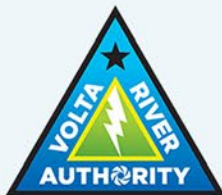




2021 Annual Report & FINANCIAL STATEMENT



**VOLTA
RIVER
AUTHORITY**

60th

Annual Report and Accounts

20 21

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VISION STATEMENT

To be a Model of Excellence for Power Utilities in Africa.



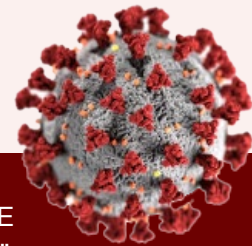
MISSION STATEMENT

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.

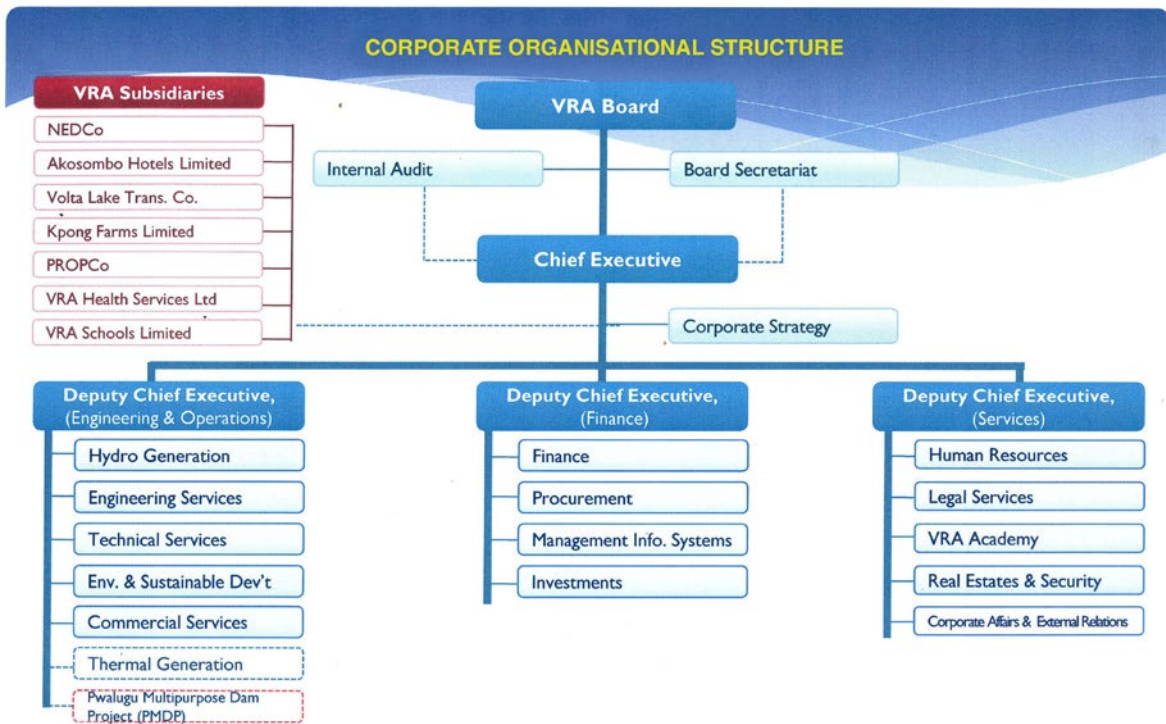


VRA MANAGEMENT’S COMMITMENT STATEMENT ON COVID-19

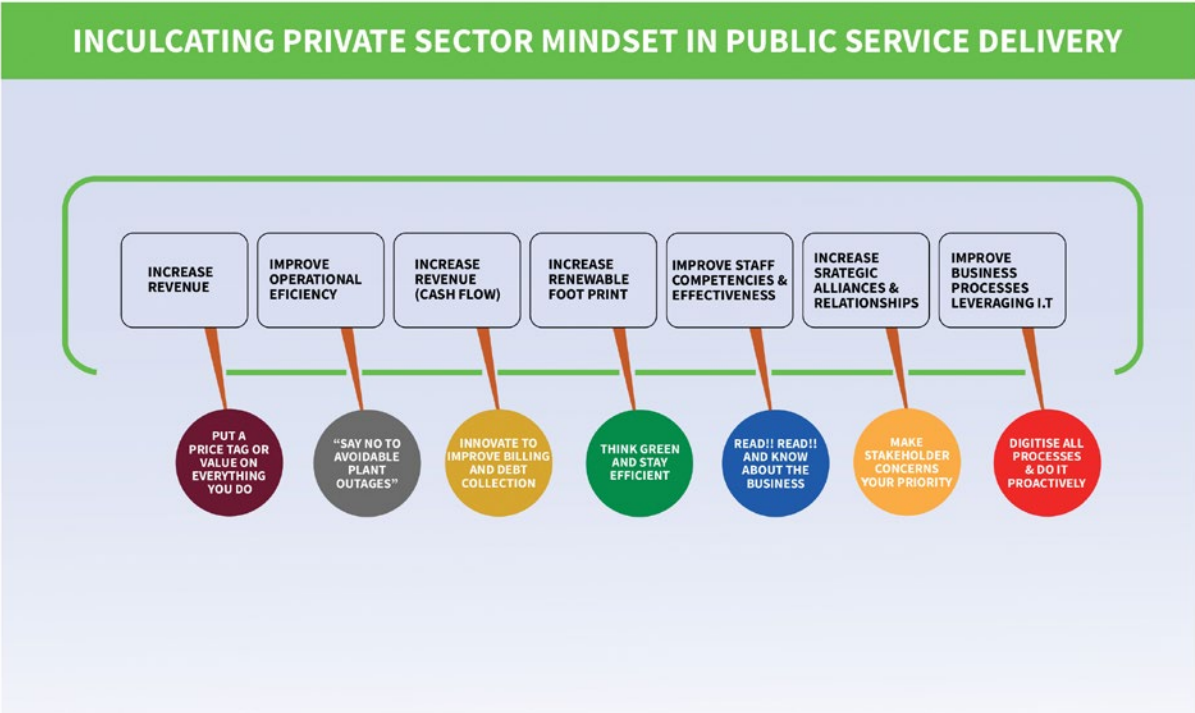
VRA Management is committed to protecting the health, safety, and overall well-being of its workforce and families, visitors and communities through the implementation of appropriate and acceptable protocols at our operational and work locations to combat the spread of COVID-19.



“KEEP YOUR DISTANCE, WASH YOUR HANDS AND SANITISE REGULARLY, MASK UP ALWAYS; NO FACE MASK NO ENTRY”



Corporate Strategy



Corporate Achievements



SUSTAINABILITY & SOCIAL INVESTMENT

- Best Company in Economic Empowerment
- Best Company in Livelihood Empowerment
- 5th SDG Leadership Award
- Best Company in Climate Change Mitigation Practice
- Best Company in Promoting Workplace Diversity & Inclusion

GHANA ENERGY AWARDS

- Exceptional Digital Management Award

GHANA BUSINESS AWARDS

- Energy Company of the Year.

AFRICA PROCUREMENT & SUPPLY CHAIN

- Best in Procurement & Supply Chain Compliance (Gold)
- Excellence in Procurement & Supply Chain (SOE) Gold

INSTITUTE OF INTERNAL AUDITORS

- Appreciation Award
- Best Internal Audit Unit (SOE Category)

NATIONAL GOVERNANCE & BUSINESS AWARDS

- Power & Energy Company of the Year.



KEY MILESTONES



- Volta River Authority established (Act 46, 1961)
- Construction of the Akosombo Dam
- First power produced on commercial basis from the Akosombo Generating Station (AGS)
- Akosombo Hydro-Electric Project inaugurated



1971- 1980

- Commissioning of last 2 units of the Akosombo Hydro-Electric Project
- Commissioning of Akosombo Expansion Project and Switch-On of Ghana-Togo-Benin Transmission Line
- Construction works on Kpong Dam begin



1981- 1990

- The first generating unit of Kpong Hydro-Electric Power Plant switched on
- The Kpong Hydro-Electric Power Plant commissioned
- The VRA and Compagnie Ivoirienne d'Electricite (CIE) Interconnection commissioned.
- The Northern Electricity Department established



1991- 2001

- AGS Retrofit project begins
- Pre-feasibility study for interconnection of Ghana-Burkina Faso Power System completed
- VRA Resettlement Trust Fund instituted
- Constructional works begin on Takoradi Thermal Power Project
- First and Second Units of Takoradi Thermal Power Plant Commissioned
- Signing of Power Purchase Agreement between VRA and Takoradi International Company
- Takoradi Thermal Power Station inaugurated

KEY MILESTONES



2001- 2010

- Official Handing Over of the AGS Retrofit Project
- Parliament Reviewed ACT 46
- VRA Appointed Implementation Agency for Liberia Emergency Power Programme (EPP)
- 126MW Tema Thermal 1 Power Plant Commissioned



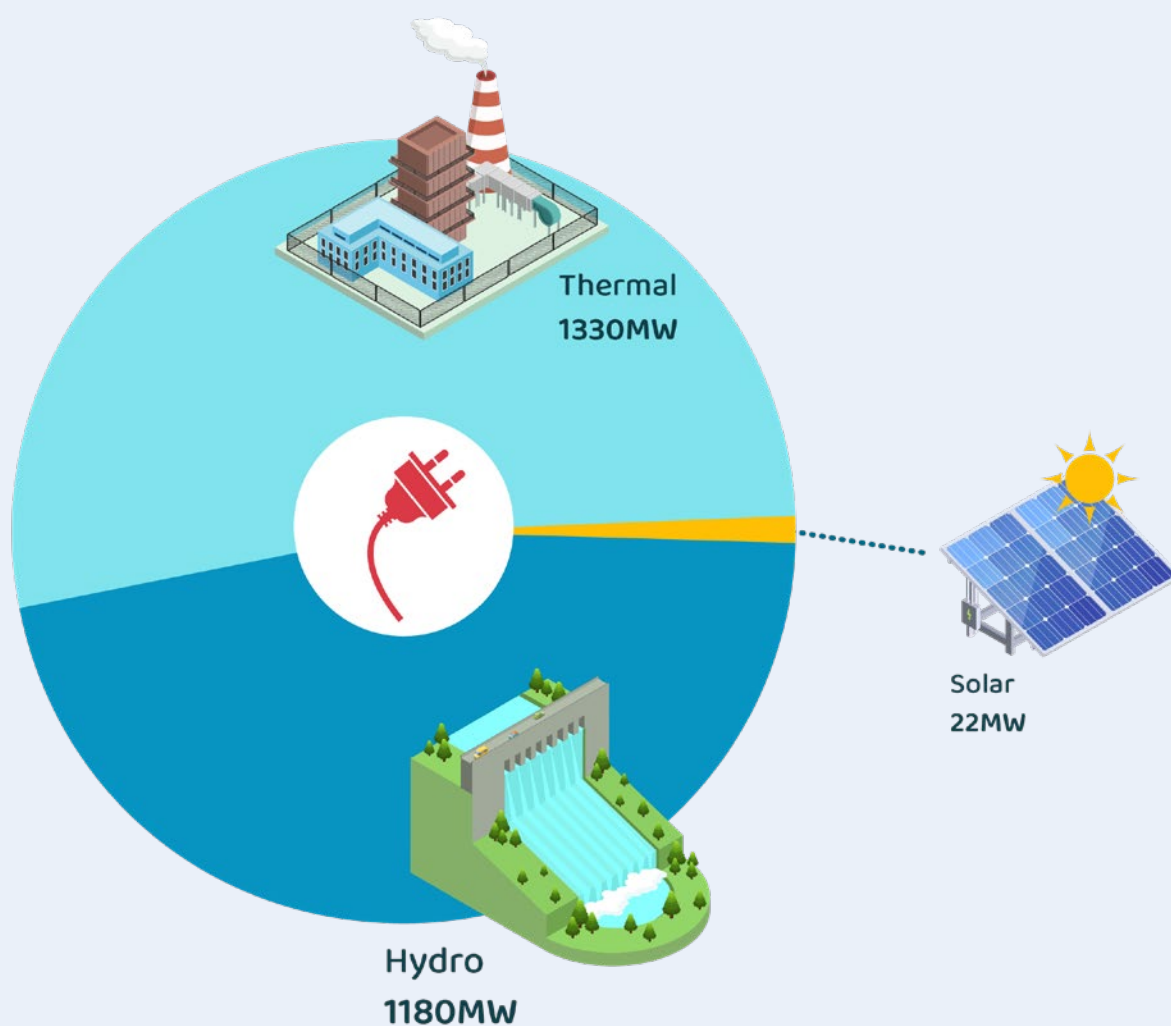
2011- 2022

- Inauguration of Northern Electricity Distribution Company (NEDCO) as a Subsidiary
- Burial of “VRA Time Capsule” at Akosombo
- Commissioning of Takoradi Thermal Power Plant Project (T3)
- Inauguration of VRA's first utility scale 2.5MW Solar Power Plant at Navrongo
- Commissioning of Kpone Thermal Power Plant (KTTP)
- Commissioning of T2 Power Plant for Combined Cycle Operations (Aboadze)
- Installation of the Head Office 79kW roof top solar PV project
- Inauguration of 17MWp Kaleo Solar Power Project in the Upper West Region
- Commissioning of 6.5MWp Lawra Solar Power Plant.
- Commissioning of the Kpong GS Retrofit Project
- Installation of 60kW Head Office Solar Rooftop Car Park



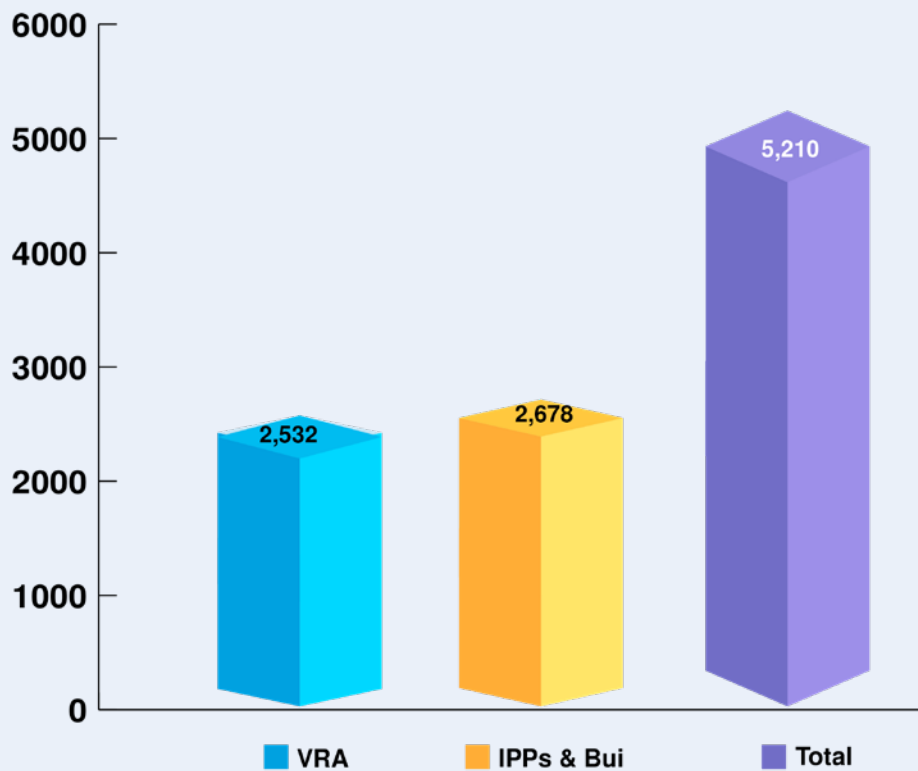
OUR FOOTPRINTS

VRA operates in seven work locations in five regions. The Eastern Region of Ghana hosts the Authority's two hydro dams: the Akosombo and Kpong Generating Stations at Akosombo and Akuse respectively. Our thermal generating facilities are located at Aboadze in the Western region and Kpone and Tema in the Greater Accra region. Lastly, our utility scale solar power plants are located in Navrongo, Lawra and Kaleo in the Upper East and Upper West regions, respectively.



NATIONAL INSTALLED CAPACITY

2021 INSTALLED CAPACITY (MW)



VRA GENERATION CAPACITY

Energy Type	Installed capacity (MW)	Percentage of VRA's installed Capacity	Percentage of the Total National Installed Capacity
Hydro	1180	46.60%	22.6%
Thermal	1330	52.53%	25.5%
Renewable (Solar)	22	0.87%	0.4%
TOTAL	2,532	100%	48.6%

BOARD CHAIRMEN (1961 - 2021)



Osagyefo Dr. Kwame Nkrumah
1962 - 1965



J.W.K. Harley, Esq.
1966 - 1970



Dr. I.B. Asafu-Adjaye
1971 - 1972



Prof. K. Bentsi-Enchill
1972 - 1973



Dr. Amon Nikoi
1973 - 1974



Mr. E.K Okoh
1974 - 1975



Nii Amaa Ollennu
1975 - 1977



Mr. Justice Enoch Edusei
1977 - 1978



Mr. Alexander E.K. Ashiagbor
1979 - 1980



Dr. Ivan Addae-Mensah
1980 - 1982



Mr. John S. Addo
1982 - 1984



Mr. E.Q.H. Acquah
1985 - 1989



Mr. Ato Ahwio
1989 - 1998



Mr. Erasmus A.K. Kalitsi
1999 - 2001



Dr. Charles Wereko-Brobby
2001 - 2001



Dr. Jones Ofori-Atta
2001 - 2003



Mr. Osei Asamoah Bonsu
2004 - 2008



Prof. Akilagpa Sawyer
2009 - 2013



Mr. Lee Ocran
2014 - 2016



Mr. Kwaku Andoh Awotwi
2017 - 2020

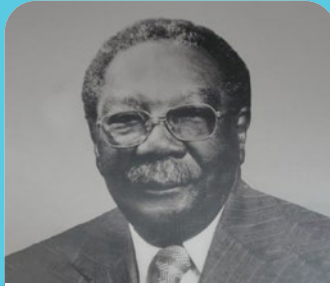


Mr. Kofi Tutu Agyare
2021 - present

CHIEF EXECUTIVES (1961 - 2021)



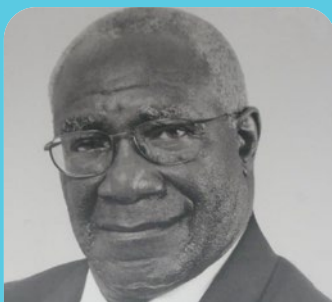
Frank L. Dobson
(1961-1966)



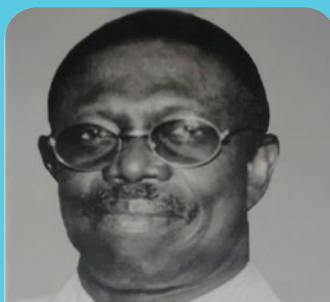
Dr. E.L. Quartey
(1966-1980)



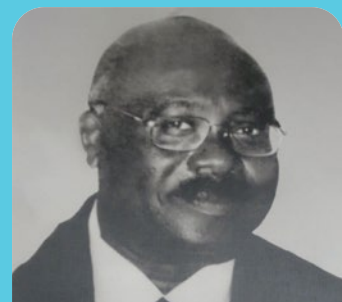
Mr. L. Casely-Hayford
(1980-1990)



Mr. E.A.K. Kalitsi
(1991-1998)



Mr. Gilbert O. Dokyi
(1998-2001)



Dr. Charles Wereko-Brobby
(2001-2003)



Mr. Joshua K. Ofedie
(2004-2008)



Mr. Owura K. Sarfo
(2008-2009)



Mr. Kweku Andoh Awotwi
(2009-2013)



Ing. Isaac Kirk Koffi
(2013-2017)



Mr. Emmanuel Antwi-Darkwa
(2017-Present)



CORPORATE PROFILE

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) into Ghana's energy market.

Following the amendment, the transmission function was hived off into an entity, designated as the Ghana Grid Company (GRIDCo), while VRA's distribution department, the Northern Electricity Department (NED), has been transformed into the Northern Electricity Distribution Company (NEDCo), a wholly owned subsidiary of VRA.

Restructuring and Re-alignment

The Authority rolled out a new corporate strategy to champion the transformation of the Authority into a "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 re-focus and re-orient business operations and organisational mindset aimed at transforming the Authority into a resilient and viable public sector organisation, with a private sector business mindset.

As a precursor to the implementation of the new strategy, VRA introduced and implemented a three (3) year Financial Recovery Plan (FRP) to drive the restoration of the Authority's finances.

As part of efforts to protect the financial gains made, following the implementation of the three (3) years Financial Recovery Plan, VRA during the year rolled out a 5-year (2021-2025) Sustainability Plan. The primary objective of the Plan is to ensure that VRA remains a financially sustainable and resilient corporate organisation, and by extension form the basis for the "VRA Beyond GoG Support" agenda.

The VRA Sustainability Plan has the objective of:

- Increasing Revenue
- Improving Operational Efficiency
- Increasing Cash Flow
- Increasing Renewable Energy Footprints
- Improving Staff competencies and Effectiveness
- Increasing Strategic Alliances & Relationships
- Improving Business Processes Leveraging I.T.

POWER ACTIVITIES

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

Currently, the Authority operates a total installed generation capacity of 2,532MW. The Akosombo and Kpong Hydroelectric Plants have installed capacities of 1,020MW and 160MW respectively. The thermal generating facilities at Aboadze, Tema and Kpone enclaves with installed total capacity of 1,330MW, in addition to the 22MWp Navrongo, Lawra and Kaleo Solar Power Plants complement the hydro generating facilities. It is instructive to state that, the total installed capacity as indicated is exclusive of Takoradi Thermal 3 (T3's) generation capacity of 132MW but inclusive of AMERI's generation capacity of 250MW.

Capacity Expansion Programme

The Authority has the mandate to provide affordable, reliable, safe, and competitively priced electricity to meet stakeholders' expectation. We strive to achieve this by strategically focusing on measures and programmes to facilitate the diversification and expansion of our generation infrastructure.

Renewable Energy Development

In accordance with the Renewable Energy Development Programme approved by the VRA Board, and in line with the Government's policy on renewable energy, VRA is pursuing the development of solar and wind energy projects. The successful implementation of the identified projects in the long term would ensure sustainable power generation, reduce our carbon footprints, and contribute positively to the global climate change agenda.

Northern Electricity Distribution Company Ltd. (NEDCo).

The Northern Electricity Distribution Company (NEDCo), a wholly owned subsidiary of VRA, is the sole distributor of electricity in the Upper East, Upper West, North East, Savannah, Northern, Bono, Ahafo, Bono East, parts of Oti, Ashanti and Western North regions. NEDCo manages VRA's electricity supply to some border towns in Burkina Faso, Cote d'Ivoire and Togo. It has a customer population of 1,136,050 and a maximum load demand of 348MW. NEDCo was originally developed as an integral part of the larger Northern Electrification and System Reinforcement Project (NESRP).

Customers and Power Interconnectivity

VRA sells power to the Northern Electricity Distribution Company (NEDCo), Electricity Company of Ghana (ECG) and Enclave Power Company (EPC), the main distribution companies in Ghana. Power sold to these entities cater for domestic, industrial, and commercial demands. NEDCo distributes power in the North of the country, ECG in the South, while EPC distributes power in the Free Zones Enclave in Tema and the Dawa Industrial Park Enclave. Bulk power is also sold to mining companies and industries across the country such as Newmont Ghana Gold Ltd., AngloGold Ashanti, Future Global Resources, Aluworks, Diamond Cement and Akosombo Textiles Ltd.

Sub-Regional Cooperation

The Authority reaches its customers in Ghana and neighbouring countries through the Ghana Grid Company's (GRIDCo's) transmission system. The transmission system covers the entire country and is connected 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).

VRA is a partner in the development of the West African Gas Pipeline (WAGP), which guarantees our competitiveness in power delivery in the sub region. VRA is also 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). VRA is also a member of the West African Power Pool (WAPP).

Relations with Statutory Bodies

VRA has effective working relations with the following statutory bodies:

- **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.
- **Public Utilities Regulatory Commission:** An independent regulatory commission with oversight responsibility for tariff and

rate setting while ensuring the provision of the highest quality of electricity to consumers.

- **Ministry of Energy:** Provides supervision and policy direction for the energy sector.

NON-POWER ACTIVITIES

VRA operates six subsidiary companies: Akosombo Hotels Limited, Kpong Farms Limited, VRA Property Holding Company (PROPCo), the Volta Lake Transport Company Limited, Northern Electricity Distribution Company and VRA Health Services Limited.

1.0 Subsidiary Companies

a. Akosombo Hotels Ltd (AHL)

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

b. VRA Property Holding Company (PROPCo)

The Property Holding Company Ltd. (PROPCo) was incorporated on December 2, 2013, and commenced operations in June 2018, with a core mandate in property development, investment, and asset management. PROPCo is focused on the optimisation of VRA's non-core real estate assets by converting them into commercially viable investment assets for income and capital growth. Its long term, objective is to build a diversified portfolio of income generating real estate assets for VRA.

c. Kpong Farms Ltd. (KFL)

The 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 viable agricultural ventures and for the Farm to serve as a demonstration project in a modern agricultural system. KFL has evolved into a commercial venture, with a huge potential for expansion with the private sector.

d. Volta Lake Transport Company Ltd. (VLTC)

Incorporated in 1970, the Volta Lake Transport Company Limited (VLTC) provides river transport for passengers, bulk haulage of petroleum products and significant quantities of cement, and cross-lake ferry services along the Volta Lake (Agordeke, Yeji, Kete-Krachie, Dambai, Adawso).

2.0 Akosombo Management Committee

Pursuant to Executive Instrument (EI) 42, 1989, VRA oversees and exercises Local Authority functions in the Akosombo Township by enforcing Local Authority enactments, resolutions, and by-laws.

3.0 Corporate Social Responsibility (CSR)

VRA demonstrates commitment to its 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. In 2003, VRA established the Community Relations Unit (CRU) to promote its CSR activities. The objective for this intervention is to strengthen engagements with the communities impacted by the Authority's operations but not captured under the Trust Fund.

To enhance the Authority's partnership with the impacted communities, VRA in 2012 introduced the Community Development Programme (CDP). The CDP is aimed at empowering the affected communities, and stimulating economic and human capital development. The programme focuses on six (6) thematic areas which are; Social Infrastructural Projects, Environmental Protection Activities, Industrial Attachment, Educational Scholarship, Healthcare, and Support for Cultural Activities.



CHAIRMAN'S STATEMENT



Dear Stakeholders,

Ladies and Gentlemen, I am pleased to welcome you to the Volta River Authority's 2021 Stakeholders' Interface.

On behalf of the Board, Management and Staff, I am pleased to present to you the Volta River Authority's (VRA) Operational and Financial performance report for the year ended December 31, 2021. This year marks the second year of business since the outbreak of the COVID-19 pandemic in 2020. In spite of the challenges posed by the pandemic, I am proud to report that our financial and operational performance remained robust and resilient.

The year 2021 saw an improvement in our business as an Authority, which resulted in a profit out-turn, building on another profitable year in 2020. This remarkable improvement in our financials contrasts with several years of loss making, in particular during the 2014-2016 period. The success is attributable largely to the Financial Recovery Programme (FRP) and Sustainability Plan (SP) that were instituted by the Authority and the previous Board. The measures implemented under the FRP and SP significantly contributed to a reduction in our cost of operations, improved our revenues and ensured that our generation system remained reliable and efficient.

The Board is appreciative of all the support, efforts and co-operation of the various stakeholders, namely, the Government, Management and Staff, Sister Utilities, Regulators, Customers, and the general public.

Operational Performance

The Authority continued to show its importance in the power sector as indicated by our contribution of over 53 percent of all generation produced in the country. The Akosombo and Kpong Generating Stations generated a total of 6,530GWh. This is approximately 30GWh (0.5%) higher than the planned generation of 6,500GWh. Comparatively, this year's performance was a significant increase over the 2020 generation of 6,024GWh.

The Authority showed a significant improvement in its thermal generation portfolio in 2021. In the year under review, planned thermal generation was 5,456GWh. Actual supply recorded was however 5,067GWh. The 5,067GWh recorded, was 7 percent or 389GWh lower than the planned output. It is instructive to note that the T1 Plant in Aboadze achieved its highest availability since 2014. This development largely contributed to the enhanced overall performance of the thermal portfolio.

Financial Health

In 2021, the Authority's Revenue from the sale of electricity increased by 3.7 percent, from the previous year's sale of GH¢ 3,793 million to GH¢ 3,932 million. This was mainly due to the combined effect of a 10.5 percent (1,110GWh) increase in the volume of energy sold from 10,535Wh in 2020 to 11,645GWh in 2021.

This was against the background of a decrease of 6.68 percent in the average tariff to ECG, from GH¢ 0.26978/kWh in 2020 to GH¢ 0.25175/kWh in 2021. Transmission Services Charge relating to energy

(TSC2) increased by 52.85 percent from an average of GH¢ 0.011534 in 2020 to GH¢ 0.01763 in 2021.

The volume of energy sold to the two major distribution companies in the country increased by 20.8 percent (1,051GWh) from 5,044GWh in 2020 to 6,095GWh in 2021. Sales to our other customers however decreased by 3.75 percent (169GWh) from 4,501GWh in 2020 to 4,332GWh in 2021. This was largely due to a decrease in sales to Communauté Électrique Du Bénin from 715GWh in 2020 to 574GWh in 2021, representing a decline of 141GWh (19.72%).

Notwithstanding the post-covid challenges, the Authority ended the year with a Net profit of GH¢112.76 million. This is the second year of profitability after our financial recovery, and the first for this current Board.

Corporate Social Responsibility

As a responsible corporate citizen, the Authority has the objective to implement programmes that improve the living standards and development of our impacted communities. In this regard, VRA continued to invest in developing the life skills of the inhabitants in impacted communities to enhance their income earning potential and improve their socio-economic development.

The Authority executes its Corporate Social Responsibility policy through implementation of the Community Development Programme (CDP). The CDP focuses on six (6) thematic areas of development and support services including; support for social infrastructural projects, environmental protection, industrial attachments, educational scholarships to indigenes at the Tertiary level as well as healthcare, and cultural activities.

I wish to reiterate that, with the implementation of Government's Free SHS policy, the Authority now provides scholarships to brilliant but needy students at the Tertiary Education level. Currently, there are about 60 beneficiaries who are on this programme with an annual budget of GH¢ 260,000.

We continue to maintain mutually beneficial partnerships with the communities through their District and Municipal Assemblies, and other development agencies such as the traditional councils, among other key stakeholders.

Industrial Relations

The industrial environment was stable and peaceful as Management and Staff collaborated effectively to create an enabling environment that made the Authority's business thrive. On the part of Management, to ensure VRA maintained a well-motivated Staff with the right customer-centric attitudes, Management continued to provide the necessary platform, opportunities and

programmes to advance the skills, knowledge and competences of the Staff.

Portfolio Growth

VRA increased its footprints in renewable energy (solar) with the coming on stream of the 13MWp Kaleo Solar Power Plant. Going forward, the Authority will continue to work with relevant stakeholders and comply with all regulatory processes to facilitate the construction of our 60MWp Bongo Solar Power project in the Upper West Region and the 75MW Wind Power Project at Anloga in the Volta Region. The orderly expansion of our renewable energy portfolio is in line with our commitment to diversify our generation portfolio. It is anticipated to increase our renewable footprint to at least 200MW by the year 2025.

As part of the expansion of our thermal generation portfolio, we are working with the Ministry of Energy to relocate the 250MW Ameri plant to Kumasi and rehabilitate and operationalize the 132MW T3 power plant in Aboadze within the 2023 to 2024 time-frame.

Again, we deepened our engagement with SSNIT/CENIT energy towards converting our two simple cycle power plants at Tema into combined cycle plants to make a total generation of 330MW. Similar discussions are ongoing with potential partners on the conversion of our 220MW KTPS plant, also in Tema, into a 330MW combined cycle. The objective is to make them efficient, reduce operational cost and increase our generation capacity.

60th Anniversary Celebration

On April 26, 2021, VRA celebrated its Diamond Jubilee, 60 years, with significant activities but under strict COVID-19 pandemic restrictions. The year-long celebration was marked with well-planned activities, which sought to celebrate the achievements of the Authority over the past 60 years. All stakeholders including Staff (past and present), our Shareholder, Chiefs and natives of our impacted communities, customers, school children and the general public were given due recognition during the celebration. Under the theme: "Celebrating 60 years in the Power business, Our Legacy, Our Future," the activities were preceded by the Anniversary launch at the Kempinski Hotel Gold Coast City, Accra on October 28, 2020, where the then Senior Minister, Hon. Yaw Osafo-Maafa delivered the keynote address.

Some of the key activities undertaken during the celebration were the following:



Drone Delivery of Educational Materials and COVID-19 Relief Items

In support of Science, Technology, Engineering, and Mathematics (STEM) education, the Authority deployed drone technology to deliver branded educational materials including school bags, exercise books, math sets, pens, pencils, water bottles and other stationery to sixteen thousand (16,000) school children from thirty (30) selected schools in communities within the Authority's operational areas across six (6) regions. Other items distributed to the school children and their respective schools were VRA branded personal protective equipment (nose masks, Veronica buckets, hand sanitisers) in support of the Nation's efforts at curbing the spread of the COVID-19 pandemic.

Unveiling of Life-Sized Busts of Four (4) Former Chief Executives of VRA

The unveiling of life-sized busts in honour of four (4) past Ghanaian Chief Executives of VRA was another high note event to mark the 60th Anniversary. The past Chief Executives were honoured for their immense contribution towards the growth of the Authority since its inception. The busts of Ing. Dr. Emmanuel Laud Quartey and Mr. Alexander Erasmus Kwabla Kalitsi were mounted and unveiled at Akosombo, while those of Ing. Dr. Louis Casely-Hayford and Ing. Gilbert Ohene Dokyi were mounted and unveiled at Akuse and Aboadze respectively.

Tree Planting Exercise

In support of Government's Green Ghana Project, the Chief Executive led Management and Staff to plant 600 seedlings of various tree plant species. This also complemented the Authority's afforestation along the Volta Lake and within various operational locations. Through this exercise, the Authority embedded its "BRAISE" and Sustainability agenda as part of the 60th Anniversary. The exercise was under the theme: VRA@60: Investing in the Greening Ghana Initiative for Energy and Environmental Sustainability.

Challenges

The Authority was confronted with three key challenges during the year. The first is the depreciation of the cedi to the US dollar, which significantly increased our cost of sales and thereby negatively influencing our net financial position.

Secondly, the absence of a competitively priced electricity tariff that integrates financial compensation for the auxiliary services the Authority provides to support the stability and reliability of the national power system, remains a concern. We thank the Public Utilities Regulatory Commission (PURC) for its increases and

will continue to work with them to ensure a smooth dispatch of electricity.

Thirdly, our ability to get paid by our customers. We are embarking on a renewed consultation period to try to rectify this.

The Way Forward

I would like to assure our esteemed Stakeholders that, VRA will continue to demonstrate unwavering commitment to executing our public sector mandate of generating power for a sustainable economy. We will diversify our portfolio, increase our generation capacity and provide reliable and competitively priced electricity to support national development and increase our exports.

VRA is keen to expand upon its mandate to be responsible for all activities on the lake. To that end, we are embarking on a consultation phase to see what more can be done to increase its commercial viability to the benefit of all Ghanaians.

Conclusion & Appreciation

To conclude, I want to commend highly, the Chief Executive and his Management Team for their excellent leadership, which ensured that VRA successfully navigated through the challenges of the year. My profound gratitude also goes to our dedicated Staff for their commitment to work and for supporting Management to deliver on the mandate of the Authority.

I want to thank all our stakeholders; the Ministers for Energy and Finance, State Interests and Governance Authority (SIGA), our very supportive sector regulators, sister utilities, financial institutions, our esteemed customers, Traditional Rulers and the people of the communities, suppliers, the Media and the general public for their unflinching support during the year.

It is also in order and indeed proper, for me to express my gratitude to Members of the VRA Board for their dedication, diligence and collaboration, without which the Authority could not have achieved so much in the last year.

Finally, I would like to assure our Stakeholders of my conviction that, our "can-do spirit", which remains the guiding principle in all our endeavours will continue to sustain us and drive our future success.

Thank you for the attention.

MR. KOFI TUTU AGYARE

BOARD CHAIRMAN





CORPORATE GOVERNANCE

BOARD CHAIRMAN AND MEMBERS AS AT DECEMBER 31, 2021

NAME	DESIGNATION
Mr. Kofi Tutu Agyare	Chairman
Ing. Emmanuel Antwi-Darkwa	Member
Hon. Kwame Anyimadu-Antwi	Member
Rev. Dr. Joyce Rosalind Aryee	Member
Chief Musa Badimsugru Adam	Member
Mad. Janet Akosua Gyasiwaa	Member
Mr. Solomon Adjetey Sowah	Member
Mr. Richard Obeng Okrah	Member
Most Reverend Dr. Cyril Kobina Ben Smith	Member
Claudia Gyekye-Aboagye (Mrs.)	Secretary

EXECUTIVE AND MANAGEMENT AS AT DECEMBER 31, 2021

OFFICE OF THE CHIEF EXECUTIVE

NAME	DESIGNATION
Ing. Emmanuel Antwi-Darkwa	Chief Executive
Ing. Frank Akligo	Advisor, Office of the Chief Executive
Mr. Ebenezer Kwadwo Omari-Mireku	Director, Internal Audit
Ing. Ebenezer Apau Koramoa	Director, Corporate Strategy

ENGINEERING AND OPERATIONS BRANCH

NAME	DESIGNATION
Ing. Emmanuel Dankwa Osafo	Deputy Chief Executive
Ing. Kenneth Mensah Arthur	Director, Hydro Generation
Ing. Edward Ekow Obeng-Kenzo	Director, Thermal Generation
Ing. Alfred D. Sackeyfio	Director, Engineering Services
Mr. Benjamin Arhin Sackey	Director, Environment & Sustainable Development
Ing. Samuel Odartey Lamptey	Director, Technical Services
Dr. Abubakari Obuama Addy	Director, Commercial Services
Mr. Kwaku Wiafe	Director, Pwalugu Multipurpose Dam Project

FINANCE BRANCH

NAME	DESIGNATION
Dr. Ebenezer Tagoe	Deputy Chief Executive
Miriam Darke (Mrs.)	Director, Procurement
Mr. Richard Ahenkora Osei	Director, Investment
Mr. Paul Seniagya	Director, Finance
Mrs. Awurama Ofori-Ani	Director, Office of the DCE, with oversight responsibility over MIS Department
Mr. Francis Kusi	Director, Office of the DCE



SERVICES BRANCH

NAME	DESIGNATION
Dr. Irene Stella Agyenim-Boateng (Mrs.)	Deputy Chief Executive
Angela Heyman (Mrs.)	Director, Legal Services
Surv. David Adomako-Mensah	Director, Real Estate & Security
Mr. Eric Mensah Bonsu	Director, Human Resources/VRA Schools
Mr. Kingsley Gyamfi	Ag. Chief Learning Officer, VRA Academy
Vivian Jennifer Yebuah	Manager, Akosombo Management Committee

SUBSIDIARIES

NAME	DESIGNATION	REGISTERED COMPANY
Dr. Osmani Aludiba Ayuba	Managing Director	Northern Electricity Distribution Company (NEDCo)
Dr. Alexander Kwabena Omari-Yeboah	Medical Director	VRA Health Services Ltd. (VHSL)
Mr. William Bobie	Managing Director	Property Holding Company (PROPCo)
Mr. Edwin Adi Aryitey	General Manager	Akosombo Hotels Ltd. (AHL)
Lilian Arhinful (Mrs.)	Ag. Farm Manager	Kpong Farms Ltd. (KFL)
Mrs. Rose Appiah Okyere	Ag. Managing Director	Volta Lake Transport Company (VLTC)

STRATEGIC BUSINESS UNITS

NAME	DESIGNATION	ORGANISATION
Vacant	General Manager	VRA International Schools

STAFF ON SECONDMENT

NAME	DESIGNATION	ORGANISATION
Alexandra Totoe (Ms.)	General Manager, Finance & Administration	State Interest and Governance Authority (SIGA)
Dr. Isaac Adjei Doku	General Manager, Corporate Affairs	West Africa Gas Pipeline Company (WAPCo)

CORPORATE GOVERNANCE STATEMENT



Some members of the VRA Board in a group photograph

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 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 Chairman, 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.

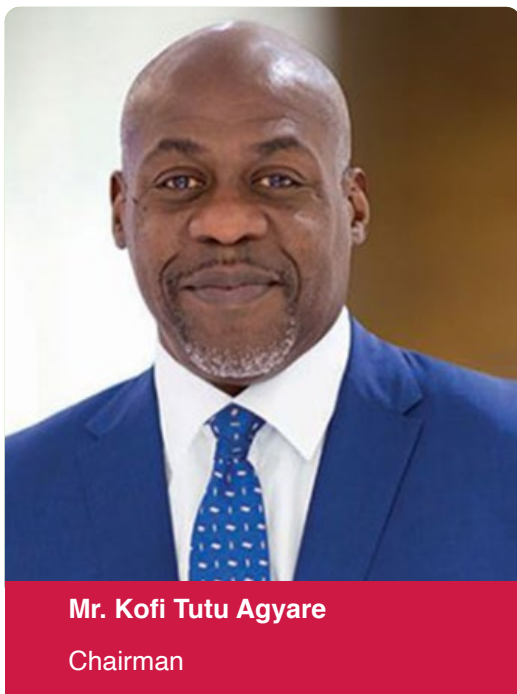
2.0 Membership of the Board

For the most part of 2021, the Volta River Authority was without a governing Board due to the dissolution of the Board on January 6, 2021 in line with the provisions in the Presidential (Transition) Act, 2012, Act 842. However, on August 31, 2022, a nine (9) member Board was sworn into office by the Hon. Minister of Energy, following their appointment by H.E. the President, in compliance with the enabling Act of VRA. The newly constituted Board comprises five members whose tenures were renewed and four new members.

The Board Members are drawn from diverse backgrounds. Their diversity, independence and skills ensure an objective and balanced decision making.



PROFILE OF BOARD MEMBERS



Mr. Kofi Tutu Agyare was appointed as the non-Executive Chairman of the Board of Volta River Authority in August 2021. Mr. Agyare is the Managing Partner at Nubuke Investments, an FSA registered asset management and advisory firm focused solely on Africa, which he founded in 2007. Nubuke Investments is based in London and Accra. He previously had a 21-year career with UBS Investment Bank holding a number of senior positions, most recently as the Head of European Emerging Markets and a member of the Investment Bank Board.

He served as a non-executive Director of Tullow Oil, the largest Independent Oil Exploration company in Africa from 2010 – 2019.

He is currently the Chairman of Kempinski Hotel, Gold Coast City, Accra and ZEN Petroleum Ghana Limited. He has served on a number of Boards including the Development Bank Ghana and UBS Investment Bank, UK. He is a member of the Senior Advisory Group of Power Africa, the President Obama initiative, to significantly increase access to electricity, across Africa.

He has a very strong network of African relationships both at the Government and Business level and is a sought-after International Public Speaker and Advisor on his views, experiences, and knowledge of the Continent. He travels extensively across Africa advising Corporates on business strategy, Governments on Policy and looking for investment ideas for his international relationships and executing these.

He is a Founder and Director of the Nubuke Foundation, Ghana's Premier Private Arts Foundation, and was most recently voted one of the 100 most influential Africans by New African magazine. He is also a Director of 1-54, The world's Premier Contemporary African art fair.

Mr. Agyare has a degree in Mathematics and Computing from the University of Ghana, Legon.

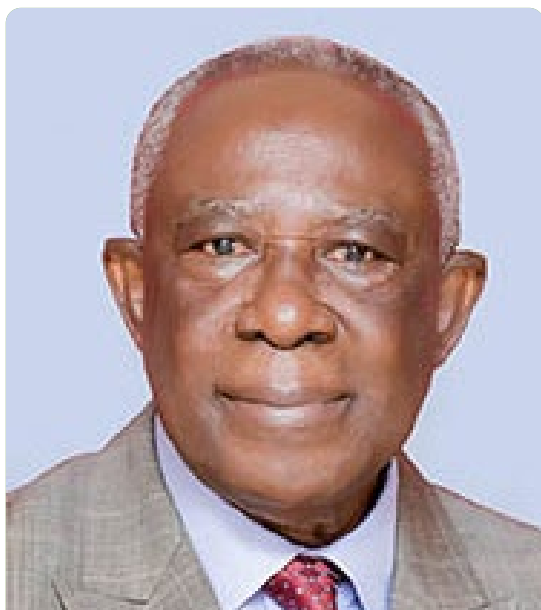


Mr. Emmanuel Antwi-Darkwa
Chief Executive/Member

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 Obeng Okrah was appointed as a Non-Executive Director of the Board of VRA in October 2017. His appointment was renewed in 2021. Mr. Richard Okrah has professional training in Human Resource Management, Public Procurement and Electricity Sector Reform/Restructuring. He holds a Certificate in Reform of Electricity Sector awarded by the Adam Smith Institute, Purley, UK and a Graduate Diploma in Executive Management from the Wharton School, University of Pennsylvania. He is the current President of the Chartered Institute of Supply Chain Management of Ghana (CISCM). 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 and Services.

Mr. Richard Obeng Okrah holds a Master of Public Administration (MPA) with emphasis in Investment Appraisal and Financial Management 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

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.

Chief Musa B. Adam was appointed as a Non-Executive Director of the Board of VRA in October 2017. His appointment was renewed in 2021. 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



Most Rev'd Dr. Cyril Kobina Ben-Smith
Member

Most Rev'd Dr. Cyril Kobina Ben-Smith was appointed as a Non-Executive Director of the Board of VRA in August 2021. He is currently the Archbishop of the Anglican Church of Ghana within the Church of the Province of West Africa. He serves as Chairman of the Council of the Anglican University College of Technology and Board of Governors of the Mampong Babies Home.

Archbishop Ben-Smith has served in various capacities such as Vice Dean, St Nicholas Anglican Seminary, Cape Coast, Ghana (2007-2010), Chairman of the Academic Board of St. Monica's College of Education, Asante Mampong and St. Nicholas Anglican Seminary, Cape Coast, Ghana. He has also served as a Visiting scholar to Selly Oak College, University of Birmingham, (2007-2008).

He holds a Doctor of Philosophy from the Manchester University, United Kingdom, a Master of Arts Degree in Religion from the Asia United Theological University, Seoul, and a Master of Philosophy Research from the University of Wales, Cardiff, United Kingdom.



Rev. Dr. Joyce R. Aryee
Member

Rev. Dr. Joyce R. Aryee was appointed as a Non-Executive Director of the Board of VRA in October 2017. Her appointment was renewed in 2021. Rev. Dr. Joyce Aryee is the Founder and an Executive Director of Salt & Light Ministries, a Christian organisation, 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, Education and Local Government. 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.



Madam Janet Akosua Gyasiwaa
Member

Madam Janet Akosua Gyasiwaa was appointed as a Non-Executive Director of the Board of VRA in October 2017. Her appointment was renewed in 2021. She is currently the Managing Director of Gentle Giant Company Limited. She is an astute entrepreneur and was adjudged the Chamber Businesswoman of the Year (2018). Prior to unlocking her entrepreneurial potential, she worked with the Ghana Police Service and Canada Trust Bank. Madam Janet Gyasiwaa holds a Certificate in Banking from the Humber College, Canada.





Mr. Solomon Adjetey Sowah
Member

Mr. Solomon Adjetey Sowah was appointed as a Non-Executive Director of the Board of VRA in August 2021. Mr. Adjetey Sowah is currently the Director of Power at the Ministry of Energy with over 20 years' experience in the Energy Sector; 19 years in Ghana and one year in Germany. He has been working with the Ministry of Energy since 1998 in the Power Directorate.

He played significant roles in the National Electrification Scheme (NES), and led a team of engineers to develop a model for the calculation of access to electricity in Ghana in the year 2009. He contributed to the implementation of the NES which saw the increase in the national electrification access rate to electricity from 43% in the year 2000 to the current 84.32% (by way of the population). He has undergone training in various areas, including Project Management in the field of mid-voltage sub-stations, short courses on PV Solar, Improvement of Operation of Electric Power Facilities, and Management of Wind Power Development amongst others. He has also been involved in Value for Money (VfM) Audit processes for several rural electrification projects (both local and foreign funded), Power Purchase Agreement (PPA) related issues, and served on various Evaluation Panels and Committees.

Mr. Solomon Adjetey Sowah holds a Masters in Engineering, Electrical Engineering (Dipl.-Ing.) from the Technical University of Dresden, Germany, at the Institute of High Voltage and Current Engineering. He also holds an Executive Masters in Business Administration from the Ghana Institute of Management and Public Administration (GIMPA).



Hon. Kwame Anyimadu-Antwi
Member

Hon. Kwame Anyimadu-Antwi was appointed as a Non-Executive Director of the Board of VRA in August 2021. He is currently a member of Parliament for Asante-Akim Central constituency in the 8th Parliament of the fourth Republic of Ghana, a position he has held since 2009.

Hon. Anyimadu-Antwi is an experienced legal practitioner and Solicitor of the Supreme Court of Ghana. Prior to joining the Parliament of Ghana, he worked at a Senior Level in government with duties that included legislative and policy in Intellectual Property Rights from 1997-2008. He has served in various capacities including an expert on legal aspects of consumer protection, worked in collaboration with Ghana Standards Board on appropriate equipment for testing standards of metals of value and also provides legal advice and opinions to the Government, through the Copyright Administration Office on issues pertaining to Intellectual Property Protection.

He serves as the chairperson to the Parliamentary select committee on Employment, Social Welfare and State Enterprises and the Ghana National Fire Service Council.

Hon. Kwame Anyimadu-Antwi holds an Executive Masters in Governance and Leadership from the Ghana Institute of Management and Public Administration (GIMPA). He also holds a Master of Law Degree in Intellectual Property of Law from the Queen Mary College, University of London, Post Graduate Certificate in Intellectual Property Rights from the Kyoto Comparative Law Centre, a Barrister-at-Law (BL) from the Ghana School of Law and a Bachelor of Law (LLB) from the University of Ghana, Legon, Ghana.

3.0 Mandate

The Board is collectively 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. The Chairman, individual Members and Chief Executive have clearly defined roles and responsibilities defined in the Board Charter. All Members are expected to have a fiduciary duty to the Authority and sign on to the Statement of Responsibilities acknowledging their individual and collective responsibility as Directors to Volta River Authority upon appointment.

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 selection of Chairpersons and Members to these Committees is done based on their relevant qualifications, skills and experiences. 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. It also has oversight of the Health, Safety and Environment, (HSE) Audits and Compliance including Environment Impact Assessments & Mitigation and Emergency Mitigation Plans

The Committee has a Membership of four (4) 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 five (5) and is chaired by Mr. Richard Obeng Okrah.

4.3 Risk & Audit Committee

The mandate of the Committee is to assist the Board in fulfilling its fiduciary responsibilities as they relate to accounting policies, risk management, technical audits and reporting practices, the quality and sufficiency of internal and external audits, and the system of internal control. These include but not limited to oversight of financial reporting, Risk Management, Internal Control, Compliance, Ethics, and Audit issues.

The Committee has a Membership of four (4) and is chaired by Most Rev. Dr. Cyril Ben-Smith.

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 clear line of authority and accountability for key responsibilities at all levels and in all areas of the Authority. Senior Management is responsible for reporting all matters that fall within their materiality threshold to the Chief Executive.

6.0 Board Calendar

The Board always approves an annual calendar to guide its work plan in any particular year.

In 2021, two (2) Ordinary Board meetings, instead of six (6) as required by the Board Charter, were held to consider issues of strategic and business performance importance, due to the late constitution of the Board. Eight (8) Committee meetings were also held prior to these Board meetings, providing the platform for Committee Members to engage more with the Executive and other Management Staff on issues and thereafter make recommendations to the Board. Members participated in all meetings held during the year, either through the virtual mode or in-person.



7.0 Board Orientation

Following the inauguration of the Board into office in August 2021, an orientation session was held to introduce Members to the operations of VRA and the current state of affairs. Documentation comprising Board Policies and Procedures, Strategic Plan and Organisational Structure among others were provided to Members for their study as part of the orientation process. Individual sessions between the Board Chairman and Management staff were also organised as part of the onboarding process. Newly appointed Directors visited some operational areas of VRA, a process which is on-going in 2022.

8.0 Board Training

To facilitate Members' fulfilment of their responsibilities, the Authority has committed itself to the continuous education and training of Members to enhance their knowledge in business operations and latest development in corporate governance. In 2021, Members attended an orientation/training workshop on Corporate Governance and Financial Management organised by the States Interests & Governance Authority (SIGA).

9.0 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. The 2021 Financial Statements were audited by the Ghana Audit Service.

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, represented by the State Interests & Governance Authority, and other key stakeholders. The Annual General Meeting to consider the 2020 financial and operational performance was held in December 2021.

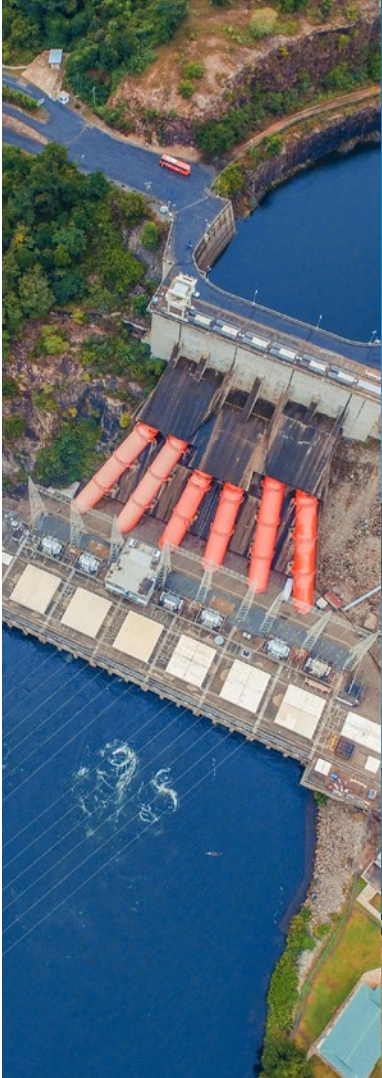
The Board continues to strengthen its engagements with other key stakeholders, significant being the institutions in the energy value chain (GRIDCo, ECG and NEDCo) to foster a collaboration that will deliver reliable and good service to customers.

10.0 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 approved by Government.

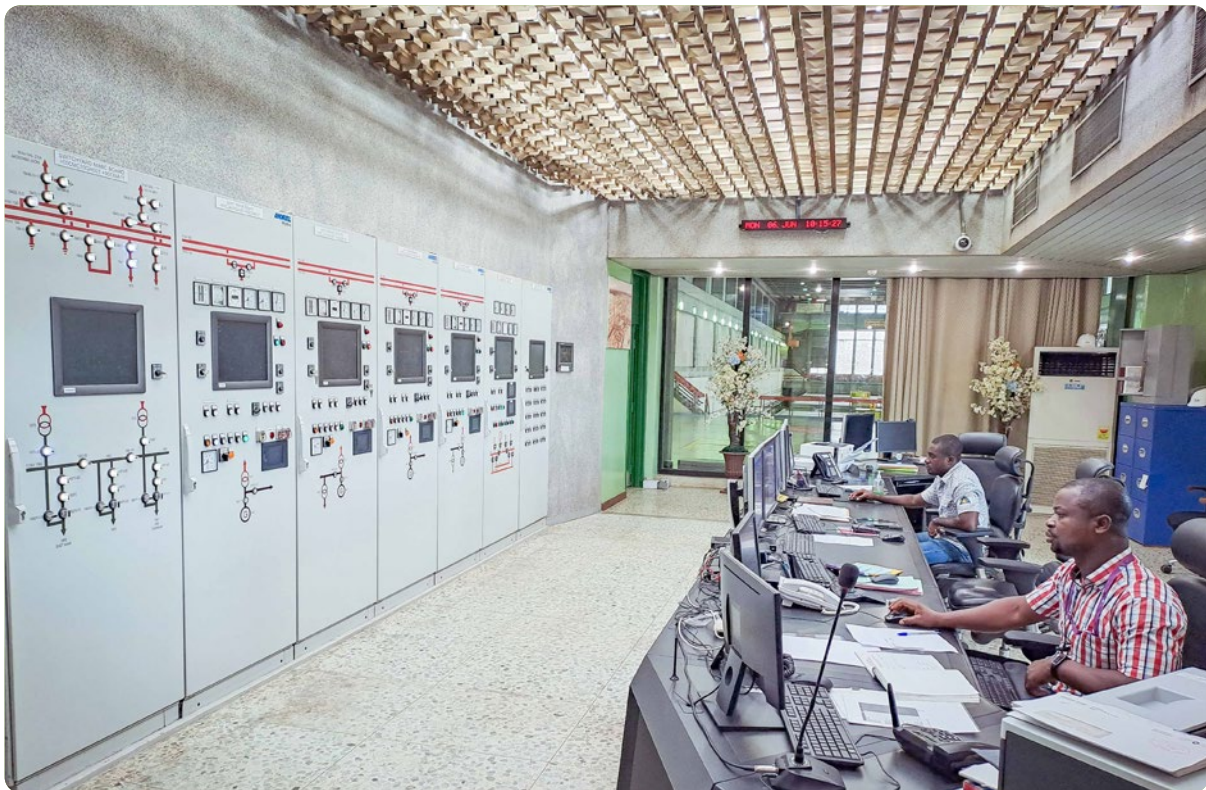
11.0 Board Evaluation

The Board has adopted an evaluation policy and has undertaken a self-evaluation in accordance with its evaluation policy and procedures for three consecutive years. The intention is to undertake an external evaluation in 2022.



POWER OPERATIONS

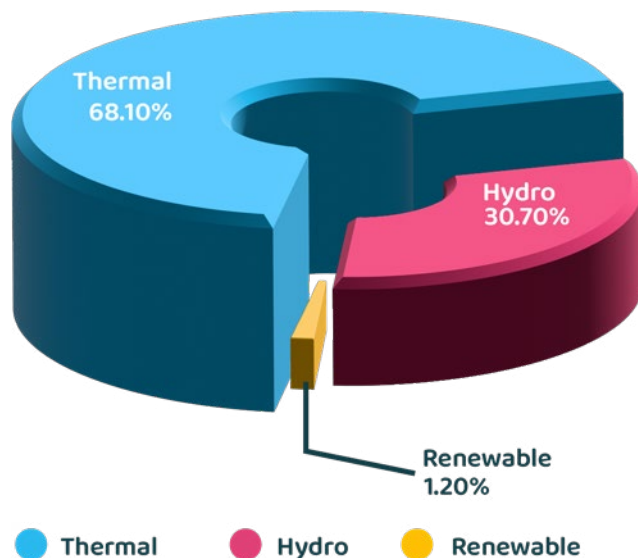




Electricity Demand and Supply

In 2021, Ghana's power system recorded a system peak demand of 3,246MW in December. At this peak, Ghana's load was 2,864MW. The peak demand represents an increase of 156MW (5.0%) over the 2020 peak demand of 3,090MW.

The total energy consumed during the year, including losses, was 21,480GWh compared to the 2020 figure of 19,720GWh. This represents an annual growth in energy consumption of 8.9%. The Authority's projected supply for the year was 11,986GWh. However, the actual supply was 11,656GWh, which is 2.8% or 330GWh lower than the projected. The supply shortfall during the year under review was as a result of various outages from the TICO and TAPCo Plants.



Hydro Generation

Generation from the Akosombo Generating Station (AGS) in 2021 was 5,557GWh, approximately 93GWh (1.6%) lower than the planned generation of 5,650GWh. The Kpong Generating Station (KGS), on the other hand, generated 972GWh, approximately 122GWh (14.4%) higher than the planned generation of 850GWh. The overall generation from VRA's



hydro sources totaled 6,530GWh. This is approximately 30GWh (0.5%) higher than the planned generation of 6,500GWh. The increase in hydro generation was to support the power system during the periods of Ghana Gas outage.

Thermal Generation

The planned supply from VRA's thermal plants (Including Tico) for the year was 5,456GWh. However, the actual supply recorded was 5,067GWh. The 5,456GWh recorded is 6.6% or 359GWh lower than the 2021 planned generation. At the Tema enclave, TTPC generated 404GWh of energy, TT2PC generated 90GWh and KTPS generated 378GWh. At Aboadze, TICO generated 1,998GWh, whilst the Takoradi Thermal Power Station generated a total of 2,130GWh.

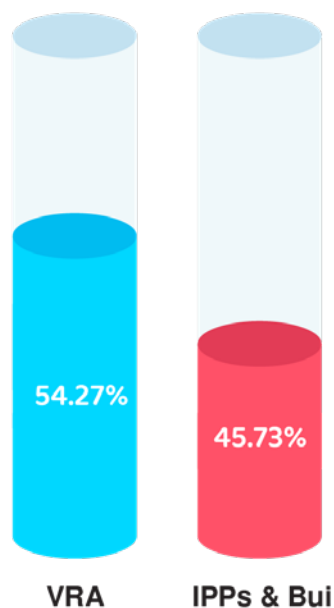
Renewable Energy

The Authority's solar power plants at Navrongo, Lawra and Kaleo in the Upper East and Upper West Regions contributed a total of 16.2GWh in 2021 compared to the 3GWh generated in 2020. Solar energy's contribution to the total system generation mix was 0.08% percent.

By the close of the year, VRA's thermal/hydro mix was 43.5%/56.02%. It is instructive to note that imports and solar accounted for the remaining 0.5%. On the other hand, the thermal/hydro mix for the entire Ghana power system was 64.5%/35.3%, whilst import and solar accounted for 0.28%. From the generation dynamics, VRA's hydro generation's contribution to the overall system is a confirmation of the importance of hydropower to Ghana's entire power system.

Market Share

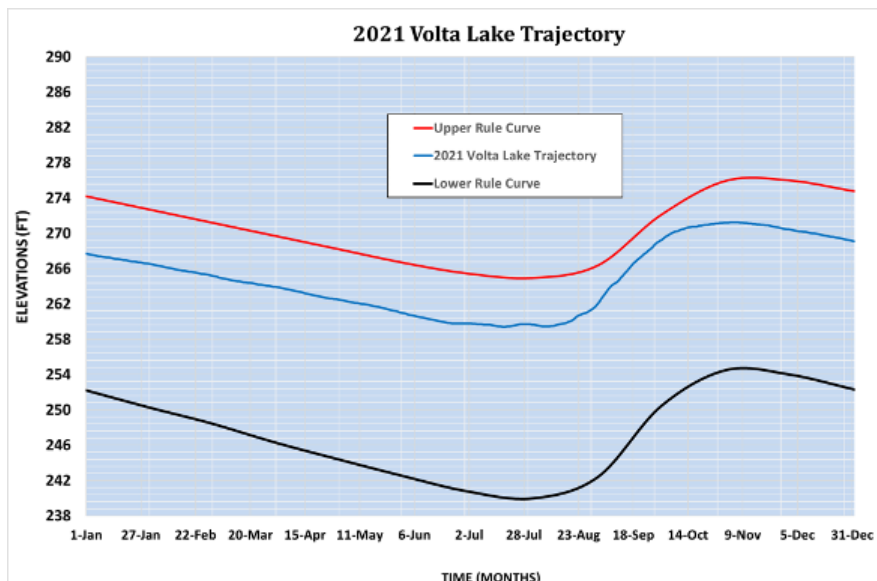
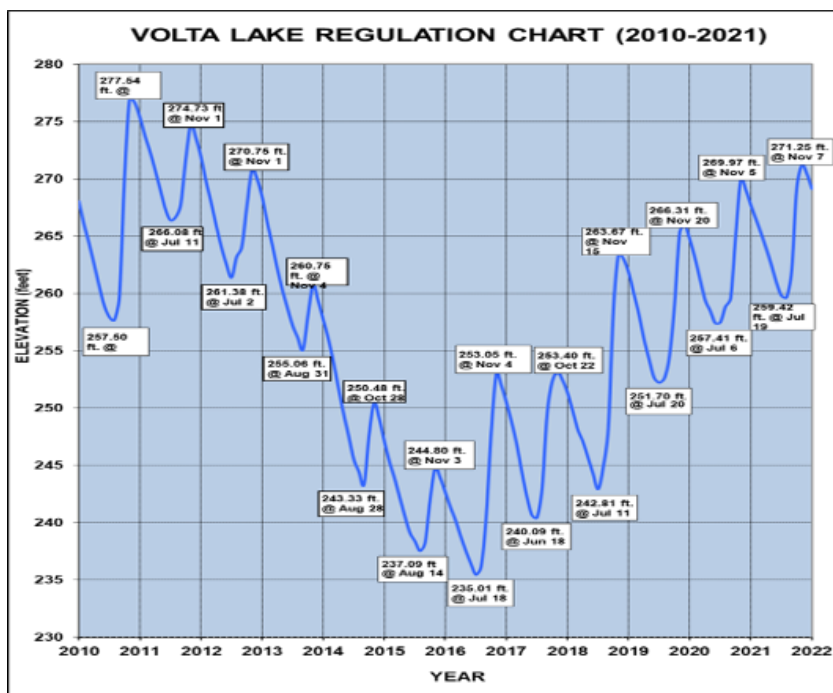
In 2021, the Authority experienced a slight increase in its market share from the base case projected share of 53.42% to an actual share of 54.27%. It is significant to state that, although there was a marginal increase in VRA's market share, analysis of the shares over the years shows a significant decline from the 2010 market share value of 98.7%.

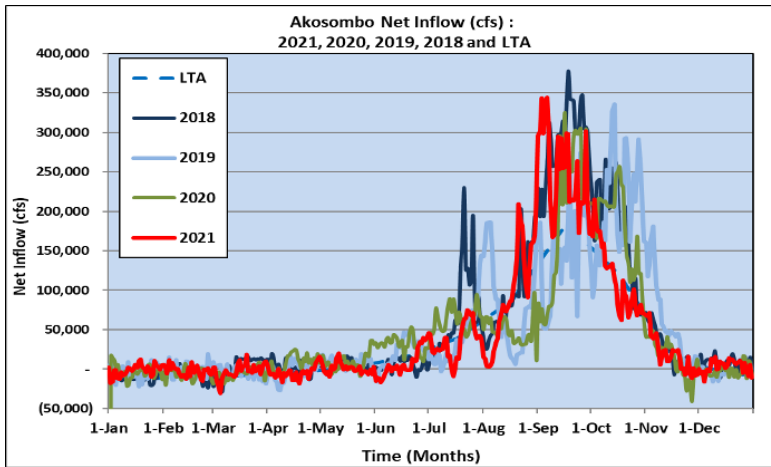


Volta Lake Management

Hydrology Report

In accordance with our objective to operate our hydro generation resources in an efficient and sustainable manner, the Volta Lake was regulated between elevations 81.59m (267.70ft) at the beginning of the year 2021 and 79.07m (259.42ft), the minimum lake elevation at the end of the dry season. This represents a drop of 2.52m (8.28ft.) from the beginning of the year to the end of the dry season. The lowest Volta Lake elevation was on July 19, 2021. The Volta Lake however attained a maximum elevation of 82.68m (271.25ft) on November 7, 2021. This represents a total rise of 3.61m (11.83ft). The Volta Lake elevation at the end of the year under consideration was 82.04m (269.16ft.)





Meteorology

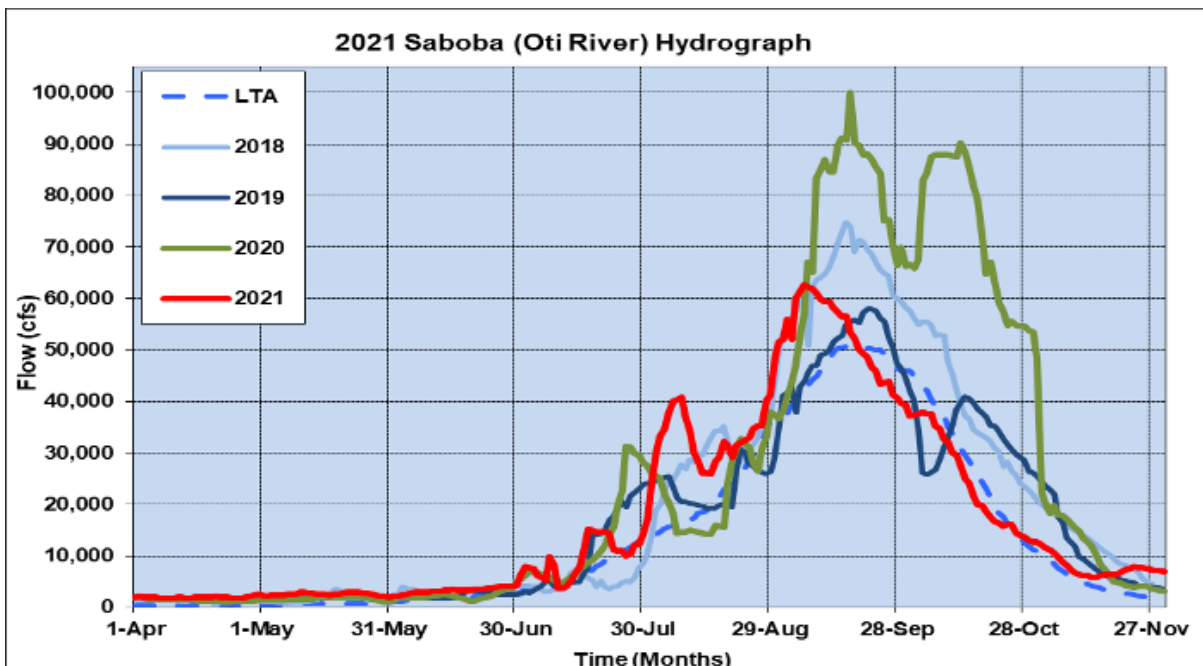
The rainfall activities within the southern part of the Volta Basin were average to below average for the year 2021. This led to average to below average rainfall activities in Ghana. The annual rainfall for the seven (7) selected rainfall stations of interest to VRA for 2021 was 1,076mm. This was lower than that of the Long-Term Average (LTA) by 11%, 2019 by 11% and 2018 by 9%. The recordings were, however, higher than that of 2020 by 10%.

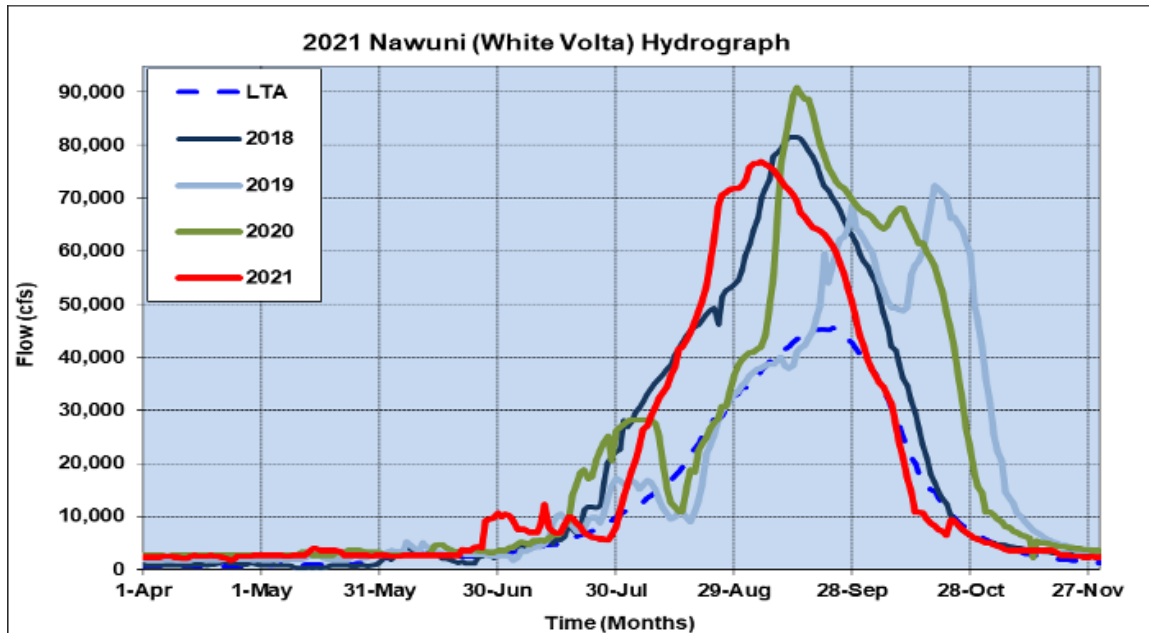
Tributary Flows

In 2021, stream flow data from the 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. The inflows, recorded on the Oti River at Saboba was 7.95MAF, which was higher than LTA for the Oti River by 16%. Additionally, inflows recorded on the White Volta at Nawuni was 8.62MAF. This was 34% percent higher than the LTA for the White Volta River at Nawuni. The flow recorded on the Black Volta due to energy generation at Bui Hydropower Stations from January to December was 9.66MAF. However, due to the Bui Dam on the Black Volta, which distorts the flows, the flow was not compared to the LTA.

Net Inflow

The cumulative inflow into the Volta Lake from January to December 2021 was 31.01MAF. This was about 19% higher than the LTA net inflow of 25.22MAF. The instantaneous peak inflow into the reservoir, which occurred on September 6, 2021, was 9,743m³/s (344,060cfs). The cumulative Net Inflow into the Volta Lake for 2021 was, however, lower than that of 2020 by 3%, 2019 by 8%, and 2018 by 29%. The Akosombo Daily Net Inflow Hydrograph and the cumulative annual Net Inflow for 2021, 2020, 2019, 2018 and LTA are shown below.





Dam Safety Monitoring and Surveillance

To ensure the Authority’s hydroelectric dams located at Akosombo and Akuse were available for the continuous use for power generation, VRA implemented a dam safety monitoring and surveillance program. The program includes the visual inspection of the dams and its appurtenances and the monitoring and collection of all instrumentation data.

Further to that and consistent with industry best practices, VRA subjected its dam safety and monitoring surveillance program to an external panel of experts; the Dam Review Board (DRB). The Dam Review Board is a panel of industry experts constituted to review the performance of the dams every five years. It is instructive to state that, following the outbreak of COVID-19 pandemic inspection of the dams was scheduled in two phases as follows:

Phase 1: A virtual site inspection, review of monitoring data and technical engagement and issuing of Preliminary Dam Review Report

Phase 2: On-site physical site inspection and issuing of Final Dam Review Report

The phase 1 inspection was successfully carried out between October to December, 2021 and a Preliminary Report issued by the Board. The Phase 2 inspection is scheduled to be carried out in 2023.





Thermal Generation

In accordance with our strategy of ensuring our thermal portfolio remains strong, resourceful and effective, VRA, during the year, continued with its engagements with the relevant stakeholders including the Government, to repower the T3 Plant at Aboadze, and convert our simple cycle plants in Kpone and Tema into combined cycle mode.

Operations

Total thermal generation for the year under review was 5,067GWh compared to a projected target of 5,456GWh. The 2021 performance was achieved following an average plant operational availability of 87.98 percent and capacity utilisation of 58.31 percent. During the period under consideration, we succeeded in maintaining a zero-tolerance for LCO usage as we run our thermal facilities solely on natural gas and Distillate Fuel Oil (DFO). In all, a total of 34,243,947 MMBtu of natural gas was used compared to last year's consumption of 34,334,892. A total of 34,323 bbls of DFO was consumed during the year.

Generation from the Tema Thermal 1 Power Station (TTPS) amounted to 404GWh of energy. This was achieved with an availability factor of 94.12 percent and a capacity utilisation of 44.17 percent. TT2PS, on the other hand, generated 90GWh of energy at an availability factor of 41.81 percent. The Kpone Thermal Power Station (KTPS) generated 378GWh of energy at an availability factor and capacity utilisation of 92.95 percent and 34.21 percent respectively. At Aboadze, the Takoradi Thermal Power Station (TTPS) generated a total of 2,130GWh of energy. This was accomplished at an availability factor of 83.73 percent and an end-of-year capacity utilisation of 79.55 percent. TICO generated 1,998GWh for the year.

The running regime at the Tema enclave remained unchanged as KTPS and TTPS were operated every other month. The arrangement has the key objective of preventing the shutdown of the facilities for extended periods.





Maintenance

In keeping with the maintenance culture, the maintenance teams worked around the clock to achieve 98.72 percent and 88.66 percent of preventive and corrective maintenance accomplishments, respectively. This remarkable performance of our thermal portfolio in 2021 is attributed to the setting up of an Operations & Performance Unit at the various stations to critically monitor, investigate and make recommendations on plant and equipment. This is aimed at improving reliability, and utilising OEM and Owners Engineers for specialised cases as was done in the KTPS Type C inspection. Again, the provision of technical and leadership training provided for the Staff of thermal generation enhanced their problem-solving skills and largely impacted on their commitment to achieve the targets set out for the year.

Renewable Energy Development

Pursuant to the Government’s decision to promote the development and utilisation of renewable energy, the Authority focused on its renewable energy program. Our decision is aimed at complying with our strategy of ensuring development in a sustainable manner, by providing cleaner energy and energy security, as well as ensuring the systematic development of its related infrastructure. Our overarching objective is to contribute to the collective global climate change agenda by reducing the Authority’s carbon emissions.

Wind Power Projects

During the period, the Environmental Protection Agency (EPA) and the Energy Commission granted VRA with an environmental and siting permits respectively for the Wind Power Project 1 (WPP1). VRA is collaborating with all key stakeholders to ensure a smooth take-off of the project. Successful completion of the project would add to our generation capacity and boost our reputation as a trailblazer to develop Ghana’s first wind farm.



Solar Power Projects

60MW Bongo Solar Power Project

Further to the successful completion of the Authority's Lawra and Kaleo projects, which have significantly increased our solar generation capacity from 9MWp to 22.4MWp, the Authority has shifted its focus to the development of the proposed 60MW Bongo Solar Power Project. Work on securing an environmental permit for the project is progressing steadily as VRA continues to collaborate with the Environmental Protection Agency. To facilitate the validation of the Authority's feasibility study on the project, VRA collaborated with the African Development Bank (AfDB) to procure a third party to review the report. Further to this, VRA received and is reviewing the terms and conditions of the proposed ECA facility submitted by Elecnor S.A.



Floating Solar PV Project

In line with the strategy to include floating solar PVs in the Authority's generation mix, VRA during the year submitted the financing agreement to KfW for their consideration. Consequent to that, negotiations were held among VRA, the KfW tender agent, and Multiconsult, the consultant engaged for the project, to discuss the technical and commercial issues raised during the evaluation.



Electro Volta House Solar Car Park Project

The Authority rolled out and successfully executed the first phase of the Head Office Solar Car Park Fence wall project. This was a follow up to the 74.6Kw Head Office Rooftop Solar Project in 2019. The project, will further reduce and alleviate the problem of parking at the Head Office. VRA has engaged with the Public Procurement Authority (PPA) to secure the requisite approvals to commence the second phase of the project. The objective for this and other identified solar power projects is aimed at ensuring sustainable development and working in a green and smart environment.



Pwalugu Multipurpose Dam Project

The Pwalugu Multipurpose Dam Project is a developmental project that has been identified to generate considerable economic growth in the northern regions of Ghana with a direct impact on poverty reduction. The completion of the Pwalugu Multipurpose Dam Project would comprise of a 60MW hydro dam, 50MW hybrid solar facility and a 25,000ha irrigation scheme. Benefits of the project include the provision of water for irrigation to boost agricultural production, the improvement in stability of power supply in the northern regions, increase in Ghana's renewable energy capacity whilst contributing to the country's climate change commitment, and most significantly, the reduction in the frequency of flooding in the regions. Even though construction has not commenced as expected, significant project activities were undertaken during the year.



Environmental Impact Statement (EIS)/ Resettlement Action Plan (RAP)

For the year under review, the draft EIS and RAP reports on the project were submitted by the Consultant in March and April 2021 respectively. VRA submitted the draft EIA report to the Environmental Protection Agency (EPA) in June 2021 for their review as part of the acquisition of the Environmental Permit process. The key conclusions from the RAP report were discussed with the Project Affected Communities through several stakeholder engagement events held in the affected communities between June 14-25, 2021. The RAP report was independently reviewed by the University for Development Studies (UDS).

Stakeholder Engagements

VRA in conjunction with the EPA and the Lands Commission held three (3) public hearing events in Pwalugu, Zebilla and Walewale from November 2 to 4, 2021 to engage the affected communities on the impacts of the Project. The proposed mitigation measures, land acquisition issues and resettlement of the persons that would be physically displaced was also discussed. Additional engagements at the regional levels were held in Accra, Bolgatanga and Nalerigu to inform stakeholders on all aspects of the project and to solicit feedback. These engagements were held to address the concerns of and present practical solutions to the affected people and other stakeholders.

Land Acquisition/Resettlement Townships

The Lands Commission published a notice of the declaration of intent to acquire the land for the project. This notice was gazetted on October 19, 2021, with copies of the Notice presented to the affected communities, the traditional authorities and other key stakeholders. A cadastral map for the main dam reservoir area and solar site was prepared and submitted by the Survey and Mapping Division (SMD) of the Lands Commission in April 2021. The cadastral survey and demarcation of the total weir reservoir area of 80Km² was completed in September 2021 with 298 boundary pillars planted to demarcate the area. Land Valuation Division (LVD) of the Land Commission completed its independent referencing of properties for purposes of valuation of farmlands in the project area in July 2021. The Project is awaiting the Interim Valuation report from LVD.

Formal acquisition of the reservoir area and the solar site was initiated. The Central Site Advisory Committee for the project met twice in Bolgatanga on July 14 and November 5, 2021. The Committee agreed to VRAs request for compulsory acquisition. Site visits were carried out by the Committee on July 15, 2021.

The EIA report indicated Six communities (with a total population of 2,618 people) within the proposed project acquisition enclave will be physically displaced. The RAP suggested engaging with the communities on the identified potential sites for resettlement. In the year under review, a request for proposal document was issued to seven (7) shortlisted consultants for the restricted tendering process to undertake the planning and design of the resettlement townships.

Signed Agreements

In December 2019, the Ministry of Energy (MoEn) signed a contract agreement on behalf of Government of Ghana with PowerChina International Group Limited for the Engineering, Procurement and Construction (EPC) of a 60MW Hydro-Power Plant and a 50MWac Solar Power Plant at Pwalugu. VRA signed a contract agreement with Tractebel Engineering as Owner's Engineers for the project in the ensuing year.

In March 2021, VRA received the final Grid Impact Study report from the Ghana Grid Company (GRIDCo) indicating no adverse impact on the stability of the national interconnected transmission system with the connection of the hydro and solar plants. In line with that, a draft Memorandum of Understanding (MOU) was prepared by the two key stakeholders.

Nuclear Power Programme

In collaboration with the Ghana Nuclear Power Programme Organisation (GNPPO), Nuclear Power Institute (NPI) and the Ghana Geological Survey Authority (GGSA), Nuclear Power Ghana (NPG) completed the installation of seismic monitoring equipment at candidate sites in the Greater Accra, Central and Western Regions. The equipment facilitates real-time data gathering information on ground motions (velocities and accelerations) and relevant seismic data at the candidate sites. The objective is to facilitate the evaluation process for the selection of the preferred site for the construction of Ghana's first nuclear power plant.

NPG also completed the evaluation report for large and small modular reactors following Request for Information documents issued to six vendor countries. The report will be submitted to the Minister for Energy in January 2022.

AMERI Power Plant

The Government of Ghana (GoG) entered a Build, Own, Operate and Transfer (BOOT) agreement with AMERI Energy for a fast-track turnkey power generation solution in 2015. The agreement involved the construction of a power plant at Takoradi with 10 new GE TM 2500+ Aero Derivative Gas Turbines with its related equipment and the provision of certain services related to the operation and maintenance services.

The AMERI Power Plant was scheduled to be transferred to GoG on January 31, 2021 at the end of the 60th month concessionary period. The Volta River Authority as the Assignee has been mandated to perform the GoG's function including operation and maintenance of the AMERI Power Plant.

During the year, VRA and other stakeholders including the Ministry of Energy, GRIDCo and Ghana Gas, met in Kumasi and agreed to relocate the GE TM 2500 Units AMERI Power Plant to the middle belt of the country. The objective is to improve voltages on the power system within the middle belt and the Northern sector of Ghana.

In line with the decision to relocate the AMERI Plant, following activities were undertaken in 2021:

- Public Procurement Authority granted approval to GoG through the Ministry of Energy to engage Mytilineos as the EPC Contractor for the works.
- An Environmental Impact Assessment Scoping Report has been completed and submitted to EPA for consideration and approval.
- Site Permit for the Project has been issued by the Energy Commission.
- Negotiations for the relocation of the plant to Kumasi is ongoing with Mytilineos Limited.
- Routine preservation activities are being undertaken by VRA as per the Original Equipment Manufacturer's recommendations.
- Condition Assessment of the Units was carried out by Messrs. WSP Global.

A 15-acre parcel of land adjacent to the GRIDCo K2BSP 161kV/330kV substation at Anwomaso in Kumasi, near Ejisu, in the Ashanti Region belonging to the Kwame Nkrumah University of Science and Technology (KNUST) has been earmarked to accommodate the AMERI power plant, its associated Balance of Plant, Office building and car park.

Capacity Expansion Activities

In 2021, Kaleo which is a 13MW solar power plant was commissioned and included to VRA's generation capacity. VRA continued its engagement with SSNIT/CENIT, a private partner for the development of the Tema Thermal 1 Power Plant (TTIPP) into a combined cycle. Additionally, VRA held engagements with the Government on the transfer of ownership of the Takoradi 3 Power Plant. The objective is to allow VRA to take over, revamp and operate the Plant. The Authority's desire to reactivate the T3 Plant is to increase its generation capacity and our thermal portfolio and enable us to reposition the company to compete effectively in the energy market.



POWER BUSINESS

Power Sales

Power sold to customers in 2021 was 11,542GWh. This was 10.49% higher than the 2020 sales of 10,446GWh. The total power sales in 2021 comprised 6,327GWh to electricity distribution companies, 1,733GWh to export customers, 2,367GWh to bulk customers and 1,115GWh to GRIDCo as transmission losses and substation use.

The power sales to the distribution companies were 4,342GWh to Electricity Company of Ghana (ECG), 1,753GWh to Northern Electricity Distribution Company (NEDCo) and 232GWh to Enclave Power Company (EPC).

For export customers, the Authority sold 95GWh to Communauté Electrique du Bénin (CEB), 415GWh to Compagnie Energie Electrique du Togo (CEET), 64GWh to Societe Beninoise d'Energie Electrique (SBEE), 962GWh to Société Nationale d'électricité du Burkina (SONABEL) and 197GWh to Compagnie Ivoirienne d'Electricite (CIE).

Power sold to bulk customers was made up of 1,410GWh to mining companies and 185 GWh to industrial/commercial customers. The mining companies includes AngloGold Ghana Limited, 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 Ltd., AngloGold Ashanti (Iduapriem) Ltd., Drillworx and Great Consolidated Diamonds Ghana Ltd. The industrial/commercial customers include Aluworks Ghana Ltd., Akosombo Textile Ltd., Diamond Cement Ghana Ltd., Savanna Diamond Company Ltd., VALCO, and others.

During the period under review, the Authority signed on one (1) new customer, Temple Energy Services Limited.

Imports

In 2021 there was no actual import from Compagnie Ivoirienne d'Electricite (CIE), although there were inadvertent exchange(s) of power.

Tariffs

Electricity tariffs for bulk and export customers were adjusted based on the terms and conditions of the respective Power Sale and Purchase Agreements. The VRA Bulk Generation Charge (BGC) approved by the Public Utilities Regulatory Commission (PURC) remained unchanged at GHp28.2273/kWh. The tariffs for ECG, NEDCo and EPC at year end were GHp25.1750/kWh, GHp33.7957/kWh and GHp33.7957kWh respectively.

Sale Contracts

In 2021, VRA continued to review and execute Power Sale and Purchase Agreements (PSPAs) with its customers. As at December 2021, VRA had twenty (20) valid PSPAs

Natural Gas Supply

In our quest to ensure compliance with our strategy for a 100% utilisation of natural gas for thermal power generation, VRA continued to engage our principal natural gas suppliers to ensure continuous availability of the resource. For the period under consideration, VRA received gas supplies from Ghana Gas Company (NGC), Ghana National Petroleum Corporation (GNPC) and N-Gas through West African Gas Pipeline (WAGP) with volumes of 20,486.10MMscf, 10,593.63MMscf and 16,975.43MMscf respectively. Gas received from N-Gas was utilised by both Asogli and VRA.

Business Development

Commercialisation of Liquid Fuel Assets

Pursuant to our policy of maximising the utilisation of our assets and increasing revenue, VRA initiated the process of commercialising its liquid fuel assets in Aboadze and Tema. Discussions are underway with the following institutions on a potential lease of the facilities for their operations.

VRA signed a Non-Disclosure Agreement (NDA) with Comanda Energy, a Ghanaian energy company, with specialty in bulk import of petroleum products. This follows their expression of interest to lease our facilities. Comanda Energy is expected to submit a proposal on their plan to utilise the liquid fuel asset after site inspections of the facilities at Tema and Aboadze.

VRA continued its consolidated engagement with Go Energy, following their indication to use one of the 29,500m³, capacity LCO storage tanks at Aboadze. An NDA has been signed after Go Energy undertook a site inspection. Bureau Veritas has been appointed by Go Energy to assess the integrity of the LCO storage tanks after undertaking a feasibility study on the assets.

VRA also received an expression of interest from the Tema Oil Refinery (TOR) to lease its diesel tanks at Tema. TOR has inspected the available tanks. VRA expects to achieve a full utilisation of the storage facilities to ensure the maximisation of the assets.





SUSTAINABILITY



Sustainability

In conformity with VRA's policy of ensuring long-term development in a sustainable manner, the Authority continued to focus on issues such as sustainability, environmental conservation, environmental protection, and improving the lifestyles of those living in riparian areas. The long-term investment in environmental sustainability in VRA's operational areas is aimed at mitigating the negative effects of operations on the people and the environment.

Environmental Sustainability

Climate Smart Stove (CSS)

One hundred CSS were constructed for 100 households in four (4) communities in 2021. This brings the total number of stoves provided in 2020 from 510 to 610 in 2021. Additionally, the Authority refurbished 90 existing stoves that were destroyed/abandoned by its users. CSS is designed to facilitate the Volta Lake Watershed Environment programme with the objective of reducing emissions of Greenhouse Gases (GHGs), mitigating climate change impacts, reducing forest degradation through the reduced consumption of firewood as fuel for cooking, improving health conditions of the users of the stoves, as well as saving money for users of the stoves.

Environmental Permits Renewal

In compliance with industrial regulation, Environmental Assessment Regulations, LI1652, the Authority initiated the processes for the renewal of permits by EPA for the underlisted operational facilities to the:

- Akosombo & Kpong GS
- 330 MW Takoradi Thermal Power Station
- 126MW Tema Thermal 1 Power Station
- 80MW Tema Thermal 2 Power Station
- 2.5MW Navrongo Solar Power Project
- 220MW Kpone Thermal Power Plant

The renewed Environmental Permits for the power facilities are expected to be issued in 2022.

Bamboo for the Protection of the Volta Lake

To facilitate the protection of the shoreline of the Volta Lake and preserve the waterbody for sustained hydropower generation, VRA continued to collaborate with the Bamboo & Rattan Unit of the Forestry Commission, Council for Scientific Research, and the Forest Research Institute of Ghana.

During the year, 10.40 hectares were planted as a continuation of phase 1 with 5,664 bamboo plantlets at Kudi Korpe. Total bamboo planted to date is 15

hectares with a total number of 7,504 plantlets. The Authority anticipates that the successful execution of the venture would create the needed buffer zone to avert encroachment of VRA's acquired lands and flood prone areas, protect against erosion and prevent or reduce the rate of evaporation of the Volta Lake, and finally protect the Volta Lake by serving as a means of demarcation of the 85 meters above mean sea level (280 feet contour).

Reforestation along the Volta Lake

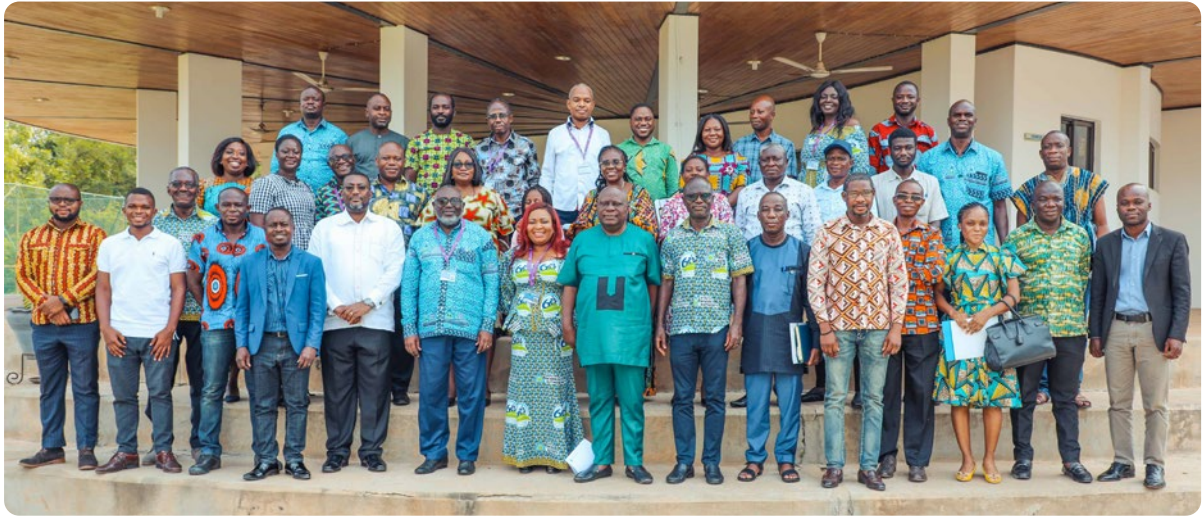
To reduce greenhouse emissions and ensure the continuous flow of water in the Volta Lake Basin, VRA continued its reforestation programmes along the Volta Lake. By the end of the year, about 3,132ha of the Volta Gorge area had been covered by dense forest vegetation consisting of both plantation and natural forest. The forest plantation area is 1,657 ha, the natural forest covers 1,502ha and the area of land with rocks and grass vegetation is 2,017.24ha. With respect to the buffer zone reforestation programme, a total of 28,000 out of 32,200 forest seedlings produced were supplied to 40 riparian communities for planting and 43 hectares of planted area achieved. About 241ha of forest cover was re-established under this programme as at the close of 2021. This intervention has the objective of ensuring the Authority's ability to generate sustainable power generation for the socio-economic development of the country.

Environmental Management Plan for the Akosombo & Kpong Hydroelectric Power Plants

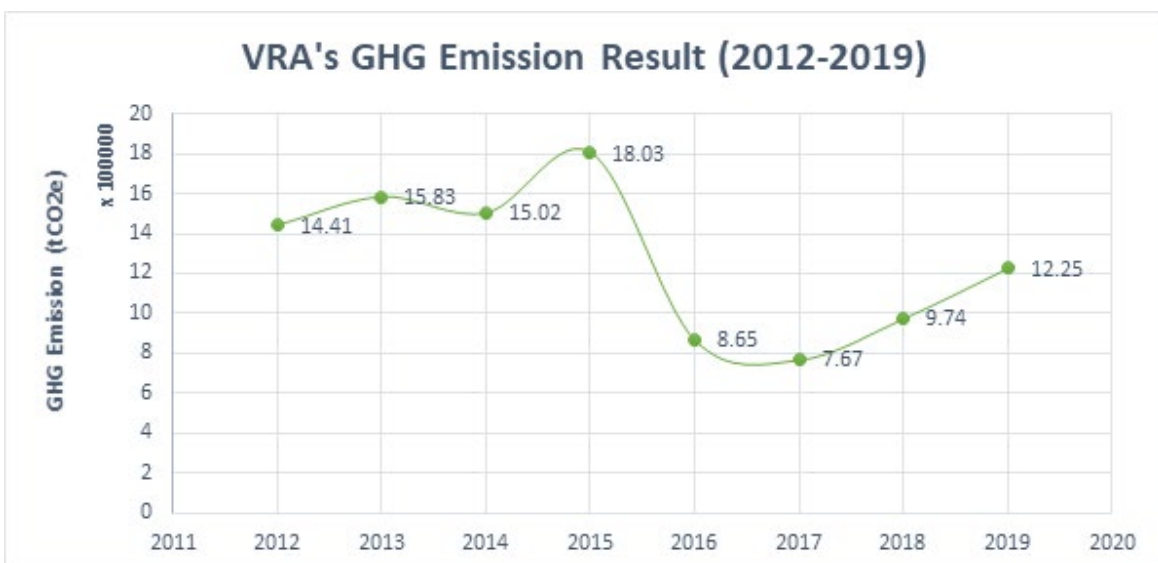
Being a socially responsible corporate organisation, the Authority has developed and implemented an Environmental Management Plan (EMP) for the continued operation of its two (2) Hydroelectric power plants. A key activity of the EMP is the formation of the Steering Committee, which is mandated to ensure the monitoring and guidance of the overall implementation of the EMP. In 2021, the members deliberated on VRA's 2020 annual report on environmental and social activities under the EMP. The final report from the meeting formed the basis for the submission of the 2021 annual environmental report submitted to the Environmental Protection Agency in accordance with the environmental permit conditions. VRA held its Annual Stakeholder Engagements to inform impacted assemblies on the highlights of major components of the EMP despite the COVID-19 pandemic and its limitations. The engagement falls under the Emergency Preparedness Plan (EPP), a key component of the EMP. It specifies the roles and responsibilities of stakeholders for emergencies and the occurrence of operational flow releases that could threaten downstream life, property, or economic activity.



Green House Gas Inventory Reporting



In response to the global clarion call on nations and organisations to assist in combating climate change and its impacts, VRA in 2016, initiated a corporate Carbon Footprint Management Programme (CFMP). The programme aims to improve the environmental sustainability of our business and helps strengthen our green credentials in the marketplace. The first corporate GHG inventory report, which covered emissions from nine VRA power generating facilities in Aboadze, Akosombo, Akuse, and Tema for the period 2012-2015, was produced in 2017. The Baseline Report was later verified by the Climate Change Department of the Ghana Environmental Protection Agency (EPA) in accordance with the GHG Protocol and updated to cover GHG emissions for the period 2012-2019. The report compares GHG emission from 2012 to 2019 and includes a number of internal sustainability targets as well as emissions reduction initiatives achieved. As indicated, the results of the annual GHG inventory allows for the tracking of progress made against emission targets, measures the impact of implemented reduction initiatives, and identifies further reduction opportunities for future action. Results of GHG Emissions arising from VRA operations from 2012-2019 is as presented graphically below.



GHG Emission Reduction Strategies

In line with recommended GHG emission reduction actions, VRA developed a Renewable Energy Development Programme (REDP) to increase its generation capacity from renewable sources. The VRA REDP set a 5-10-year Renewable generation capacity target of upscaling generation from renewable sources from 2.5MW to 160MW as detailed in the Table below.

Projects	
2.5MW	Navrongo Solar Power Project (operational since 2013)
17MW	Solar (Kaleo, Lawra) – Phase 1 (commissioned in 2019)
15 MW	Solar (Kaleo, Lawra) – Phase 2 (commissioned in 2021)
60MW	Bongo Solar Power Project (Environmental Permit Acquired)
0.060MW	Head Office Solar Car Park (operational since 2021)
0.079MW	Head Office Rooftop Project (commissioned in 2020)
75MW	Wind Power Project -1 (Anloga, Srogbe, Anyanui) Construction expected to commence by Q4 2021 and commissioned in Q1 2023
50MW	Solar Power Component - Pwalugu Multipurpose Dam (Construction planned for 2024)

So far, the 2.5MW Navrongo Solar Power Plant has been operational since 2013 and emission savings till date, is estimated at 10,791.00 Tonnes CO₂ equivalent (CO₂e). Annual GHG Emission savings from other planned renewable energy projects listed in the table above are estimated as 98,808 Tonnes CO₂ equivalent (CO₂e) for the solar power projects (122.584MW) and 98.077 Tonnes CO₂ equivalent (CO₂e) for the wind power projects (75MW).

Other GHG emission reduction strategies currently ongoing include retooling existing simple cycle plants to combine cycle, increasing our reforestation program coverage, utilisation of fuel-efficient climate smart stoves in impacted riparian communities, office paper usage reduction, sound solid waste management practices and leveraging on IT infrastructure to reduce business travels and transportation.



Social Sustainability

Our social dimension of sustainability identifies and manages business impacts, both positive and negative, on people and communities. Our social license to operate is heavily reliant on the success of our efforts to achieve social sustainability.

Support for Education

VRA Scholarship Scheme

The Authority's Scholarship scheme covers support for brilliant and needy students within its operational areas pursuing tertiary education at various public institutions. During the year, fifteen beneficiaries of the scheme graduated with notable achievements. In particular, Mr. Bright Azeibu of Koforidua Technical University from Torgorme Resettlement Community in the North Tongu District of the Volta Region obtained the highest cumulative grade point average of 4.02 in the history of Koforidua Technical University, while Elizabeth Amartei of the University of Cape Coast from Kpone Katamanso Municipal District of the Greater Accra Region was adjudged the best graduating student for Health, Physical and Recreation Department of the University of Cape Coast.

Donation of Educational Materials

In 2021, as part of the Authority's 60th anniversary, VRA donated educational and COVID-19 preventive materials valued at GH¢2 Million to 16,000 children in 30 schools. Drone technology was used in delivering the materials to beneficiary schools selected from the Eastern, Volta, Western, Greater Accra and Bono East Regions as part of the Authority's 60th Anniversary celebrations.

Employee Volunteer Programme

During the year, VRA mobilised about sixty (60) Staff to take up a day's Career Guidance, Counselling and teaching exercise in two (Ada and Adidome) Senior High schools. The subjects of interest included; Elective and Core Mathematics, Physics, Biology, Chemistry, ICT, English Language, Literature, Geography, Government, Economics, Social Studies, Financial and Cost Accounting. The Authority's EVP is purposely designed to promote volunteerism of Staff to give back





to the communities impacted by our operations, and inspire the students to achieve academic excellence in their chosen career paths.

Schistosomiasis Control Programme

In furtherance to the Authority's resolve to sustain efforts at addressing the menace of schistosomiasis in the Volta Basin, the E&SDD continued to collaborate with identified state institutions such as the Ghana Health Services of the Ministry of Health and the University of Health and Allied Sciences (UHAS). During the year, VRA deployed an integrated approach to the management and control of Schistosomiasis. Interventions deployed included Mass Drug Administration (MDA) to reduce disease parasitic load; shoreline weeds clearing to control intermediate host snail population thereby minimising the risk of infection; as well as educating and creating awareness to enhance and lead to change in knowledge, attitudes, and practices of indigenes of endemic communities. The Authority expects that these interventions will facilitate a decline in the disease prevalence and ultimately culminate in full disease eradication.

In 2021, VRA undertook MDA exercises in forty-two (42) communities within the Asuogyaman, North Tongu and Biakoye Districts as well as the Kpando Municipality as part of efforts to minimise disease parasitic load through mass drug administration. Three thousand and thirty-nine (3,039) persons including enrolled and out of school children as well as adults were treated with Eight thousand, six hundred and ninety (8,690No.) Praziquantel (PZQ) Tablets.

A subsequent evaluation exercise to evaluate the effectiveness of the MDA had one thousand, one hundred and forty-eight (1,148) persons assessed in forty-one (41) communities. Seventy-four (74) of these persons were diagnosed positive for Urinary Schistosomiasis. The average prevalence of Urinary Schistosomiasis in the Volta Basin was 6.45% compared to the previous average rate of 12.34% in these communities. Analysis revealed a moderate reduction in prevalence rates by 19.52%. This could be attributed to the MDA exercises and the numerous interventions deployed in majority of the communities evaluated.



Provision of Clean Water

In 2021, VRA in collaboration with Project Maji Foundation developed three standard Solar-Powered Mechanised water facilities worth One Hundred and Eighty Thousand Ghana Cedis (GH¢180,000.00) for three impacted communities in Battorkope, Akplorti and Dansokrom-Asikuma in the South-Tongu and Asuogyaman Districts. The beneficiary communities had challenges accessing potable water and therefore depended on water from the Volta Lake for domestic purposes, resulting in schistosomiasis infection. Six communities (Sedorm and Korankyi in the Asuogyaman District, Amlalokorpe and Volo in the North District, Atrobinya in the Shai-Osu Doku District and Teikpitikorpe in Ada East District) with a population of about 5,000 have benefited from VRA's solar powered mechanised borehole water facilities.



Provision of Biofil Sanitation

In 2021, VRA continued with ongoing projects to provide a Twenty (20) seater Biofil Toilet facility for Adjena Senior High School in the Asuogyaman District at a cost of One Hundred and Seventy-Five Thousand, Two Hundred Ghana Cedis and Two Pesewas (GH¢175,200.02). The Biofil sanitation facility is an off-grid alternative to septic tanks, that treats fecal matter on site in a digester separating solids and liquids under aerobic composting condition making the system odour free. The Authority is also developing a nine-seater sanitation facility for the Kade Government Hospital. Both projects are expected to be handed over to the beneficiaries in 2022.



Alternative Livelihood Interventions

To improve the livelihoods of the people living in the impacted areas, VRA continued to focus on the livelihood empowerment activities for the people in the identified areas. These livelihood empowerment interventions have the key objectives of serving as a reliable income status for the members of the communities in the project to prevent negative activities particularly, tree felling, from impacting the Authority's ability to ensure sustained hydroelectric power generation. VRA's bee keeping activities saw an improvement, as a total of 243 litres of honey was recorded, signifying a cash equivalence of GH¢13,500.00. It is imperative to note that, the total honey harvested since 2005 is 802.8 litres.



Economic Sustainability

Our economic dimension of sustainability includes assisting commercial initiatives on the Volta Lake to exploit the full potential of the Lake by utilising our fleet of marine vessels, protecting the environment and improving the livelihoods of people in riparian areas.

External Services

VRA provided Marine support services to external enterprises in 2021 in maritime working platforms, navigation services, and vessel hiring. Kete Krachi Timber Resources, AFCONS Infrastructure Limited, Trop Farms Limited, Adi Lake Resort, Peninsula Hotel, Approved Solutions Limited, and Adom Mbroso Water Transport Limited were among the companies that benefited from these services.

Internal Services

Internal marine services were provided during the year include water sampling for pollution monitoring aimed at maintaining the quality of the Volta Lake, lake patrols to identify and stop inimical activities on the Volta Lake, and aquatic weed harvesting to ensure the Volta River's ecosystem value is sustained.



SUPPORT SERVICES

Information and Communication Technology

As part of efforts to provide excellent, customer-focused ICT services, the Authority has developed a 5-year ICT strategy in alignment with the “BRAISE” strategy and the Sustainability Plan. The objectives of the ICT strategy are:

- Align ICT and Business Strategy
- Upgrade Infrastructure/architecture to support the business digital transformation agenda
- Double Innovation by extending ICT to the core operations of The Authority
- Improve the Organisations security posture by implementing a Cyber-Resilient Strategy
- Optimise IT investment by improving business processes and alignment with industry best practices

In the first year of 2021, seven (7) business processes were digitalised to realise the benefits of improved speed and responsiveness. One key business process digitalised is the Customer Billing Management system, which is used to manage the Authority’s customers within the Akosombo and Akuse enclaves. This extensible system is designed as a common billing platform for utilities, business licenses, tolls and all levies that may be charged within the enclaves.

To enhance the work-from-home phenomenon imposed by the COVID-19 pandemic, the Authority extended remote access and collaboration tools, which were in limited use, to all Staff in the Authority. These tools, along with a sustained program of awareness and training, significantly improved business communication, collaboration and served to maintain Staff productivity at optimum levels.

Two other initiatives that began in year 2021 were the deployment of VOIP telephony and the adoption of Cloud IT services. VOIP significantly reduced recurrent telecommunication costs and optimises the use of existing IT investments (network infrastructure). The adoption and on-going implementation of Cloud IT services reduce cost savings from CAPEX, improves security, improves access to work resources, improves work experience for Staff and most importantly, enhance focus on improving business processes as opposed to the maintenance of ICT infrastructure.

In addition, efforts to provide a resilient ICT environment included initiatives for the PEOPLE component of any successful IT service. Along with the upgrade and adoption of infrastructure and new technologies, several awareness programs and trainings were organised in the year to transform employee culture to recognise cyber security threats and embrace the new way of doing business such as working from home.

Industrial Relations

The cordial employer-employee relations that existed between the Management and the Staff ensured a relatively peaceful industrial environment during the year.

Staff Strength

Total labour strength in 2021 was 2,171. Out of the number, 2,147 were permanent while 24 were contract Staff. 1,670 out of the 2,171 were males, whilst the remaining 501 were females. It is instructive to note that the labour strength, as recorded for the year include PROPCo.

Employee Relations

To promote excellent employer–employee relations, Management held several engagements with the leadership of the various Staff groups/PSWU on matters of employee welfare and talent development. The engagements and successful negotiations on key issues related to salaries and allowances ensured a peaceful co-existence between Staff and Management, inuring to the peaceful atmosphere that existed during the year. Overall, the collaborative efforts were aimed at promoting good corporate governance within the Authority.

Training and Development

Despite the COVID 19 restrictions, Management continued to provide opportunities for tailor-made training programmes that enhanced the knowledge, skills and competencies of Staff. This is to ensure that VRA maintains a team of disciplined, dedicated, and well-motivated Staff, with the requisite customer-centric attitudes, and a private sector mindset in public service delivery. We successfully achieved this by leveraging on the Authority’s ICT infrastructure (Microsoft Teams) as well as in-person training sessions. The continuous training and development of Staff, largely contributed to the success the organisation achieved with our business continuity and sustainability efforts during the year.

Legal Services

In 2021, the Authority made efforts to undertake the monitoring of legislative initiatives that have the potential to affect the business. In the process, VRA reviewed six legislations including the Local Content and Local Participation Regulations; the Land Act (Act 1036); the Cyber Security Act, 2020 (1038); Ghana Maritime Authority Act, 2002 (Act 630) as amended; the Volta River Development Act, 1961 (Act 46) as amended, and the Public Private Partnership Act, 2020 (1039). The goal is to ensure that VRA is being responsive and in compliance with the implementation of the laws. Following the monitoring and review of the legislative initiatives, VRA provided legal education on “Analysis of PPA” for Staff of the Engineering and Operations branch.

Additionally, in keeping with best practice, VRA provided insurance cover for its insurable assets during the year. The purpose is to ensure that the Authority’s legal liabilities were transferred to the insurance company for indemnity. In line with that, the Authority renewed eleven insurance policies and procured two (2) additional insurance covers. The renewed policies covered the Authority’s Buildings in commercial use, Tema Thermal Power Complex Station 3, (T3), Takoradi Thermal (TTPS-T1) and the Liability Policy for VRA/Ghana Gas Tie-In. Furthermore, the renewed policies covered AMERI Power Plant, Goods-in-Transit, Assets All Risk (selected buildings), Akosombo & Ada Marine Hull, Marine Hull/Passenger, Third-Party Liability Policy as well as the Kpone Thermal Power Station (KTPS) Insurance Cover. The two new insurance policies procured include insurance covers for Akosombo and Kpong Hydro Generating Stations.

In line with VRA’s strategy to advance internal and external business processes, the Authority successfully captured one hundred and twenty-six (126) power and non-power related agreements on a fully automated contract register. The aim is to avert possible lapses that would result into financial liabilities, arising from the expiration of the contracts.

Lastly, during the year, final judgement was given by the Honourable Court in the suit between VRA and Enclave Power Company (EPC). The judgement enjoins EPC to pay a settlement amount of US\$12,938,630.80 to VRA. This follows an out of court settlement of the suit, which commenced in 2016. Enclave Power has to date complied with the terms of settlement.

Corporate Strategy

During the year under review, the Authority rolled out a new strategic programme, the VRA Sustainability Plan. The plan has the key objective of solidifying the gains made from the implementation of the first phase of the “BRAISE” strategy, thereby enabling the Authority to realise its financial and operational objectives.

In addition, VRA complied with relevant statutory obligations by preparing and submitting the Authority’s Corporate Plan for the next five years, the 2022 Performance Contract, and other submissions required by the State Interests and Governance Authority.

To ensure the effective implementation of the Authority’s corporate objectives and strategies, VRA continued with its performance assessment and evaluation of organisational and departmental objectives. The regular monitoring and evaluation engagements yielded commendable results as both the Corporate and composite Departmental Performance for the year remained above average and improved on a year-on-year basis. This improved performance, is an indication of Staff commitment to the strategy, despite the COVID-19 pandemic, to realise agreed performance targets over the year under review.

In response to the dynamics in the electricity market and to support the Authority’s competitive strategy, VRA carried out research and produced insightful market research reports on Cote D’Ivoire and Nigeria, two key competitors in the regional electricity market. An analysis of the mining sector was also carried out to garner insights on their operations and energy requirements. The outcomes of these and other research works have subsequently been used to re-shape the Authority’s competitive market strategy.

Additionally, VRA successfully concluded work on its Enterprise Risk Management Committee Charter (ERMC). The Charter is the governance document for the Authority’s Enterprise Risk Management (ERM) and Risk Management culture. The Strategic Risk Register as well as Operational Risk registers for Departments, Specialised Units/SBUs were also developed. The registers provide the respective risk dashboards and planned mitigation actions on key operations of the Authority.

The Authority expects that by continually updating its strategic plans to reflect the dynamic business environment, and fostering strategic thinking amongst our well-motivated Staff, VRA will be able to reposition itself in the highly competitive energy market, and ultimately become a model of excellence for power utilities in the region.



Real Estates & Security Services Department

The Akosombo Management Committee (AMC) continued to oversee VRA's Local Authority functions in Akosombo in accordance with the Executive Instrument (EI) 42, establishing the Akosombo Township. The total revenue generated by AMC from its local council activities in 2021, amounted to GH¢239,541.00, compared to the 2020 figure of GH¢220,798.90 representing a percentage increase of 8.49 percent. In accordance with the agreement, the accrued receipts for 2021 is expected to be shared equally between the Authority and the Asuogyaman District Assembly.

In 2021, the total income accumulated from rent amounted to GH¢1,338,060.54 compared to GH¢2,803,942.74 achieved in 2020, resulting in a decrease by 52.28 percentage. Included in the total revenue under property services is income from Catering Services, Club House, and accommodation, which amounted to GH¢6,463,272.64. This represents an increase of 135.52 percent over the 2020 total revenue of GH¢3,580,904. The overall total revenue generated during the period under review was GH¢7,862,609.10. The year 2021 ended with an overall revenue growth of 9.63% over that of 2020.

Below is the summary of 2021 as against 2020 Actual Revenue line items for the year:

REVENUE LINES	2021 REVENUE	2020 REVENUE	INCREASE/DECREASE
Rental	1,338,060.54	2,803,942.74	1,465,882.20
Catering & Club House	4,823,940.64	2,048,200.84	2,775,739.80
Accommodation	1,639,332.00	1,532,704.00	106,628.00
Miscellaneous & Leisure	61,275.92	96,005.02	34,729.10
Total	7,862,609.10	6,480,852.60	1,381,756.50

Health & Safety

Considering the value VRA places on its Staff and the Environment, the Authority continued to ensure that issues related to health and safety remained paramount in all our operational activities in the Work Areas.

During the year, VRA strictly monitored the Safety performance to ensure compliance with set standards. This was achieved through Work Area Safety Committees (WASACO) Inspections/Meetings, Safety meetings, Fire Safety and Occupational Health and Safety Audits.

The goal is to drive and measure critical safety activities to enable effective interventions to mitigate and recover from negative trends before they result in injury, damage, or loss.

These activities culminated in the celebration of the Authority's Annual Safety Day in November. In the order of performance, KTPS, TTPC and Akosombo GS emerged as best WASACOs for the VRA Operational Areas, whiles WA, Bolgatanga, and Techiman emerged winners for the NEDCo Areas. For the

Non-Operational Areas, Investment and Commercial Services Departments (Kpone) and Real Estates at Aboadze emerged as winners.

Annual Medical Examination

In 2021, the Authority resumed its mandatory annual staff medical examination after it was suspended in 2020 due to the outbreak of the COVID-19 pandemic. The policy has the objective of ensuring the Authority's optimal occupational health and safety.

VRA Health Services Limited (VHSL)

The outbreak of the COVID-19 pandemic and its resultant restrictions posed operational challenges to the Authority's health facilities during the year. With support from VRA, however, through the provision of Personal Protective Equipment (PPEs), VHSL successfully executed its mandate to meet stakeholders' expectation. In line with COVID-19 restrictions and to ensure the strict observance of the social distancing protocols, call centres were instituted for clients to book appointments to see assigned doctors.

VRA's hospitals became fully operational after a few months of restricted operations. To ensure VHSL's facilities were adequately equipped for the effective management of COVID-19 cases, VHSL acquired the requisite equipment to conduct the COVID-19 antigen test and a COVID-19 testing Safety Cabinet. VHSL also took delivery of three (3) X-ray machines, which have been deployed to the Accra, Akosombo and Aboadze Hospitals and are currently operational.

VRA continued its work towards the procurement of diagnostic equipment for the hospitals. In terms of infrastructure, the Authority focused on the Accra Prefab and Aboadze Expansion projects. The Aboadze expansion works comprise of main wards, an operating theatre, a recovery ward, an ambulance bay, a sterilisation unit, a laundry facility, an eye and dental units. The Aboadze expansion project is almost complete with the main administrative block, wards, dental and eye units currently in use. To further improve efficiency in health care delivery, VHSL deployed a new Hospital Information Management System (HIMS). The deployment of the HIMS is expected to reduce patient waiting times, improve efficiency in the revenue collection process, reduce revenue losses, and enhance clinical care.

The overarching objective for these interventions is to ensure VHSL is well-positioned to deliver quality services to improve business operations and revenue streams.

VRA Academy

In line with the mandate to bridge the competency gaps in the energy sector, the VRA Academy, successfully organised training programmes targeted at its in-house and external clients. A total of 2,138 Staff benefited from 67 in-house programmes, and 354 external clients participated in 22 external training programmes. The training programmes were mostly organised in person with the Academy putting in place the necessary COVID-19 safety protocols.





NON POWER ACTIVITIES



SUBSIDIARIES

In 2021, the Authority continued to pursue its agenda of securing the best overall investment return for its Subsidiaries and Strategic Business Units; the Akosombo Hotels Limited (AHL), the Kpong Farms Limited (KFL), the Volta Lake Transport Company (VLTC), the VRA Property Holding Company (PROPCo), the VRA International Schools Limited (VISL) and the VRA Health Services Limited (VHSL). The initiative is in alignment with VRA's corporate strategy to restructure the organisation into a resilient, viable and self-sustaining entity, operating with a private sector mindset.

The Authority's commitment to engage the private sector in the management of the subsidiaries is motivated by the opportunities strategic partners would provide through the injection of capital, introduction of innovative business principles, and strategic leadership in their operations, to maximise the values of the subsidiary businesses.

The successful execution of engaging strategic partners with the subsidiaries would in the long term deliver value to the Authority following improvements in their operational and financial performance.

VRA Property Holding Company (PROPCo)

PROPCo in 2021, successfully operationalised the "Garden Lodge", one of its planned two-phased Volta Residences renovation and refurbishment projects at Akuse. The Garden Lodge, which has been passed for a 2-star hotel by the Ghana Tourist Board has 15 standard rooms remodelled from an old motel property.

On completion of the second phase of the project, the "Volta Residences" will have a total of 68 rooms, comprising of a current 15 room Garden Lodge and 17 bungalows.

PROPCo leveraged on the demand for hotel rooms in Akuse from the VRA Academy, which currently serve as the anchor guest to its operations since inception. The "Volta Residence" also accommodates guests from Akosombo Hotels Ltd. when they are over-booked.

The synergies among PROPCo, VRA Academy and Akosombo Hotel is an excellent example of a collaborative initiative between three (3) VRA subsidiary businesses and business unit in line with its parent company's drive for public sector service with a private sector mentality.

During the year, The "Volta Residences" catered to a variety of walk-in guests (leisure seekers/long weekenders) and hosted several corporate clients.



VRA Health Services Limited (VHSL)

COVID-19 Management

In support of national efforts aimed at reducing the prevalence and ensuring effective management of recorded COVID-19 cases, VHSL (Akosombo Hospital) received accreditation to begin free testing. VHSL commercialised testing in the course of the year.



Infrastructure Expansion

In order to provide premium health care services to patrons in the various work locations, the VHSL augmented existing facilities in the Accra work area, with a Prefab building, which introduced theatre services at the Hospital. Upon the completion of the Aboadze Phase 1 & 2 expansion projects, service provision at the Hospital Annex commenced in July, 2021.

The expansion also included the purchase of ultra- modern equipment to the Aboadze Hospital Annex, Accra and Akosombo Hospitals. Items purchased include an Ultra Sound Scanner, trolleys for the X-Ray Unit and a Suturing Machine and two (2) X-Ray machines. The equipment were inspected, tested and declared safe for use by the Nuclear Regulatory Authority and were installed successfully.



Volta Lake Transport Company Limited (VLTC)

Business Operations

The 2021 business year showed a considerable improvement in VLTC's operations compared to 2020 and 2019. This was largely as a result of efficiency in operations and most importantly, an increase in liquid cargo shipment. During the year, a total of 79,751.95 tons of cargo representing 81 percent compared to the budgeted 98,492 was shipped. Specifically, 59,322.55 tons of liquid cargo representing 182 percent of the budgeted cargo of 32,592.0 tons was transported. In terms of solid cargo, out of a projected 50,400 tons of cargo to be transported, a total of 20,429.40 was achieved. This represents 31 percent below the projected value. The drop in shipment of solid cargo is attributed to the unavailability of MV Volta Queen, as it was scheduled for routine maintenance. In terms of passenger traffic, VLTC transported 1,090,607 passengers in cross lake operations.



Strategic Partnership Selection

VLTC's strategic partner selection process opened with an introductory meeting involving the VRA Team; the Mergers and Acquisitions Advisor; and the Strategic Partner, a consortium comprising three firms, Eleqtra Limited (West Africa), Merchants Company of West Africa Limited and Sociedade Gestora de Participacoes Sociais (Grupo ETE). The selection process was stalled at the due diligence stage following VRA's rejection of the consortium's inability to provide evidence it had the available funds for partnership.

VOLTA LAKE TRANSPORT COMPANY LIMITED (VLTC)



OUR COMMERCIAL OPERATION

Our commercial operations involve the transportation of cement in large quantities, diesel, vehicles, agricultural products, and general cargo from Akosombo (South) to the North and vice versa. The Company has the capacity to annually transport approximately 91,843 tonnes and 80,000 tonnes of liquid cargo and solid cargo respectively to Buipe in the Northern part of the Country.

FERRY CROSSING SERVICES

VLTC operates cross ferry services at five (5) stations namely: Adawso (Eastern Region), Yeji (Bono-East Region), Kete-Krachi (Oti Region), Agordeke (Eastern Region), and Dambai (Oti Region).

TRAMP SERVICES

VLTC also offers tramp services along Volta Lake. A vessel is available at short notice (or fixture) to load any cargo within its catchment area.

VLTC... We Transport Regional Trade

Head Office

Akosombo-Marine Drive
Eastern Region
P.O. Box 75, Akosombo
Contact: 0342-291949/0302218540
Digital Address: Ea-07431633

Accra Office

VRA Annex
Room - 15
Accra

www.vltcgh.com

Akosombo Hotels Limited (AHL)

Business Operations

Even though the hospitality industry experienced severe drawbacks due to the COVID-19 pandemic, AHL in spite of the challenges, continued to adopt innovative ways of business continuity by ensuring that the Volta Hotel and Dodi World maintained their operations to meet their stakeholders' expectations in a safe, secure and healthy environment. In line with that, AHL, during the year, successfully increased the hotel's room capacity by completing and operationalising nine (9) additional premium rooms. This increased AHL's room capacity from thirty-five (35) to forty-four (44).

Furthermore, to stay relevant and customer-focused, AHL developed aggressive marketing strategies and business alliances to keep and increase its market share in spite of stiff competition. Business processes were also realigned to match customer expectations. Leveraging on digitalisation, AHL also successfully launched the Dodi World online booking and payment platform to increase access to global markets and create a seamless booking process for customers.

Customer care within this period also became the primary focus for Staff training and development.

Strategic Partnership

During the year, AHL's efforts to complete the strategic partner selection process experienced a setback at the due diligence stage, as it was discovered that the identified Strategic Partner, had some challenges in arranging funding to handle the transaction.



Kpong Farms Limited (KFL)

Business Operations

During the year, KFL received approval from the Ghana Standards Authority to enable the company proceed to obtain certification from the Food and Drugs Authority (FDA). Following that, KFL rebranded its product in anticipation of the certification.

Strategic Partnership

Unlike AHL, KFL's strategic partner selection process progressed steadily during the year. In the course of the year, the Strategic Partner, Dorothy Kani Company Limited (DKCL), visited the KFL facility to carry out evaluation and due diligence. DKCL, subsequently, submitted a proposal for the inclusion of greenhouse vegetables and meat processing/piggery in KFL's product line. It is our expectation that with the injection of the requisite capital and leadership, KFL would be repositioned to ensure it successfully competes in its

area of operation.

Re-registration of KFL, which allowed for its recognition as a legal entity, was executed in 2021. This followed PriceWaterhouseCoopers' (PWC) successful completion and submission of the 2018/2019 Audited Report; the payment of the required fees as well as the submission of relevant documents to the Registrar General's Department.



Akosombo Hotels Limited Volta Hotel & Dodi World

The Volta Hotel Akosombo, provides a fantastic view of the Akosombo Lake (Second largest man-made lake in the world) and the Akosombo Hydroelectric dam. Volta Hotel is definitely a heaven of concert, hospitality, and natural beauty.



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Conference



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STRATEGIC BUSINESS UNITS

VRA International Schools Limited (VISL)

Health & Safety

In the wake of the COVID-19 pandemic, mandatory testing and psychological care, through a newly established Counselling Unit, was offered to students and Staff as part of efforts aimed at augmenting existing health and safety standards in the schools.



Achievements

During the year under review, the School continued to promote a competitive spirit among its students with their participation in various educational competitions in the study areas of Climate Change as well as Science, Technology, Engineering and Mathematics (STEM). Students of the Akosombo and Aboadze Schools emerged winners and runners-up in the British Council three-minute video contest on the topic "Waters of the World" and a Regional Quiz Competition respectively.





60TH ANNIVERSARY CELEBRATION

On April 26, 2021, VRA celebrated its Diamond Jubilee, with significant activities but under strict COVID-19 pandemic restrictions. The year-long celebration was marked with well-planned activities, which sought to celebrate the achievements of the Authority over the past 60 years. All stakeholders including our Stakeholder, Staff (past and present), our Shareholders, Chiefs and natives of our impacted communities, customers, school children and the general public were given due recognition during the celebration. Under the theme: “Celebrating 60 years in the Power business, Our Legacy, Our Future,” the activities were preceded by the Anniversary launch at the Kempinski Hotel Gold Coast City Accra on October 28, 2020, where the then Senior Minister, Hon. Yaw Osafo-Maafa represented the Government of Ghana to deliver the keynote address. Also, at the event, the 60th Anniversary logo and cloth were outdoored.

Some of the key activities undertaken during the celebration were as follows:

Drone Delivery of Educational Materials and COVID-19 Relief Items

In support of Science, Technology, Engineering, and Mathematics (STEM) education, the Authority deployed drone technology to deliver branded educational materials including school bags, exercise books, math sets, pens, pencils, water bottles and other stationery to sixteen thousand (16,000) school children from thirty (30) selected schools in communities within the Authority’s operational areas across six (6) regions. Other items distributed to the school children and their respective schools were VRA branded personal protective equipment (nose masks, Veronica buckets, hand sanitisers) in support of the Nation’s efforts at curbing the spread of the COVID-19 pandemic.

Unveiling of Live-Sized Busts of Four (4) Former Chief Executives of VRA

The unveiling of life-sized busts in honour of four (4) past Ghanaian Chief Executives of VRA was another high note event to mark the 60th Anniversary. The past Chief Executives were honoured for their immense contributions towards the growth of the Authority since its inception. The busts of Ing. Dr. Emmanuel Laud Quartey and Mr. Alexander Erasmus Kwabla Kalitsi were mounted and unveiled at Akosombo, while those of Ing. Dr. Louis Casely-Hayford and Ing. Gilbert Ohene Dokyri were mounted and unveiled at Akuse and Aboadze respectively.



Green Ghana Tree Planting Exercise

In support of Government’s Green Ghana Project, the Chief Executive led Management and Staff to plant 600 seedlings of various tree plant species. This also complemented the Authority’s afforestation along the Volta Lake and within various operational locations. Through this exercise, the Authority embedded its “BRAISE” and Sustainability agenda as part of the 60th Anniversary. The exercise was under the theme: VRA@60: Investing in the Greening Ghana Initiative for Energy and Environmental Sustainability.

Anniversary Climax

It is worthy to note that, on April 26, 2021, the 60th Anniversary activities were climaxed with a Birthday cake-cutting ceremony, which was observed at all work locations by all Staff.

Conclusion

Although challenging, the Authority in the face of the disruptive COVID-19 pandemic, ended the year on a positive note as we successfully celebrated our Diamond Jubilee and churned out an incredible operational and financial performance. Additionally, the Authority enjoyed a positive outlook in the media landscape.



60TH ANNIVERSARY ACTIVITIES IN PICTURES

Anniversary Climax Cake Cutting



Unveiling of Live-Sized Busts



60TH ANNIVERSARY ACTIVITIES IN PICTURES

Drone Delivery of Educational Materials and COVID-19 Relief Items



Green Ghana Tree Planting





**100%
NATURAL**



**AROMATIC
LONG GRAIN
RICE**



**Kpong
Farms
Rice**

Kpong Farms Limited (KFL) was incorporated in May 1982 by the VRA as a wholly-owned agricultural commercial venture to carry out mechanized commercial farming, agro-processing and provision of machinery services. The FL's 252 hectares landed property presently cultivates 100 hectares of irrigated land for rice production, and serves both local and international markets.

It contains lots of nutrients which includes carbohydrate, protein, high fiber, fats, vitamins and minerals such as folic acid, phosphorus, vitamin B1 (thiamine), vitamin B3(niacin), magnesium, selenium, manganese, and iron.



Email: Kpongfarms@vra.com | Facebook: [@Kpongfarmsrice](https://www.facebook.com/Kpongfarmsrice)

Tel: 0543 811 577 | 0597 065208 | 0244 622 886

Instagram: [@kpongfarmsltd](https://www.instagram.com/kpongfarmsltd)



FINANCIAL HEALTH



Revenue from sale of electricity in 2021 increased by 7.62 percent (GH¢298.84 million) to GH¢4,219.99 million from the previous year's sales of GH¢3,921.15 million. This was mainly due to the combined effect of a 9.36 percent (919GWh) increase in the volume of energy sold from 9,820GWh in 2020 to 10,848GWh in 2021 and 6.68 percent decrease in the average tariff of ECG from GH¢0.26978/kWh in 2020 to GH¢0.25175/kWh in 2021. Transmission Services Charge relating to energy (TSC2) increased by 52.85 percent from an average of GH¢0.011534 in 2020 to GH¢0.01763 in 2021. The volume of energy sold to regulated customers increased by 22.5 percent (1,197GWh) from 5,319GWh in 2020 to 6,516GWh in 2021. The volume of electricity sold to deregulated customers which attract relatively higher tariff decreased by 3.75 percent (169GWh) from 4,501GWh in 2020 to 4,332GWh in 2021. This was due to the decline in sales to Communaute Electrique Du Benin which decreased from 715GWh in 2020 to 574GWh in 2021 representing a decrease of 141GWh (19.72%).



AUDITED ACCOUNTS (Financial Review & Audited accounts)

CORPORATE INFORMATION

BOARD OF DIRECTORS

Mr. Kofi Tutu Agyare-Chairman
 Mr. Emmnuel Antwi-Darkwa - Chief Executive
 Most Rev'd. Dr. Cyril Kobina Ben-Smith
 Rev. Dr. Joyce Rosalind Aryee
 Hon. Kwame Anyimadu-Antwi
 Chief Musa Badimsugru Adam
 Mr. Richard Obeng Okrah
 Madam Janet Akosua Gyasiwaa
 Mr. Solomon Adjetey Sowah

SECRETARY

Mrs. Claudia Gyeke-Aboagye

REGISTERED OFFICE

Electro Volta House
 P. O. Box M.77
 Accra

AUDITORS

Ghana Audit Service
 P .O. Box M96
 Accra

BANKERS

Access Bank Ghana Limited
 Bank of Africa Ghana Limited
 Bank of Ghana
 ABSA Bank of 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
 Societe Generale 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

FINANCIAL REVIEW FOR THE YEAR ENDED 31 DECEMBER 2021

The financial review relates to the Group, unless stated otherwise.

Power Production

The total electricity generated from both hydro and thermal sources increased by 319GWh (3%) from 9,280GWh in 2020 to 9,599GWh in 2021; this includes generation and transmission substations use of 59GWh (2020: 50 GWh). Generation from hydro sources increased by 506GWh (8%) from 6,024 GWh in 2020 to 6,530GWh in 2021. Thermal generation however decreased by 6% (187GWh) from 3,256 GWh in 2020 to 3,069GWh in 2021. The Thermal generation includes 67GWh of energy from the Ameri Plant (2020: 1,283GWh). VRA's 2021 generation from solar plants was 6GWh (2020: 3GWh).

To supplement generation from VRA's own plants, gross power of 1,998GWh (2020: 1,193GWh) was purchased from Takoradi International Company Limited (TICO) of Ghana representing an increase of 67% (804GWh) from the 2020 power purchase from TICO. There was net inadvertent import of 43GWh from CIE in 2021 (2020: 58GWh)

Summary of energy generated and purchased

	Change		2021		2020	
	GWh	%	GWh	%	GWh	%
VRA Hydro:						
Akosombo	396	8%	5,557	48%	5,161	49%
Akuse	110	13%	972	8%	862	8%
Total Hydro	506	8%	6,530	56%	6,024	57%
VRA Thermal						
TTPS	1,043	96%	2130	18%	1087	10%
TTIPP	-24	-6%	404	3%	427	4%
TT2PP	(0)	0%	90	1%	90	1%
KTPS	10	3%	378	3%	368	3%
AMERI	(1,216)	-95%	67	1%	1,283	12%
Total Thermal	(187)	-6%	3,069	26%	3,256	31%
Total VRA Hydro & Thermal	319	3%	9,599	82%	9,280	88%
VRA Solar:						
NSPS	(0)	(0)	3	0%	3	0%
Kaleo	3	-	3	0%	-	0%
	3	-	6	0%	3	0%
Total Energy by VRA	321	(0)	9,604	82%	9,283	88%
Purchases & Imports						
TICO	804	67%	1,998	17%	1,193	14%
CIE	(15)	-26%	43	0%	58	1%
	789	63%	2,041	18%	1,252	15%
Total Energy Generated & Bought	1,111	11%	11,645	100%	10,535	100%



Financial Review for the year ended 31 December 2021

Revenue

Revenue from sale of electricity in 2021 increased by 7.62% (GH¢298.84 million) to GH¢4,219.99 million from the previous year's sales of GH¢3,921.15 million. This was mainly due to the combined effect of 9.36% (919GWh) increase in the volume of energy sold from 9,820GWh in 2020 to 10,848GWh in 2021 and 6.68% decrease in the average tariff of ECG from GH¢0.26978/kWh in 2020 to GH¢0.25175/kWh in 2021. Transmission Services Charge relating to energy (TSC2) increased by 52.85% from an average of GH¢0.011534 in 2020 to GH¢0.01763 in 2021. The volume of energy sold to regulated customers increased by 22.5% (1,197GWh) from 5,319GWh in 2020 to 6,516GWh in 2021. The volume of electricity sold to deregulated customers which attract relatively higher tariff decreased by 3.75% (169GWh) from 4,501GWh in 2020 to 4,332GWh in 2021 largely on account of sales to Communaute Electrique Du Benin which decreased from 715GWh in 2020 to 574GWh in 2021 representing a decrease of 14GWh (19.72%).

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¢289.27 million (9.01%) from GH¢3,208.80 million in 2020 to GH¢3,498.07 million in 2021.

This is attributable to the combined effect of the following;

Increase in energy generation by 10.54% (1,111GWh) from 10,535 GWh in 2020 to 11,645 GWh in 2021.

- Thermal Generation from TICO increased by 67% from 1,193 GWh in 2020 to 1,998 GWh in 2021
- Gas consumption in line with the decrease in generation also declined by 11.53% (4,380,364 MMBtu) from 37,986,448.40 MMBtu in 2020 to 33,606,084.44 MMBtu in 2021.
- 4.20% depreciation of the average GH¢/US\$ exchange rate from GH¢5.5775/US\$1 in 2020 to GH¢5.8116/US\$1 in 2021 also contributed to the increase in cost of sales.
- Power importation (actual and inadvertent) from CIE dropped by 26% (GWh) from 58 GWh in 2020 to 43 GWh in 2021.

Administrative Expenses

Administrative expenses increased by GH¢134.33 million (21.49%) from GH¢625.10 million in 2020 to GH¢759.43 million in 2021.

There was a reduction in depreciation from GH¢738.46 million in 2020 to GH¢451.09 million in 2021 due to the physical assets revaluation and the extension of useful life of some of the assets.

Staff related cost also increased by 15.33% (GHS57,966) from GH¢378.20 million in 2020 to GH¢436.16 million in 2021. Repairs and maintenance also increased from GH¢26.17 million in 2020 to GHS¢29.27 million in 2021.

Other Operating Expenses

Other operating income increased by GH¢41.63 (18.58%) from GH¢224.01 million in 2020 to GH¢265.64 million in 2021. The increase was due to increases in income from Operating Units and subsidiaries such as VRA Schools, VRA Health Services Limited, Property Holding Company Limited (PROPCo), Akosombo Hotel Limited and Volta Lake Transport Company Limited 22.19% (GHS15.65 million.) increase from GH¢70.54 million in 2020 to GH¢86.12 million in 2021.

Financial Review for the year ended 31 December 2021



Other Operating Income

The operating profit of the Group in 2021 was GH¢355.41 million compared to GH¢439.20 million in 2020. The decrease of 19.08% (GH¢83.79 million) in operating profit was mainly due to an increase in Administrative Expenses by GH¢134.33 million (21.49%) from GH¢625.10 million in 2020 to GH¢759.43 million in 2021. Included in total operating income is a GH¢127.29 million support by the Government of Ghana in respect of the shortfall on tariffs to be received for power generated by the AMERI Plant. (2020: GH¢127.95 million).

Net Profit

The Group ended the year 2021 with a Net Profit of GH¢60.00 million (2020: Net Loss of GH¢127 million). This represents an increase of 147.24% (GH¢186.99 million). The increase in profit for the year is due to increase in Financial Income (64.83%) from GH¢145.82 million in 2020 to GH¢240.35 million in 2021, decrease of GH¢167.17 million (64.75%) in Financial Expenses from GH¢258.18 million in 2020 to GH¢91.02 million in 2021. Exchange loss was GH¢389.45 million in 2021 (2020: GH¢403.64), a decrease of GH¢14.18 million (3.51%).

2022 OPERATIONAL & FINANCIAL OUTLOOK

The forecast national system demand for 2022 is 23,264GWh, comprising customer demand of 22,115GWh, GRIDCo substation usage of 10GWh and transmission losses of 1,139GWh. The Authority plans to generate a total of 12,625GWh whilst Bui Hydro Plant 756GWh and the Independent Power Producers would generate 10,483GWh excluding Bui generation. The Authority's generation breakdown is as follows: 6,500GWh from hydro sources, 2,003GWh from the Takoradi Thermal Plant, 348GWh from the TT1PP, 375GWh from the Kpone Thermal Power Plant, 35GWh from the Solar Plant, 354GWh from AMERI and no power imports. The Takoradi International Company (TICO) is forecast to supply 2,299GWh. Thus, VRA is forecast to generate 52% of the national electricity load whilst Bui Hydro Generating Plant and the IPPs will supply 42% with no additional supply required. The forecast power sale revenue for 2022 is GH¢4,245million assuming a Bulk Generation Tariff of GHp25.18/kWh. The Other income of about GH¢75.6 million, includes a premium of GH¢21.6 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¢3,145 million.

However, total administrative cost is estimated at GH¢595 million (excluding the Strategic Business Units- SBUs) whilst interest expense is forecast at GHS106.6 million and loss on exchange fluctuation on foreign debt amount to GH¢28.5 million



Financial Review for the year ended 31 December 2021

Financial Summary (VRA)

	2017	2018	2019	2020	2021
	GH¢'000	GH¢'000	GH¢'000	GH¢'000	GH¢'000
Income from Sale of Electricity	2,632,802	3,000,712	3,890,946	3,793,161	3,932,207
Other Operating Income	353,976	132,919	110,837	121,105	132,106
Operating and General Expenses including depreciation	2,910,118	3,079,293	3,310,366	3,161,441	3,618,285
Depreciation	421,369	432,317	424,903	535,675	365,613
Operating Profit/(Loss)	771,765	591,311	830,713	880,776	573,322
Financial Expenses	363,726	422,850	363,726	258,184	87,596
Financial Income	9,788	14,101	10,939	3,593	7,811
Exchange Fluctuation	(396,380)	(402,663)	(605,046)	(469,686)	(380,779)
Government Assistance/Subvention/Subsidy	651,153	536,973	139,296	127,951	127,294
Net Profit/(Loss)	(430,544)	(220,101)	(127,120)	156,499	112,757
Property, Plant and Equipment(Cost/Valuation)	13,329,637	15,062,532	17,778,816	18,914,285	24,627,519
Property, Plant and Equipment (Net Book Value)	6,948,350	7,502,118	8,469,329	8,648,585	16,832,940
Capital Work in Progress	834,031	743,927	815,969	827,780	961,369
Current Assets	6,110,609	7,495,142	8,864,931	9,201,999	8,631,569
Current Liabilities	6,187,043	6,419,391	7,626,322	7,812,410	6,861,037
Investment by the Rep. of Ghana	2,924,652	3,960,933	4,305,586	4,305,586	4,433,937
Capital Surplus	4,560,176	4,893,838	5,899,375	5,952,182	14,097,485
Retained Earnings	(1,854,085)	(1,526,999)	(1,326,931)	(750,510)	(279,085)
Principal portion of long term loans	962,447	962,447	824,691	845,598	946,521
Ghana Cedi (GH¢) to US\$ Exchange Rate	4.4142	4.8200	5.2150	5.7342	5.9961

Financial Review for the year ended 31 December 2021



Financial Summary (VRA)

		2017	2018	2019	2020	2021
Return on Average Equity	%	16.49	9.07	10.2	9.54	4.12
Return on Average Net Fixed Assets -Plant in Operation	%	10.47	8.18	10.4	10.29	4.50
Current Assets Ratio	Times	0.99	1.17	1.16	1.18	1.26
Debt Service Ratio	Times	0.61	0.71	0.9	0.77	0.75
Gearing Ratio	%	27	27.11	9.25	8.86	9.85
GWh Generated and Purchased less Station Use (X 106)	GWh	9503	9,597	11,364	10,476	11,586
Total Production Expense including depreciation per MWh	GH¢	306	407	291	302	312
Total cost of production including depreciation and interest but excluding Debt Fluctuation per MWh	GH¢	364	385.96	323.00	275.30	288
Average Revenue/MWh Generated and Purchased	GH¢	273	321.69	352.00	366.76	497
Total Installed Capacity	MW	2684	2684	2,520	2,651	2651
Ratio of gross hydro generation to firm capability of Akosombo and Kpong	%	94.98	95.71	117.13	113.65	116
System Peak Demand	MW	2077	2371	2881	2857	2886
Ratio of System Peak Demand to Installed Capacity	%	77.38	88.34	114.33	107.77	108



Financial Review for the year ended 31 December 2021

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 2021.

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 the Volta River Authority, comprising the consolidated and separate statement of financial position at 31 December 2021, 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 31 December 2021



REPORT OF THE DIRECTORS TO MEMBERS OF THE VOLTA RIVER AUTHORITY

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. 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 May 30, 2022 and are signed on their behalf by:

KOFI TUTU AGYARE
BOARD CHAIRMAN

Date: 31/05/2022

EMMANUEL ANTWI-DARKWA
CHIEF EXECUTIVE

Date: 30/05/2022



Corporate Governance

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 include 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.

Financial Review for the year ended 31 December 2021



INDEPENDENT AUDITORS' REPORT TO THE MEMBERS OF THE VOLTA RIVER AUTHORITY

A REPORT ON THE AUDIT OF THE VOLTA RIVER AUTHORITY'S CONSOLIDATED AND SEPARATE FINANCIAL STATEMENTS

Opinion

We have audited the consolidated ("the Group") and separate ("VRA") financial statements of the Volta River Authority, which comprise the consolidated and separate Statements of Financial Position at 31 December, 2021, 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 22 to 65.

In our opinion, these consolidated and separate financial statements give a true and fair view of the consolidated and separate financial position of the Volta River Authority as at 31 December, 2021, 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 (Amendment) Act, 2005 (Act 692) and the Companies Act 2019, (Act 992).

Basis of Opinion

We conducted our audit in accordance with International Standards on Auditing (ISAs). Our responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the 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 the Volta River Development (Amendment) Act, 2005 (Act 692), 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 regard.

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.



Financial Review for the year ended 31 December 2021

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 International Standards of Supreme Audit Institutions (ISSAIs), which is consistent with the Fundamental Auditing Principles (ISSAIs 100-999) of the International Standards of Supreme Audit Institutions, we exercised 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 safe guard.

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.

Financial Review for the year ended 31 December 2021



Report on other legal and Regulatory Requirements.

The Companies Act, 1963 (Act 179) as amended requires that in carrying out our audit we consider and report on the following matters. We confirm that:

1. 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;

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

2. 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.

A handwritten signature in black ink, appearing to read 'John Godfred Kojo Addison', written over a horizontal line.

JOHN GODFRED KOJO ADDISON
DEPUTY AUDITOR-GENERAL / CAD
for: AUDITOR-GENERAL

Dated: MAY 31, 2022



Financial Review for the year ended 31 December 2021

STATEMENT OF FINANCIAL POSITION AS AT 31 DECEMBER 2021

	Note	VRA		GROUP	
		2021	2020	2021	2020
		GH¢'000	GH¢'000	GH¢'000	GH¢'000
Assets					
Property, Plant and Equipment	8b	17,794,309	9,476,364	25,227,429	10,453,223
Intangible Assets	8d	-	-	0	30
Investment in Subsidiaries	9	502,202	487,985	-	-
Investment in Equity Securities	9b	-	-	14,104	14,104
Other long term investments	10	60,839	57,981	1,764,199	1,500,898
Trade and other Receivables	12	23,269	19,899	23,269	19,899
Non-current Assets		18,380,619	10,042,229	27,029,001	11,988,154
Inventory	11	431,712	440,486	479,482	477,983
Trade and Other Receivables	12	7,635,703	7,983,021	7,647,803	8,442,593
Current Tax Assets	7b	-	-	1,163	533
Short term investments	13	83,334	65,447	131,029	120,432
Cash and Cash Equivalents	14	480,820	713,044	975,299	841,794
Current Assets		8,631,569	9,201,999	9,234,777	9,883,335
Total Assets		27,012,188	19,244,229	36,263,778	21,871,488
Equity					
Investment by Republic of Ghana	17	4,433,937	4,305,586	4,433,937	4,305,586
Retained Earnings Account		(279,085)	(750,510)	(397,449)	(876,109)
Revaluation Surplus	18	14,097,485	5,952,182	22,308,332	7,701,961
Debt Contingency Fund Reserve	21	38,921	38,921	38,921	38,921
Government of Ghana Grant	20	-	-	1,232	1,232
Total Equity		18,291,259	9,546,180	26,384,973	11,171,591

Financial Review for the year ended 31 December 2021



STATEMENT OF FINANCIAL POSITION AS AT 31 DECEMBER 2021

	Note	VRA		GROUP	
		2021	2020	2021	2020
		GH¢'000	GH¢'000	GH¢'000	GH¢'000
Liabilities					
Employee Benefit Obligations	19	243,963	218,344	290,331	259,543
Trade and other Payables	15	269,740	269,740	270,615	269,740
Capital Grant	15	328	328	43,859	43,718
Deferred Tax	7c	-	-	411	552
Borrowings	16	1,345,861	1,397,228	1,445,696	1,535,135
Non-Current Liabilities		1,859,891	1,885,639	2,050,911	2,108,687
Trade and Other Payables	15	6,404,819	6,794,485	7,045,482	7,339,504
Current Tax	7b	-	-	426,024	370,594
Borrowings	16	456,219	1,017,925	356,387	881,112
Current Liabilities		6,861,037	7,812,410	7,827,893	8,591,210
Total Liabilities		8,720,929	9,698,049	9,878,805	10,699,897
Total Equity and Liabilities		27,012,188	19,244,229	36,263,778	21,871,488

The Financial Statements were approved by the Board of Directors on, 2022 and are signed on their behalf by:

.....
KOFI TUTU AGYARE
 BOARD CHAIRMAN

.....
EMMANUEL ANTWI-DARKWA
 CHIEF EXECUTIVE



Financial Review for the year ended 31 December 2021

STATEMENTS OF COMPREHENSIVE INCOME FOR THE YEAR ENDED 31 DECEMBER 2021

	Note	VRA		GROUP	
		2021	2020	2021	2020
		GH¢'000	GH¢'000	GH¢'000	GH¢'000
Revenue	2a	3,932,207	3,793,161	4,219,986	3,921,148
Cost of Sales	3	(3,054,944)	(2,725,655)	(3,498,073)	(3,208,803)
Gross Profit/(Loss)		877,263	1,067,506	721,914	712,345
Other Operating Income	2b	132,106	121,105	265,637	265,637
Government of Ghana Support on AMERI tariff shortfall	2c	127,294	127,951	127,294	127,951
Administrative Expenses	4	(563,341)	(435,786)	(759,433)	(625,103)
		(303,941)	(186,730)	(366,502)	273,144
Operating profit/(Loss)		573,322	880,776	355,411	439,201
Financial Income	5a	7,811	3,593	240,346	145,816
Financial Expenses	6	(87,596)	(258,184)	(91,015)	(258,184)
Net Exchange Loss		(380,779)	(469,686)	389,454	(403,637)
Profit / (Loss) before taxation		112,757	156,499	115,289	(76,804)
Taxation	7a	-	-	(55,290)	(50,191)
Profit (Loss) for the year		112,757	156,499	59,998	(126,995)
Other Comprehensive Income items that will not be reclassified to profit or loss:					
Revaluation of Properties, Plan and Equipment	18	8,503,971	472,729	15,034,171	477,253
Other Comprehensive Income, net of tax		8,503,971	472,729	15,034,171	477,253
Total Comprehensive Income		8,616,728	629,229	15,094,169	350,258

Financial Review for the year ended 31 December 2021



STATEMENTS OF CHANGE IN EQUITY FOR THE YEAR ENDED 31 DECEMBER 2021

VRA	Republic of Ghana Contribution	Retained Earnings Surplus	Capital Surplus	Debt Contingency Fund Reserve	Total Equity
	GH¢'000	GH¢'000	GH¢'000	GH¢'000	GH¢'000
2021					
Balance at 1st January, 2021	4,305,586	(750,510)	5,952,182	38,921	9,546,179
Loss for the year	-	112,757	-	-	112,757
Other Comprehensive Income	-	-	8,503,971	-	8,503,971
Total Comprehensive Income	-	112,757	8,503,971	-	8,616,728
Additional Investments in VRA	128,352	-	-	-	128,352
Transfer to Retained Earnings (Note 18)	-	358,668	(358,668)	-	-
Transfer to Debt Contingency Fund Reserve	-	-	-	-	-
Balance at 31st December, 2021	4,433,938	279,085	14,097,485	38,921	18,291,529
2020					
Balance as at 1st January 2020	4,305,586	(1,326,931)	5,899,375	38,921	8,916,951
Loss for the year	-	156,499	-	-	156,499
Other Comprehensive Income	-	-	472,729	-	472,729
Total Comprehensive Income	-	156,499	472,729	-	629,228
Additional Investments in VRA	-	-	-	-	-
Transfer to Retained Earnings (Note 18)	-	419,922	(419,922)	-	-
Transfer to Debt Contingency Fund Reserve	-	-	-	-	-
Balance at 31st December, 2020	4,305,568	(750,510)	5,952,182	38,921	9,546,180



Financial Review for the year ended 31 December 2021

STATEMENTS OF CHANGE IN EQUITY FOR THE YEAR ENDED 31 DECEMBER 2021

GROUP	Republic of Ghana Contribution	Retained Earnings Surplus	Revaluation	Debt Contingency Fund Reserve	Government of Ghana Grant	Other Reserves	Total Equity
	GHC'000	GHC'000	GHC'000	GHC'000	GHC'000	GHC'000	GHC'000
Balance at 1st January, 2021	4,305,586	(876,109)	7,701,960	38,921	1,232	-	11,171,590
Profit / (Loss) for the year	-	59,999	-	-	-	-	59,999
Other Comprehensive Income	-	-	15,034,171	-	-	-	15,034,171
Total Comprehensive Income	-	59,999	15,034,171	-	-	-	15,094,170
Additional Investments in VRA	128,351.50	-	-	-	-	-	128,352
*Prior year adjustments	-	-1,653	(7,486)	-	-	-	(9,139)
Government of Ghana Grant	-	-	-	-	-	-	0
Transfer to Retained Earnings (Note 18)	-	420,314	(420,314)	-	-	-	0
Balance at 31st December, 2021	4,433,938	(397,449)	22,308,331	38,921	1,232	-	26,384,972
2020							
Balance at 1st January, 2020	4,305,586	(1,286,644)	7,671,284	38,921	1,232	-	10,730,379
Profit / (Loss) for the year	-	(126,994)	-	-	-	-	(126,994)
Other Comprehensive Income	-	-	477,253	-	-	-	477,253
Total Comprehensive Income	-	(126,994)	477,253	-	-	-	350,259
Additional Investments in VRA	-	-	-	-	-	-	-
*Prior year adjustments	-	90,953	-	-	-	-	90,953
Government of Ghana Grant	-	-	-	-	-	-	477,253
Transfer to Retained Earnings (Note 18)	-	446,577	(446,577)	-	-	-	-
Transfer to Debt Contingency Fund Reserve	-	-	-	-	-	-	-
Balance at 31st December, 2020	4,305,586	-	7,701,960	38,921	1,232	-	11,171,590

* relates to transfer of capital reserves to retained earnings in 2021

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STATEMENTS OF CASH FLOW FOR THE YEAR ENDED 31 DECEMBER 2021

	Note	VRA		GROUP	
		2021	2020	2021	2020
		GHC'000	GHC'000	GHC'000	GHC'000
Net Cash from Operating Activities	22	646,220	330,859	1,021,557	389,145
Cash Flows from Investing Activities					
Interest Received		-	-	4,679	8,012
Purchasing of Property, Plant and Equipment		(45,998)	(6,888)	(70,350)	(16,792)
Proceeds from sales of Property, Plant and Equipment	8c	48	536	48	542
Deferred expenditure		-	-	-	-
Acquisition of short term investment		-	-	-	-
Acquisition of long term investments		(14,218)	(10,646)	(14,218)	(10,646)
Payments towards Capital Works-In-Progress		(133,589)	(11,811)	(133,520)	(103,176)
Net Cash used in investing activities		(193,757)	(28,809)	(213,360)	(122,060)
Cash flows from Financing Activities					
Net inflows from increase in stated capital		-	-	1,351	(384)
Proceeds from loans and borrowings		72,283	143,062	51,225	143,062
Repayment of borrowings		(241,739)	(180,199)	(215,540)	(180,199)
Payment of finance lease obligations		(497,344)	(222,375)	(496,038)	(221,761)
Shareholders advance		-	-	4,019	7,632
Net Cash used in financing activities		666,800	(259,512)	(654,983)	(251,650)
Net increase/(decrease) in Cash and cash equivalents		(214,337)	42,537	153,213	15,435
Cash and cash equivalents at the beginning of the year	14	778,491	723,201	962,225	894,535
Exchange rate fluctuation on cash and cash equivalents		-	12,754	(9,111)	52,255
Cash and cash equivalents at the end of the year		564,155	778,491	1,106,328	962,225



Financial Review for the year ended 31 December 2021

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 2021 and the Group’s interest in associates. The separate financial statements as at and for the year ended 31st December, 2021 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, (Act 46), 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 thousand, 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 recognised 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. 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.

Financial Review for the year ended 31 December 2021



1.3 Basis of Consolidation

The Authority's 2021 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 recognised 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 recognised 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 (VLTC), Akosombo Hotels Limited (AHL), Northern Electricity Distribution Company (NEDCo) and Takoradi Power Company Limited (TAPCO), VRA Property Holding Company (PROPco) and Volta River Authority Health Services Limited (VHSL).

Transactions eliminated on Consolidation

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

Loss of Control

When the Group loses control over a subsidiary, it derecognises 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 recognised 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 recognised 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 standards and interpretations not adopted

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 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.



Financial Review for the year ended 31 December 2021

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 date so that all insurance entities must apply IFRS 4 for annual periods on or after January 01, 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 the 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 01, 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 denominated in foreign currencies, are recognised in profit or loss.

Non-monetary assets and liabilities are translated at historical exchange 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.

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(i) Foreign Operations

The assets and liabilities of foreign operations are translated into Ghana Cedi at the spot 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.

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 assets 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, PROPCo 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.



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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 related equipment is capitalised as part of that equipment. When parts of an items 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 recognised in profit or loss to the extent that it reverses a revaluation decrease of the same asset previously recognised in profit or loss.

A valuation decrease is recognised 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 relevant revalued 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.

Depreciation 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;

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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 amortised over the shorter of the estimated 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.



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(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 recognised 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 or 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 realisable 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 realisable 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

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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 company 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.



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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.

Leasehold Improvements

Leasehold improvement are measured at cost less accumulated depreciation and any accumulated impairment losses. Subsequent expenditure is capitalised only if it is probable that the future economic benefits associated with the expenditure will flow to the Group. Ongoing repairs and maintenance are expensed as incurred. Leasehold improvement are capitalised and depreciated over the shorter of the useful lives of the assets and the lease term.

1.6.1 Tax Expense

Tax expense comprise current and deferred tax. Income tax is recognised 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

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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:

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

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

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 established 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 the Volta River Authority. The Board has, in turn, given the Volta River Authority's Management a risk mandate. Management allocates this mandate to the 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 the 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



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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 company'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, an 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.
- 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. The 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 things. 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:

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	VRA		GROUP	
	2021	2020	2021	2020
	GHC'000	GHC'000	GHC'000	GHC'000
Trade Receivables	4,161,037	4,500,859	5,816,172	6,467,114
Receivables from related parties	1,690,782	1,504,035	-	-
Other receivables including receivables from Government of Ghana but excluding fuel receivables from Tema Oil Refinery	1,817,006	2,127,544	1,834,400	2,144,147
Staff Debtors	37,948	35,707	43,102	41,473
Cash and cash equivalents (excluding cash-on-hand)	480,820	713,044	975,299	841,794
Long-term investments	60,839	57,981	1,764,199	1,500,898
Short-term investments	83,331,766	65,447	131,029	120,432
	8,331,766	9,004,617	10,546,200	11,115,858

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

	2021	2020	2021	2020
	GHC'000	GHC'000	GHC'000	GHC'000
Wholesale (ECG)	1,949,762	1,949,762	1,949,762	1,949,762
Distribution to end-users	2,211,275	2,551,097	3,866,409	4,517,352
	4,161,037	4,500,859	5,816,172	6,467,114



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Impairment Losses

The ageing of trade receivables at the reporting date was:

VRA	Impairment		Impairment	
	Gross	Allowance	Gross	Allowance
	31-Dec-2021	31-Dec-2021	31-Dec-2020	31-Dec-2020
	GH¢'000	GH¢'000	GH¢'000	GH¢'000
Not past due nor impaired	598,609	-	598,609	-
Past due 30-60 days	319,701	-	319,701	-
Past due 60-90 days	115,582	-	115,582	-
Past due 90-120 days	515,039	-	515,039	-
Past due 120 days and above and impaired	2,612,107	183,759	2,951,29	286,406
	4,161,037	183,759	4,500,859	286,406

GROUP	Impairment		Impairment	
	Gross	Allowance	Gross	Allowance
	31-Dec-2021	31-Dec-2021	31-Dec-2020	31-Dec-2020
	GH¢'000	GH¢'000	GH¢'000	GH¢'000
Not past due nor impaired	695,902	-	1,346,844	-
Past due 30-60 days	356,924	-	356,924	-
Past due 60-90 days	150,700	-	150,700	-
Past due 90-120 days	551,930	-	551,930	-
Past due 120 days and above and impaired	4,060,717	220,338	4,060,717	321,451
	5,816,172	220,338	6,467,114	321,451

Impairment losses have been recognised 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.

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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, 2021 - 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	6,315,782	6,242,111	22,304	-	-	-
Payable to related parties	74,388		74,388	-	-	-
Accrued Expenses	3,444	3,444	-	-	-	-
Sundry creditors, excluding statutory obligations	14,649	10,254	4,395	-	-	-
Borrowings, excluding finance lease obligations	1,799,610	85,859	336,016	307,275	875,827	246,000
Other payables- non-current	270,615	-	-	270,615	-	-
Finance Lease Obligations	2,470	2,470	-	-	-	-
	8,480,957	6,344,138	437,103	577,890	875,827	246,000

December 31, 2020 - 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	6,733,587	6,711,283	22,304	-	-	-
Payable to related parties	33,016		33,016	-	-	-
Accrued Expenses	14,992	14,992	-	-	-	-
Sundry creditors, excluding statutory obligations	13,096	9,167	3,929	0	-	-
Borrowings, excluding finance lease obligations	1,947,823	182,705	336,016	307,275	875,827	246,000
Other payables- non-current	269,740	-	-	269,740	-	-
Finance Lease Obligations	467,330	467,330	-	-	0	-
	9,479,584	7,385,477	395,265	577,015	875,827	246,000



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December 31, 2021 - 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	6,911,799	5,353,724	1,558,075	-	-	-
Payable to related parties	-	-	-	-	-	-
Accrued Expenses	14,649	14,649	-	-	-	-
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	-
	10,471,208	6,347,982	2,019,952	867,699	1,148,954	86,620

December 31, 2020 - 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	7,310,871	5,752,797	1,558,075	-	-	-
Payable to related parties	-	-	-	-	-	-
Accrued Expenses	13,096	13,096	-	-	-	-
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	-
	10,868,726	6,745,503	2,019,952	867,699	1,148,954	86,620

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.

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.

Exposure to Currency Risk

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

2021-in-thousands	USD	EUR	SDR	KD	CHF	GBP	SKR	CAD	ZAR	UA
Account receivable	630,888									-
Cash and Bank Balances	91,101	1,829				-				
Investments	16,818									-
Account Payable	(1,160,905)	(6,568)	-	(261)	-	(34)	(286)	(79)	(11)	-
Borrowings	(151,210)	(48,765)		(4,234)						-
	(573,308)	(53,504)	-	(4,495)	-	(34)	(286)	(79)	(11)	-

2020-in-thousands	USD	EUR	SDR	KD	CHF	GBP	SKR	CAD	ZAR	UA
Account receivable	617,075									-
Cash and Bank Balances	83,142	1,762				-				
Investments	20,194									-
Account Payable	(1,050,636)	(15,904)	-		-	(34)		(37)	(11)	-
Borrowings	(205,271)	(51,811)		(4,234)						-
	(535,496)	(65,953)	-	(4,234)	-	(34)		(37)	(11)	-

December 2021

	USD	EUR	SDR	KD	CHF	GBP	SKR	CAD	ZAR	UA
Reporting date spot rate	5.9961	6.7983	8.6527	20.4309	6.5648	8.1053	0.6637	4.6912	0.3756	8.4061
Average rate	5.8116	6.8678	8.4261	19.6152	6.3447	7.9861	0.6754	4.6285	0.395	8.2804

December 2020

	USD	EUR	SDR	KD	CHF	GBP	SKR	CAD	ZAR	UA
Reporting date spot rate	5.7342	7.054	8.4773	19.2956	6.4959	7.8045	0.7003	4.4956	0.3926	8.2962
Average rate	5.5775	6.3866	8.0089	18.6515	5.9585	7.1731	0.6069	4.2555	0.3425	7.8620

Sensitivity

A 5% strengthening of the GH¢, as indicated below, against the currencies above at 31st December, 2021 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 2020, 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
2021	(184,614)	(19,442)	-	(4,408)	-	(14)	(10)	(18)	0	-
2020	(149,336)	(23,262)	-	(3,948)	-	(12)	-	(8)	0	-



Financial Review for the year ended 31 December 2021



Effect in thousands of GH¢

	USD	EUR	SDR	KD	CHF	GBP	SKR	CAD	ZAR	UA
2021	(166,592)	(18,373)	-	(4,408)	-	(14)	(10)	(18)	0	-
2020	(149,336)	(23,262)	-	(3,948)	-	(12)	-	(8)	0	-

A 5% weakening of the Ghana Cedi against the currencies above at 31st December 2020 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	
	2021	2020	2021	2020
	GH¢'000	GH¢'000	GH¢'000	GH¢'000
Fixed rate Instruments				
Financial Liabilities	2,470	467,330	1,260,058	1,260,058
Variable rate Instruments				
Financial Assets	83,334	65,447	131,029	120,432
Financial Liabilities	1,799,610	1,947,823	542,026	1,156,189

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	
	10 bp increase	10 bp decrease	10 bp increase	10 bp decrease
	GH¢'000	GH¢'000	GH¢'000	GH¢'000
31st December, 2020				
Financial Liabilities	247	(247)	126,006	(126,006)
Variable rate Instruments				
Financial Assets	179,961	179,961	54,203	54,203

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

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Revenue	VRA				GROUP			
	2021		2020		2021		2020	
2a. Sale of Electricity	GWh	GH¢'000	GWh	GH¢'000	GWh	GH¢'000	GWh	GH¢'000
Electricity Company of Ghana	4,342	1,105,530	3,468	937,533	4,342	1,105,530	3,468	937,553
Mines	1,410	816,434	1,498	907,306	1,410	816,434	1,498	907,306
Akosombo Textiles	3	1,332.95	3	1,200	3	1,333	3	1,200
Aluworks	6	2,700.00	6	2,501	6	2,700	6	2,501
Diamond Cement	35	15,739.70	33	14,214	35	15,740	33	14,214
Volta Aluminium Co. Ltd.	772	123,521.59	722	110,259	772	123,522	722	110,259
Others	141	29,161	143	39,943	141	29,161	143	39,943
GRIDCo (Transmission Loss Recoveries)	1,105	265,203	891	235,097	1,105	265,203	891	235,097
Substation Use (GRIDCo.)	10	2,935	10	2,870	10	2,935	10	2,870
Northern Electircity Dept.(NED)	1,753	596,406	1,576	560,994	1,059	884,186	950	688,981
Local Customers	9,577	2,958,964	8,350	2,811,937	8,883	3,246,744	7,724	2,939,924
Communaute Electrique Du Benin	574	282,628	715	339,283	574	282,628	715	339,283
Compagne Ivoirienne d'Electricité	197	138,059	149	86,246	197	138,059	149	86,246.00
Société National D'elect Du Burkina	20	13,617	17	10,830	20	13,617	17	10,830
Sonabel Youga Mines	42	29,208	43	29,397	42	29,208	43	29,397
Sonabel Bolga-Ougadougou	900	431,534	930	430,381	900	431,534	930	430,381
Free Zone Companies	232	78,196	242	85,087	232	78,196	242	85,087
Foreign Customers	1,965	973,242	2,096	981,224	1,965	973,242	2,096	981,224
Total Sale of Electricity	11,542	3,932,207	10,446	3,793,161	10,848	4,219,986	9,820	3,921,148

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	VRA		GROUP	
	2021	2020	2021	2020
	GH¢'000	GH¢'000	GH¢'000	GH¢'000
2b. Other Operating Income				
Real Estates	11,905	10,871	11,905	21,729
Health Services	-	-	29,819	21,387
Schools	12,221	8,182	12,221	8,182
Service Charge	41,970	58,389	41,970	58,389
Profit on Sale of Fixed Assets	48	605	48	605
Gas Sales Proceeds	22,735	26,612	22,735	26,612
Decrease in provision	-	-	-	-
Other Income	43,227	16,446	114,696	67,863
Ferry Services	-	-	24,447	14,912
Hospitality Services	-	-	7,796	4,329
Total	132,106	121,105	265,637	224,008

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.

	VRA		GROUP	
	2021	2020	2021	2020
	GH¢'000	GH¢'000	GH¢'000	GH¢'000
	127,294	127,951	127,294	127,951
	127,294	127,951	127,294	127,951

	VRA		GROUP	
	2021	2020	2021	2020
	GH¢'000	GH¢'000	GH¢'000	GH¢'000
3. Cost of Sales / Operating Cost				
Analysis by budget center:				
Generation: Hydro	61,161	48,525	61,161	48,525
Thermal	1,475,620	1,372,747	1,475,620	1,372,747
Distribution(NEDCo)	-	-	352,232	307,314
Purchase of Electricity	1,189,007	805,529	1,213,907	829,464
Depreciation	329,157	498,853	398,741	650,752
Total	3,054,944	2,725,655	3,498,073	3,208,803

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	VRA		GROUP	
	2021	2020	2021	2020
	GH¢'000	GH¢'000	GH¢'000	GH¢'000
3. Cost of Sales / Operating Cost				
Analysis by Cost Elements:				
Salaries and Related Expenses	162,657	138,577	338,075	293,037
Materials and Spares Consumed	-	-	13,612	17,137
Repairs and Maintenance	65,658	41,919	81,926	55,003
Fuel Handling and Usage	1,306,803	1,220,666	1,306,803	1,220,666
Purchase of Electricity	1,189,007	805,529	1,210,319	829,464
Transmission Service Charge	-	-	125,196	112,359
Depreciation	329,157	498,853	398,741	650,752
Other Operating Costs	1,663	20,111	23,400	35,040
Total	3,054,944	2,725,655	3,498,073	3,208,803

	VRA		GROUP	
	2021	2020	2021	2020
	GH¢'000	GH¢'000	GH¢'000	GH¢'000
4. Administrative Expenses				
Analysis by budget center:				
Central Services	404,826	299,706	517,681	407,582
Schools	38,676	31,607	38,676	31,607
Real Estates	83,383	31,607	83,383	67,651
Health Services	-	0	63,756	60,358
Depreciation	83,383	36,822	55,938	57,905
Total	83,383	435,786	759,433	625,103

Analysis by cost element :				
Salaries and Related Expenses	316,634	273,889	436,164	378,198
Repairs & Maintenance	24,400	20,358	29,266	26,165
Other Administrative Cost	174,470	94,876	222,384	140,446
Depreciation	36,456	36,822	55,938	57,905
Employees Benefits	11,162	9,642	13,925	13,351
Audit Fees and Expenses	218	199	222	313
Increase in Provision for doubtful debts	-	-	1,534	8,725.0
Total	563,341	435,786	759,433	625,103
Total Operating & Admin Cost	3,618,284	3,161,441	4,257,506	3,833,906



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5a. Financial Income

	VRA		GROUP	
	2021	2020	2021	2020
	GH¢'000	GH¢'000	GH¢'000	GH¢'000
Interest & Investment Income	7,811	3,593	240,346	145,816
	7,811	3,593	240,346	145,816

6. Financial Expenses

	VRA		GROUP	
	2021	2020	2021	2020
	GH¢'000	GH¢'000	GH¢'000	GH¢'000
Interest on Long Term Loans	3,496	3,223	3,496	3,223
Interest on Medium Term Loans	39,751	57,545	39,751	57,545
Interest on Short Term Loans	4,753	28,472	8,172	28,472
Finance Cost on Ameri Finance Lease	1,308	100,657	1,308	100,657
Finance Cost on Defined Benefit Obligations	29,836	26,553	29,836	26,553
Interest on Delayed Invoices	8,452	41,734	8,452	41,734
Total	87,596	258,184	91,015	258,184

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 organisations 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 recognised in profit or loss includes:

	GROUP	
	2021	2020
	GH¢'000	GH¢'000
Current Tax Expense - Note 7 (b)	55,431	50,310
Deferred Tax Expense - Note 7 c.	(141)	(119)
	55,290	50,190

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7b. Current Tax

Movement in current tax balance are shown below:

2021	Bal. at Jan. 1	Payments	Charge for the year	Adjustments	Bal. at Dec. 31
	GH¢'000	GH¢'000	GH¢'000	GH¢'000	GH¢'000
Before 2018	181,112				181,112
2018	56,458				56,458
2019	84,309				84,309
2020	48,714				4,8714
2021	-		55,431		55,431
	370,594	-	55,431	-	426,025

2020	Bal. at Jan. 1	Payments	Charge for the year	Adjustments	Bal. at Dec. 31
	GH¢'000	GH¢'000	GH¢'000	GH¢'000	GH¢'000
Before 2017	143,042				143,042
2017	38,070				38,070
2018	56,458				56,458
2019	84,309				84,309
2020	-	(78)	50,310	(1,518)	48,714
	321,879	(78)	50,310	(1,518)	370,594

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

	2021	2020
	GH¢'000	GH¢'000
Current Tax payable	426,023	370,594
Current tax receivable	(1,163)	(533)
Total	424,860	370,060

7c. Deferred Tax

Movements in Deferred Taxes are shown below:

	2021	2020
	GH¢'000	GH¢'000
Balance at 1 January	552	671
Charge to profit or loss	(141)	(119)
Balance at 31st December	411	552



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8a. Capital Work-in-Progress

GROUP

2021

	Generation Assets	Power Distribution Network	Others	Total
	GHC'000	GHC'000	GHC'000	GHC'000
Balance as at Jan 1, 2021	690,779	196,619	106,110	993,507
Reclassification	-	-	-	-
	690,779	196,619	106,110	993,507
Additions during the year	151,541.23	5,013.87	134,865.92	291,421.01
Write off	-	-	(700)	(700)
Transfers	(146,806)	(7,976)	(11,367)	(166,149)
Balance as at Dec 31, 2021	695,514	193,657	228,908	1,118,079

2020

	GHC'000	GHC'000	GHC'000	GHC'000
Balance as at Jan 1, 2020	703,773	65,749	86,706	856,228
Reclassification	4,319.00	-	(4,319)	-
Additions during the year	206,174	147,240	39,629	393,042
Write off	-	-	(78.46)	(78.46)
Transfers	(223,487)	(16,370)	(15,828)	(255,685)
Balance as at Dec 31, 2020	690,779	196,619	106,110	993,507

VRA

2021

	Generation Assets	Power Distribution Network	Others	Total
	GHC'000	GHC'000	GHC'000	GHC'000
Balance as at Jan 1, 2021	690,779	34,745	102,256	827,780
Reclassification	-	-	-	-
	690,779	34,745	102,256	827,780
Additions during the year	151,541	5,014	134,533	291,088
Write off	-	-	(700)	(700)
Transfers during the year	(146,806)	-	(9,993)	(156,798)
Transfers to NEDCo	-	-	-	-
Balance as at Dec 31, 2021	695,514	39,759	226,096	961,369

2020

	GHC'000	GHC'000	GHC'000	GHC'000
Balance as at Jan 1, 2020	703,773	32,040	80,156	815,969
Reclassification	4,319	-	(4,319)	-
Additions during the year	206,174	19,075	38,324	263,573
Write off	-	-	(78)	(78)
Transfers	(223,487)	-	(11,826)	(235,313)
Transfers to NEDCo	-	(16,370)	-	(16,370)
Balance as at Dec 31, 2021	690,779	34,745	102,256	827,780

8b. Property, Plant and Equipment

VRA 2021

VALUATION

	Dam Power House and Civil Work	Generating Plant and Ma- chinery	Townships	Building	Floating Craft	Motor Vehicle	Equipment & Furniture	Total
	GH¢'000	GH¢'000	GH¢'000	GH¢'000	GH¢'000	GH¢'000	GH¢'000	GH¢'000
Balance as at Jan 1, 2021	9,813,766	7,627,575	744,561		102,092	124,006	61,598	18,914,285
Transfer & Adjustments				440,686				-
Disposal						(112)		(112)
Revaluation surplus	1,735,042	3,775,894	67,217		23,143	51,057	67,416	5,667,347
Additions (including transfers from CWIP)	-	5,453	6,755	(52,422)		26,961	1,044	45,998
				5,784				
Balance as at Dec. 31, 2021	11,548,808	11,408,923	818,533	394,048	125,235	201,913	130,059	24,627,519

DEPRECIATION

As At Jan.1, 2021	5,509,179	4,058,095	392,896		102,015	113,065	52,359	10,265,701
Disposal/Transfers				38,092		(112)		(112)
Charge for the period	131,962	190,956	24,179		28	5,571	2,745	365,613
Revaluation surplus	(2,268,187)	(425,407)	(187,458)	10,172		21,352	55,071	(2,836,624)
				(24,143)	(7,853)			
Balance as at Dec 31, 2021	3,372,955	3,823,644	229,618	24,120	94,190	139,876	110,175	7,794,579

CARRYING AMOUNT

Balance as at Dec. 31, 2021	8,175,854	7,585,278	588,915	369,929	31,044	62,037	19,884	16,832,940
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Work-in-Progress as at Dec 31, 2021
(Note 8a)

961,369

17,794,309



Financial Review for the year ended 31 December 2021

8b. Property, Plant and Equipment

	Dam Power House and Civil Work	Generating Plant and Machinery	Townships	Building	Floating Craft	Motor Vehicle	Equipment & Furniture	Total
	GH¢'000	GH¢'000	GH¢'000	GH¢'000	GH¢'000	GH¢'000	GH¢'000	GH¢'000
VRA 2020								
A. VALUATION								
Balance as at Jan 1, 2020	9,221,673	7,170,337	698,226	419,795	97,257	117,170	54,358	17,778,816
Transfers & Adjustments								
Disposal						(1,019)		(1,019)
Revaluation surplus	459,203	366,504	34,433	20,866	4,834	5,805	2,642	894,287
Additions (including transfers from CWIP)	132,890	90,735	11,903	25		2,049	4,599	242,201
Balance as at Dec. 31, 2021	9,813,766	7,627,575	744,561	440,686	102,092	124,006	61,598	18,914,285
B. DEPRECIATION								
As At Jan.1, 2020	5,135,299	3,544,450	346,812	31,643	97,134	105,698	48,451	9,309,487
Disposal/Transfers						(1,019)		(1,019)
Charge for the period	118,235	378,861	28,846	4,876	53	3,156	1,648	535,675
Revaluation surplus	255,645	134,784	17,238	1,573	4,828	5,229	2,260	421,557
Balance as at Dec 31, 2020	5,509,179	4,058,095	392,896	38,092	102,015	113,065	52,359	10,265,701
C. CARRYING AMOUNT								
Balance as at Dec. 31, 2020	4,304,587	3,569,480	351,665	402,595	77	10,941	9,240	8,648,585
Work-in-Progress as at Dec 31, 2021 (Note 8a)								827,780
								9,476,364



8b. Property, Plant and Equipment

	Dam Power House and Civil Work	Generating Plant and Machinery	Power Distribution Network	Townships	Building	Floating Craft	Motor Vehicle	Equipment & Furniture	Total
	GH¢'000	GH¢'000	GH¢'000	GH¢'000	GH¢'000	GH¢'000	GH¢'000	GH¢'000	GH¢'000
GROUP 2021									
A. VALUATION									24,050,333
Balance as at Jan 1, 2021	9,813,766	7,627,576	4,355,256	761,636	624,921	553,169	214,243	99,765	24,050,332
Transfer/Adjustments				275		10		(285)	0
Disposal							(112)		(112)
Revaluation surplus	1,735,042	3,775,894	5,290,617	67,217	1,845	23,143	112,602	95,094	11,101,454
Additions (including transfers from CWIP)		5,453	16,370	6,755	8,169		27,456	5,939	70,142
Balance as at Dec. 31, 2021	11,548,808	11,408,923	9,662,243	835,883	634,936	576,322	354,189	200,514	35,221,817
B. DEPRECIATION									
As At Jan.1, 2021	5,509,179	3,993,594	3,866,355	406,419	97,179	452,861	189,032	75,998	14,590,616
Disposal/Transfers									-
Charge for the period							(112)		(112)
Revaluation Adjustment	131,962	190,956	59,693	24,326	12,752	11,398	13,490	6,512	454,679
as at Dec 31, 2021	(2,268,187)	(425,407)	(425,407)	(187,458)	(41,397)	(7,853)	34,787	71,619	(3,929,127)
	3,372,954	3,759,143	2,820,816	243,287	68,533	456,406	237,198	154,130	11,112,467
C. NET BOOK VALUE									
As at Dec. 31, 2021	8,175,855	7,649,780	6,841,427	592,596	566,402	119,916	116,991	46,384	24,109,350
Work-in-Progress as at Dec 31, 2021 (Note 8a)									1,118,079
									25,227,429



Financial Review for the year ended 31 December 2021

8b. Property, Plant and Equipment

	Dam Power House and Civil Work	Generating Plant and Machinery	Power Distribution Network	Townships	Building	Floating Craft	Motor Vehicle	Equipment & Furniture	Total
	GHC'000	GHC'000		GHC'000	GHC'000	GHC'000	GHC'000	GHC'000	GHC'000
GROUP 2020									
A. VALUATION									
Balance as at Jan 1, 2020	9,221,673	7,170,337	4,180,707	715,300	678,392	543,634	200,130	87,865	22,798,038
Transfer & Adjustments					(78,899)				(78,899)
Disposal							(1,019)	(6.35)	(1,025)
Revaluation surplus	459,203	366,504	158,179	34,433	25,254	4,834	9,736	3,834	1,061,977
Additions (including transfers from CWIP)	132,890	90,735	16,370	11,903	174	4,701	5,395	8,072	270,241
Balance as at Dec. 31, 2020	9,813,766	7,627,576	4,355,256	761,636	624,921	553,169	214,243	99,765	24,050,332
B. DEPRECIATION									
As At Jan.1, 2020	5,135,299	3,479,949	3,589,439	360,107	89,882	436,788	174,184	68,501	13,334,149
Prior Year Adjustment			-						-
Disposal/Transfers			(34,311)		(1,577)		(1,019)	(6)	(36,913)
Charge for the period	118,235	378,861	148,061	29,073	7,301	11,245	10,638	5,243	708,657
Revaluation Surplus	255,645	134,784	163,166	17,238	1,573	4,828	5,229	2,260	584,723
as at Dec 31, 2020	5,509,179	3,993,594	3,866,355	406,419	97,179	452,861	189,032	75,998	14,590,616
C. NET BOOK VALUE									
As at Dec. 31, 2020	4,304,587	3,633,982	488,901	355,217	527,743	100,308	25,211	23,767	9,459,715
Work-in-Progress as at Dec 31, 2020 (Note 8a)									993,507
									10,453,223



Financial Review for the year ended 31 December 2021



8b. Property, Plant and Equipment

The net carrying amount of generating plant and machinery acquired under finance leases at the end of the year was Gh¢1,473.04 million (2020: Gh¢1,316.12 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	
	2021	2020	2021	2020
	Gh¢'000	Gh¢'000	Gh¢'000	Gh¢'000
Cost	112	1,019	112	1,025
Accumulated Depreciation	(112)	(1,019)	(112)	(1,025)
Carrying amount	-	-	-	0
Revaluation on disposed assets	-	-	-	-
Net Carrying Amount	-	-	-	-
Proceeds from Disposal	48	536	48	605
Adjustment	0	69	0	69
Profit/(loss) on disposal	48	605	48	674

8d. Intangible Assets

Cost				
Balance as at Jan 1	-	-	159	159
Additions	-	-	-	-
Balance as at Dec. 31	-	-	159	159
Amortization				
Balance as at Jan 1	-	-	129	100
Charge for the year	-	-	29	29
Balance as at Dec 31	-	-	159	129
Carrying Amount	-	-	0	30

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	-	-
PROPCO (100%)	77,972	69,945	-	-
NEDCo(100 %)	200,000	200,000	-	-
VHSL (100% Owned)	48,369	42,179	-	-
	502,202	487,985	-	-

TICO (10% Owned)	4,516	4,516
WAGPCo (16.38% Owned)	9,588	9,588
	14,104	14,104



Financial Review for the year ended 31 December 2021

10. Other Long Term Investments

	VRA		Group	
	2021	2020	2021	2020
	Gh¢'000	Gh¢'000	Gh¢'000	Gh¢'000
Debt Contingency Fund	60,839	57,981	60,839	57,981
Other Long Term Investment			1,703,360	1,442,917
	60,839	57,981	1,764,199	1,500,898

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	
	2021	2020	2021	2020
	Gh¢'000	Gh¢'000	Gh¢'000	Gh¢'000
Inventory and spare parts	245,632	177,848	293,402	215,345
Write down for obsolescence	-	-	-	-
	245,632	177,848	293,402	215,345
Fuel for Thermal Plant	186,080	262,638	186,080	262,638
	431,712	440,486	479,482	477,983

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

12. Trade and other Receivables

	VRA		Group	
	2021	2020	2021	2020
	Gh¢'000	Gh¢'000	Gh¢'000	Gh¢'000
Trade Receivables	4,161,037	4,500,859	5,816,172	6,467,114
Provision for doubtful debts	(183,759)	(286,406)	(220,338)	(321,451)
	3,977,278	4,214,453	5,595,833	6,145,664
Prepayments	135,959	121,182	197,359	147,578
Amounts due from related parties	1,690,782	1,504,035	379	(16,370)
Amount due from Government of Ghana in respect of the AMERI transaction - Note 2(c)	-	0	-	-
Other Receivables	1,817,006	2,127,544	1,834,400	2,144,147
Staff Advances	37,948	35,707	43,102	41,473
	7,658,973	8,002,920	7,671,073	8,462,492
Current	7,635,703	7,983,021	7,647,803	8,442,593
Non-current	23,269	19,899	23,269	19,899
	7,658,973	8,002,921	7,671,073	8,462,492

Financial Review for the year ended 31 December 2021



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	
	2021	2020	2021	2020
	Gh¢'000	Gh¢'000	Gh¢'000	Gh¢'000
Foreign Currency	343,473	489,183	343,473	606,064
Local Currency	137,073	223,642	624,505	235,378
Cash on Hand	274	219	7,321	351
Cash and cash equivalents in the statement of financial position	480,820	713,044	975,299	841,794
Short term investments	83,334	65,447	131,029	120,432
Bank overdraft	-	-	-	-
Cash and cash equivalents in the statement of cash flows	564,154	778,491	1,106,328	962,226

Short-term included as cash and cash equivalents in the Group's financial statements are instruments held with maturities of three months or less.

15. Payables

	VRA		Group	
	2021	2020	2021	2020
	Gh¢'000	Gh¢'000	Gh¢'000	Gh¢'000
Current Portion				
Trade Payables	6,315,782	6,733,587	6,911,799	7,310,871
Amount due to related parties	74,388	33,016	-	-
Sundry Payables	14,649	13,096	129,030	12,432
Capital Grant	-	-	1,209	1,209
Accruals and Provisions	0	14,785	3,444	14,992
	6,404,819	6,794,485	7,045,482	7,339,504
Capital Grant				
Non-Current Portion				
Other Payables	269,740	269,740	270,615	269,740
Deferred Tax	-	-	411	552
Capital Grant (Note 20)	328	328	43,859	43,718
	270,068	270,068	314,884	314,009
Total Payables	6,674,887	7,064,552	7,360,366	7,653,513



Financial Review for the year ended 31 December 2021

16a. Borrowings

	VRA		Group	
	2021	2020	2021	2020
	Ghc'000	Ghc'000	Ghc'000	Ghc'000
Current Portion				
Current portion of long and medium term loans	99,835	137,907	-	1,069
Finance lease obligations due within 1 year	2,470	467,330	2,470	467,330
Bank Overdrafts	-	-	3	24
Loan interest and commitment charges	326,305	322,043	326,305	322,043
Short-term borrowings	27,609	90,645	27,609	90,645
	456,219	1,017,925	356,387	881,111
Non-Current Portion				
Finance lease obligations due after 1 year	-	-	-	-
Amount due after one year but before five years	399,340	551,630	499,175	689,537
Amount due after five years but before ten years				
Amount due after ten years	946,521	845,598	946,521	845,598
	1,345,861	1,397,228	1,445,696	1,535,135
Total Borrowing	1,802,080	2,415,153	1,802,083	2,416,246

Financial Review for the year ended 31 December 2021



16b. Borrowings - Movement in loan balances

The following shows the movement in loan balances during the year

VRA	Balance as at	Drawings Repayments		Adjustment	Exchange	Balance as at
	1-01-2021	GH c'000	GH c'000	GH c'000	Variation	31-12-2021
		GH c'000	GH c'000	GH c'000	GH c'000	GH c'000
Long Term Loans						
Kpong Hydro Project						
Kuwait Fund - 339	15,199				894	16,093
Kuwait Fund	66,493				3,912	70,405
Societe General - T3	398,431				18,198	416,629
IDA-4356-GEDAP	-					-
AFD(Akuse Retrofit)	325,569		(26,199)		(11,749)	287,621
KTPP-MRP	-					-
KFW GOG 17MW Photovoltaic System	39,906	70,977			(2,706)	108,177
KFW GOG 14MW Photovoltaic System II		16,774			.	16,774
EIB Kpong Retrofit		31,589			(767)	30,822
Subtotal: Long Term Loans	845,598	70,977	(26,199)	-	8,549	946,521
Medium Term Loans						
Afrexim \$150m	-	-				-
Afrexim \$75m	-	-				-
Afrexim \$185m	689,537		(215,540)		25,178	499,175
Subtotal: Medium Term Loan	689,537	-	(215,540)	-	25,178	499,175
Total: Long and Medium Term	1,535,135		(241,739)	-	33,727	1,445,696
Loans interest and Commitment charges	322,043				4,262	326,305

VRA	Balance as at	Drawings	Repayments	Exchange	Balance as at
	1-01-2021	GH c'000	GH c'000	Variation	31-12-2021
		GH c'000	GH c'000	GH c'000	GH c'000
Short Term Loans					
Sahara Energy Resources	90,645	-	(94,786)	4,141	-
GHIB		35,956	(9,064)	717	27,609
Subtotal: Short Term Loans	90,645	35,956	(103,850)	4,858	27,609
Finance lease obligations - Note 16c	467,330	1,306	(497,344)	31,178	2,470
Total Borrowings	2,415,153	108,239	(842,933)	69,763	1,802,080



Financial Review for the year ended 31 December 2021

16b. Borrowings - Movement in loan balances

The following shows the movement in loan balances during the year

GROUP

	Balance as at 1-01-2021	Drawings	Repayments	Adjustment	Exchange Variation	Balance as at 31-12-2021
	GH c'000	GH c'000	GH c'000	GH c'000	GH c'000	GH c'000
Long Term Loans						
Kpong Hydro Project						
Kuwait Fund - 339	15,199				894	16,093
Kuwait Fund	66,493				3,912	70,405
Societe General - T3	398,431				18,198	416,629
IDA-4356-GEDAP	-					-
AFD(Akuse Retrofit)	325,569		(26,199)		(11,749)	287,621
KTPP-MRP	-					-
KFW GOG 17MW Photovoltaic System	39,906	70,977			(2,706)	108,177
KFW GOG 14MW Photovoltaic System II		16,774			.	16,774
EIB Kpong Retrofit		31,589			(767)	30,822
Subtotal: Long Term Loans	845,598	70,977	(26,199)	-	8,549	946,521
Medium Term Loans						
Afrexim \$150m	-	-				-
Afrexim \$75m	-	-				-
Afrexim \$185m	689,537		(215,540)		25,178	499,175
Subtotal: Medium Term Loan	689,537	-	(215,540)	-	25,178	499,175
Total: Long and Medium Term Loans	1,535,135		(241,739)	-	33,727	1,445,696
Loans interest and commitment charges	322,043				4,262	326,305

	Balance as at 01.01.2021	Drawings	Repayments	Exchange Variation	Balance at at 31-12-2021
	GH c'000	GH c'000	GH c'000	GH c'000	GH c'000
Short Term Loans					
Sahara Energy Resources	90,645	-	(94,786)	4,141	-
GHIB		35,956	(9,064)	717	27,609
Overdraft		3	-	-	3
Subtotal: Short Term Loans	90,645	35,956	(103,850)	4,858	27,612
Finance lease obligations - Note 16c	467,330	1,306	(497,344)	31,178	2,470
Total Borrowings	2,415,153	108,239	(842,933)	69,763	1,802,083

Financial Review for the year ended 31 December 2021



16b. Long term loans

Details of the long term loans are shown below:

Loan	Currency	Contract Amount	Interest Rate	Maturity Date
KUWAIT 339	KWD	787,680	4%	2029
SOCIETE GENERAL-T3	USD	67,960,462	2.08%	2024
KUWAIT FUND (K THERMAL)	KWD	3,446,000	4%	2029
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:

	Minimum Lease Payment		Interest		Present Value of Minimum Lease Payment	
	2021	2020	2021	2020	2021	2020
VRA						
	GH¢'000	GH¢'000	GH¢'000	GH¢'000	GH¢'000	GH¢'000
Less than one year	2,469	467,555	-	225	2,469	467,330
Between one and five years						
	2,469	467,555	-	225	2,469	467,330

	Minimum Lease Payment		Interest		Present Value of Minimum Lease Payment	
	2021	2020	2021	2020	2021	2020
GROUP						
	GH¢'000	GH¢'000	GH¢'000	GH¢'000	GH¢'000	GH¢'000
Less than one year	3,344	468,626	-	225	3,344	468,401
Between one and five years	-	-	-	-	-	-
	3,344	468,626	-	225	3,344	468,401

16c. Finance Lease Obligations

Finance lease liabilities are payable as follows:

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.



Financial Review for the year ended 31 December 2021

17. Investment by the Bank of Ghana

Finance lease liabilities are payable as follows:

	VRA		GROUP	
	2021	2020	2021	2020
	GH¢'000	GH¢'000	GH¢'000	GH¢'000
Balance at beginning of the year	4,305,586	4,305,586	4,305,586	4,305,586
Addition during the year	128,351.50	0	128,351.50	0
Balance at close of the year	4,433,937	4,305,586	4,433,937	4,305,586

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

	VRA		GROUP	
	2021	2020	2021	2020
	GH¢'000	GH¢'000	GH¢'000	GH¢'000
Balance at beginning of the year	5,952,182	5,899,375	7,701,961	7,671,284
Surplus for the year	8,503,971	472,729	7,686,990	477,253
Adjustments				
Transfer to Retained Earnings	(358,668)	(419,922)	6,919,381	(446,577)
Balance at close of the year	14,097,485	5,952,182	22,308,332	7,701,961

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-Service 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.

Financial Review for the year ended 31 December 2021



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

	VRA		VRA	
	2021	2020	2021	2020
	GH¢'000	GH¢'000	GH¢'000	GH¢'000
Long-service award	46,460	40,655	69,073	58,908
Severance Benefit	25,122	20,635	34,458	28,119
Post-Retirement medical benefit	172,381	157,054	186,801	172,516
	243,963	218,344	290,331	259,543

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

The following tables show recomputations 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		VRA	
	2021	2020	2021	2020
	GH¢'000	GH¢'000	GH¢'000	GH¢'000
Balance at 1 January	40,655	39,477	58,908	58,099
Included in profit or loss:				
Current service cost	4,747	3,922	6,481	5,325
Past service cost	-	-	-	-
Net interest	5,902	5,642	9,798	8,197
	10,649	9,564	16,279	13,522
Included in other comprehensive income:				
Actuarial loss (gain arising from):				
Actuarial loss (gain arising from)				
Demographic/Financial Assumptions	3,362	(585)	4,448	(3,122)
Other sources				
	3,362	(585)	4,448	(3,122)
Benefits paid	(8,207)	(7,801)	(10,563)	(9,591)
Balance at 31 December	46,460	40,655	69,073	58,908



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Severance Benefit

	VRA		GROUP	
	2021	2020	2021	2020
	GH¢'000	GH¢'000	GH¢'000	GH¢'000
Balance at 1 January	20,635	18,230	28,119	24,897
Included in profit or loss:				
- Current service cost	1,349	1,135	1,887	1,571
- Past services cost				
- Net interest	2,858	2,517	4,438	3,547
	4,206	3,652	6,325	5,118
Included in other comprehensive income:				
actuarial loss (gain arising from)			-	-
- Demographic/Financial assumptions	4,371	1,645	4,904	1,646
- Other sources	-	-		
	4,371	1,645	4,904	1,646
Benefits paid	(4,090)	(2,894)	(4,890)	(3,542)
Balance at 31 December	25,122	20,635	34,458	28,119

Post-retirement medical benefit

	VRA		GROUP	
	2021	2020	2021	2020
	GH¢'000	GH¢'000	GH¢'000	GH¢'000
Balance at 1 January	157,054	136,907	172,516	149,112
Included in profit or loss:				
- Current service cost	5,066	4,585	5,556	5,027
- Past services cost				
- Net interest	21,076	18,394	23,461	20,461
	26,142	22,979	29,018	25,488
Included in other comprehensive income:				
actuarial loss (gain arising from)	-	-	-	-
Demographic/Financial assumptions	(5,476)	2,506	(9,124)	3,491
other sources				
	-5,476	2,506	(9,124)	3,491
Benefits paid	(5,339)	(5,339)	(5,608)	(5,575)
Balance at 31 December	172,381	157,054	186,801	172,516

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Total	VRA		GROUP	
	2021	2020	2021	2020
	GH¢'000	GH¢'000	GH¢'000	GH¢'000
Balance at 1 January	218,344	194,614	259,543	232,109
Included in profit or loss:				
- Current service cost	11,162	9,642	13,925	11,922
- Past services cost	-	-		
- Net interest	29,836	26,553	37,697	32,206
	40,998	36,196	51,622	44,128
Included in other comprehensive income:				
Actuarial loss (gain arising from)				
Demographic/Financial assumptions	2,256	3,567	227	2,015
Other sources				
	2,256	3,567	227	2,015
Benefits paid	(17,635)	(16,033)	(21,061)	(18,708)
Balance at 31 December	243,963	218,344	290,331	259,543

c. Defined benefits obligations-acturial assumptions

The following are the principal assumptions at reporting date

	VRA		GROUP	
	2021	2020	2021	2020
Inflation rate	13.00%	10.00%	13.00%	10.00%
Discount rate	16.00%	13.00%	16.00%	13.00%
Nominal inflation gap	3.00%	3.00%	3.00%	3.00%
Withdrawal Rate	2.50%	5.00%	2.50%	5.00%
Retirement age	60 years	60 years	60 years	60 years

Mortality in 2021 was assumed to follow the mortality rates according to the SA85-90 table. This assumption was the same as what was used in 2020 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.



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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.

22. Reconciliation of operating profit/loss to operating cash flow

	VRA		GROUP	
	2021	2020	2021	2020
	GHe'000	GHe'000	GHe'000	GHe'000
Loss after Tax	112,757	156,499	59,857	(125,520)
Adjustments for:				
Depreciation & amortization	365,613	535,675	454,679	708,656
Exchange (Gain) / Loss	380,779	469,686	287,431	403,637
Profit on disposal of Property, Plant and	(48)	605	(48)	9,321
Investment Income	(7,811)	(3,593)	(136,150)	(132,426)
Finance expense	87,596	258,184	87,596	258,184
Capital Work-in-progress written off				
Prior year adjustments	-	-	-	(231)
Amortization of grant	-	-	(1,209)	(1,209)
Tax Expense	-	-	55,430	48,716
	938,887	1,417,056	807,587	1,169,127
Changes in:				
- Inventories	8,775	(70,755)	(1,500)	(88,160)
- Receivables	343,948	186,390	575,196	645,818
- Payables	(671,008)	(1,168,810)	(389,899)	(1,308,245)
- Provisions and defined benefits	25,619	23,730	30,788	27,435
	646,220	387,611	1,022,173	445,975
Cash Generated from Operating activities	646,220	387,611	1,022,173	445,975
Tax paid	-	-	(615)	(78)
Interest paid	-	(56,752)	-	(56,752)
Net cash from operating activities	646,220	330,859	1,021,557	389,145

Financial Review for the year ended 31 December 2021



23. Going concern consideration

The Authority recorded a net profit of GH¢112.76 million for the year ended 31 December, 2021 (2020: GH¢156.50 million) and as at the date, the current assets exceeded current liabilities by GH¢1,770.53 million (2020: current liabilities exceeded assets by GH¢1,292.13 million)

24. Capital Commitments

There was capital commitments of GHS12.85 for the year. (2020: The group had 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 was GH¢24.93 million)

25. 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.

26. Related parties

Related party transactions

	VRA		GROUP	
	2021	2020	2021	2020
	GH¢'000	GH¢'000	GH¢'000	GH¢'000
Sale of Power				
NEDCo	596,406	560,994	596,406	560,994
Purchase of Power				
TICO	335,538	335,538	335,538	335,538

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