from Disposal	174	4,646	174	4,756
Profit /(loss) on disposal	174	3,865	174	2,696

8d. Intangible Assets

Cost				
Balance as at Jan 1	-	-	71	71
Additions	-	-	88	-
Balance as at Dec. 31	-	-	159	71
Amortization				
Balance as at Jan 1	-	-	71	62
Charge for the year	-	-	29	9
Balance as at Dec 31	-	-	100	71
Carrying Amount	-	-	59	-

9a. Investment in Subsidiaries

TAPCO(100% owned)	169,113	169,113	-	-
VLTC(100% owned)	1,123	1,123	-	-
AHL (100% owned)	5,625	5,625	-	-
NEDCo(100 %)	200,000	200,000	-	-
PROPCO (100%)	69,945	69,945	-	-
VHSL (100% Owned)	52,825	-		
	498,631	445,806	-	-

All the subsidiaries are incorporated in the Republic of Ghana.
Volta River Authority Health Services Ltd (VHSL) was operating as a Strategic Business Unit of Volta River Authority until April 01, 2019 that the board approved it to be operated as a subsidiary

9b. Investment in Equity Securities

TICO (10% Owned)	1,123	1,123
WAGPCo (16.38% Owned)	169,113	169,113
	170,236	170,236

10 Other Long Term Investments

	VRA		GROUP	
	2019	2018	2019	2018
	GH¢'000	GH¢'000	GH¢'000	GH¢'000
Debt Contingency Fund	38,921	38,921	38,921	38,921
Other Long Term Investment	-	-	1,355,131	1,076,463
	38,921	38,921	1,394,052	1,115,384

This represents the Group's investment in foreign currency money market instruments to enable the group meet its debt obligations during periods of operational difficulties

11 Inventories

	VRA		GROUP	
	2019	2018	2019	2018
	GH¢'000	GH¢'000	GH¢'000	GH¢'000
Inventory and spare parts	164,022	99,896	198,463	122,190
Write down for obsolescence	-	-	(14,350)	
	164,022	99,896	184,113	122,190
Fuel for Thermal Plant	205,710	267,530	205,710	267,530
	369,732	367,426	389,823	389,720

Cost of inventory is determined by using the weighted average cost formula.

12 Trade and other Receivables

	VRA		GROUP	
	2019	2018	2019	2018
	GH¢'000	GH¢'000	GH¢'000	GH¢'000
Trade Receivables	4,844,583	4,104,078	5,944,426	5,067,678
Provision for doubtful debts	(280,751)	(280,751)	(307,072)	(308,168)
Prepayments	4,563,832	3,823,327	5,637,354	4,759,510
Amounts due from related parties	112,256	68,369	168,786	76,771
Amount due from Government of Ghana	1,101,225	811,224	-	-
in respect of the AMERI transaction - Note 2(c)	876,455	737,158	876,454.52	737,158
Other Receivables	1,102,747	1,051,748	1,616,801	1,353,142
Staff Advances	30,839	31,835	36,890	42,360
	7,787,354	6,523,661	8,336,286	6,968,941
Current	7,771,998	6,508,511	8,320,930	6,953,791
Non-current	15,356	15,150	15,356	15,150
	7,787,354	6,523,661	8,336,286	6,968,941

13 Short-term Investments

Short-term investments are made up of investments in Government of Ghana treasury bills and money market instruments held with financial institutions.

14 Cash and Bank

	VRA		GROUP	
	2019	2018	2019	2018
	GH¢'000	GH¢'000	GH¢'000	GH¢'000
Foreign Currency	516,124	538,582	551,550	544,325
Local Currency	132,808	77,850	205,502	161,809
Cash on Hand	188	126	188	175
Cash and cash equivalents in the statement of financial position	649,120	616,558	757,240	706,309
Short term investments	74,081	2,647	137,295	83,487
Bank overdraft	-			(43)
Cash and cash equivalents in the statement of cash flows	723,201	619,205	894,535	789,753

*Short-term investment included as cash and cash equivalents in the Group's financial statements are investments in Government of Ghana treasury bills and other money market instruments with maturities of 3 months or less.

15 Payables

	VRA		GROUP	
	2019	2018	2019	2018
	GH¢'000	GH¢'000	GH¢'000	GH¢'000
Current Portion				
Trade Payables	6,457,706	5,070,749	6,913,628	5,377,858
Amount due to related parties	33,016	33,016	-	-
Sundry Payables	82,415	255,570	95,800	268,750
Accruals and Provisions	14,799	32,486	14,865	32,523
	6,587,936	5,391,821	7,024,293	5,679,131
Capital Grant				
Non-Current Portion				
Other Payables	269,740	269,740	256,743	225,196
Deferred Tax	-	-	671	816
Capital Grant (Note 20)	-	-	48,712	25,257
	269,740	269,740	306,126	251,269
Total Payables	6,857,676	5,661,561	7,330,419	5,930,400

NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2019

(continued)

16a Borrowings

	VRA		GROUP	
	2019	2018	2019	2018
	GH¢'000	GH¢'000	GH¢'000	GH¢'000
Current portion of long and medium term loans Finance lease	-	-	-	-
obligations due within 1 year	688,128	532,610	688,814	532,610
Bank Overdrafts	-	-	130	43
Loan interest and commitment charges	262,718	280,780	262,718	280,780
Short-term borrowings	87,540	214,181	87,540	216,692
	1,038,386	1,027,571	1,039,202	1,030,125
Non-Current Portion				
Finance lease obligations due after 1 year	-	727,448		727,448
Amount due after one year but before five years	870,819	307,275	870,819	307,275
Amount due after five years but before ten years	824,691		824,691	
Amount due after ten years	-	962,447		962,447
	1,695,510	1,997,170	1,695,510	1,997,170
Total Borrowing	2,733,896	3,024,741	2,734,712	3,027,295

16b. Borrowings - Movement in loan balances

The following shows the movement in loan balances during the year

VRA	Bal. as at 1-01-2019	Drawings	Repayments	Adjustment	Exchange Variation	Bal. as at 31-12-2019
	GH¢'000	GH¢'000	GH¢'000	GH¢'000	GH¢'000	GH¢'000
Long Term Loans Kpong Hydro Project						
Kuwait Fund - 339	12,712	-	-	-	2,072	14,784
Kuwait Fund	55,615	-	-	-	9,063	64,678
Societe General - T3	333,605	-	-	-	49,681	383,286
IDA-4356-GEDAP	36,740	-	-	-	5,784	42,524
AFD(Akuse Retrofit)	239,969	23,940	-	-	32,078	295,987
KTPP-MRP	283,807	-	(283,807)	-	-	-
KFW GOG 12mw	-	22,140	-	-	1,292	23,432
Photovoltaic System - Loan						
Subtotal: Long Term Loans	962,448	46,080	(283,807)	-	99,970	824,691
Medium Term Loans						
Afrexim $150m	144,600	-	(152,472)	-	7,872	-
Afrexim $75m	162,675	-	(171,531)	-	8,856	-
Afrexim $185m	-	940,244	(149,072)		79,647	870,819
Subtotal: Medium Term Loan	307,275	940,244	(473,075)	-	96,375	870,819
Total: Long and Medium Term Loans	1,269,723		(756,882)	-	196,345	1,695,510
Loans interest and commitment charges	280,780	-	(18,062)		-	262,718

16b. Borrowings - Movement in loan balances

The following shows the movement in loan balances during the year

VRA	Bal. as at 1.01.2019	Drawings	Repayments	Exchange Variation	Bal. as at 31-12-2019
	GH¢'000	GH¢'000	GH¢'000	GH¢'000	GH¢'000
Short Term Loans					
Ecobank	33,740	-	(33,740)	-	-
Ghana International Bank (GIB$5.5M)	20,083	-	(20,993)	910	-
Sahara Energy Resources	148,494	-	(80,288)	19,334	87,540
Cal Bank	11,864	-	(12,369)	505	-
Subtotal: Short Term Loans	214,181	-	(147,390)	20,749	87,540
Finance lease obligations - Note 16c	1,260,058	215,431	(930,732)	143,372	688,129
Total Borrowings	3,024,742	1,201,755	(1,853,066)	360,466	2,733,897

16b. Borrowings - Movement in loan balances

The following shows the movement in loan balances during the year

GROUP	Bal. as at 1.01.2019	Drawings	Repayments	Exchange Variation	Bal. as at 31-12-2019
	GH¢'000	GH¢'000	GH¢'000	GH¢'000	GH¢'000
Long Term Loans					
Kpong Hydro Project					
Kuwait Fund - 339	14,130	-	-	2,072	16,202
Kuwait Fund	54,197	-	-	9,063	63,260
Societe General - T3	333,605	-	-	49,681	383,286
IDA-4356-GEDAP	36,740	-	-	5,784	42,524
AFD(Akuse Retrofit)	239,969	23,940	-	32,078	295,987
KTPP-MRP	283,806	-	(283,806)	-	-
KWF GOG 12 MW Photovoltaic System Loan	-	22,140	-	1,292.00	23,432
	962,447	46,080	(283,806)	99,970	824,691
Medium Term Loans					
Afrexim 150m	144,600	-	(152,472)	7,872	-
Afrexim 75m	162,675	-	(171,531)	8,856	-
Afrexim 185m	-	940,244	(149,072)	79,647	870,819
Subtotal: Medium Term Loan	307,275	940,244	(473,075)	96,375	870,819
Loans interest and commitment charges	280,780	-	(18,062)	-	262,718

16b. Movement in loan balances continued (VRA)

The following shows the movement in loan balances during the year

GROUP	Bal. as at 1.01.2019	Drawings	Repayments	Exchange Variation	Bal. as at 12.31.2019
	GH¢'000	GH¢'000	GH¢'000	GH¢'000	GH¢'000
Short Term Loans					
Ghana International Bank	20,083		(20,993)	910	-
Sahara Energy Resources	148,494		(80,288)	19,334	87,540
Cal Bank	11,864		(12,369)	505	-
Ecobank	33,740	-	(33,740)	-	-
Subtotal: Short Term Loans	214,181	-	(147,390)	20,749	87,540
Bank Overdrafts	2,554	2,151	(2,424)	-	2,281
Finance lease obligations - Note 16c	1,260,058	216,117	(930,732)	143,372	688,815
Total Borrowings	3,027,295	1,204,592	(1,855,489)	360,466	2,736,864

16b. Long Term Loans

Details of the long term loans are shown below:

Loan	Currency	Amount	Interest Rate	Maturity Date
KUWAIT 339	KWD	787,680	4%	2029
SOCIETE GENERAL-T3	USD	67,960,462	2.08%	2020
KUWAIT FUND	KWD	3,446,000	4%	2029
(KTHERMAL)IDA 4356	SDR	5,232,026	5.30%	2047
AFD(Kpong Retrofit Project)	EUR	23,609,533	1.99	2041

16c. Finance Lease Obligations

Finance lease liabilities are payable as follows:

VRA	Minimum Lease Payments		Interest		Present Value of Minimum Lease Payment	
	2019	2018	2019	2018	2019	2018
	GH¢'000	GH¢'000	GH¢'000	GH¢'000	GH¢'000	GH¢'000
Less than one year	903,560	1,011,398	215,431	478,788	688,129	532,610
Between one and five years		816,462		89,014		727,448
	903,560	1,827,859	215,431	567,802	688,129	1,260,058

NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2019

(continued)

GROUP	Minimum Lease Payments		Interest		Present Value of Minimum Lease Payment	
	2019	2018	2019	2018	2019	2018
	GH¢'000	GH¢'000	GH¢'000	GH¢'000	GH¢'000	GH¢'000
Less than one year	903,560	1,011,398	215,431	478,788	688,129	532,610
Between one and five years	-	816,462	-	89,014	-	727,448
	903,560	1,827,859	215,431	567,802	688,129	1,260,058

In 2016, the Government of Ghana entered into a Build Own Operate and Transfer (BOOT) arrangement with Africa and Middle East Resources Investment Group (AMERI Energy) LL C for the provision of a 250MW fast track power generation solution. The Government of Ghana assigned its rights under the arrangement to VRA. The BOOT was re-negotiated in August 2018 which resulted in the waiver of the variable and operating charge and the extension of the repayment period for the capacity charge. the Authority also bears the cost of gas supplied to AMERI for the production of power.

The Government of Ghana has the option to purchase the equipment for USD1 at the end of the lease term.

17 Investment by the Republic of Ghana

	VRA		GROUP	
	2019	2018	2019	2018
	GH¢'000	GH¢'000	GH¢'000	GH¢'000
Balance at beginning of the year	3,960,933	2,924,652	3,960,933	2,924,652
Addition during the year	344,653	1,036,281	344,653	1,036,281
Balance at close of the year	4,305,586	3,960,933	4,305,586	3,960,933

18 The revaluation surplus arises as a result of revaluation of property, plant and equipment

	VRA		GROUP	
	2019	2018	2019	2018
	GH¢'000	GH¢'000	GH¢'000	GH¢'000
Balance at beginning of the year	4,893,838	4,560,176	6,798,395	6,337,221
Surplus for the year	1,332,725	784,011	1,177,670	897,758
Transfer		-		-
Transfer to Income Surplus Account	(327,188)	(450,349)	(304,781)	(436,584)
Balance at close of the year	5,899,375	4,893,838	7,671,284	6,798,395

The revaluation surplus is not distributable to owners of the parent

19 Employee Benefits
a. Defined benefit obligations-schemes funded

VRA operates the following defined benefit schemes:

i Long- Services awards

This defined scheme entitles employees to a benefit package at the end of their service to the Authority. The benefit package is paid at the point of exit on a graduated scale based on the length of service ranging from 10 to 40 years.

ii. Severance benefit

This relates to rewards (package) paid to employees who attain certain milestone with the Authority and exit before their due date of retirement

iii Post-Retirement Medical Benefit

There is no contribution by the employee towards this benefit and no insurance scheme. The employer simply bears the medical costs (no cap defined) of the retiree and their spouse for as long as the retiree is alive. After the death of the retiree the spouse will be taken care of for 6 months after which they will be removed from the scheme.

The present value of the benefits at the end of the year are as shown below:

	VRA		GROUP	
	2019	2018	2019	2018
	GH¢'000	GH¢'000	GH¢'000	GH¢'000
Long-service award	39,477	38,136	58,099	55,266
Severance Benefit	18,230	17,229	24,897	23,208
Post-Retirement medical benefit	136,907	132,704	149,112	143,979
	194,614	188,070	232,109	222,454

b. Defined benefit obligations- movement in net defined benefit liability

The following tables show recompilations from the opening balances to the closing balances for the net defined benefit liability and its components of the various employee benefit schemes:

Long-service award	VRA 2019	VRA 2018	GROUP 2019	GROUP 2018
	GH¢'000	GH¢'000	GH¢'000	GH¢'000
Balance at 1 January	38,136	33,575	55,266	48,792
Included in profit or loss:				
Current service cost	3,654	2,680	5,152	3,922
Past service cost	-	-		-
Net interest	5,433	4,744	7,747	6,872
	9,087	7,424	12,898	10,794
Included in other comprehensive income:				
Actuarial loss (gain arising from):				
Actuarial loss (gain arising from)				
Demographic Assumptions	(64)	1,958	(308)	2,638
Financial Assumptions				
Other sources		(903)		(1,140)
	(64)	1,055	(308)	1,498
Benefits paid	(7,682)	(3,917)	(9,757)	(5,817)
Balance at 31 December	39,477	38,136	58,099	55,266

Severance Benefit	VRA 2019	VRA 2018	GROUP 2019	GROUP 2018
	GH¢'000	GH¢'000	GH¢'000	GH¢'000
Balance at 1 January	17,229	16,064	23,208	21,513
Included in profit or loss:				
Current service cost	1,005	870	1,405	1,193
Past service cost		-		-
Net interest	2,370	2,287	3,183	3,056
	3,375	3,157	4,588	4,249
Included in other comprehensive income:				
actuarial loss (gain arising from):			-	-
Demographic Assumptions	(12)	865	143	1,136
Financial Assumptions				-
Other sources	-	(882)		(1,011)
	(12)	(17)	143	125
Benefits paid	(2,362)	(1,974)	(3,042)	(2,679)
Balance at 31 December	18,230	17,230	24,897	23,208

NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2019

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Post-retirement medical benefit	VRA		GROUP	
	2019	2018	2019	2018
	GH¢'000	GH¢'000	GH¢'000	GH¢'000
Balance at 1 January	132,704	99,497	143,979	108,519
Included in profit or loss:				
Current service cost	3,987	2,297	4,392	2,648
Past service cost		-		-
Net interest	17,770	14,925	19,157	16,278
	21,757	17,222	23,549	18,926
Included in other comprehensive income:				
actuarial loss (gain arising from):	-	-	-	-
Demographic Assumptions	(13,179)	6,836	(4,589)	7,410
Financial Assumptions				
Other sources		12,312		12,476
	-13,179	19,148	(4,589)	19,885
Benefits paid	(4,376)	(3,163)	(13,827)	(3,351)
Balance at 31 December	136,907	132,704	149,112	143,979

Total	VRA		GROUP	
	2019	2018	2019	2018
	GH¢'000	GH¢'000	GH¢'000	GH¢'000
Balance at 1 January	188,070	149,136	222,454	178,823
Included in profit or loss:				
Current service cost	8,646	5,848	10,948	7,763
Past service cost	-	-		-
Net interest	25,573	21,955	30,087	26,206
	34,219	27,803	41,035	33,969
Included in other comprehensive income:				
actuarial loss (gain arising from):				-
Demographic Assumptions	-	9,659		11,183
Financial Assumptions		-		-
Other sources	(13,255)	10,526	(13,992)	10,325
		20,185	(13,992)	21,508
Benefits paid	(14,421)	(9,055)	(17,388)	(11,847)
Balance at 31 December	194,614	188,070	232,109	222,453

c. Defined benefits obligations-actuarial assumptions

The following are the principal assumptions at reporting date

	VRA		GROUP	
	2019	2018	2019	2018
Inflation rate	12.00%	9.41%	12.00%	9.41%
Discount rate	15.00%	15.00%	15.00%	15.00%
Net effective inflation gap	3.00%	2.68%	3.00%	2.68%
Withdrawal Rate	5.00%	5.00%	5.00%	5.00%
Retirement age	60 years	60 years	60 years	60 years

Mortality in 2018 was assumed to follow the mortality rates according to the SA85-90 table. This assumption has changed in 2019 to reflect the the SSNIT mortality.

20 Government Grant

These are grants in the form of crafts and other assets received by Volta Lake Transport Company Ltd from the Government of Ghana during the year to support the company's operations.

21 Debt contingency fund reserve

The debt contingency fund reserve was established by the Authority to enable the Authority meet its debt obligations during periods of operational difficulties. The fund is supported by investments in foreign currency money market instruments. At the end of every year, an amount (equal to the change in the value of the investments) is transferred from retained earnings to the debt contingency fund service.

Changes in the value of the investment are attributable to interest earned and foreign exchange gains/losses.

NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2019

(continued)

22. Reconciliation of operating loss to operating cash flow

	VRA		GROUP	
	2019	2018	2019	2018
	GH¢'000	GH¢'000	GH¢'000	GH¢'000
Loss after Tax	(127,489)	(220,101)	(253,051)	(393,157)
Adjustments for:				
Depreciation & amortization	424,903	432,317	619,022	601,545
Exchange (Gain) / Loss	605,046	402,663	385,047	286,903
Profit on disposal of Property, Plant and Equipment	(223)	(3,865)	(223)	(3,930)
Investment Income	(10,939)	(14,101)	(158,435)	(133,013)
Finance expense	363,726	422,850	363,726	422,850
Capital Work-in-progress written off		-		-
Prior year adjustments		-	(48)	13,921
Amortization of grant		-	(735)	(2,447)
Tax Expense		-	84,401	55,293
	1,255,024	1,019,763	1,039,704	847,965
Changes in:				
• Inventories	(2,306)	(83,450)	(102)	(79,770)
• Receivables	(1,263,324)	(1,214,708)	(1,486,012)	(1,045,120)
• Payables	926,909	399,687	1,388,554	420,974
• Provisions and defined benefits	6,544	38,934	6,544	38,934
Cash Generated from Operating activities	922,847	160,226	948,688	182,983
Tax paid	-	-	(68)	(89)
Interest paid	(18,062)	(30,619)	(18,062)	(30,619)
Net cash from operating activities	904,785	129,607	930,558	152,275

NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2019

(continued)

23 Going concern consideration

The Authority recorded a net loss of GH¢127 million for the year ended 31 December, 2018 (2018: GH¢220) million and as at the date, its current assets exceeded its current liabilities by GH¢1,220 million (2018: current liabilities exceeded assets by GH¢1,075 million).

24 Contingent liabilities

As at the reporting date, the Authority had other legal cases pending judgment. The Directors believe that the outcome of these cases will be favorable to the Authority.

25 Capital commitments

The Group has a contract with Zakhem Construction Ghana Limited for the Engineering, Procurement and Construction of a single cycle power plant at Tema. The estimated value of works expected to complete the project at the end of the year is GH¢24.93million.

26 Related parties

Related party transactions

	VRA		GROUP	
	2019	2018	2019	2018
Sale of Power	GH¢'000	GH¢'000	GH¢'000	GH¢'000
NEDCo	452,716	369,797	452,716	369,797
Purchase of Power				
TICO	328,153	429,433	328,153	429,433

27 Prior Year Adjustment

This includes an amount of GH¢64.5 million relating to overcharged depreciation for floating craft.