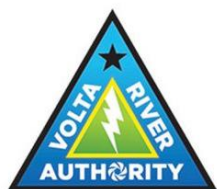


2022 Annual Report & Financial Statement



**VOLTA
RIVER
AUTHORITY**

61st Annual Report and Accounts

2022

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VRA Property Company (PROPCo) Ltd.

VRA International Schools Limited (VISL)

AUDITED ACCOUNTS (Financial Review & Audited accounts)





VISION STATEMENT

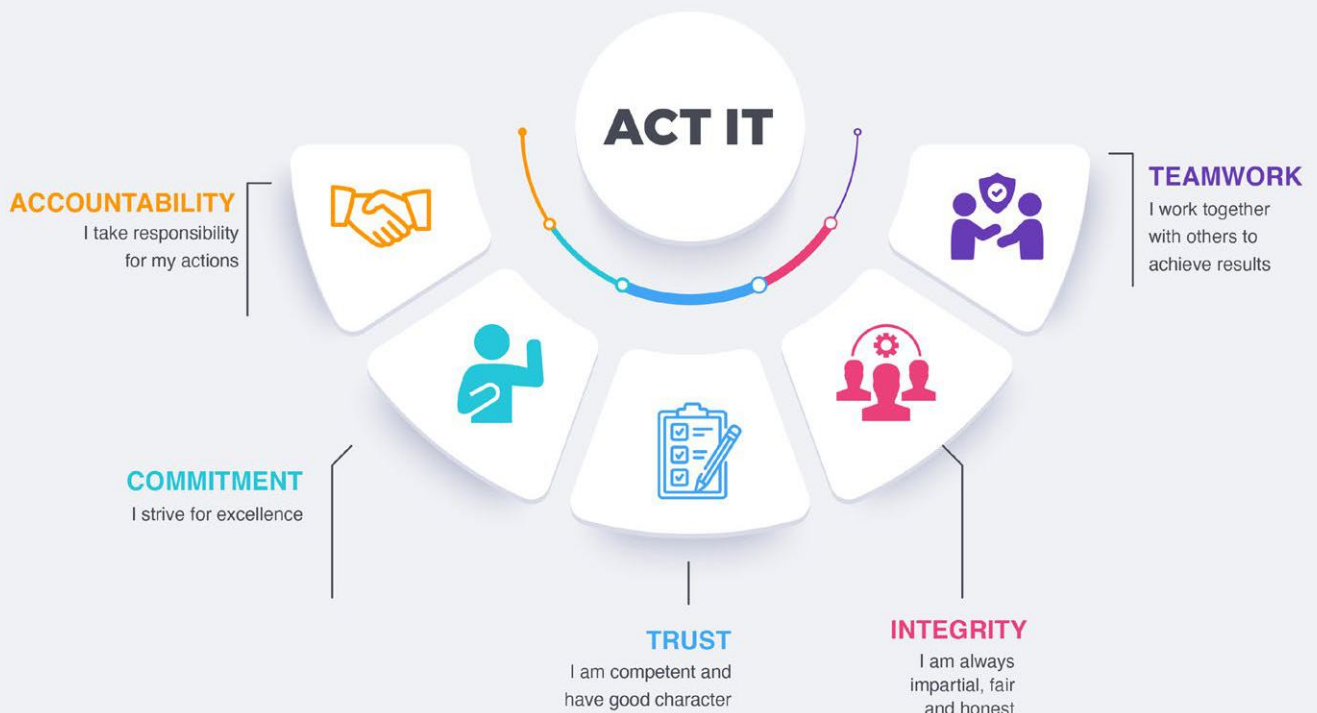
To be a Model of Excellence for Power Utilities in Africa.



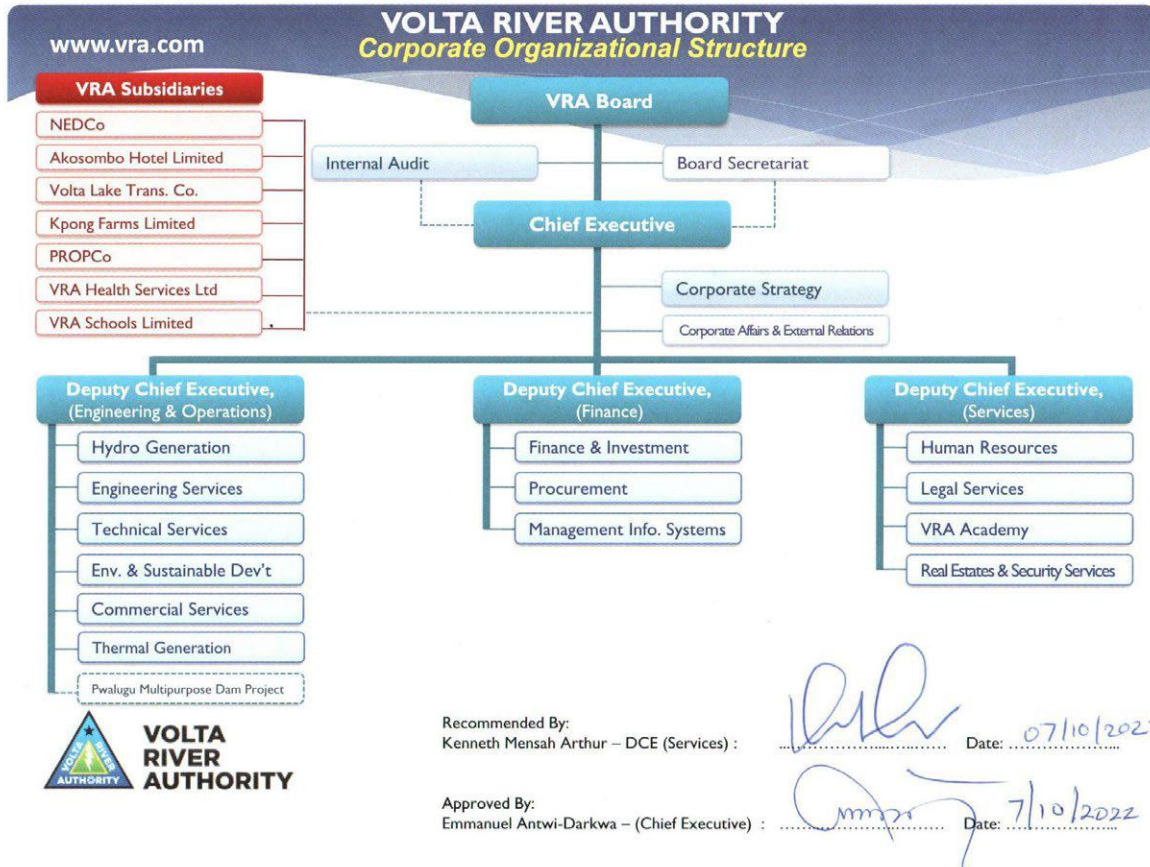
MISSION STATEMENT

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.

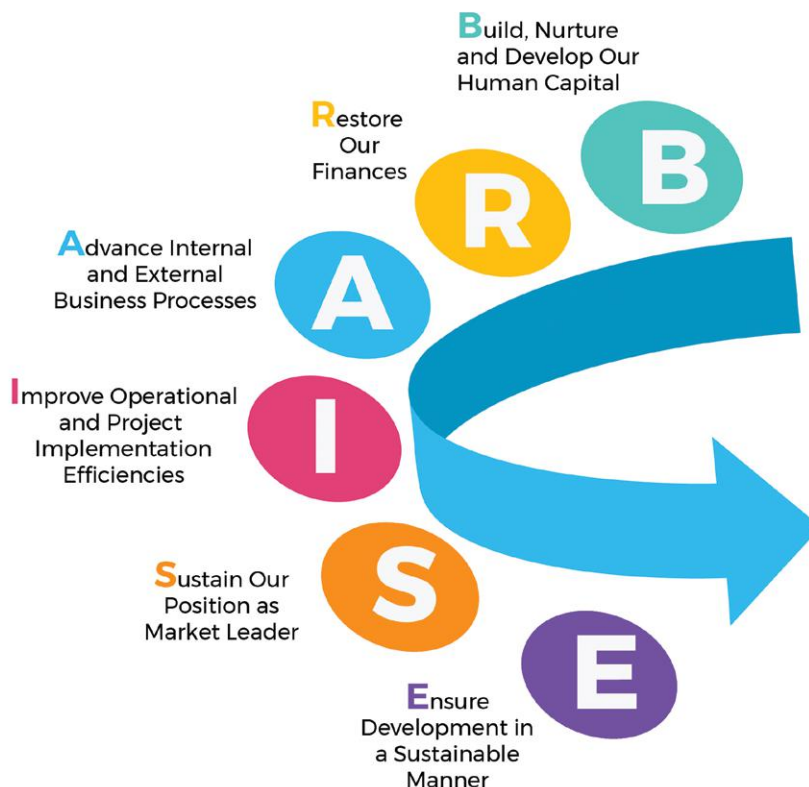
Core Values

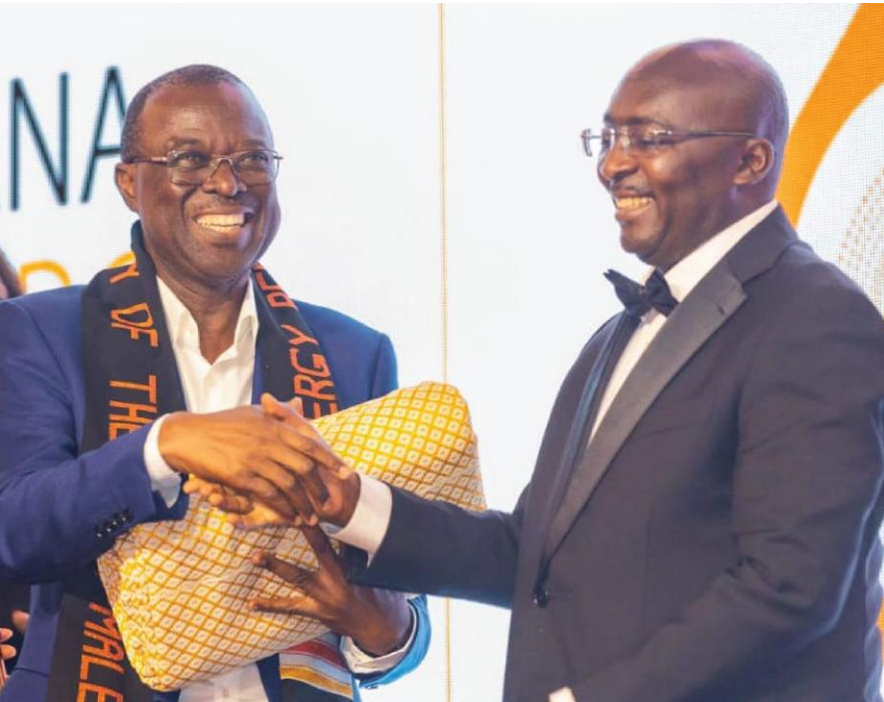


Corporate Organisational Chart



Corporate Strategy







CORPORATE ACHIEVEMENTS

2022 Sustainability Social Investment Awards

- Best WASH Initiative Award of the Year
- Net Zero Carbon Strategy of the Year
- Best Company in Climate Change Mitigation Projects
- SDG Pioneer of the Year
- SSI Project of the Year (Environment)
- Climate Change Leadership Award – VRA CE

2022 Ghana Energy Awards

- Excellence in Power Generation
- Energy Personality of the Year (Male) – VRA CE
- Visionary Leadership Award – VRA CE

2022 Ghana Corporate Brands Awards

- Industry Leadership Award (Public Sector)

2022 National Governance and Business Leadership Awards

- Excellence In Promoting and Supporting Education
- 100 Most Influential Business Leadership Personalities In Ghana 2022 – VRA CE

2022 Ghana Business Awards

- Energy Company of The Year
- Energy Personality of The Year (Public Sector) – VRA CE

2022 Ghana CEO Awards

- CEO of the Year- Energy/Power – VRA CE
- Overall Public Sector CEO Of the Year – VRA CE

2022 Public Sector Conference & Awards

- Most Outstanding contributions to Power Development in West Africa
- Excellence in Transforming Public Assets – VRA PROPCo

2022 National Brands Innovation Awards

- Energy Brand of the Year
- Company Brand of the Year (Public Sector)
- Member - Ghana's Top 100 Brands Across Industries
- Outstanding “Finance Leadership Personality of the Decade” – Dr. Ebenezer Tagoe



KEY MILESTONES



1961-1970

- 1961 - Promulgation of ACT 46- Establishment of the Volta River Authority
- 1962 - Commencement of construction of the Akosombo Dam
- 1965 - First power produced on commercial basis from the Akosombo Generating Station (AGS)
- 1966 - Formal inauguration of the Akosombo Hydro-Electric Project



1971-1980

- 1972 - Commissioning of the last two (2) units of the Akosombo Hydro-Electric Project for the full complement of 6 Units
- 1972 - Commissioning of Akosombo Expansion Project and Switch-On of Ghana-Togo-Benin Transmission Line
- 1974 - Acres International Limited and Shawinigan Engineering Limited both of Canada, were commissioned to conduct a detailed study of the Kpong Hydro-Electric Project
- 1978 - Commencement of construction of the Kpong Dam



1981-1990

- 1981 - Switching on of the first generating unit of Kpong Hydro-Electric Power Plant
- 1982 - Formal commissioning of Kpong Hydro-Electric Power Plant
- 1983 - Commissioning of the VRA and Compagnie Ivoirienne d'Electricite (CIE) Interconnection.
- 1987 - Establishment of the Northern Electricity Department.
- 1990 - Inauguration of national grid extension to the Upper East Region
- 1990 - Inauguration of the Medical Boat, "Onipa Nua"



1991-2000

- 1992 - AGS Retrofit project begins
- 1993 - AGS Retrofit Project suspended
- 1993 - Environmental impact assessment draft report on the Takoradi Thermal Power Project publicly discussed
- 1993 - Retrofitting of Kpong Generating Station begins
- 1994 - Pre-feasibility study for interconnection of Ghana-Burkina Faso Power System completed
- 1994 - VRA Resettlement Trust Fund instituted
- 1995 - Constructional works begin on Takoradi Thermal Power Project
- 1997 - First Unit of the Takoradi Thermal Power Plant Commissioned
- 1998 - Second Unit of the Takoradi Thermal Power Plant Commissioned
- 1999 - Power Purchase Agreement between VRA and Takoradi International (TICO) signed.
- 1999 - Shareholders Agreement executed between VRA, CSMG, TICO, TAPCO and CMST
- 1999 - Execution of Joint Development Agreement for Tema Thermal Power Plant between VRA and AES
- 2000 - Takoradi Thermal Power Station inaugurated

KEY MILESTONES



2001-2010

- 2001 - VRA's 40th Anniversary celebration with Dr. Charles Wereko Brobby as Chief Executive
- 2002 - Mallam Substation commissioned
- 2002 - Aflao Substation Commissioned
- 2003 - Sawla Substation Commissioned
- 2005 - Official Handing over of the AGS Retrofit Project
- 2005 - Parliament Reviewed ACT 46
- 2007 - Lowest Reservoir Lake level ever recorded at 234.96ft
- 2007 - VRA appointed Implementation Agency for Liberia Emergency Power Programme (EPP)
- End of EPP in Liberia
- 2008 - 126MW Tema Thermal 1 Power Plant Commissioned
- 2010 - Highest Reservoir level ever recorded at 277.5ft
- 2010 - Spillways of the Akosombo Dam opened



2011-2022

- 2011 - VRA's 50th Anniversary with Mr. Kweku Awotwi as Chief Executive
- 2011 - Inauguration of Northern Electricity Distribution Company (NEDCO) as a Subsidiary
- 2012 - Kpone Thermal Power Project recommended for construction
- 2012 - Burial of "VRA Time Capsule" at the Forecourt of the Akosombo Generating Station
- 2013 - Takoradi Thermal Power Plant Project (T3) commissioned
- 2013 - Inauguration of VRA's first utility-scale 2.5MW Solar Power Plant at Navrongo
- 2015 - Commissioning of Kpone Thermal Power Plant (KTTP)
- 2015 - Expansion of Siemens Plants at Tema Thermal Power Complex
- 2016 - KTTP GT11 and GT12 begin commercial operation
- 2016 - Commissioning of T2 Power Plant for Combined Cycle Operations (TICO Aboadze)
- 2016 - 2nd lowest reservoir level recorded at 235.01ft
- 2016 - Kpong GS Unit 2 returns to commercial operations after retrofit
- 2018 - Kpong GS Unit 1 returns to commercial operations after retrofit
- 2019 - Commissioning of TT1PS Gas flow metering Skid- Tema
- 2019 - Kpong GS Unit 3 returns to commercial operations after retrofit
- 2019 - Installation of 79kW rooftop solar PV project at the VRA Head Office
- 2019 - Sod-cutting for commencement of 17MWp Solar Power Project in the Upper West Region
- 2020 - Kpong Generating Station Unit 4 returns to commercial operations after retrofit
- 2020 - Official Commissioning of 6.5MWp Lawra Solar Power Plant.
- 2020 - Official Commissioning of the Kpong GS Retrofit Project
- 2020 - VRA launches its 60th Anniversary Celebration
- 2021 - VRA celebrates 60th Anniversary with Mr. Emmanuel Antwi-Darkwa as Chief Executive
- 2021 - VRA celebrates Past Chief Executives with the unveiling of life-sized busts at Akosombo, Akuse and Aboadze as part of its 60th anniversary
- 2021 - Upgrade and automation of existing systems and SCADA commences at Akosombo generating station
- 2021 - VRA in collaboration with relevant partners, conduct environmental and social impact assessment of the Pwalugu multipurpose dam project
- 2021 - Installation and commissioning of 60kW Head Office Solar Rooftop Car Park
- 2022 - GE TM 2500 Units AMERI Power Plant handed over to the Authority in Kumasi
- 2022 - Creativity and Innovation Day launched on the 61st anniversary – VRA Day
- 2022 - Establishment of Digital Transformation and Innovation Unit in VRA
- 2022 - VRA's 13MW Kaleo Solar PV Power Plant commissioned by the President of Ghana, His Excellency Nana Addo Dankwa Akufo-Addo
- 2022 - Commercial operation of 13MW Kaleo Solar Power Plant



Operational Areas

The Volta River Authority, Ghana's leading electricity provider has footprint in Seven (7) operational areas.



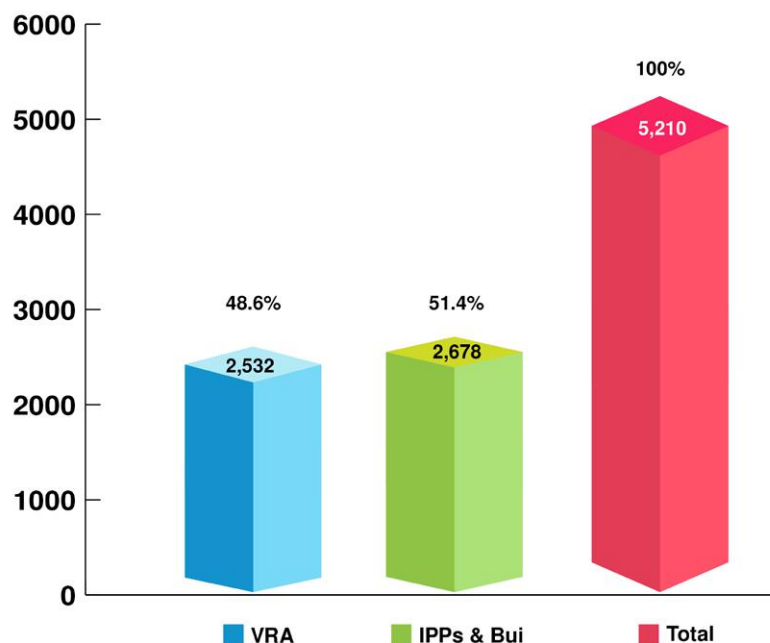
The Eastern Region has two (2) hydro dams; the Akosombo and Kpong Generating Stations with a total installed capacity of 1180MW.

With a total thermal installed capacity of 1330MW, VRA's thermal generating facilities cut across the Greater Accra Region at Kpone/Tema and Aboadze in the Western Region. These include the 330MW Takoradi Thermal (T1) Power Station, 340MW Takoradi International Company Thermal (T2) Power Plant, which is a joint venture (JV) between VRA and TAQA from Abu Dhabi, 110MW Tema Thermal 1 Power Plant (TT1PP) now designated Station 2, an 80MW Tema Thermal 2 Power Plant (TT2PP) designated Station 3, a 220MW Kpone Thermal Power Station (KTPS) and a 250MW AMERI Power Plant.

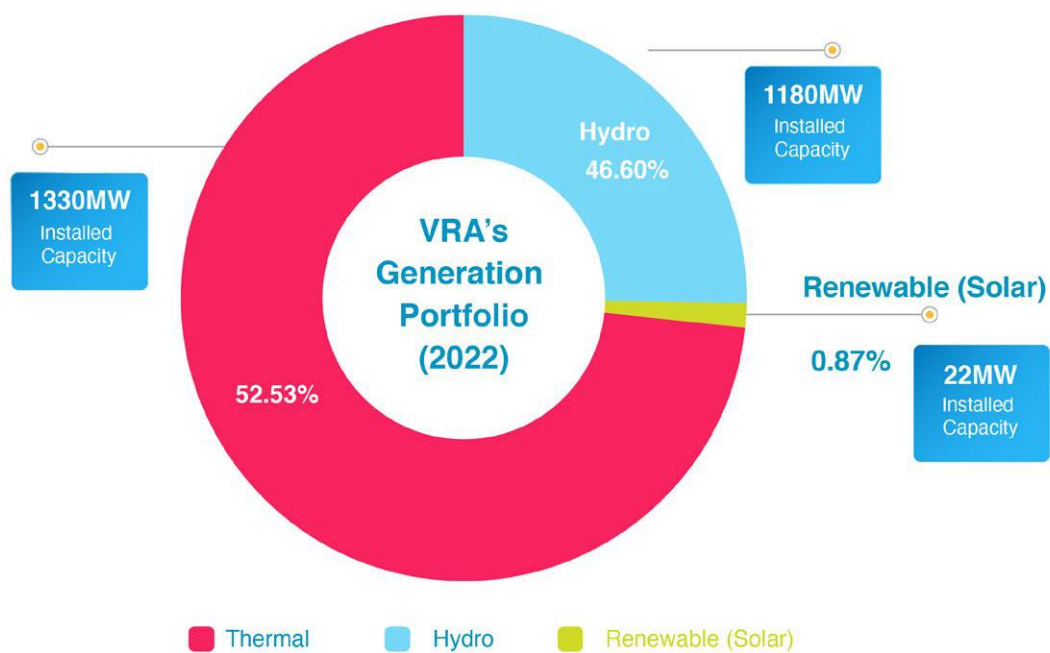
The Authority's utility-scale Solar Power Plants also span across Lawra, Kaleo and Navrongo in the Upper East and Upper West Regions consisting of a total installed capacity of 22MW.



2022 National Installed Capacity



VRA's 2022 Generation Portfolio





PROFILE OF VOLTA RIVER AUTHORITY

The Volta River Authority (VRA) was established on April 26, 1961, under the Volta River Development Act, Act 46 of the Republic of Ghana, with the mandate to generate, transmit and distribute electricity. However, following the promulgation of a major amendment to the VRA Act in the context of the Ghana Government Power Sector Reforms in 2005, VRA's mandate has been largely restricted to the generation of electricity. The amendment has the key function of creating the enabling environment to attract Independent Power Producers (IPPs) 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.

Organisational Restructuring

As part of efforts towards restructuring, VRA in 2018 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.

To protect the financial gains made, following the implementation of the three (3) year Financial Recovery Plan, VRA rolled out a 5-year (2021-2025) Sustainability Plan. The primary objective of the Plan is to ensure VRA remains a financially sustainable and resilient corporate organisation, and by extension, forms 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.

Organisational Re-alignments

Consistent with the strategy to restructure VRA into a resilient, sustainable & growing Multi-Business Holding Company, the Authority continued with the re-alignment of Departments and Units within the organisation. In line with that, the Strategic Projects & Business Unit was created with a focus on projects that will increase VRA's generation capacity and market share, reduce VRA's carbon footprint as well as improve the efficiencies and lower the cost of the simple cycle plants. The ultimate objective is to ensure improved efficiency in project delivery.

Further to that, the Engineering and Operations Branch (E&O) was restructured into the Engineering and Technical Services Departments. The Engineering Services Department now comprises of the Generation and System Planning, Project Development and the Infrastructure Services Sections. Whilst the Technical Services Department comprises of the Marine and Power Support, Health, Safety, Security and Environment (HSSE), Project Implementation, Transport Management, Utility Services and the Technical Audit Sections.

The restructuring has the overarching objective of developing the consultancy expertise of the Branch to provide support in areas of project management, feasibility studies, detailed design development and quality control.

Aside that, the Corporate Social Responsibility Unit (CSR) originally under the Environment and Sustainable Development Department has been merged with the Corporate Affairs & External Relations Unit. The merged entity, the Corporate Affairs & External Relations (CA&ER) Unit is under the office of the Chief Executive. The purpose of the merger is to strengthen and reposition the VRA brand to achieve organisational effectiveness and impact.

Lastly, the Investment and Finance Departments were merged with the aim of providing strategic leadership and direction in co-ordinating and monitoring the activities of the Authority's Subsidiaries and Strategic Business Units (SBUs) to secure the best overall investment returns to the Authority, and transform the Subsidiaries and SBUs into high-yielding, self-sustaining commercial entities.

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 with an 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' expectations. 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. NEDCo has a customer population of 1,210,230 and a peak 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 Volta River 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 to 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 a 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 a 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 of 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



Mr. Kofi Tutu Agyare
Board Chairman

Dear Stakeholders,

On behalf of the Board of Directors, it is my pleasure to present to you the operational and financial performance report of the Volta River Authority for the year ended December 31, 2022.

Ladies and gentlemen, the 2022 financial year remained challenging for all businesses as Ghana's economy continued to reel under the effects of the COVID-19 pandemic. VRA, I must say, was no exception, as the Authority's business also suffered a decline. We recorded a net loss of GHSS277.18 million recorded in 2022 as against the GHS60 million net profit achieved in the 2021 financial year.

It is instructive to state that the decline in VRA's financial performance during the year is attributable to the Authority's increased cost of sales and administrative expenses arising from the general price level increases of goods and services; the 42.29% depreciation of the average GHS/US\$1 exchange rate from GHS5.8116/US\$1 in 2021 to GHS8.2695/US\$1; as well as the substantial increase in gas consumption from 43,513,527.70MMbtu to 52,516,527.77MMbtu. The combined effects of the above, largely contributed to the Authority's increased cost of operations during the year.

Management is hopeful of a positive financial outlook due to the strategic implementation of its sustainability plan and the purposeful investment in improving existing infrastructure. These activities will heavily leverage a general improvement in the economic outlook and, hopefully, inure to a turnaround in the financial fortunes of the Authority for the ensuing year.

Despite the setback, the Board is appreciative of the support and co-operation received from various stakeholders including the Government, Management and Staff, Sister Utilities, Regulators, Commerce, and the general public.

Operational Performance

Ladies and gentlemen, as the country's leading power producer, VRA, in 2022, we demonstrated our dominance in the power sector with our contribution of 56.52% to the country's total power generation. This is particularly evidenced by the significant role played by our hydro sources as they served as an important backup to generation shortfalls, especially during periods of gas outages.

During the year, gross hydroelectric energy generated from the Akosombo hydroelectric station was 5,781GWh and a net of 5,748GWh. This is 4.26% above the Base Case generation target of 5,513GWh. The Kpong Generation Station (KGS), on the other hand, recorded a gross generation of 984GWh and a net of 969GWh. This is 1.77% below the Base Case target of 987GWh. In comparison, our 2022 performance saw a significant increase (188GWh) over the 2021 gross generation of 6,530GWh. The increase in performance is attributed to the good water level recorded during the period as well as the better collaboration and engagement with GRIDCo to dispatch the Authority's hydro resources as planned.

Ladies and Gentlemen, VRA's thermal portfolio, in 2022, recorded an impressive performance over the previous year's showing. Total generation from thermal generation for the year 2022 was 3,483GWh. This is compared to the 3,069GWh achieved in 2021. The increased performance is attributable to the high plant availability of 91% recorded for the period. It is important to note that the huge disparity in the actual 2022 energy generation of 3,483GWh compared to the planned target of 3,191GWh is due to the postponed major activities planned to be carried out at TTPS-T1, which had been initially factored into the energy supply plant.

Financial Health

Revenue from sale of electricity in 2022 increased by 36.02% (GHS1,519.90 million) to GHS5,739.88 million from the previous year's sale of GHS4,219.99 million. This was mainly due to the combined effect of 9.98% (1,088GWh) increase in the volume of energy sold from 10,484GWh in 2021 to 11,931GWh in 2022 and 24.13% increase in the average tariff of ECG from GHS0.25175/kWh in 2021 to GHS0.337957/kWh in 2022. The volume of energy sold to regulated customers decreased by 2.89% (188GWh) from 6,516GWh in 2021 to 6,328GWh in 2022. The volume of electricity sold to deregulated customers which attracts relatively higher tariff increased by 29.34% (1,271GWh) from 4,332GWh in 2021 to 5,603GWh in 2022, largely on account of sales to Communaute Electrique Du Benin which increased from 574GWh in 2021 to 743GWh in 2022 representing an increase of 169GWh (29.44%) and Sonabel Bolga-Ougadougou which increased from 900GWh in 2021 to 1,177GWh in 2022 representing an increase of 277GWh (30.78%).

Portfolio Growth

Ladies and Gentlemen, VRA has employed a growth strategy and although there were no capacity additions to the Authority's generation portfolio in the year under review, we continue to work towards increasing our generation capacity both in the area of conventional and renewable energy generation. In terms of conventional power generation, the Authority continued engagements with SSNIT/CENIT Energy towards the proposed conversion of our twin simple-cycle power plants located at Tema into a 330MW combined-cycle power plant. A consultant has now been engaged by both parties and our expectation is that this project will get back on track in the next few weeks.

Again, VRA focused on the development of the Authority's 220MW Kpone Thermal Power Station's (KTPS) 220MW simple-cycle plant into a 330MW combined-cycle power plant. As at the close of the year, VRA had successfully signed the consultancy service agreement and is collaborating with other relevant stakeholders to determine the model of arrangement for the Engineering, Procurement, Construction and Financing (EPCF). Bids have been received and are being evaluated.

In line with the development of our proposed renewable energy (RE) projects, VRA effectively collaborated with key stakeholders for the takeoff of the 60MW Bongo Solar Power Project. So far, we have received siting clearance and environmental permits for the project from the Energy Commission and the Environmental Protection Agency respectively, and are working on the validation of the feasibility studies and Environmental Social Impact Assessment reports. The successful completion of the necessary regulatory processes will

ensure the successful takeoff of the project. We also have a number of solar projects which we are discussing with various developers.

With respect to the development of our novel 75MW Wind Power Project, we deepened our engagements with the relevant stakeholders for the completion of the necessary documentation and processes for the eventual execution of the project. It is imperative to note that apart from adding on to generation, the successful completion of this project will be an endorsement of our status as a trailblazer in the area of power generation in the country.

I am optimistic that the successful execution of the RE projects will promote our diversification efforts, impact positively on the world's efforts to reduce carbon emissions into the ecosystem, and most importantly, ensure we sustain our position as a market leader in the sector.

Repowering of Generating Power Plants

The Authority's desire to repower the 132MW Takoradi Thermal Power Plant (T3) was given a major boost as Government finally transferred the asset to the Authority after successful negotiations. The transfer offers us the opportunity to bring the Plant back online by strategising and deploying the best retooling options.

Secondly, following the successful execution of the Asset Transfer Agreement for the GE TM2500 AMERI Power Plant, VRA has commenced the necessary arrangements for the relocation of the Plant to Kumasi. We have negotiated with the Kwame Nkrumah University of Science and Technology for the lease of land for the relocation. Similarly, VRA has also received a no objection from the sector ministry for the relocation of the Siemens Plant from Tema to Kumasi.

The relocation of the GE TM2500 AMERI and Siemens Power Plants (Kumasi 1 Thermal Power Plant) to the middle part of the country has the key objectives of improving grid stability and ensuring adequate reliability of power supply to the middle and northern parts of the country. Most importantly, the relocation of the Siemens Plant would contribute to addressing the current challenge of low dispatching by the Ghana Grid Company (GRIDCo) and improve the capacity utilisation and efficient operation of the Plant. The successful completion of the relocation of these generating assets would positively impact our strategy of increasing our market share. These moves are on-going as we speak and we expect to have them both commissioned at least in part by the end of September or October. This will add 235MW to the country's generating capacity.

Corporate Social Responsibility

Building strong relationships with our impacted communities over the years has given us the social capital to deliver on our core mandate in line with our long term values. In recognition of the dynamics of society, our Community Development Programme (CDP) outlines areas of support as stipulated in the Environmental Protection Agency (EPA) Permit requirements and the United Nations Sustainable Development Goals (UN SDGs). Thematic areas of support are Education Scheme, Health, Social Infrastructure Projects, Support for Cultural Activities, Environmental Protection Activities, and Industrial Attachment. As a responsible corporate entity, VRA has continuously aimed at operating sustainably by managing the environment responsibly, improving the living standards of our communities, and deepening relationships with stakeholders.

Creativity & Innovation

With the aim to inject new energy and momentum into the operations of the Authority, the culture of Creativity and Innovation was born in 2021. The focus has been to put VRA at the forefront of global business trends while optimising staff productivity and enhancing operations. In line with this, April 26, the "VRA Day" has been rechristened as the "Creativity and Innovation Day." The initiative is aimed at soliciting and optimising ideas and resources, and streamlining processes towards improving the Authority's overall business outlook.

Industrial Relations

The effective partnership that existed between Management and Staff, during the year, largely contributed to the peaceful industrial environment we attained for the year. The collaboration between the two partners in corporate governance created the enabling environment, which ultimately, promoted the Authority's business. Pursuant to that, to facilitate Management's objective of cultivating a diverse, committed and future ready workforce, VRA created the platform to inculcate in Staff, the culture of creativity and innovation as well as equipping Staff with the right attitudes to ensure the Authority executes its mandate as a public sector organisation with a private sector mindset. The objective is to enrich our customers' and stakeholders' experience to drive growth and ultimately reposition VRA in the relatively competitive energy market.

Challenges

In 2022, three key indicators negatively impacted our business operations. These include the depreciation of the cedi to the US dollar, which significantly increased our cost of sales, thereby negatively influencing our net financial position, as well as 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 and our inability to collect the revenue from all the power we sell. We are working closely with our sister company, ECG to rectify this.

As VRA, we will continue to contribute our quota to the nation's socio-economic development and expect that, other key relevant stakeholders would put in the necessary mechanisms to ensure an improvement in the country's economic outlook. To the Public Utilities Regulatory Commission (PURC), we are grateful for your support and will continue to knock on your doors to consider our request for financial compensation for the additional services VRA provides to support the stability and reliability of the power system

The Way Forward

My assurance to our esteemed stakeholders is that the Volta River Authority will continue to work assiduously towards fulfilling our mandate as a public sector organisation but with a private sector mindset. We will focus on increasing our generating capacity as well as retooling our power plants. We will do these with the objective of repositioning ourselves to enable us continue providing reliable power and competitively priced electricity to propel the country's socio-economic development as well as increase our power exports to the sub region. VRA has also commissioned a commercial study of the Volta Lake with a view to providing a blue print for further development. This is expected by the first Quarter of 2024. VRA is also working on a generation plan for the long term, which incorporates both thermal and renewables for the year 2028 and beyond.

Conclusion & Appreciation

To conclude, I reassure you that your Board of Directors is responsive to the uncertainties in the current business environment and would continue to provide the requisite leadership to protect stakeholders' interest and maximise stakeholder value with the view to ensuring VRA has a sustainable business ethos.

Secondly, VRA has continued to make progress due to the unflinching commitment and dedication of the Management Team and Staff. They have not lost sight of the strategic objectives of the organisation. I thank them for their diligence and co-operation.

Again, I want to thank all our stakeholders: the Ministers for Energy, Finance and Public Enterprises, the State Interests and Governance Authority (SIGA), sector regulators, sister utilities, financial institutions, our esteemed customers, Traditional Rulers and the communities, suppliers, the Media and the general public for their unwavering support and confidence.

Thank you for the attention.

KOFI TUTU AGYARE
BOARD CHAIRMAN

A modern conference room with a large white table, black chairs, and glass walls. A telephone and papers are on the table. A large screen is mounted on the wall. The ceiling has recessed lighting.

CORPORATE GOVERNANCE

Board Chairman & Members

Executive Management

Corporate Governance Statement

BOARD CHAIRMAN AND MEMBERS AS AT DECEMBER 31, 2022

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 Adjetei Sowah	Member
Mr. Richard Obeng Okrah	Member
Most Reverend Dr. Cyril Kobina Ben Smith	Member
Claudia Gyekye-Aboagye (Mrs.)	Secretary

EXECUTIVE MANAGEMENT TEAM AS AT DECEMBER 31, 2022**OFFICE OF THE CHIEF EXECUTIVE**

NAME	DESIGNATION
Emmanuel Antwi-Darkwa	Chief Executive
Dr. Irene Stella Agyenim-Boateng (Mrs)	Advisor, Office of the Chief Executive
Mr. Ebenezer Kwadwo Omari-Mireku	Director, Internal Audit
Mr. Clement Boakye	Director, Corporate Strategy
Ing. Ebenezer Apau Koramoa	Director, Office of the Chief Executive
Ing. Alfred D. Sackeyfio	Director, Strategic Projects & New Business

ENGINEERING AND OPERATIONS BRANCH



Ing. Edward Ekow Obeng Kenzo

Branch Head

Ing. Edward Ekow Obeng Kenzo is an accomplished Business Executive, focused on supporting cross functional teams in achieving exceptional, mission-critical results in highly competitive environments that demand continuous improvement to increase return on investment (RoI) and deliver customer satisfaction.

Ing. Obeng Kenzo has twenty-four years' experience in the power sector. He holds a Master's Degree in Public Administration (MPA) and a Bachelor of Science Degree (BSc Hons) in Mechanical Engineering from the Kwame Nkrumah University of Science and Technology. He is a member of the Ghana Institution of Engineering.

Prior to his appointment into his current position, Ing. Edward Obeng Kenzo served as the Director, Thermal Generation SBU, Plant Manager, Tema Thermal Power Complex (TTPC), Operations Manager, TTPC and Project Manager, Tema Thermal 2 Power Project, (49.5MW Siemens Emergency Power Plant).

Key responsibilities: provides strategic direction and leadership to the Departments in the Engineering and Operations branch to innovate and improve their efficiencies to ensure VRA stays a market leader.

Departments: Hydro Generation, Engineering Services, Technical Services, Environment & Sustainable Development, Commercial Services , Thermal Generation, Pwalugu Multipurpose Dam Project.

NAME	DESIGNATION
Ing. Edward Ekow Obeng-Kenzo	Deputy Chief Executive
Ing. Kwaku Sarpong Mensah	Director, Hydro Generation
Ing. Jacob Brown Yawson	Director, Thermal Generation
Ing. Kwaku Wiafe	Director, Engineering Services
Mr. Benjamin Arhin Sackey	Director, Environment & Sustainable Development
Ing. Samuel Odartey Lamptey	Director, Technical Services
Miriam Darke (Mrs)	Director, Commercial Services
Ing. Daniel Onny	Director, Pwalugu Multipurpose Dam Project
Mr. Richard Ahenkora-Osei	Director, Office of the DCE (E&O)

FINANCE BRANCH



Dr. Ebenezer Tagoe

Branch Head

Dr. Ebenezer Tagoe is an astute Finance and Audit professional with over 25 years of leadership experience. He graduated with a Bachelor of Science (Accounting) Degree from the University of Ghana in 1993 and began his career as an Internal Audit Officer at the Volta River Authority.

Throughout his career at VRA, Dr. Tagoe progressed to become the Director of Audit in 2009 and later served as the Director of Finance until 2018. He was then promoted to Deputy Chief Executive Officer, overseeing Finance.

In addition to his role at VRA, Dr. Tagoe holds board memberships in various companies, including Akosombo Hotels Limited and Volta Lake Transport Company Limited. He currently chairs the Finance Committee of the West African Power Pool in Cotonou, Republic of Benin.

Dr. Tagoe is highly qualified, holding an MBA in Finance from the University of Ghana and a Doctor of Business Administration (DBA) & Masters Degree from the Swiss Business School and Nobel International Business

School. He is a Qualified Accountant and certified Internal Auditor (CIA), and holds a Certification in Risk Management Assurance (CRMA) with the Institute of Internal Auditors. Dr. Tagoe is also a Fellow of the Chartered Institute of Supply Chain Management, Ghana.

His international exposure includes training in Leadership, Management Development, and Utilities Management from institutions such as Harvard University, the University of Texas, and the International Public-Private Partnerships Institute, USA. He is married with three children.

Key responsibilities: provides strategic direction and leadership to the Finance, Procurement, Investments, and Management Information System Departments, ensuring optimal efficiency and financial stewardship in support of the Volta River Authority's objectives.

Departments: Procurement, Finance and Investment, Management Information Systems (MIS)

NAME	DESIGNATION
Dr. Ebenezer Tagoe	Deputy Chief Executive
Mr. Jacob Kyei	Director, Procurement
Mr. Paul Seniagya	Director, Finance & Investment
Mrs. Awurama Ofori-Ani	Director, MIS
Dr. Abubakari Obuama Addy	Director, Office of the DCE

SERVICES BRANCH



Ing. Kenneth Mensah Arthur

Branch Head

Ing. Kenneth Arthur was appointed as Deputy Chief Executive in charge of Services in 2021. He oversees the VRA's Services branch to ensure efficient and value-added support services for the delivery of VRA's core business of generation and sale of electricity. Prior to that, he was the Director, Hydro Generation; Project Director, Kpong Generating Station Retrofit Project; Plant Manager, Akosombo Generating Station.

He has over twenty-seven years of experience in the Electric Power Industry, and has extensively worked in the management, operation, and maintenance of VRA's hydroelectric power stations.

He is a versatile and accomplished Engineering Management Professional and Business Executive, with expertise in strategic planning, project management, business management, asset

management, contract negotiations, monitoring and evaluation and business re-engineering. He holds an Executive MBA (Utility Management) from the University of Fribourg, Switzerland and a Bachelor of Science degree in Mechanical Engineering from the Kwame Nkrumah University of Science and Technology. He is a Member of the Ghana Institution of Engineering.

Key responsibilities: Oversees VRA's Services branch to ensure efficient and value-added support services for the delivery of VRA's core business of generation and sale of electricity.

Departments: Real Estate & Security, Human Resources, Legal Services, VRA Academy.

NAME	DESIGNATION
Ing. Kenneth Mensah Arthur	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	Chief Learning Officer, VRA Academy, with responsibility over the VRA Schools
Mr. Raphael Punamane	Manager, Akosombo Management Committee
Vacant	General Manager, VRA International Schools

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)
Mr. Tei Sarbah	Farm Manager	Kpong Farms Ltd. (KFL)
Mrs. Rose Appiah Okyere	Managing Director	Volta Lake Transport Company (VLTC)
Mr. Kingsley Gyamfi	Chief Learning Officer	VRA Academy and Schools

STAFF ON SECONDMENT

NAME	DESIGNATION	REGISTERED COMPANY
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

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

1.0 The Board of Directors

As stipulated by the Volta River Development Act, 1961 (Act 46), and as amended by the Volta River Development Act (Amendment) Act, 2005 (Act 692), the Board consists of the Chairperson, the Chief Executive and seven (7) Non-Executive 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.

2.0 Membership of the Board

The year 2022 began with a nine (9) member Board that was sworn into office on August 31, 2022, following their appointment by H.E the President. The Board Members have diverse backgrounds and their diversity, independence and skills ensure objective and balanced decision-making.

The Members are:

PROFILE OF BOARD MEMBERS



Mr. Kofi Tutu Agyare
Non-Executive Board Chairman

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

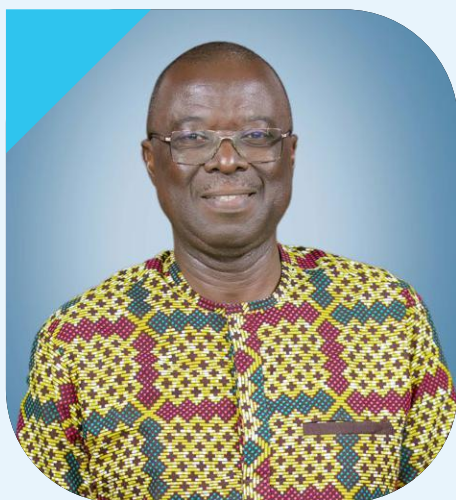
with UBS Investment Bank, holding a number of senior positions, most recently as the Head of European Emerging Markets and a member of the Investment Bank Board. He served as a Non-Executive Director of Tullow Oil, the largest Independent Oil Exploration company in Africa from 2010 – 2019.

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 seeking and executing investment ideas for his international relationships.

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

Appointed: 2017 - Present

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

Non-Executive Board Member

Appointed: 2017 - Present

Mr. Richard Obeng Okrah has served as a Non-Executive Director on the Board of VRA since October 2017. 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.



Chief Musa B. Adam

Status: Non-Executive Board Member

Appointed: 2017 - Present

Chief Musa B. Adam has served as a Non-Executive Director of the Board of VRA since October 2017. Chief Musa B. Adam is the Board Chairman of RegencyNem Insurance Company Ltd. and the Managing Director of Primary Resources Ghana Ltd. Prior to this, he had been Managing Director of the Electricity Company of Ghana from May 1998 to October 2000. Chief Musa Adam is a renowned Engineer who started his career at Ohio Bell Telephone Company and later at the General Electric Co. Lamp Division both in the USA. He became the General Manager of GECAD Ghana in 1995. Chief Adam has served on the Boards of several government agencies, commissions and private companies including Tema Development Corporation, National Commission on Culture, Presidential Commission on Pension and Advisory Council of the Institute of Economic Affairs among others. He has also chaired the Board of Trustees, Volta River Resettlement Trust and the West Mamprusi Community Bank.

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



Hon. Kwame Anyimadu-Antwi

Non-Executive Member

Appointed: 2021 - Present

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.



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

Status: Non-Executive Board Member

Appointed: 2021 - Present

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.



Mr. Solomon Adjetey Sowah

Non-Executive Member

Appointed: 2021 - Present

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).



Rev. Dr. Joyce R. Aryee
Non-Executive Board Member
Appointed: 2017 - Present

Rev. Dr. Joyce R. Aryee has served as a Non-Executive Director of the Board of VRA since October 2017. 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 an excellent record of accomplishment in strategic leadership and management, an executive coach and a passionate advocate for positive social change. She has played multiple roles in a variety of industries including mining, education, government and media. She served as the Chief Executive Officer of Ghana Chamber of Mines and as Secretary (Minister) of Information and Education and Local Government respectively. She serves on the Boards of diverse organisations including Central University College, University of Mines and Technology and Ghana Chamber of Mines, to mention but a few. She serves as the Chairman of Databank Ark Fund, Global Media Alliance and Newmont Gold Ghana, among others.

She is a recipient of a myriad of 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
Status: Non-Executive Member
Appointed: 2017 - Present

Madam Janet Akosua Gyasiwaa has served as a Non-Executive Director of the Board of VRA since October 2017. 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 respectively.

Madam Janet Gyasiwaa holds a Certificate in Banking from the Humber College, Canada and is an honorary fellow of the Chartered Institute of Supply Chain Management (CISCM).

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 Environmental 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. Six (6) Ordinary Board meetings as required by the Board Charter, were held to consider issues of strategic and business performance importance in 2022. In addition, two (2) Extraordinary and One (1) Emergency meetings were held to consider issues that came up during the intervening periods between planned ordinary meetings. A total of twenty-two (22) 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

The orientation of newly appointed Members to the operations of the Authority continued into the year 2022 with visits, combined with briefings, to some operational areas. Visits were made to the Akuse, Akosombo, Kpone and Aboadze enclaves during the year.

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 2022, Members in groups or as individuals, attended a total of nine (9) capacity building programs.

9.0 Transparency, Accountability and Stakeholder Relations

To ensure transparency and accountability, the Board maintains active communication and engagements with its shareholders, 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 2022 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 Shareholders, represented by the State Interests & Governance Authority, and other key stakeholders. The 12th Annual General Meeting to consider the financial and operational performance for the year 2021 was held on Thursday, September 29, 2022.

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

Non-Executive 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 over the years. A consultant was procured in 2022 to conduct an independent external evaluation of the performance of the Board for the year 2022. The outcomes of the evaluation have since been shared with Members and an action plan drawn to guide the implementation of key recommendations.

Acts and Regulations

The following are some of the Acts and Regulations VRA complies with.



Principles of Corporate Governance



The Corporate Governance principles are entrenched in VRA's strategic and operational objectives to facilitate growth and increase stakeholder value.

BOARD CHARTER



Board Charter Statement

The Board Charter outlines the respective roles, responsibilities, and authorities of the Members, both individually and collectively, and Management in setting the direction, management, and control of the Authority. It is subject to relevant provisions of the 1992 Constitution of the Republic of Ghana, the Volta River Development Act, 1961 (Act 46) as amended by Act, 2005 (Act 692), the Code of Conduct for Public Officers, the Public Financial Management Act, 2016 (Act 921); the Companies Act, 2019 (Act 992) as amended, good corporate governance practices as promoted under the State Interests and Governance Act, 2019 (Act 990), and any other statutory and legal provisions as well as practices that conform to normative advice on good corporate governance.



POWER OPERATIONS

Electricity Demand & Supply

Hydro Generation

Hydrology Report

Thermal Generation

Renewable Energy

Capacity Expansion

Repowering of Generating Power Plants

POWER OPERATIONS



Electricity Demand and Supply

The power system in Ghana recorded a system peak demand of 3,469MW in March 2022. This represents an increase of 223MW, which is 6.8% over the 2021 peak demand of 3,246MW.

For the period under review, the total energy consumed, including losses, was 22,490GWh. This compared to the 2021 figure of 21,480GWh, represents an annual growth in energy consumption of 4.7%. In the year under consideration, the projected base supply was 12,025GWh. However, the actual supply was 12,712GWh. The actual supply in 2022 is 687GWh higher than the planned projection. The difference in projection represents a 5.71% increase. This increase in supply is attributable to higher than planned generation from the VRA thermal plants as a result of higher availability and utilisation. VRA's hydro power plants also generated higher than planned because of challenges with the Independent Power Producers (IPPs), as a result of natural gas supply challenges.

Hydro Generation

Operations

In 2022, the Akosombo reservoir was drafted at an average daily rate of 15.839GWh. At this rate, the gross hydroelectric energy from Akosombo Generating Station (AGS) was 5,781GWh and a net of 5,777GWh,

which is 3.39% below the planned annual generation target of 5,980GWh. The Kpong Generating Station (KGS), on the other hand, achieved a gross generation of 984GWh and a net of 981GWh, which is also 3.83% below the planned target of 1020GWh.

Plant Availability

The AGS and KGS attained Plant availability of 94.31% and 96.78% respectively, during the year. This translates into a consolidated hydro availability of 94.65%. During the same period, AGS and KGS achieved forced outages of 0.076% and 0.260% respectively. This culminated in a weighted forced outage of 0.101%. The consolidated forced outage achieved during the period is within the Authority's internal target of 1%, and Electricity Utility Cost Group (EUCG's) benchmarked target of 5.2%.

Utilisation Factor Analysis

For the period under consideration, an analysis of the monthly utilisation factor for the AGS and KGS indicated clearly that each Plant's performance was above the stated target throughout the year. At AGS, the highest monthly utilisation was 79.50%. This occurred in January and is about 9.50% above the 70% target. The least for AGS was 72.92%, which is about 2.92% above the 70% target. KGS, on the other hand, attained its highest utilisation in August, with a recording of 92.95% against the target of 80%. The least for KGS was 80%.

Maintenance Accomplishment

In strict compliance with the Authority's maintenance culture, VRA ensured a 100% accomplishment for the hydro-generating plants, Auxiliary and outside services. Within the year, the SCADA upgrade and MCC replacement were substantially completed on Units 3, 5 and 6 at the Akosombo Generating Station. This brings the number of Units completed so far to five. What remains outstanding is Unit 4 and the integration of all the Unit governors and control systems. Completion of the SCADA project has the ultimate objective of improving and modernising the Plant by enhancing surveillance and equipment monitoring, machine control, providing one-stop monitoring in real time, ensuring innovative and flexible/adaptable human machine interfaces, etc. In addition, the Unit 6 (1T6) transformer, which has been in service since its installation was successfully replaced with a new spare. At KGS, the Authority also successfully completed the re-gasketing of the Unit 1 transformer (19T1), installation of the SCADA Antivirus project and the rehabilitation of the duplex strainer #1, etc.

Volta Lake Management

Hydrology Report

In the year under review, the Volta Lake was regulated between elevations 82.02m (269.11ft) at the beginning of the year 2022 and 79.47m (260.74ft), the minimum lake elevation, at the end of the dry season. The elevation represents a drop of 2.55m (8.37ft) from the beginning of the year to the end of the depletion season. The lowest Volta Lake elevation for the year was recorded on June 28, 2022. Meanwhile, the Volta Lake attained a maximum elevation of 83.59m (274.26ft.) on November 9, 2022, giving a total rise of 4.12m (13.52ft.). The Volta Lake elevation at the end of the year was 83.11m (272.66ft.).

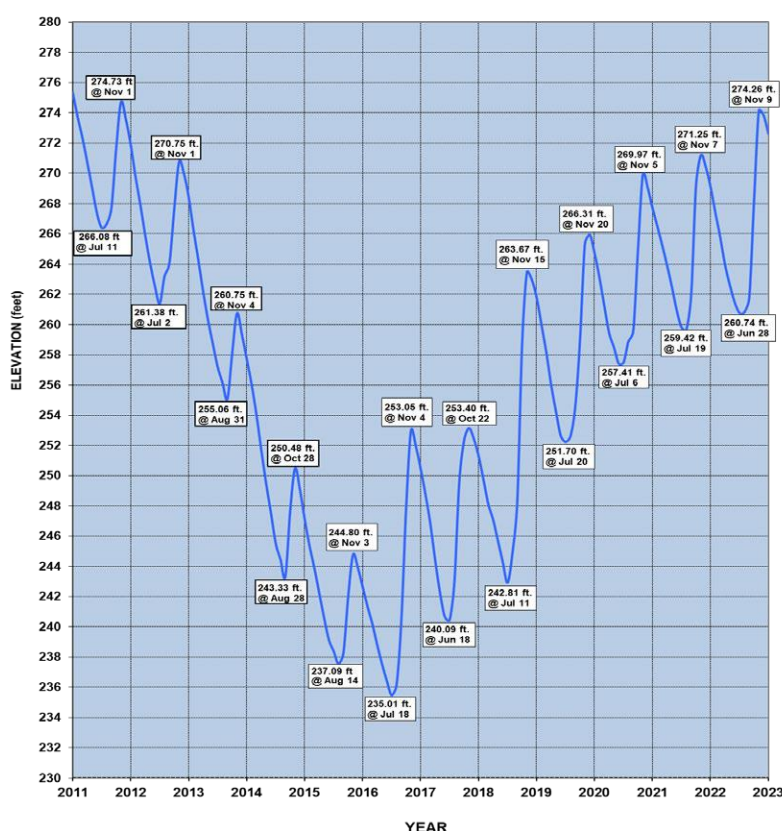
Net Inflow

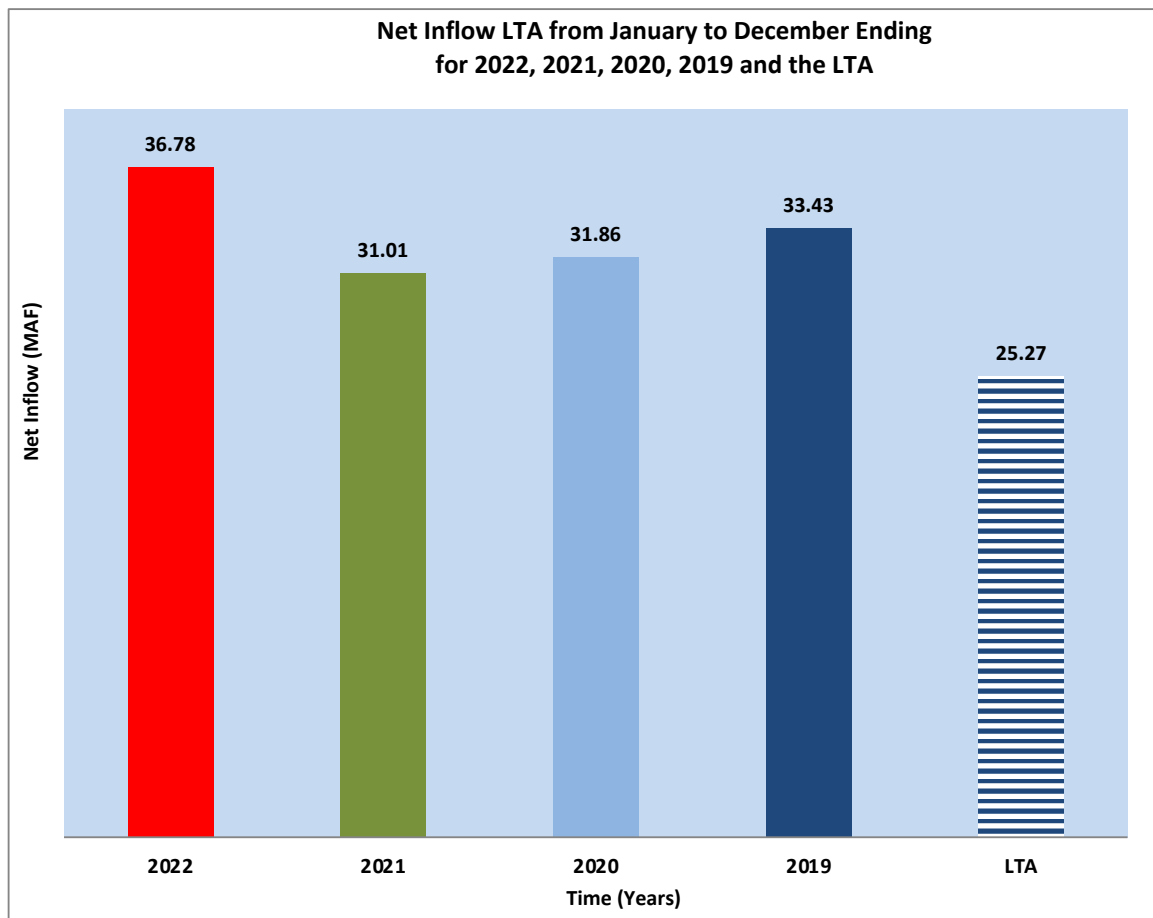
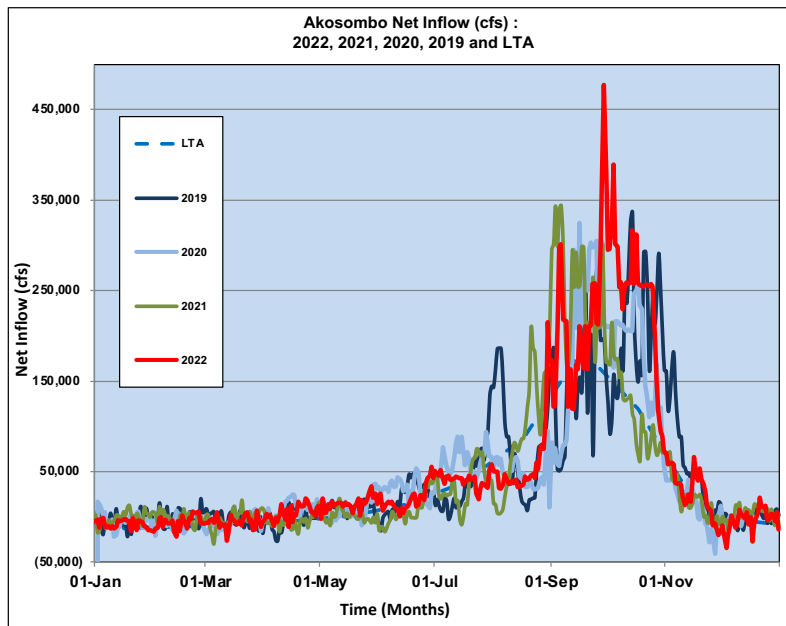
The cumulative Net Inflow into the Volta Lake from January to December 2022 was 36.78 MAF, which was about 46% higher than the Long-Term Average (LTA) net flow of 25.27 MAF. The Akosombo Daily Net Inflow Hydrograph and the cumulative annual Net Inflow for 2022, 2021, 2020, 2019 and LTA are shown below.

Tributary Flows

The inflow recorded on the Oti River at Saboba for 2022 was 9.53 MAF. This was higher than the LTA for the Oti River by 43%. The inflow recorded at the White Volta at Nawuni for 2022 was 9.28 MAF. This was 64% higher than the LTA for the White Volta at Nawuni. The flow recorded on the Black Volta due to energy generation at Bui Hydropower Stations from January to December 2022 was 13.36 MAF.

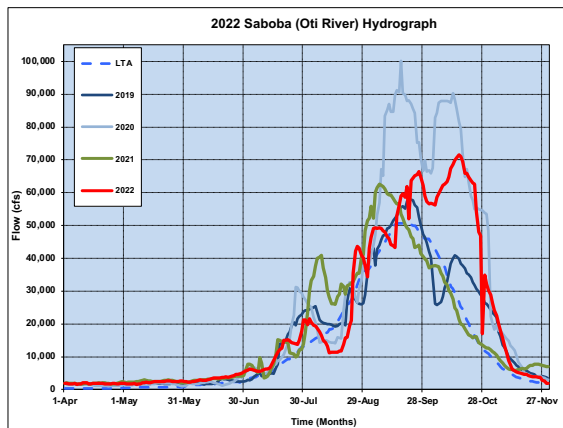
VOLTA LAKE REGULATION CHART (2011-2022)



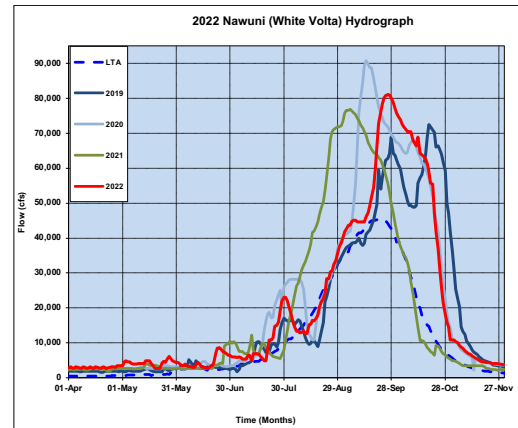


Cumulative annual Net Inflow for 2022, 2021, 2020, 2019 and LTA

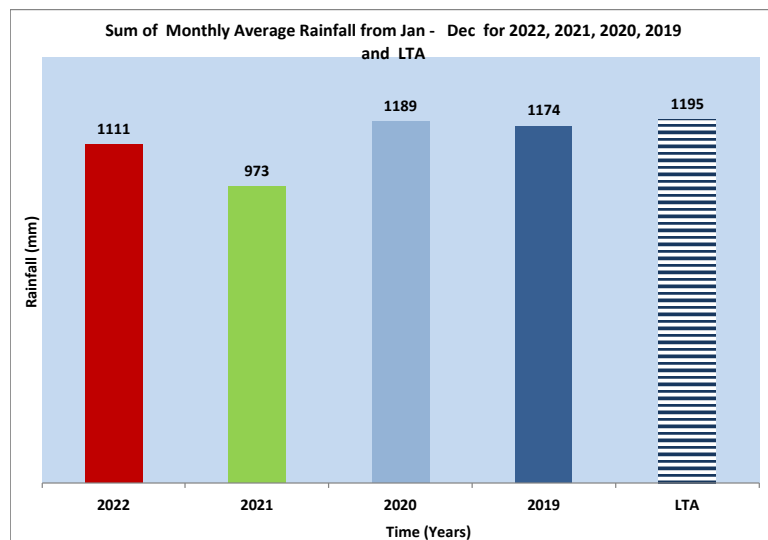
Akosombo Daily Net Inflow Hydrograph for 2022, 2021, 2020, 2019 and LTA



Saboba Hydrograph for 2022, 2021, 2020, 2019, and LTA



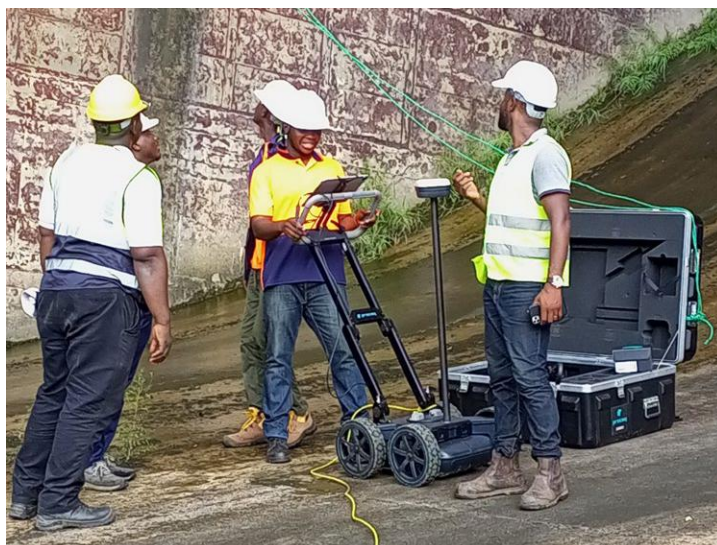
Nawuni Hydrograph for 2022, 2021, 2020, 2019, and LTA



Sum of monthly average rainfall for 2022, 2021, 2020, 2019, and the LTA

Rainfall

The rainfall activities within the southern part of the Volta Basin were average to below average for 2022. This led to average to below-average rainfall activities in Ghana for the 2022 rainfall season. The annual rainfall for the seven selected rainfall stations of interest to VRA for 2022 was 1,111mm. This was lower than that of the LTA by 7%, 2019 by 5%, and 2020 by 7%. It was, however, higher than that of 2021 by 14%.



Dam Safety Monitoring and Surveillance

Consistent with international best practices, the Authority continued with the monitoring and physical inspection, data collection, and other related activities on the Akosombo and Kpong Hydroelectric Dams. The objective is to ensure the dams were in good stead for sustainable power generation.



Renewable Energy Generation

Net Generation from VRA's three utility-scale solar power plants at Navrongo, Kaleo, and Lawra was 29.516GWh. This is 15.39% below the projected generation target of 35GWh. The total net generation from NSPP was 2.431GWh. Comparatively, this is 18.96% below the annual target of 3GWh. The solar power at Lawra generated a net energy of 8.632GWh, out of the estimated 10GWh, which is 13.22% below the annual target. The Kaleo solar power plant, on the other hand, achieved a net generation of 18.453GWh. This is 15.88% below the annual target of 20GWh. The huge deficit in generation from the Authority's renewables is attributable, among others, to the burnt string cables at the Navrongo Solar Power Plant, the replacement of defective inverters at LSPP and KSPP, as well as the replacement of several broken PV modules at LSPP and KSPP.

Plant Availability

The Average annual availability factor for each of the renewable solar plants for the year was above the 95% target. On the hand, the Annual Specific Energy Yield (SEY) and the annual capacity factor for each of the solar power plants were lower than the internal target assigned. Specifically, NSPP had a SEY of 1,028.57kWh/kWp as against the projected 1,200kWh/kWp target. Whilst LSPP and KSPP achieved SEYs of 1,339.38kWh/kWp and 1,611.46kWh/kWp compared to the estimated targets of 1,500kWh/kWp and 1,690kWh/kWp respectively.

Capacity Factor Analysis

The low capacity factors of 11.74% as against the annual target of 14% at NSPP, 15.29% compared to the annual target of 18% at LSPP, and 18.39% against the target of 19%, respectively, were largely due to a number of defective solar panels at NSPP as well as the burning of string cables affecting about 15 arrays, with

approximately 1080 PV models. For Lawra and Kaleo, the reasons were largely due to the defects experienced on several inverters.

Head Office Rooftop/Car Park Solar

The Head Office and car park solar facilities performed satisfactorily with an annual self-sufficiency value of 21.22%, plant availability of 100%, SEY of 1,315.46kWh/kWp, a capacity factor of 15.02%, and a performance ratio of 72.08%.



Mini Grid facilities

Following the formal handing over of the Ministry of Energy's (MoEN) five (5) mini-grids to the Authority, VRA, during the year under review, effectively operated, managed, and maintained these facilities. The Ministry of Energy's five (5) mini-grid facilities are located at Atigagome, Peditorkope, Kudorkope, Aglakope, and Wayokope. In 2022, VRA satisfactorily operated three (3) out of the five (5) mini-grid facilities. However, operational challenges at Atigagome and Peditorkope accounted for the underperformance of the facilities at Atigagome and Peditorkope. Specifically, the mini-grid facility at Peditorkope experienced shutdowns after sunset, whereas the Atigagome plant experienced a complete shutdown due to defective storage cells.



Thermal Generation

In accordance with the strategy to sustain operational and service excellence in a clean and digital environment, VRA, in 2022, maintained its policy on zero tolerance of Light Crude Oil (LCO) combustion for the thermal generating portfolio, while operating in an effective and efficient manner.

Operations

The Authority's Kpone Thermal Power Station (KTPS) and the Tema Thermal Power Complex (TTPC) were operated in Simple Cycle mode whereas the Takoradi Thermal Power Station was operated in Combined Cycle mode.

The Combined thermal generation in 2022 was 3,486.39GWh as compared to the planned target of 2837.45GWh. The huge disparity in the actual and planned targets was due to the postponed major activities carried out on T1, which originally had been factored into the Energy Supply Plan (ESP). Subsequent to that, out of the 3,486.39GWh total thermal generation for the year, 54.98GWh was executed using Distillate Fuel Oil (DFO). The unexpected increase in DFO usage for the year was mainly due to emergency requirements arising from gas outages and grid requirements. Regardless, the ratio of the energy produced from DFO versus the overall energy produced was 1.57%, which was under the 10% limit.

VRA's thermal generation performance for the year 2022 was achieved with a weighted average plant operational availability of 91%. This is compared to

the proposed annual target of 85 percent whereas the combined capacity factor for the same period was 59.14%. This is against the initially planned target of 48.13%.

The combined volume of gas utilised by VRA's thermal generating facilities was 33,157,323.19MMBtu. This represents a 23% increase compared to the planned utilisation target of 26,922,327.03MMBtu. The marginal increase in the natural gas consumption for 2022 is attributed to the increased plant generation also resulting from more energy produced than what was initially planned in the Energy Supply Plan. Furthermore, for the same period, the weighted average heat rate was 9,726.69Btu/kWh. This is against the 9,9327.78Btu/kWh target estimated for the year. Consequently, the heat rate variance recorded was 4.28 percent. This is slightly below the five (5%) target.

Meanwhile, Takoradi Thermal Power Stations' (TTPS) generation for the same period was 2,474.92GWh compared to the 2,130GWh that was recorded in the previous year. It is imperative to note that TTPS' performance was accomplished at an availability rate of 93.6% and an end-of-year capacity utilisation of 89.69%.

Generation from the Tema Thermal Power Complex (TTPC) was 516GWh. Comparatively, the 2022 generation of 516.86GWh for TTPC was 92.86GWh higher than the 2021 generation of 404GWh. In terms of average availability and capacity utilisation, TTPC recorded 63.69% and 33.91% respectively. Further

to that, TTPC's performance comprises an energy generation of 441.27GWh at an availability of 93.37% (excluding TT2PS) forced outage of 2.8% and capacity utilisation of 48.02%. At TT2PS, energy generated amounted to 86.60GWh and this was achieved at an availability of 49.12%.

Kpone Thermal Power Station (KTPS) recorded a generation of 487.18GWh. This was carried out with an availability rate of 85.76%, a forced outage of 8.67% and an end-of-year capacity utilisation of 27.53%.

Similar to last year, the running regime at the Tema enclave remained unchanged, as TTPS and KTPS were operated every other month. The motivation for the arrangement is to prevent the extended periods of shutdown of the two (2) facilities.

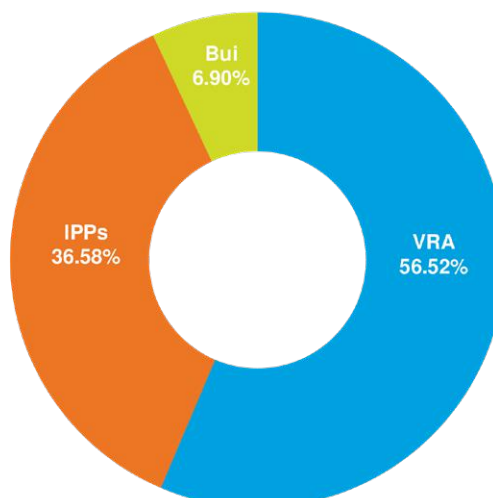


Market Share

VRA's market share for the year 2022 increased from the base case projected share of 51.69% to an actual share of 55.6% as compared to the 53.42% share recorded in 2021. The marginal increase achieved can be attributed to increased supply to ECG, VALCO and to some of our export and mining companies. VRA also generated higher than planned from the hydro plants, TAPCO, TICO and KTRP during generation shortfalls. Despite the marginal gain in the market share, it is instructive to state that an analysis of VRA's shares over the years points to a significant decline from the 98.7% market share value recorded in 2010.

Maintenance

Similar to the year 2021, the institution of the Operations & Performance Unit at the various generating stations with the objective of critically monitoring, investigating and making the appropriate recommendations on plant and equipment, once again, significantly impacted the overall performance



Capacity Expansion Activities

Though there were no capacity additions to the Authority's generation portfolio in 2022, VRA continued its series of engagements with SSNIT/CENIT for the conversion of the Tema Thermal 1 Power Plant (TTIPP) and the 110MW CENIT Energy into a Combined Cycle Power Plant. In 2015, VRA and CEL began collaborations towards the implementation of the joint conversion of the two simple cycle plants at Tema into a combined cycle. After unsuccessful attempts at enforcing the established Joint Implementation Agreement (JIA) in 2020, however, the Minister for Energy instructed VRA & SSNIT to resume the co-operation towards realisation of the combined cycle project. VRA estimates Q2 2026 as the date for commercial operation for the plant.

Kpone Thermal Power Plant (KTPP)

In line with the objective of developing the Kpone Thermal Power Station (KTPS), the existing 220MW KTPS is to be converted into a 330MW Combined Cycle Plant. The project is to be executed through an Engineering, Procurement, Construction and Financing (EPCF) Contract. The target Commercial operation date for the proposed plant is Q4-2025. As part of efforts to achieve the goal, VRA during the year procured a Consultant, Messrs. Fichtner GmbH & Co. KG of Germany to assist with the preparation of tender documents for the procurement of the EPC Contractor. Subsequently, VRA in October 2022, successfully concluded negotiations on the arrangements and signed the consultancy services contract. The Authority followed up the signing of the contract with a kick-off meeting and a site visit. The expectation is that, next year, VRA will continue to work with the relevant stakeholders to procure the EPCF Contractor, using the pre-qualification and restricted tendering model.

60MW Bongo Solar Power Project (60MW BSPP)

To facilitate the attainment of the VRA's RE objectives as set out in the Renewable Energy Development Programme (REDP) developed in 2010, the Authority continued to engage with key and relevant stakeholders towards the development of its proposed RE projects. During the year, VRA was issued with an environmental permit by the Environmental Protection Agency after the successful completion and submission of the Environmental and Social Impact Assessment (ESIA) report. Following that, the Energy Commission also issued the siting clearance permit for the project. Currently, the Authority is working closely with the African Development Bank (AfDB) to procure a third-party consultant to review and validate the feasibility and ESIA for the Bongo project. While working towards the commencement and execution of the project, VRA also initiated the process to anchor discussions with one of the Authority's Direct Customers for the offtake of RE power from Bongo. The arrangement is in line with the Authority's RE diversification efforts.

Wind Power Project 1 (WPP 1)

Further to the granting of approval of the Authority's siting permit by the Energy Commission for the Wind Power Project 1, the Environmental Protection Agency (EPA) also renewed the environmental permit issued last year. That aside, the third update of the feasibility study for the proposed 75MW Wind Power Project 1 (WPP-1) was also completed during the year. The Authority is currently working towards land acquisition for the project, while working with the relevant stakeholders to determine the model arrangement for the Engineering, Procurement, Construction and

Financing (EPCF). For Wind Power Project 2 (WPP-2), a stakeholder engagement was organised between EPA, VRA, Upwind and Solar Park on the issue related to site overlap. VRA eventually has resolved to relinquish the overlapping areas with Solar Park and Upwind, as Management has granted approval for a new layout to be developed.

25MWp Floating Solar PV Project

In 2022, VRA and KfW signed the financing agreement to facilitate the execution of the proposed 25MWp Floating Solar PV Project. In line with that, a kick-off meeting was held during the year. This was preceded by site visits by the consultant. A presentation on the findings was made after, which both parties agreed that an inception report be provided after a preliminary assessment of the choice of site. Meanwhile, KfW has expressed interest in financing a study of the project on the Kpong Headpond and Akosombo Reservoir. The collection of data for the project is ongoing. To facilitate the execution of the projection, the Authority has completed the survey of six (6) sites for the new solar PV sites.

Repowering of Generating Power Plants

132MW Takoradi Thermal 3 (T3)

In 2022, VRA successfully concluded negotiations with the Government leading to the execution of transfer of the assets of the Takoradi 3 (T3) Thermal Power Plant to the Authority. Transfer of the asset and the execution of the asset agreement is to afford VRA the opportunity to retool the Plant and make it available for commercial operation. Further to the execution of the asset transfer agreement, VRA engaged HATCH of Canada to provide consultancy services. This is geared towards the development of a roadmap for repowering the plant, preparing an employer's requirement/technical specification, and request for proposal documents. Upon deliberations after receipt of the roadmap report, Management has opted to use turbines from the GE TM2500 Plant to repower the T3 Plant. The decision to opt for the GE TM2500, follows Turbine Technology's emergence as one of the feasible replacements of the existing damaged turbines.

Siemens Power Plant

Pursuant to the recommendation by GRIDCo for the need to inject at least 330MW of power into the middle part of the national grid for the purposes of grid stability and improved voltages in the middle and northern parts of the country, VRA obtained a no-objection from the Ministry of Energy to relocate

the Siemens Plant to Kumasi. Consequently, VRA executed a technical assistance services contract with WSP UK for the Plant's relocation. Again, to facilitate the process, a Plant condition assessment was conducted by WSP and their local representative, Thermenergy Services. The report of the final plant condition assessment and transportation from Tema to Anwomaso, Kumasi, was submitted by WSP to VRA. After several considerations, it was concluded that the Units of the Siemens Plant be maintained as a Simple Cycle Plant. VRA subsequently has obtained a proposal from Seljen Consult to update the initial Environmental Impact Assessment (EIA) carried out by them with respect to only the 250MW GE TM-2500+Plant to include the 80MW Siemens Plant. A contract is being processed to engage Seljen Consult to conduct an updated EIA for the planned 330MW K1TTP.

TM 2500 (AMERI) Power Plant

In 2022, the agreement for the transfer of the GE TM2500 Plant from GoG to VRA was executed. Subsequently, VRA has formally written to the MoEn for the take-over of the operations/preservations activities of the Power Plant originally managed by

Mytilineos, SA. Towards the targeted relocation of the GE TM2500 plant, VRA is negotiating with the Kwame Nkrumah University of Science and Technology (KNUST), for the lease of 33 acres of land earmarked for the development of the Kumasi 1 Thermal Power Project (K1TTP).

To facilitate the implementation of the project, VRA applied for and received the environmental permit from EPA in August 2022. Application for a wholesale authorisation permit to construct has been sent to the Energy Commission. The process would be completed after the procurement of an EPC contractor. Furthermore, the application for building/works permits from the Oforikrom Municipal Assembly was approved and is in progress and would be completed upon the receipt of the sub-lease agreement required for the issuance of the permit. In addition to that, a grid connection application has been submitted to GRIDCo. This is expected to be completed hopefully in February 2023.

Pwalugu Multipurpose Dam Project

The Pwalugu Multipurpose Dam Project is one of the developmental projects identified to generate considerable economic growth in the northern regions of Ghana with a direct impact on poverty reduction. Completion of the Pwalugu Multipurpose Dam Project, comprising a 60MW hydro dam, 50MW hybrid solar facility as well as a 25,000ha irrigation scheme, will have a number of benefits. These include the provision of water for irrigation to boost agricultural production and improve the stability of power supply in the northern regions, increase Ghana's renewable energy capacity and contribute to meeting the country's climate change commitment, and most significantly, reduce the frequency of flooding in the environment. Even though the construction aspect of the Project 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, a detailed environmental assessment report entitled "Environmental Impact Statement (EIS), Pwalugu Multipurpose Dam Project (PMDP)" was submitted by Tractabel. The report contains, among others, the existing natural and social setting and the potential impacts and measures proposed to mitigate and/or monitor these impacts in accordance with the environmental requirements of the funding agencies. A detailed pre-construction and post-construction programme, covering physical and biological characteristics of the local freshwater environment, terrestrial ecology of the site and transmission corridor, ambient site air quality and noise levels have been defined for implementation.

A VRA Team comprising staff from the Environment & Sustainable Development Department (E&SDD) and PMDP visited the proposed solar site to collect environmental and socio-economic data for the EIS for the solar component. Based on the data collected, a draft EIS for the Solar Site was submitted to EPA.

The final draft EIS and RAP Reports were submitted in June 2022 and were reviewed by VRA in consultation with EPA. EPA requested that the Volta Basin Authority (VBA) comments on the final draft EIS Report. Accordingly, PMDP, through the Water Resources Commission (WRC) submitted the Report to VBA. VRA submitted the final EIS documents to EPA for approval and acquisition of the Environmental permit for the Project. Tractebel also submitted the final RAP on October 21, 2022.

Environmental Permit

The final EIS was submitted to EPA on September 29, 2022, for approval and acquisition of an Environmental Permit for the PMD Project. EPA reviewed VRA's application and consequently issued an Environmental Permit.

Land Acquisition/Resettlement Townships

The Survey and Mapping Division (SMD) consolidated the survey data for the main dam reservoir, irrigation weir reservoir and solar sites and submitted the final cadastral map to VRA on February 02, 2022.

The Land Valuation Department (LVD) submitted an Interim Valuation report to VRA on June 17, 2022 following the completion of property referencing in July 2021. LVD's final valuation will form the basis for the payment of compensation to PAPs.

Subsequent to the gazetting and distribution of GoG's intent to acquire two parcels of land in 2021, VRA wrote to the Public and Vested Lands Management Division (PVLMD) of Land Commission (LC) to include the irrigation weir reservoir area in the land requirement for reservoirs and solar for the Project. The Government's intention to acquire the irrigation weir reservoir area was gazetted on June 24, 2022, and notices to that effect were distributed to affected communities, persons of interest and relevant state institutions. Additionally, VRA on August 25, 2022, requested LC to facilitate the publication of GoG's intent to acquire the various project lands. The intent to acquire was duly published.

In line with the requirement for state acquisition, the MoEn was requested to obtain GoG assurance of paying compensation to Project Affected Persons (PAPs). The Ministry on August 9, 2022, requested VRA to submit a draft Cabinet Memo for review and submission to Cabinet. The draft Cabinet Memo was submitted to the Executive for review following a review by the relevant entities.

Planning of Resettlement Townships

Three (3) firms submitted their tenders for the architectural design of resettlement townships. The combined technical and financial evaluation report was completed, and the report was submitted to the Executive. Executive endorsed the report and forwarded it to Entity Tender Committee (ETC) on July 15, 2022. A draft letter of acceptance was prepared for the engagement of the winning bidder and was submitted to Legal Services Department for review and onward submission to Chief Executive for signature.

Development of Action Plans

The Environmental Management Plan of the EIS proposed some avoidance, mitigation and compensation measures required to offset the impact of the Project. Among these measures are the Community Resource Management Area (CREMA), Human-Animal Conflict Mitigation, Public Health Sensitization and Awareness, Vocational Needs Assessment and Shrine Relocation. During the period under review, the necessary engagements required for the development of the action plans were undertaken with the North-East and Upper East Regional Wildlife Division, Forestry Commission, EPA, Regional Health Directorate, and Regional Social Welfare. The Ghana Technical and Vocational Education and Training (TVET) Services were engaged on August 9, 2022, for the development of an Action Plan for Vocational Needs Assessment.

Signed Agreements

Further to the signing of the contract agreement between the Ministry of Energy (MoEn) on behalf of the Government of Ghana and PowerChina International Group 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 Tractabel Engineering as Owner's engineer in 2020.

Subsequently, VRA, in 2022 signed a Grid Interconnection Agreement with GRIDCo. The Grid Interconnection Agreement includes all front-end activities, such as environmental impact assessments, compensation for rights of way or easements, all applicable approvals and permits required from governmental regulatory agencies, design, engineering, procurement, tendering process, construction, testing and commissioning through to commercial operation and the construction of the Connection Facility.

POWER BUSINESS

Power Sales

Power sold to customers in 2022 was 12,645GWh. This was 9.56% higher than the 2021 figure of 11,542GWh. The total power sale in 2022 comprised 7,042GWh to electricity distribution companies, 2,214GWh to export customers, 1684GWh to bulk customers, 772GWh to VALCO and 933GWh to GRIDCo as transmission losses and substation use.

Out of the power sold to the distribution companies, 4,990GWh was sold to the Electricity Company of Ghana (ECG), 1,824GWh to Northern Electricity Distribution Company (NEDCo) and 228GWh to Enclave Power Company (EPC).

For export customers, the Authority sold 70GWh to Communauté Electrique du Bénin (CEB), 598GWh to Compagnie Energie Electrique du Togo (CEET), 75GWh to Société Beninoise d'Energie Electrique (SBEE), 1,204GWh to Société Nationale d'électricité du Burkina (SONABEL) and 267GWh to Compagnie Ivoirienne d'Electricite (CIE).

Power sold to bulk customers consisted of 1,496GWh to mining companies and 188GWh to industrial/commercial customers. The mining companies include AngloGold Ghana Limited, Newmont Ghana Gold Ltd (NGGL), Newmont Golden Ridge Ltd (NGRL), Goldfields Ghana Ltd (GFGL), Future Global Resources (Bogoso/Prestea) Group, Golden Star Resources, Wassa, Perseus Mining Ghana Ltd (PMGL), Adamus Resources Ltd, Talos Owere Mines, Prestea Sankofa Gold Ltd (PSGL), Asanko Gold Ltd, AngloGold Ashanti (Iduapriem) Limited, Drillworx, and Ghana Consolidated Diamonds Ltd.

The industrial/commercial customers also include Aluworks Ghana Ltd, Akosombo Industrial Company Ltd, Diamond Cement Ghana Ltd, Savanna Diamond Company Ltd., and Ghana Water Company.

Imports

In 2022, there was no actual import from CIE (i.e. Import was zero). VRA is currently exporting power to Cote d'Ivoire and other neighbouring countries.

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 Public Utilities Regulatory Commission (PURC) approved a new electricity tariff, effective September

1, 2022. The VRA Bulk Generation Charge (BGC) was adjusted from GHp28.2273/kWh to GHp37.9560/kWh. The tariffs for the Electricity Company of Ghana (ECG), Northern Electricity Company (NEDCo) and Enclave Power Company (EPC), at year-end, were GHp31.2499/kWh, GHp50.2819/kWh, and GHp55.0979kWh respectively.

Sale Contracts

In 2022, VRA continued to review and execute Power Sale and Purchase Agreements (PSPAs) with its customers. As of December 2022, VRA had Nineteen (19) valid PSPAs.

Gas Supply

In line with the strategy for zero tolerance for combustion with Light Crude Oil (LCO), VRA did not import LCO for the period under consideration. In light of this, natural gas was procured from various sources to facilitate the Authority's operations. These include 20,115,626MMBtu of natural gas from WAGP through N-Gas and 25,082,174MMBtu, and 16,130,783MMBtu of natural gas secured from Ghana National Gas Company and the Ghana National Petroleum Corporation respectively. Gas received from N-Gas was utilized by both Asogli and VRA.

Business Development

Commercialisation of Liquid Fuel Assets

In the quest for Management's decision to maximize revenue, by transforming its latent assets into commercial ventures, VRA, in 2022, continued its engagement with Comanda Energy Limited, a local downstream energy petroleum corporation. The engagement is towards the proposed lease of the Authority's liquid fuel storage tanks. This initiative has the ultimate goal of promoting financial responsibility, which is aligned with VRA's "SPICE" objective. Pursuant to that, VRA performed the valuation to determine the commercial terms for the proposed lease of 14.78 acres of land to Comanda Energy Limited.

Diversification of Generation Portfolio (RE Efforts)

Since the implementation of Renewable Energy (RE) is market driven by way of securing power purchase agreements with off-takers and securing growth in demand for electricity by existing customers, the

Authority, in 2022, engaged with companies that desired to take power from VRA's Renewable Energy (RE) sources. The companies include: Asanko Gold Mine, AngloGold Ashanti (AGA), Shandong Gold Project and Ghana Integrated Aluminum Development Corporation (GIADEC).

In the course of the year, Asanko Gold Mine requested solar power of up to twenty percent (20%) of their current demand. Subsequent to that, VRA entered into a Memorandum of Understanding (MoU) with the mining company, confirming VRA's readiness and ability to supply the needed power. Pursuant to that, VRA has committed its 12.58MWp Kaleo Phase 2 Project, which is expected to be completed in the second quarter of 2023, to Asanko Gold Mining company. Similarly, AngloGold Ashanti (AGA) requested for over 60MWp of solar power for their two mining sites in Ghana. VRA, subsequently, has committed to assigning the 60MWp Bongo Solar Project to AGA, with a further commitment to add on to meet AGA's demand for additional power. Shandong Gold Project and Ghana Integrated Aluminum Development Corporation (GIADEC) also engaged VRA on the possibility of the latter supplying to their facilities.

The Authority's expectation is that these interventions would facilitate the achievement of the VRA's objective of diversifying the Authority's generation portfolio, assist in achieving the Government of Ghana's renewable energy policy objective, and contribute to reducing the Authority's carbon footprints as well as those of our customers.

Finally, in line with the objective of enriching customer and stakeholder experience to drive growth, VRA during the year initiated the Value Added Services (VAS) for our customers. The primary objective is to add value to our services and generate supplementary income for the Authority. The proposed services include Energy, Environmental, Technical, Safety and Water Use Audits as well as Carbon Emissions Quantification. The initiative will be fully rolled out next year pending Executive approval.

Procurement and Tendering Processes

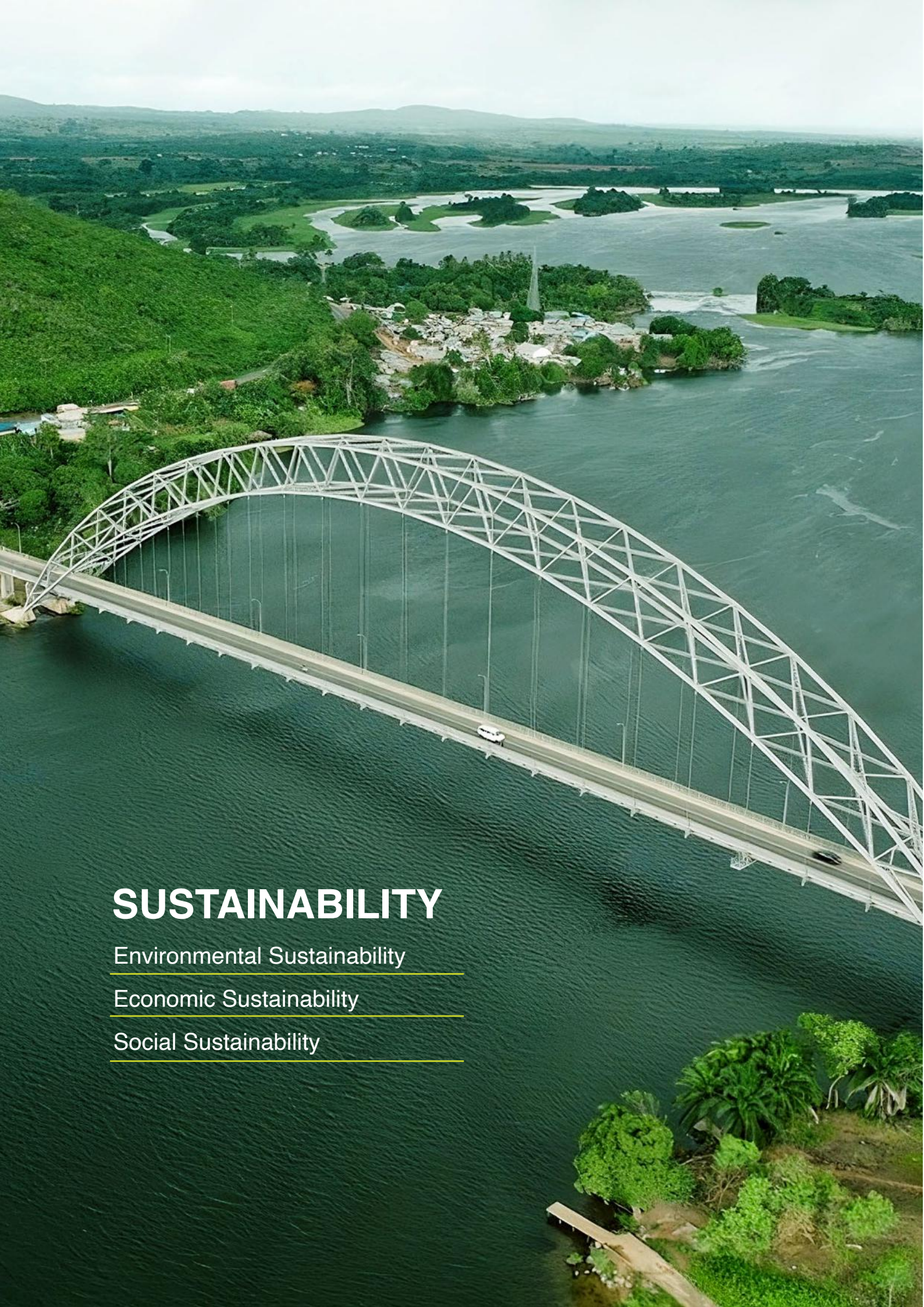
As a responsible corporate organisation, VRA successfully managed the relationship between the Authority and the relevant approving Authorities for procurement as set out by the Public Procurement Act, PPA Act 2003 (Act 633) as amended by the PPA Act 2016 (Act 914).

As a public entity, VRA is responsible for procurement in accordance with the Public Procurement Act, 2003 (Act 663) as amended by the PPA Act 2016 (914). Since the inception of the Act, VRA has been noted for strict compliance with the tenets of the Act and currently has a 'Stage 4: MATURED' rating on the Maturity Table by the PPA. VRA's performance rating is 'Very Good'.

To further improve VRA's rating, and in line with the strategy to digitise the Authority's business processes, VRA, in 2022, initiated the digitisation of some of the Authority's procurement processes, such as the signing of Purchase Orders and Purchase Requisitions. When fully operational, the initiative will streamline and facilitate procurement activities by expediting the approval workflow.

Again, in 2022, VRA, as a cost-cutting measure, created a common communication platform for all parties involved in the shipping and clearing activities. The goal is to facilitate the sharing of information on a single platform to avert the incidence of demurrage, which comes to the Authority at a huge cost. The successful implementation of this initiative would positively impact the Authority's operational cost in the long term.

Finally, to reduce the incidence of direct human interface between VRA's Staff and Suppliers, the Authority in the course of the year, created an email address system specifically for procurement and tendering-related issues. The objective is to expedite the process where tenders and other procurement documents will be sent or received via email rather than the physical dispatching of those documents.



SUSTAINABILITY

Environmental Sustainability

Economic Sustainability

Social Sustainability

ENVIRONMENTAL SUSTAINABILITY

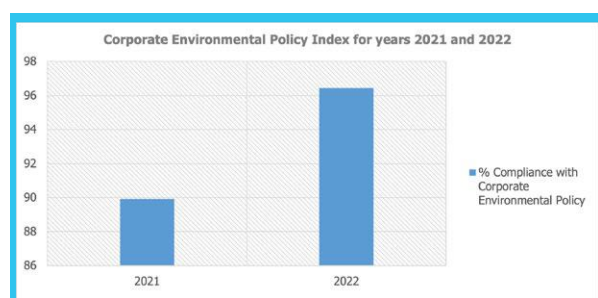
The Volta River Authority (VRA) is committed to ensuring the continual improvement in the environmental sustainability of the operations of VRA and 'Go Green' by reducing our Environmental Footprints, achieving Net Zero emissions, implementing an effective Environmental Management System, promoting the inclusion of environmental sustainability indicators in Project Development and Management, and demonstrating leadership and innovation in Environmental Service Delivery. VRA continually assesses its management performance through the implementation of key strategic initiatives and programmes described in the subsections below:

Environmental Stewardship & Compliance Monitoring

In line with sustainability principles, VRA continued to successfully manage the Authority's physical and social environment effectively and responsibly. VRA's Corporate Environmental Policy embodies the organisation's commitment to sound environmental stewardship as it articulates the Authority's resolution to meet and exceed all applicable environmental laws, regulations, and standards. VRA's obligation for sound environmental stewardship also requires acquiring all requisite social and environmental licenses and permits for sustainable power generation, whilst avoiding and/or mitigating any adverse environmental impacts the Authority's operations may have on VRA's stakeholders, particularly host communities. These are evaluated by the Authority's Environmental Policy Compliance Index and our Environmental Quality Compliance Index described below.

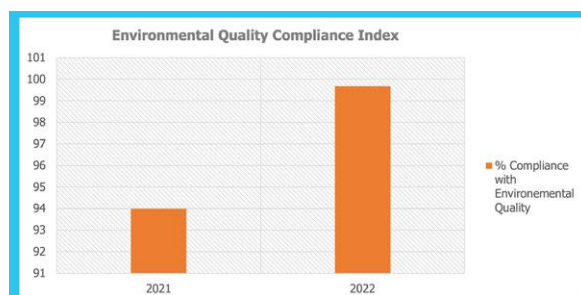
Environmental Policy Compliance Index

Primarily, the Environmental Policy Compliance Index evaluates progress made in terms of carrying out activities prescribed for implementation or indicative of the policy. In 2022, VRA achieved a corporate score of 96%. This is an increase of 7% from the previous year as shown the graph below.



Environmental Quality Compliance Index

VRA's Environmental Quality Compliance Index, on the other hand, assesses the Authority's compliance with local environmental quality standards for emissions and discharges into environmental media from our thermal power operations. In the year under review, VRA achieved a corporate score of 99.7%, representing an increase of 6% from the previous year.



Environmental Permitting

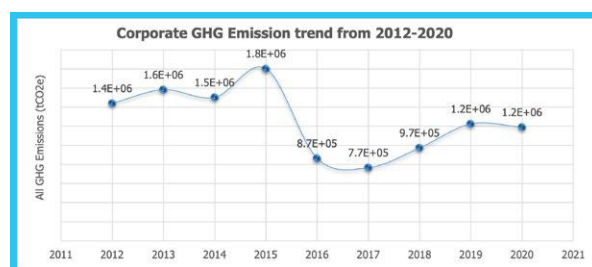
In accordance with the Environmental Assessment Regulations of 1999, LI 1652, the Environmental Permits for the under-listed business operations were successfully renewed during the reporting period.

- Akosombo & Kpong Generation Stations
- 330 MW Takoradi Thermal Power Station
- 126MW Tema Thermal 1 Power Station
- 83.2MW Tema Thermal 2 Power Station
- 2.5MW Navrongo Solar Power Project
- 220MW Kpone Thermal Power Plant
- Natural Gas Pipeline from VRA R&M WAPCo Station
- VRA Health Services Limited, Akosombo
- VRA Health Services Limited, Aboadze
- VRA Health Services Limited, Accra
- VRA International School Limited, Akosombo
- VRA International School Limited, Akuse
- VRA International School Limited, Aboadze

Further to the above, following VRA's successful submission of the Environmental Impact statement for the 250MW Kumasi Thermal Power Project, the Environmental Protection Agency (EPA) also granted the Environmental Permit for the 250MW Kumasi Thermal Power Project. The issuance of the permit eventually paves the way for the execution of the project. That aside, VRA also submitted to the EPA for consideration, the final Environmental Management Plan for the 35MW Solar Power Project in Kaleo and Lawra. The approval of the environmental management plan will result in the renewal of the environmental permit for the plants.

Carbon Footprint Management Programme

As part of VRA's Corporate Strategic Objectives to allow for the measuring, reporting and management of its Greenhouse Gas (GHG) emissions and strengthen its green credentials in the marketplace, the Authority, in 2016, initiated a "Corporate Carbon Footprint Management Programme" (CFMP). In furtherance to that, the Authority, accordingly, published the 2012-2020 GHG Inventory Report on its corporate website (www.vra.com) during the period under review. The report compares GHG emission from 2012 to 2020, measures the impact of implemented reduction initiatives, and identifies further reduction opportunities for future action. VRA's GHG emissions decreased by 17.4% from 2012 to 2020.



GHG Offsets and Reduction Strategy

As a responsible corporate entity and in line with recommended GHG emission reduction actions, VRA has developed a Renewable Energy Development Programme (REDP) to increase its generation capacity from renewable sources. The VRA REDP sets a 5-10 years' Renewable generation capacity target of upscaling generation from renewable sources from 2.5MW to 160MW.

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. Expected to commence in 2024)
0.448MW	Akuse Residential & Institutional Office Buildings Solar PV Rooftop Project (Construction planned for 2023 Q4)
0.057MW	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 2023 and commissioned in Q1 2024
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 with emission savings to date, estimated at 10,791.00 tCO₂e. Annual GHG Emission savings from other planned renewable energy projects listed in the table above are estimated as 98,808 tCO₂e for the solar power projects (122.584MW) and 98.077 tCO₂e for the wind power projects (75MW).

Other GHG emission reduction strategies currently being implemented include retooling existing single cycle thermal power plants to combined cycle, fuel switch from light crude oil to natural gas in the Authority's thermal power generation, increasing VRA's reforestation program coverage, the utilisation of fuel-efficient climate smart stoves in impacted riparian communities, office paper usage reduction, sound solid waste management practices and leveraging IT infrastructure to reduce business travels and transportation.

Payment of Environmental Services

The Authority is currently implementing a Payment of Environmental Services (PES) scheme as a tool for securing the sustainable use of ecosystems within the Volta Gorge. The Volta Gorge is a 5,149.25 Ha land, stretching from the Akosombo dam wall to about 35km upstream of the Volta Lake. The Gorge extends from the shoreline of the Volta Lake to the summit of the first hills bordering the Lake, and 300m of either bank on the Lake on the low slopes and excludes lands acquired by Government for the Akosombo dam. The core idea of PES is that external ecosystem beneficiaries make direct, contractual and conditional payments to local landholders and users in return for adopting practices that secure ecosystem conservation and restoration. The objectives of the scheme are:

- To ensure the permanent vegetative cover for the 5,149.24 hectares of land through forest tree and cash crop plantation development.
- To embark on developmental and social programmes to reduce the dependence of the communities on the Volta Lake resources to minimise soil exposure and sedimentation.
- To restrict human disturbances in the Volta Gorge Protected Area.

In this regard, a cadastral survey to map out ecological zones and ascertain the land sizes of landholders commenced during the reporting year.

VRA Reforestation Programme

As part of efforts aimed at forest cover restoration, VRA, in 2022, continued to engage in reforestation activities along the Volta Lake (i.e., Gorge and Buffer Zone areas). To achieve this, the existing vegetation was protected, and all grassy and degraded lands were restocked either by enrichment planting or full plantation development. During the year, 16ha and 41.5ha of degraded lands within the Volta Gorge and Buffer Zone areas respectively were reforested with cashew and assorted forest tree seedlings under the programme. Also, community sensitisation on the benefit of cashew cultivation was also undertaken in ten (10) local communities.



Bamboo for the Protection of the Volta Lake

To ensure the continued protection of the shoreline of the Volta Lake and preserve the waterbody for sustained hydropower generation, VRA continued with the Bamboo for the Protection of the Volta Lake project. In view of that, during the year, four thousand (4,000) bamboo plantlets were planted on 10ha of land at Dodi Asantekrom. The initiative is underpinned by the collaborative venture between VRA and the Bamboo & Rattan Unit of the Forestry Commission, Council for Scientific Research-Forest Research Institute of Ghana.

The successful execution of this venture is expected to create the needed buffer to avert encroachment in the flood prone areas of the lake and protect the lake against inimical human activities.



Climate Smart Stove (CSS)

Again, to facilitate the protection of the watershed areas of the Volta Lake by reducing GHG emissions and enhancing carbon savings, reducing forest degradation through the reduced consumption of firewood as fuel for cooking, as well as improving health conditions of the users of the stoves, VRA, during the reporting year, kept the focus on the implementation of the climate smart stove project. This year, twelve (12) CSS champions within riparian communities of the Volta Lake were trained and engaged to undertake the maintenance of the cook stoves in their respective communities by mending cracks, reconstructing old and broken stoves and replacing damaged chimneys. Consequently, a total of 457 out of 510 existing

stoves representing 89.6% were maintained in their respective communities.

Alternative Livelihood Interventions

As a means of contributing to the socio-economic development of riparian communities within the Volta Basin, through the VRA Alternative Livelihood Interventions, prevalent inimical activities along the Volta Lake were substituted with environmentally friendly alternatives. In this regard, VRA, in partnership with Community Based Organisations (CBOs), embarked on beekeeping projects in fifteen (15) riparian communities to produce honey in commercial quantities. In the year under review, forty-two (42) beehives were procured by VRA and added to the existing fifty-seven (57) beehives.

Drone Technology Services

Following Management's decision to adopt drone technology to protect the Volta Basin and halt illegal undertakings/projects along the Volta Lake, A-M Surveys Limited was appointed to provide the services. The project is expected to generate detailed maps and photographs of land use changes, erosion, human activities, aquatic weeds coverage, vegetation coverage and aquaculture developments, etc. along the Volta Riverine system, to allow for enhanced environmental planning and conservation activities for sustained hydro power generation.

ECONOMIC SUSTAINABILITY

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

External Services

VRA provided Marine support services to external enterprises in 2022 in maritime working platforms, navigation and diving services, and vessel hiring. Kete Krachi Timber Resources, AFCONS Infrastructure Limited, Tropo Farms Limited, Adi Lake Resort, Peninsula Hotel, Dutch Dredging Company, VLTC, and Approved Solutions Limited were among the companies that benefited from these services.

The Marine Services Unit also carried out corrective maintenance works on the berthing Gangway, Floaters and Anchorage Systems at Dodi World in Akosombo which serves as the mooring point for some of the Authority's vessels and those of the Akosombo Hotels Limited (AHL), including the tourism boat, MV Dodi Princess.

Internal Services

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

Bathymetry survey for Volta Lake project feasibility studies in addition to daily surveillance at the Kpong Generation Station, Akuse, were conducted to prevent floating weeds from getting into the intake of Kpong Generating Station in order to curtail disruption to power generation. The MV Black Volta Queen (Dipper Dredger) is currently being relocated to the Kpong head pond for aquatic weed dredging activities.

During the year under review, the VRA's Maritime Services Unit received and accomplished forty-eight general maritime service requests. These include two internal requests and forty-six external requests.

SOCIAL SUSTAINABILITY

Schistosomiasis Control Programme

In furtherance to the Authority's resolve to sustain efforts at addressing the menace of schistosomiasis in the Volta Basin, VRA 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). The Authority also continued the deployment of an integrated approach to the management and control of Schistosomiasis. Interventions deployed include Mass Drug Administration (MDA) to reduce disease parasitic load, shoreline weeds clearing to minimise the risk of infection, snail vector prospection and population density assessment, to determine infectivity rates as well as education and awareness creation to enhance and lead to a change in knowledge, attitudes, and practices of indigenes of endemic communities. It is, therefore, anticipated that these interventions will facilitate the lowering of the disease prevalence and ultimately culminate in full disease eradication.

As part of efforts to minimise disease parasitic load through chemotherapy, VRA, in 2022, undertook MDA exercises in thirty-six (36) communities in the Lower Manya Krobo, Shai Osudoku and the South Tongu Districts. The exercise was done in conjunction with District Directorates of Health who supported our team with Disease Control Officers and community volunteers. One thousand six hundred and seven (1,607) persons, including enrolled and out of school children as well as adults, were treated with Four thousand, nine hundred and ninety-seven (4,997) tablets of Praziquantel (PZQ).

A subsequent evaluation exercise to assess the effectiveness of the MDA had Forty-two (42) communities in the Asuogyaman, Lower Manya Krobo, Shai Osudoku, North Tongu and the South Tongu Districts of the Volta Basin. One thousand, five hundred and sixteen (1,516) persons were examined. Ninety (90) of them were diagnosed positive for Urinary Schistosomiasis, making the average prevalence of Urinary Schistosomiasis in the Volta Basin for the year 5.94% as against a previous average prevalence of 28.53% recorded in these same communities. The individual community prevalence levels, however, ranged from 0.00% - 39.47%. The Abuvienu community in the Shai Osudoku District recorded the highest average prevalence of 39.47%.

It was observed with concern that a significant number of people in the Kpong area had hematuria (blood in urine), which is a classical sign of Schistosomiasis infection.

This is probably due to the high-risk trade they ply - the majority of them being fisher folks. There is, therefore, the urgent need for a second round of treatment. COVID-19 repercussions created an acute shortage of Praziquantel tablets on the market due to production stoppage by Ernest Chemists, the sole manufacturer in the country. A discussion with them pointed to the fact that they would only produce a minimum batch (2,000 boxes of 100 Tablet/box) at a unit cost of GH¢150.00 per box barring foreign exchange rates. This number, we reckon, can be enough for our use



and for the impending MDA collaboration with the Neglected Tropical Diseases Program because the shelf life of the medication is four (4No.) years.

Analyses undertaken further revealed a significant reduction by 75.11% in prevalence rates. This could be attributed to the MDA exercises held in the majority of the communities evaluated. The year-to-date Schistosomiasis Control index, therefore, stands at 95.27% due to the several intervention programmes rolled out in 53 communities within the year.

Support for Education

VRA supports quality education. The Authority's Education Scholarship for brilliant but needy students, as well as its Employee Volunteer Programmes (EVP) in public Senior High Schools within its operational areas, attest to this fact. It is instructive to state that, VRA does not only provide scholarships for the brilliant but needy but complements that effort with the donation of educational materials and offers financial support towards Science, Technology and Mathematics (STEM) projects and quiz competitions in schools within the impacted communities. These programmes are intended to support the national educational efforts and maximise the potential of students to contribute to Ghana's human resource development needs.



Tertiary Education Scholarship

In 2022, VRA supported sixty-one (61) brilliant but needy students from communities impacted by its operations with its Community Development Programme (CDP) Tertiary scholarship awards to public tertiary institutions in the country.



TVET Scholarship

VRA as part of the scholarship programme engaged with 280 key stakeholders in eighteen (18) municipal/district assemblies in its operational areas on how to implement TVET to cater for the gap created by persons who are unable to proceed to the tertiary education level. This scholarship would be tailored to area specific needs to support the developmental agenda of its impacted communities. Aside from the scholarship programme, the VRA would also assist in the provision of tools and equipment in technical/vocational institutions to support the Government's free TVET programme.



Donation of Educational Materials

As part of its corporate social responsibility (CSR) and to enhance teaching and learning in communities impacted, VRA, in 2022, donated a total of 24,750 textbooks worth GHS1,370,325.00 to fifty-five (55) Public Senior High Schools. The schools are located in the Tema, Kpone, Kpando, Lower Manya Krobo, Yilo Krobo, Asuogyaman, Shai-Osudoku, Anloga, Shama, Ada East and West, Upper Manya Krobo, North and South Dayi, North, South and Central Tongu, and Biakoye sub Metropolitan/Municipal/District Assemblies. The books donated consist of Core Mathematics, Integrated Science and English Language for Senior High Schools (SHS) form one-(1) to three (3).



Employee Volunteer Program

The Authority's Employee Volunteer Program (EVP) is a flagship CSR initiative that aims at encouraging volunteerism among Staff to give back to society by participating in a day-long career guidance, counselling, and teaching exercise in Senior High Schools in communities within VRA's operational areas. In 2022, EVP was organised at the Kpando Senior High School. The initiative is expected to support and advance high-quality education in its impacted communities. This year, about 850 students benefitted from the initiative.



Water and Sanitation

In fulfillment of the Authority's objective of curbing the spread of Schistosomiasis in riverine communities along the Volta Lake, VRA continued to focus on the provision of water and sanitation facilities for communities impacted by its operations. The intervention is to allow for a more sustainable way of curbing the spread of the health hazard prevalent and geared towards the attainment of SDG goal 6.



Provision of Clean Water to Communities

In 2022, VRA in collaboration with Project Maji Foundation, provided and handed over four (4) Standard Solar-Powered Mechanised Water systems to Atrobinya, Battorkope, Dansokrom-Asikuma and Akplorti in the Shai-Osudoku, Upper Manya Krobo Asuogyaman and South Tongu Districts. The beneficiary communities are in the Eastern and Volta Regions.



Provision of 20-Seater Biofil Sanitation Facility

In accordance with the Authority's support for the UN Sustainable Development Goal 6 (SDG 6) and to address the unsanitary conditions at the Adjena Senior High/Technical School in the Asuogyaman District, VRA completed and handed over a 20-seater Biofil sanitation facility with 10 Micro flush Biofil with Urinal for male and 10 Micro flush Biofil with a changing room for female students. The project was provided at the behest of the school, following an increase in the school's enrollment arising from the implementation of the Free Senior High School policy.



Corporate Strategy

To ensure business continuity and fiscal sustainability, VRA during the period under consideration continued to focus on the implementation and monitoring of its Strategic Plan (The Sustainability Plan). The Sustainability Plan seeks to consolidate the gains made from the successful execution of the “BRAISE” strategy, which largely contributed to the realisation of the Authority’s financial and operational objectives.

In furtherance to that, and as part of efforts to simplify and improve the strategic management process, the Authority reviewed its strategic objectives. The review was to ensure that the strategic objectives were in alignment with those of benchmark international utilities. The review resulted in a reduction of the strategic objectives from fifteen (15) to five (5), under the acronym, “SPICE”. The new “SPICE” objectives have been defined as follows:

- Sustain operational and service excellence in a clean and digital environment
- Promote Financial Responsibility
- Improve Health, Safety, Security and Work Environment
- Cultivate a diverse committed and future-ready workforce
- Enrich customer and stakeholders’ experience to drive growth.

In the course of the year, VRA also successfully automated its Strategic Management process by rolling out the world class application, “Spider Impact Strategy Management” software. The new application has the capacity to provide real-time results for assessing the Authority’s productivity levels and providing the requisite analytics for improving corporate performance. The automation is in line with our corporate objectives of advancing our internal and external business processes, and leveraging on the Authority’s huge Information and Communication Technology (ICT) infrastructure.

Following the global economic crisis that has negatively impacted businesses across the world, VRA undertook rigorous analytics, research and forecasting, out of which the Authority prepared the “Ghana’s medium Term Outlook - Impact on VRA” report. The report basically outlines strategies for sustaining the Authority’s business in the midst of global challenges.

In addition, VRA developed an Operational and Financial Resilience Plan for the 2023-2024 fiscal year. The Plan is to serve as a medium-term strategy to prepare VRA ahead of the envisaged economic and electricity market shocks. In the area of Market and Policy Research, VRA initiated and completed research reports on the power sectors of Sierra Leone, Burkina Faso and Mali. Aside that, research was also



conducted on the status of the West African electricity market, decarbonisation strategies of key mining companies in Ghana, amongst others. The rationale is to provide market intelligence for Management and help develop strategies to ensure we meet our growth objectives.

In 2022, the Authority complied with relevant statutory reporting requirements of the State Interests and Governance Authority (SIGA), and the Ministry of Energy. This is consistent with industry’s best practices and evidence of the Authority’s commitment to good governance.

Lastly, in line with the quest to remain proactive and agile, the Authority carried out risk assessments at both the strategic and operational levels and consequently developed corresponding risk mitigation (risk treatment) actions to insulate the Authority and improve its performance.

The expectation is that by continually updating the Authority’s strategic plans to reflect the dynamic business environment, pursuing the right programmes, and fostering strategic thinking amongst the Authority’s well-motivated Staff, VRA will be able to compete effectively in the energy market, and ultimately become a Model of Excellence for Power Utilities in the region.

To maximise operational efficiency, reduce operational costs and improve customer experience while creating new growth and innovation opportunities, VRA, on February 8, 2022, established the Digital Transformation and Innovation Unit (DTIU) to coordinate the Authority’s digitalisation agenda.

The Focus Areas of the digital transformation strategy include:

- Integrated Business Data Hub
- Cyber Security and Data Protection
- R&D, Innovation and Sustainability
- Culture and Business Transformation

Digital Transformation



The DTI Unit is mandated to spearhead and coordinate the successful implementation of the VRA Digital Transformation and Innovation project and serve as a strategic digital innovation incubator hub, research and thought leadership in digital transformation and cybersecurity. The Unit is also responsible for monitoring and responding to potential threats to avert future incidents.

Following the introduction and incorporation of the digital transformation strategy into the Authority's operations, and in line with the road map to the "NEW VRA", the Creativity and Innovation Day was launched on April 26, 2022 during the 61st anniversary of VRA. The Creativity and Innovation Day is set to be celebrated concurrently with the VRA Day Celebration.

Creativity and Innovation



The Creativity and Innovation campaign is part of efforts by the Authority to remain the leading choice for power supply, and contribute to Ghana's quest at achieving the Innovation component of SDG Goal 9. The campaign is to also encourage the infusion of Creativity and Innovation into the work culture of the Authority to create an environment where innovation

is tied to the output and performance of Staff. The Slogan for the campaign is: "*Creativity our Passion, Innovation our Pride.*"

With the aim of ensuring that the required frameworks are in place to give leadership, operationalise intent, and provide the necessary assistance to elicit the anticipated value from the Authority's activities, a Committee responsible for Creativity & Innovation has been established.



SUPPORT SERVICES

Information and Communication Technology

The Authority's work, in the year, within the ICT space has been guided by the 5-year ICT strategy, which is in its second year of execution. The strategy aligns with both the "BRAISE" strategy and the Sustainability Plan with the following key objectives:

- To align ICT with Business Strategy.
- Optimise IT (Information Technology) investment by improving business processes (digitalisation) and alignment with industry best practices.
- Upgrade Infrastructure/architecture to support the business digital transformation agenda.
- Double Innovation by extending ICT to the core operations of the Authority.

In 2022, digitalisation focused on revenue management with the development and rollout of the second phase of the Customer Billing Management System, which is concerned with rents and rates from commercial activities undertaken in the Authority's enclaves; health care management, with the deployment of the new Hospital Management System, HealthPro; improved business processes with the ongoing implementation of the Oracle ERP (Enterprise Resource Planning) Cloud Project to improve financial visibility and reporting for the Authority's legal entities and other internal services.

In support of improving our business processes and optimising VRA's IT investment, standardised and documented business processes across the Authority are being analysed to prioritise candidate business processes for digitalisation in 2023.

In addition, the VoIP (Voice Over Internet Protocol) project, which seeks to replace the old GRIDCo internal telephone system (PLC) was implemented with the roll out of handsets in Accra, Akuse and Akosombo. Technical requirements for the Centralised Wi-Fi project, which seeks to improve network reliability and provide secure, universal access to corporate applications beginning from locations with no or challenged wired network infrastructure were completed and submitted for the procurement process to begin.

During the period under review, special emphasis was placed on cybersecurity awareness among Staff to improve the Authority's security posture. To promote employee awareness and sensitisation on cybersecurity, a series of webinars were undertaken for Staff of the Authority and the Northern Electricity Distribution Company (NEDCo) and articles on topical

cybersecurity subjects were published on the Intranet portal.

Finally, with the aim of upgrading the infrastructure to support IT service delivery within the Authority, Management approved the Data Centre Refresh project. VRA is working with relevant stakeholders to engage the services of Original Equipment Manufacturers (OEMs) for the supply and installation of the equipment in line with internal audit recommendations.

Legal Services

During the year under consideration, VRA, as a means of ensuring its adherence and responsiveness to legislative initiatives, made efforts to monitor legislations, which tend to affect the Authority's business. Following that, the Authority reviewed the Foreign Exchange Act, 2006 (Act 723); Copyright License/Royalties under the Copyright Act, 2005 (Act 690) and LI 1962; Right to Information under Article 21(1)(f) of the 1992 Constitution of Ghana and Section 18 of the Right to Information Act (989); comparison between the repealed Insurance Act, 2006 (Act 724) and the New Insurance Act, 2021 (Act 1061); the Penalty and Interest Waiver Act, 2022 (Act 1081); Ghana Education Act, 2008 (Act 778), and the Education Regulatory Bodies Act, 2020 (Act 1023).

In addition, to promote financial responsibility as enshrined in the Authority's "SPICE" objective, VRA renewed 18 insurance policies for its generating and non-generating assets. The objective is to protect the Authority's business and prevent possible financial losses due to property damage or loss of physical assets. The under-listed policies were renewed during the year:

- Property Damage and Public Liability cover for AMERI Power Plants (Non-Operational insurance)
- Property Damage/Business Interruption and Public Liability for Tema Thermal Power Complex Station II (TTPCS 2)
- Property Damage and Public Liability for Akosombo Generating Station
- Property Damage and Public Liability for Takoradi Thermal Power Station T3 (TTPS T3) (Non-Operational)
- Assets All Risks (Buildings in Commercial Use)
- Property Damage/Business Interruption and Public Liability for Takoradi Thermal Plant T1

- General Liability Cover for Tema Gas Facility
- Goods-in-transit insurance cover for VRA materials being transported
- General Liability Cover for Ghana Gas Tie-In-Point -Aboadze
- Property Damage/Business Interruption and Public Liability for Tema Thermal Power Complex Station iii (TTPCS 3)
- Selected Building and stores Insurance Cover
- Marine Hull and Machinery/Crew/Passenger Liability for Akosombo Marine assets
- Marine Hull and Machinery/ Crew/Passenger Liability for Ada Marine Assets
- Property Damage/Business Interruption and Public Liability for Kpone Thermal Power Station (KTPS)
- Brokerage Services for VRA Vehicles
- Property Damage and Public Liability for Kpong Generating Station

Further to that and in compliance with the law, VRA procured a new policy, the “*Hazardous Waste/ Pollution Cover*” as required under the Hazardous and Electronic Waste Control and Management Act, 2016 (ACT 917). A Directors and Officers Liabilities and Group Personal Accident policy was also procured for the Authority’s nine (9) Board Members.

To ensure VRA averted any potential lapses, which could result into financial liabilities, the Authority, leveraging its huge information communication technology and following the successful automation of its contract register duly captured seventy-seven (77) power related and non-power related agreements in the fully automated Contract Register. This intervention is in line with the Authority’s strategy to sustain operational and service excellence in a clean and digital environment.

Finally, the Authority provided Legal Education for some key Stakeholders. The education included training on Legislative Instruments for VRA Board Members: Code of Ethics of VRA for all Staff; Data Protection Act, 2012 (Act 843) to Audit Department; and Pre-Retirement Planning Seminar for Staff of GRIDCo. The motivation for the engagement is to ensure the Authority’s Staff were aligned with the identified legislations.

Industrial Relations

The effective collaboration between Management and Staff during the period under review ensured that the industrial environment remained peaceful. This largely contributed to the promotion and sustenance of the

Authority’s business.

Staff Strength

The Authority’s total Staff strength at the end of the fiscal year was 2,215. Out of this total, 2191 were permanent, while the remaining 24 were Contract Staff. It is instructive to note that by gender, 1679 out of the total number of 2215 were males with the remaining 536 being females.

Employee Relations

As partners in governance, Management and Leadership of the various Staff Groups/PSWU continued to hold successful collaborative engagements related to employee welfare in general, salaries and allowances. These constructive engagements and fruitful negotiations contributed to the peaceful co-existence experienced throughout the year.

Training and Development

In line with the strategy to cultivate a diverse, committed and future-ready workforce, VRA in the year under consideration provided tailor-measured training programmes for the Staff. The motivation is to ensure Staff were equipped with the necessary skills and knowledge and capabilities that would make them respond appropriately to the rapidly changing regulatory and business environment. The overarching objective is to ensure VRA has a core of dedicated, committed, disciplined and well-motivated Staff with the required private sector mindset capable of pushing the Authority’s agenda of becoming an agile, resilient and sustainable organisation and forge ahead the quest to become a Model of Excellence in Africa.

Real Estates & Security Services Department

In line with the dictates of Executive Instrument (EI) 42, establishing the Akosombo Township, the Akosombo



Management Committee (AMC) on behalf of the VRA, continued to oversee the VRA's Local Authority functions in Akosombo. In 2022, total revenue generated by the local council activities by AMC amounted to GH¢376,435.64 compared to the 2021 figure of GH¢239,541.00 representing a percentage increase of 57.14%. In line with the agreement, the accrued receipts for 2022 are expected to be shared equally between the Authority and the Asuogyaman District Assembly.

In 2022, the total income accumulated from rent amounted to GH¢1,846,210.57 compared to GH¢1,338,060.54 achieved in 2021, resulting in an increase of 37.97%. Included in the total revenue under property services is income from Catering Services, Club House, and accommodation, which amounted to GH¢6,950,995.03 in 2022. This represents an increase of 7.54% over the 2021 total revenue of GH¢6,463,272.64. The overall total revenue generated during the period under review was GH¢8,832,867.87. The year 2022 ended with an overall revenue growth of 12.34% over that of 2021.

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

REVENUE LINES	2021 REVENUE	2022 REVENUE	INCREASE/DECREASE
Rental	1,338,060.54	1,846,210.57	508,150.03
Catering & Club House	4,823,940.64	5, 621,047.03	797,106.39
Accommodation	1,639,332.00	1,329,948.00	(309,384)
Miscellaneous & Leisure	61,275.92	35, 662.27	(25,612.65)
Total	7,862,609.10	8, 832,867.87	970,258.77

Occupational Health & Safety

In line with the objective of ensuring the sustainability of the Authority's business, VRA continued to implement policies and programmes to improve the health, safety and work environment of the Authority's most valuable assets, the employees.

In this regard, VRA continued to enforce its annual medical examination policy. Implementing the medical examination has the key objective of screening Staff to ensure early detection, treatment, and management of common diseases. The exercise also provides valuable data to guide health surveillance and monitoring decisions. This is ultimately aimed at enhancing productivity through a healthy workforce.

To ensure health promotion, awareness creation, and well-being, Staff are often educated on general health conditions and occupational exposures during mandatory weekly and monthly Safety Meetings for operational and non-operational areas, respectively and also in the quarterly newsletter of the Authority.



Further to that, and as evidence of VRA's commitment towards ensuring a safe working environment, VRA prioritized leading safety performance indicators such as the number of work area inspections conducted, number of safety meetings held, Staff safety meeting attendance, number of near misses reported, number of unsafe acts and unsafe conditions reported, percentage of safety issues resolved, number of safety-critical equipment available, number of safety culture surveys conducted, number of emergency evacuation drills conducted, number of safety incidents investigated and number of incident investigation recommendations resolved.

The high-performance targets for these leading indicators enabled VRA to record very low safety incidents in 2022. Indeed, as of December 2022, VRA recorded a Total Recordable Case Rate (TRCR) of 0.26 against a target of 0.3 and a Days Away Restricted Transfer (DART) of 0.17 against a target of 0.3. Beyond regulatory compliances, these stringent safety measures ensured that VRA met its social contract with its skilled workforce.

Consistent with international HSSE best practices, VRA, in November 2022, climaxed its safety activities with the observance of the VRA Safety Awareness Day celebration. Kpone Thermal Power Station (KTPS), Tema Thermal Power Complex (TTPC), and the Akosombo Generating Station (AGS) were adjudged best Work Area Safety Committees (WASACO) for the Operational Areas. Investment (Kpone), Commercial Services (Kpone), and Real Estates Departments (Aboadze) emerged as the best WASACOS in the Non-Operational areas.



NON POWER ACTIVITIES

Volta Lake Transport Company (VLTC) Ltd.

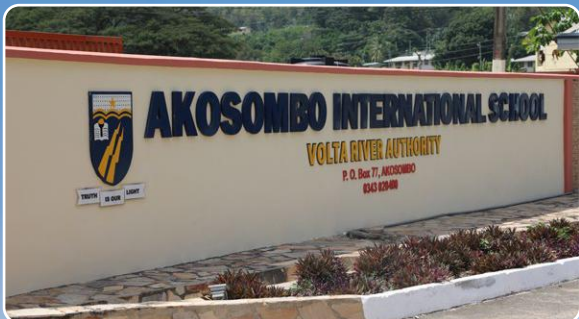
Akosombo Hotels Limited (AHL)

VRA Health Services Limited (VHSL)

Kpong Farms Ltd. (KFL)

VRA Property Company (PROPCo) Ltd.

VRA International Schools Limited (VISL)



SUBSIDIARIES

For the year under review VRA continued to pursue its strategic objective of ensuring the best overall return on investment for its Subsidiaries and Strategic Business Units (SBUs).

The Subsidiaries and SBUs are Akosombo Hotels Limited (AHL), Kpong Farms Limited (KFL), Volta Lake Transport Company (VLTC), VRA Property Holding Company (PROPCo), VRA International Schools Limited (VISL) and VRA Health Services Limited (VHSL).

This drive is consistent with VRA's corporate objective of transforming the non-power businesses into resilient, profitable and self-sustaining enterprises that bring significant value to the Authority.

The Authority's commitment to engage the private sector in the management of the Subsidiaries is motivated by the opportunities strategic partners would provide by way of capital injection, innovative business practices as well as providing strategic leadership in operations, thus maximising returns.

It is expected that the successful engagement of strategic partners would significantly transform the fortunes of the Subsidiaries, and strategically position them to compete favorably in their respective industries, thus enhancing their value to the Authority.

Volta Lake Transport Company Limited

In 2022, the Management of the Volta Lake Transport Company (VLTC) decided to officially terminate the processes leading to the selection of a Strategic Partner for VLTC. The decision to freeze the earlier Board directive to engage the second-best preferred applicant stems from the fact that the Government of Ghana was far advanced in securing a loan facility of 168 million dollars from the Republic of Korea's Economic Development Co-operation Fund (EDCF) meant for investments in key infrastructure under the improvement of Volta Lake Transport System Project. It is expected that, VLTC would be a beneficiary of the facility and can take advantage of that to improve the company's business operations and reposition it to become a profitable business entity.

Business Operations

The business year showed a considerable decline in VLTC's operations compared to the year 2021. During the year, a total of 45,228.81 tons of cargo, representing 44%, were shipped. This is compared to the projected 111,968 tons. Specifically, 28,636.51 tons of liquid cargo representing 41.3% of the budgeted cargo of 73,368.0 tons, were transported. In terms of solid cargo, out of a projected tonnage of 38,600, a total of 16,592.30 were shipped. The drop in shipment was as a result of the decline in solid and liquid cargo consigned to VLTC by its major clients. In terms of passenger traffic, VLTC transported 1,171,726 passengers in cross lake operations. It is instructive to state that the global economic challenge(s) and its emerging threats that impacted the Ghanaian economy, following the outbreak of the COVID-19 pandemic and the Ukraine-Russian war, ultimately affected VLTC's clients and its business operations.

Refurbishment of "MV Nana Besemuna"

To ensure VLTC's life-aged and inefficient vessels were made seaworthy, VLTC successfully completed and commissioned the vessel, "MV Nana Besemuna". The refurbished vessel is expected to bring efficiency to VLTC's operations.



Improvement in Information Communication Technology

To enhance VLTC's communication and improve its business processes through digitisation, VLTC in 2022 ensured the rehabilitation of the company's Akosombo LAN Project as well as the procurement of computers. The interventions are to pave way for VLTC's implementation of major IT-dependent projects, as well as facilitate the company's preparation towards deployment of the Oracle Fusion ERP application, which is being undertaken in collaboration with VRA. The overall objective is to improve operational efficiency and reduce cost.

Employee Health and Safety

To promote health and safety within the company, VLTC in November 2022 instituted a Safety Awareness Day and also inaugurated its Safety Co-ordinators Committee. The Awareness Day, which is to be observed annually has the key objective of fostering and enhancing practical health and safety practices in the company.

Akosombo Hotels Limited (AHL)

Business Operations

AHL continues to adopt innovative ways of business operations by ensuring that the Volta Hotel and Dodi World experiences meet stakeholders' expectations in a safe, secure and healthy environment. Accordingly, AHL, in the year 2022, embarked on a sustained sales and marketing drive to increase patronage of the Hotel as well as the Dodi World. Passengers ferried on Dodi Princess II increased from approximately 6,403 to 7,748 persons from 2021 to 2022. Revenue grew from 7.81 million in 2021 to about 11.19 million in 2022. The hotel was able to secure a GHS 1.2 million grant facility, through the Ministry of Tourism Arts and Culture (MOTAC). AHL will apply the funds in adding additional five (5) rooms to the existing forty-four (44) rooms to bring its rooms to forty-nine (49) room facility.

Additionally, to stay relevant and customer-focused, AHL will continue to pursue business alliances to grow its market share despite stiff competition within the catchment area of Akosombo. Business processes are being realigned to match customer expectations. Through such alliances and partnerships, AHL has a goal to transform Akosombo into an aqua-tourist destination in Ghana and the sub-region.

Leveraging digitalisation, AHL commenced a social-media drive aimed at enhancing its presence on applications such as Facebook, Instagram and Twitter to promote the business and services to varied clientele in Ghana and abroad. The successful launch of the Dodi World online booking and payment platform will be leveraged to increase access to global markets and create a seamless booking process for customers. Customer care remains the bedrock of operations. AHL continues to provide the requisite training to improve client satisfaction whilst maintaining professionalism amongst all Staff.



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 Buiepe 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

VRA Health Services Ltd.

Recognising the importance of employee health, the VRA Health Services Ltd. (VHSL) in 2022 continued to provide free healthcare to its employees and facilitated healthcare for the Public in its operational areas. VHSL is the wholly frontline provider of medical care, set up by VRA to safeguard the health of its Staff (active and retired), their dependents and the population of areas impacted by its operations. VHSL has four (4) facilities based in Akosombo, Akuse, Accra, Aboadze and a Panel Hospital through which it discharges this duty.

Patients treated in the facilities fall into the following categories:

- VRA Staff and Dependents
- Other Corporate Clients
- Paying Patients – Cash Paying Clients
- Health Insurance Clients (NHIA/Private Health Insurance Companies)

In addition to the above, VHSL also performs Public/Community Health duties on behalf of VRA, in compliance with VRA's Corporate Social Responsibilities toward the communities and manages the Ill-health policy of the Authority.

The clinical services that VHSL provides comprise primary and specialist services in General Medicine, Obstetrics & Gynaecology, Reproductive and Child Health, General Surgery, Ophthalmology and Optical care, Dentistry, Orthopaedics, Urology, Dermatology, Physiotherapy, Nutrition and Dietetics, Psychiatry Clinical Psychology, Pharmacy Services, Laboratory Services, Diagnostic Imaging, Ambulance Services and Mortuary Services.

For 2022, the total out-patient attendance recorded at the four (4) health facilities was 181,561, an increase of 9.9% over the 2021 figure of 163,617. The total revenue generated at the four (4) health facilities was GH¢ 37,772,967, an increase of 43.2% over the 2021 figure of GH¢21,458,100.



Infrastructure Improvement

As part of efforts to improve the quality of service provided to clients, VRA embarked on a significant infrastructural improvement. These include the annex wings of the Aboadze and Accra hospitals, which have enabled the introduction of new specialist services, the Akosombo containerized offices for use by the Nutrition and Dietetics Unit and Breast Cancer Team, as well as the construction of the Pediatrics Ward and Neonatal Intensive-Care Unit (NICU), which is at the final stage of front-end engineering works. That aside, VHSL also successfully completed the installation of mammogram machines in Accra and Akosombo hospitals.

COVID-19 Efforts

To ensure the Authority's health facilities maintained a grip on COVID-19 to avert a possible spread, the Local COVID-19 Task Forces in the hospitals continued to support the Executive Task Force, which includes the Medical Director, to monitor the COVID-19 pandemic, for immediate action when required. In addition, VHSL continued to facilitate vaccination at the hospitals and educated Staff and the Public on the World Health Organization's (WHO) standard protocols to mitigate the spread of the pandemic.

Kpong Farms Limited Ltd.

In the course of the year, KFL's Strategic Partnership process was repackaged as a Public Private Partnership (PPP) Project, in accordance with the PPP Act, 2020. This follows the entity's Board's directive for the process to be re-advertised under a medium to long-term lease arrangement. Subsequently, a new request for qualification was developed and published. Pursuant to that, four potential companies submitted their bids. Bid evaluations are expected to be executed in 2023, after which shortlisted bidders would advance to the request for proposal (RFP). The successful bidder would then be selected as the Lessee for KFL.

Business Operations

A total acreage of 58.2 hectares of rice, compared with 61.5 hectares in 2021 was cultivated during the period under review. The shortfall in cultivation was mainly due to delays in the 2022 cropping season.

Out of 61.5 hectares, 37.7 hectares were cultivated in the major season, whereas 20.5 hectares were cultivated in the minor season. All the major season harvest was sold in the year. The minor season cropping, however, is expected to be harvested in the first quarter of 2023. The average yield per hectare for 2022 was 4.0 tons, compared with 3.3 tons per hectare recorded in 2021. As part of efforts to promote the KFL brand and increase patronage, KFL, in 2022, participated in the National Rice Festival with its newly branded rice packages certified by the Ghana Standards Authority. Meanwhile, in line with its strategy to expand its product line, KFL, also in the year, added the cultivation of vegetables to its product mix. Land preparation for the cultivation of the vegetables commenced in the fourth quarter of 2022. The expectation is that the first batch of vegetables will be cultivated in the first quarter of 2023.



Volta Place

The "Volta Place" a 5,000 square meters gross office building located in one of the most affluent neighborhoods in Accra is designed with flexible configuration, and offers 800 square meter floor plates, which can be subdivided into smaller office suites ranging from 200 square meters to 400 square meters. The facility's building services have also been designed with flexibility in mind to accommodate the ease of individual metering. Occupancy at The "Volta Place" has consistently been high, averaging about 97% since 2018, when the building became operational.

Volta Place is occupied by a variety of tenants (companies) from different sectors of the economy. Tenants of the Volta Place include Say Cheers Ltd., Supertech Ltd., Early Power Ltd., Ghana Upstream Petroleum Chamber, Friesland Campina West Africa Ltd., Precept Advisory Ltd., Allianz Insurance, Volta Place Hospitality Ltd., British America Tobacco GH, P&G GH Ltd., Ernest Chemist Ltd., Secoroc GH Ltd., Network International Services, Africa Works and VRA Digital Transformation & Information Centre.

VRA Property Holding Company (PROPCo)

Since the commencement of operations of the Volta River Authority's Property Holding Company Ltd. (PROPCo) in June 2018, PROPCo has successfully developed 2 assets, the Volta Place (a grade A office building in the Airport Residential area, Accra) and Volta Residences - Garden Lodge (a 15-bedroom guest house facility in Akuse). PROPCo over the period has prided itself in hands on asset management to optimise total returns from its assets. This is demonstrable through the high occupancy achieved for all its assets under management.





Volta Residences – Garden Lodge

The Ghana Tourist Board certified 2-star, 15 standard room hotel, during the year catered to a variety of walk-in guests and hosted several corporate clients including; Anglo Gold, Iduapriem, Olam Ghana, GRIDCo, among others.

Volta Residences - Lodges

In October 2022, work commenced on the Phase II of the Volta Residences - Lodges Project. On completion, the Volta Residences will have a total of 68 rooms. The Project Team is currently refurbishing 8-unit houses into Lodges, which is projected to add 27 rooms to the existing facility to provide a total of 42 rooms hopefully by the third quarter of 2023.



VOLTA

RESIDENCES

Accommodation | Bar & Lounge

Come home to Volta Residences and experience country life at its best. Escape from the fast pace of city life this holiday season and enjoy all the finest pleasures of the country environment in a secure and gated estate.

Volta Residences offers private lodges and a wide range of amenities to cater to the unique and intricate hobbies and desires of our guests. Our amenities have been expertly curated to ensure our guests have a memorable stay filled with a diverse range of activities to excite and stimulate both the mind and body.

Looking for adventure, our guests can drive a few minutes into town to enjoy all the vibrant sites and activities the region has to offer.





VRA

Akuse Township

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This festive season

Relax, enjoy & rejuvenate

**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.



- Standard Rooms
- Deluxe Rooms
- Executives Rooms
- Gym & Spa
- Swimming Pool
- Dodi Princess II
- Conference Facilities
- Night Club
- Bar & Restuarant

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+233-054-435-7703

 **www.voltahotel.com.gh**
www.dodiworld.com.gh

FINANCIAL HEALTH



Revenue from sale of electricity in 2022 increased by 36.02% (GH¢1,519.90 million) to GH¢5,739.88 million from the previous year's sale of GH¢4,219.99 million. This was mainly due to the combined effect of 9.98% (1,088GWh) increase in the volume of energy sold from 1,088GWh in 2021 to 11,931GWh in 2022 and 24.13% increase in the average tariff of ECG from GH¢0.25175/kWh in 2021 to GH¢0.337957/kWh in 2022. The volume of energy sold to regulated customers decreased by 2.89% (188GWh) from 6,516GWh in 2021 to 6,328GWh in 2022. The volume of electricity sold to deregulated customers, which attract relatively higher tariffs increased by 29.34% (1,271GWh) from 4,332GWh in 2021 to 5,603GWh in 2022 largely on account of sales to Communaute Electrique Du Benin which increased from 574GWh in 2021 to 743GWh in 2022 representing an increase of 169GWh (29.44%) and Sonabel Bolga-Ougadougou, which increased from 900GWh in 2021 to 1,177GWh in 2022 representing an increase of 277GWh (30.78%).



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 2022

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

Power Production

The total electricity generated from both hydro and thermal sources increased by 601GWh (3%) from 9,598GWh in 2021 to 10,200GWh in 2022; this includes generation and transmission substations use of 59GWh (2021: 50GWh). Generation from hydro sources increased by 188GWh (3%) from 6,529GWh in 2021 to 6,717GWh in 2022. Thermal generation also increased by 13% (413GWh) from 3,069GWh in 2021 to 3,483GWh in 2022. VRA's 2022 generation from solar plants was 21GWh (2021: 6 GWh).

To supplement generation from VRA's own plants, gross power of 2,444GWh (2021: 1,998GWh) was purchased from Takoradi International Company Limited (TICO) of Ghana representing an increase of 22% (446GWh) from the 2021 power purchase from TICO. There was net inadvertent import of 37GWh from CIE in 2021 (2021: 43 GWh).

	Change		2022		2021	
	GWh	%	GWh	%	GWh	%
VRA Hydro:						
Akosombo	191	3%	5,748	45%	5,557	53%
Akuse	(3)	0%	969	8%	972	9%
Total Hydro	188	3%	6,717	53%	6,529	62%
TTPS	350	16%	2,480	20%	2,130	20%
TTIPP	33	8%	437	3%	404	4%
TT2PP	(6)	-6%	85	1%	90	1%
KTPS	103	27%	481	4%	378	4%
AMERI	(67)	-100%	-	0%	67	1%
Total Thermal	413	13%	3,483	27%	3,069	29%
Total VRA Hydro & Thermal	601	6%	10,200	80%	9,598	91%
VRA Solar:						
Total Solar	15	247%	21	0%	6	0%
Total Energy by VRA	616	6%	10,221	80%	9,604	91%
Purchases & Imports						
TICO	446	22%	2,444	19%	1,998	14%
CIE	(6)	-14%	37	0%	43	1%
	440	22%	2,481	20%	2,041	15%
Total Energy Generated & Bought	1,056	21%	12,702	100%	10,535	100%

Financial Review for the year ended 31 December 2022

NOTES TO THE FINANCIAL STATEMENT FOR THE YEAR ENDED 31 DECEMBER, 2022

Revenue

Revenue from sale of electricity in 2022 increased by 36.02% (GH¢1,519.90 million) to GH¢5,739.88 million from the previous year's sales of GH¢4,219.99 million. This was mainly due to the combined effect of 9.98% (1,088GWh) increase in the volume of energy sold from 1,088GWh in 2021 to 11,931GWh in 2022 and 24.13% increase in the average tariff of ECG from GH¢0.25175/kWh in 2021 to GH¢0.337957/kWh in 2022. The volume of energy sold to regulated customers decreased by 2.89% (188GWh) from 6,516GWh in 2021 to 6,328GWh in 2022. The volume of electricity sold to deregulated customers which attract relatively higher tariff increased by 29.34% (1,271GWh) from 4,332GWh in 2021 to 5,603GWh in 2022 largely on account of sales to Communaute Electrique Du Benin which increased from 574GWh in 2021 to 743GWh in 2022 representing an increase of 169GWh (29.44%), and Sonabel Bolga-Ougadougou which increased from 900GWh in 2021 to 1,177GWh in 2022 representing an increase of 277GWh (30.78%).

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¢1,737.45 million (49.66%) from GH¢3,498.07 million in 2021 to GH¢5,235.22 million in 2022.

There was 20.69% (9,003,000.07 MMBtu) increase in overall volume of gas consumption from 43,513,527.70 MMBtu in 2021 to 52,516,527.77 MMBtu in 2022 analyzed as follows:

- Gas usage from N-gas increased from 9,993,063.13 MMBtu in 2021 to 19,915,625.69 MMBtu in 2022 leading to overall increase in Gas consumption.
- Thermal Generation from TICO increased by 22% from 1,998GWh in 2021 to 2,444GWh in 2022.
- 42.29% depreciation of the average GH¢/US\$ exchange rate from GH¢5.8116/US\$1 in 2021 to GH¢8.2695/US\$1 in 2022 also contributed to the increase in cost of sales.
- Power import (actual and inadvertent) from CIE dropped by 13.95% (6GWh) from 43GWh in 2021 to 37GWh in 2022.

Administrative Expenses

Administrative expenses increased by GH¢253.23 million (33.34%) from GH¢759.43 million in 2021 to GH¢1,012.66 million in 2022.

Repairs and maintenance increased from GH¢29.27 million in 2021 to GH¢44.29 million in 2022 and Depreciation increased by 84.33% (GH¢29.27 million) from GH¢55.94 million in 2021 to GH¢103.11 million in 2022.

Other Operating Expenses

Other operating income increased by GH¢104.17 (39.21%) from GH¢265.64 million in 2021 to GH¢369.81 million in 2022. 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 (AHL) and Volta Lake Transport Company Limited (VLTC).

Operating Profit

The operating loss of the Group in 2022 was GHS138.45 million compared to a profit of GHS355.41 million in 2021. This was due to increase in Administrative Expenses occasioned mainly by general increase in prices of goods and services.

Financial Review for the year ended 31 December 2022

NOTES TO THE FINANCIAL STATEMENT FOR THE YEAR ENDED 31 DECEMBER, 2022

Net Profit

The Group ended the year 2022 with a Net Loss of GH¢277.18 million (2021: Net Profit of GH¢60 million). This represents a decrease of 561.98% (GH¢337.18 million). The decrease in profit for the year is due to increase in Cost of Sales (49.66%) from GH¢3,498.07 million in 2021 to GH¢5,235.22 million in 2022, increase in Administrative Expenses of 33.38% (GHS253.48 million) from GH¢759.43 million in 2021 to GH¢1,012.92 million in 2022. Financial Expenses increased by 32.76% (GH¢29.82 million) to GH¢120.83 million in 2022 (2021: GH¢91.01 million).

2023 OPERATIONAL & FINANCIAL OUTLOOK

The forecast national system demand for 2023 is 26,243GWh, comprising customer demand of 25,020GWh, GRIDCo substation usage of 10GWh and transmission losses of 1,213GWh. The Authority plans to generate a total of 12,581GWh whilst Bui Hydro Plant 1,038GWh and the Independent Power Producers would generate 12,623GWh including Bui generation. The Authority's generation breakdown is as follows: 6,800GWh from hydro sources, 2,144GWh from the Takoradi Thermal Plant, 339GWh from the TT1PP, 406GWh from the Kpone Thermal Power Plant, 35GWh from the Solar Plants, and no power imports. The Takoradi International Company (TICO) is forecast to supply 2,415GWh. Thus, VRA is forecast to generate 48% of the national electricity load whilst Bui Hydro Generating Plant and the IPPs will supply 52% with no additional supply required. The forecast power sale revenue for 2023 is about GH¢8,711million assuming a Bulk Generation Tariff of GHp37.96/kWh. The other income of about GH¢171.21 million, includes a premium of GH¢33.69 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¢7,735 million.

Interest expense is forecast at GHS137.93 million and net exchange loss is projected at GH¢378.40 million.

Financial Review for the year ended 31 December 2022

NOTES TO THE FINANCIAL STATEMENT FOR THE YEAR ENDED 31 DECEMBER, 2022

Financial Summary (VRA)

	2018	2019	2020	2021	2022
	GH¢'000	GH¢'000	GH¢'000	GH¢'000	GH¢'000
Income from Sale of Electricity	3,000,712	3,890,946	3,793,161	3,793,161	5,453,530
Other Operating Income	132,919	110,837	121,105	121,105	166,161
Operating and General Expenses including depreciation	3,079,293	3,310,366	3,161,441	3,161,441	5,086,251
Depreciation	432,317	424,903	535,675	535,675	780,270
Operating Profit/(Loss)	591,311	830,713	880,776	880,776	533,440
Financial Expenses	422,850	363,726	258,184	258,184	116,466
Financial Income	14,101	10,939	3,593	7,811	9,125
Exchange Fluctuation	(402,663)	(605,046)	(469,686)	(380,779)	(315,206)
Government Assistance/Subvention/Subsidy	536,973	139,296	127,951	127,294	-
Net Profit/(Loss)	(220,101)	(127,120)	156,499	112,757	110,893
Property, Plant and Equipment(Cost/Valuation)	15,062,532	17,778,816	18,914,285	24,627,519	35,784,821
Property, Plant and Equipment (Net Book Value)	7,502,118	8,469,329	8,648,585	16,832,940	24,063,689
Capital Work in Progress	743,927	815,969	827,780	961,369	1,285,719
Current Assets	7,495,142	8,864,931	9,201,999	8,631,569	11,751,611
Current Liabilities	6,419,391	7,626,322	7,812,410	6,861,038	8,659,534
Investment by the Rep. of Ghana	3,960,933	4,305,586	4,305,586	4,433,937	4,617,713
Capital Surplus	4,893,838	5,899,375	5,952,182	14,097,485	21,861,957
Retained Earnings	(1,526,999)	(1,326,931)	(750,510)	(279,085)	49,966
Principal portion of long term loans	962,447	824,691	845,598	946,521	1,352,008
Ghana Cedi (GH¢) to US\$ Exchange Rate	4.8200	5.2150	5.7342	5.9961	8.3150

Financial Review for the year ended 31 December 2022

NOTES TO THE FINANCIAL STATEMENT FOR THE YEAR ENDED 31 DECEMBER, 2022

Financial Summary VRA

		2018	2019	2020	2021	2022
Return on Average Equity	%	9.07	10.2	9.54	4.12	2.38
Return on Average Net Fixed Assets -Plant in Operation	%	8.18	10.4	10.29	4.50	2.61
Current Assets Ratio	Times	1.17	1.16	1.18	1.26	1.36
Debt Service Ratio	Times	0.71	0.9	0.77	0.75	0.55
Gearing Ratio	%	27.11	9.25	8.86	9.85	8.70
GWh Generated and Purchased less Station Use (X 106)	GWh	9,597	11,364	10,476	11,586	12,643
Total Production Expense including depreciation per MWh	GH¢	407	291	302	312	402
Total cost of production including depreciation and interest but excluding Debt Fluctuation per MWh	GH¢	386	323	275.30	288	354
Average Revenue/MWh Generated and Purchased	GH¢	322	352	366.76	497	350
Total Installed Capacity	MW	2,684	2,520	2,651	2,651	2532
Ratio of gross hydro generation to firm capability of Akosombo and Kpong	%	96	117.13	113.65	116	117.08
System Peak Demand	MW	2,371	2,881	2,857	2886	3007
Ratio of System Peak Demand to Installed Capacity	%	88	114.33	107.77	108.86	119

Financial Review for the year ended 31 December 2022

NOTES TO THE FINANCIAL STATEMENT FOR THE YEAR ENDED 31 DECEMBER, 2022

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 2022.

The Authority's Directors are responsible for the preparation of the consolidated and separate financial statements that give a true and fair view of the consolidated and separate financial statements of Volta River Authority, comprising the consolidated and separate statement of financial position at 31 December 2022, 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 2022

NOTES TO THE FINANCIAL STATEMENT FOR THE YEAR ENDED 31 DECEMBER, 2022

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) thereby reducing the liquidity risk concerns that have plagued the power sector in recent years.

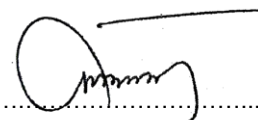
APPROVAL OF THE FINANCIAL STATEMENTS

The financial statements were approved by the Board of Directors on 27th April, 2023 and are signed on their behalf by:



KOFI TUTU AGYARE
BOARD CHAIRMAN

Date: 27/04/2023



EMMANUEL ANTWI-DARKWA
CHIEF EXECUTIVE

Date: 27/04/2023

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 interest of good governance. As indicated in the statement of responsibilities of Directors and notes to the accounts, the business adopts standard accounting practices and ensures sound internal control to facilitate the reliability of the financial statements.

The Board of Directors

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

The Risk and Audit Committee

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

Systems of Internal Control

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

Code of Business Ethics

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

Conflict of Interest

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

Financial Review for the year ended 31 December 2022

NOTES TO THE FINANCIAL STATEMENT FOR THE YEAR ENDED 31 DECEMBER, 2022

INDEPENDENT AUDITOR'S REPORT TO THE MEMBERS OF THE VOLTA RIVER AUTHORITY AND ITS SUBSIDIARIES

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 Volta River Authority, which comprise the consolidated and separate Statements of Financial Position at 31 December, 2022, 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 21 to 63.

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, 2022, 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 (IFRS) and in the manner required by the Volta River Development Act, 1961 (Act 46), as amended by Act 2005 (Act 692) and the Companies Act 2019, (Act 992).

Basis of Opinion

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

Other Information

The Directors are responsible for the other information. The other information comprises the information included in the Annual Report and the Report of the Directors as required by the Volta River Development Act 1961, (Act 46), as amended by 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 2005, (Act 692) 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 2022

NOTES TO THE FINANCIAL STATEMENT FOR THE YEAR ENDED 31 DECEMBER, 2022

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

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance but is not a guarantee that an audit conducted in accordance with 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, 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 risks, 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 uncertainty exists related to events or

conditions that may cast significant doubt on the ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the Financial Statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However future events or conditions may cause the Group to cease to continue as a going concern.

- Evaluate the overall presentation, structure, and content of the Financial Statements, including the disclosures, and whether the Financial Statements represent the underlying transactions and events in a manner that achieves fair presentation.
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the consolidated and separate financial statements. We are responsible for the direction, supervision, and performance of the Group audit. We remain solely responsible for our audit opinion.

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

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

From the matters communicated with the Directors, we determine those matters that were of most significance in the audit of the Financial Statements of the current period and are therefore the key audit matters. We describe these matters in our auditor's 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 2022

NOTES TO THE FINANCIAL STATEMENT FOR THE YEAR ENDED 31 DECEMBER, 2022

Report on other legal and Regulatory Requirements.

The Companies Act, 2019 (Act 992) 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.
2. 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
3. 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) agree with the books of account.
4. We are independent of the Authority and its subsidiaries pursuant to section 143 of the Act.



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

Dated: 28 April, 2023

Financial Review for the year ended 31 December 2022

NOTES TO THE FINANCIAL STATEMENT FOR THE YEAR ENDED 31 DECEMBER, 2022

STATEMENT OF FINANCIAL POSITION AS AT 31 DECEMBER 2022

		VRA		GROUP	
		2022	2021	2022	2021
	Note	GH¢'000	GH¢'000	GH¢'000	GH¢'000
ASSETS					
Property, Plant and Equipment	8b	25,349,408	17,794,309	35,655,159	25,227,429
Intangible Assets	8d	-	-	-	-
Investment in Subsidiaries	9	460,825	460,276	-	-
Investment in Equity Securities	9b	-	-	856,270	14,104
Other long term investments	10	174,726	102,765	1,245,176	1,764,199
Trade and other Receivables	12	23,312	23,269	23,312	23,269
Non-current Assets		26,008,271	18,380,619	37,779,917	27,029,001
Inventory	11	502,485	431,712	567,883	479,482
Trade and Other Receivables	12	10,288,370	7,635,703	10,070,040	7,647,803
Current Tax Assets	7b	-	-	2,145	1,163
Short term investments	13	33,261	83,334	393,604	131,029
Cash and Cash Equivalents	14	927,495	480,820	1,779,544	975,299
Current Assets		11,751,611	8,631,569	12,813,216	9,234,777
Total Assets		37,759,882	27,012,189	50,593,133	36,263,778
Equity					
Investment by Republic of Ghana	17	4,617,713	4,433,937	4,617,713	4,433,937
Retained Earnings Account		49,966	(279,085)	(296,462)	(397,449)
Revaluation Surplus	18	21,861,957	14,097,485	33,135,435	22,308,332
Debt Contingency Fund Reserve	21	38,921	38,921	38,921	38,921
Government of Ghana Grant	20	-	-	2,598	1,232
Total Equity		26,568,557	18,291,259	37,498,205	26,384,973

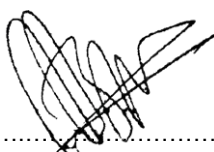
Financial Review for the year ended 31 December 2022

NOTES TO THE FINANCIAL STATEMENT FOR THE YEAR ENDED 31 DECEMBER, 2022

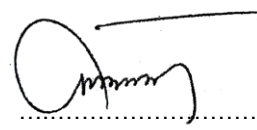
STATEMENT OF FINANCIAL POSITION AS AT 31 DECEMBER 2022

		VRA		Group	
		2022	2021	2022	2021
LIABILITIES	Note	GHC'000	GHC'000	GHC'000	GHC'000
Employee Benefit Obligations	19	271,124	243,963	322,975	290,331
Trade and other Payables	15	270,067	269,740	270,067	270,615
Capital Grant	15	-	328	49,068	43,859
Deferred Tax	7c	-	-	272	411
Borrowings	16	1,990,600	1,345,862	2,150,247	1,445,696
Non-Current Liabilities		2,531,791	1,859,892	2,792,630	2,050,911
Trade and Other Payables	15	8,363,103	6,404,819	9,692,130	7,045,482
Current Tax	7b	-	-	473,384	426,024
Borrowings	16	296,431	456,219	136,783	356,387
Current Liabilities		8,659,534	6,861,038	10,302,298	7,827,893
Total Liabilities		11,191,326	8,720,930	13,094,927	9,878,805
Total Equity and Liabilities		37,759,882	27,012,189	50,593,133	36,263,778

The Financial Statements were approved by the Board of Directors on 27th April, 2023 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 2022

NOTES TO THE FINANCIAL STATEMENT FOR THE YEAR ENDED 31 DECEMBER, 2022

STATEMENT OF PROFIT OR LOSS AND OTHER COMPREHENSIVE INCOME FOR THE YEAR ENDED 31 DECEMBER 2022

		VRA		GROUP	
		2022	2021	2022	2021
		GH¢'000	GH¢'000	GH¢'000	GH¢'000
Note					
Revenue	2a	5,453,530	3,932,207	5,739,885	4,219,986
Cost of Sales	3	(4,358,801)	(3,054,944)	(5,235,220)	(3,498,073)
Gross Profit/(Loss)		1,094,729	877,263	504,665	721,914
Other Operating Income	2b	166,161	132,106	369,805	265,637
Government of Ghana Support on AMERI tariff shortfall	2c	-	127,294	-	127,294
Administrative Expenses	4	(727,450)	(563,341)	(1,012,915)	(759,433)
		(561,289)	(303,941)	(643,110)	(366,502)
Operating profit/(Loss)		533,440	573,321	(138,445)	355,411
Financial Income	5a	9,125	7,811	169,655	240,346
Financial Expenses	6	(116,466)	(87,596)	(120,833)	(91,015)
Net Exchange Loss		(315,206)	(380,779)	(88,479)	(389,454)
Profit / (Loss) before taxation		110,893	112,757	(178,102)	115,289
Taxation	7a	-	-	(99,081)	(55,290)
Profit / (Loss) for the year		110,893	112,757	(277,183)	59,999
Other Comprehensive Income					
Items that will not be reclassified to profit or loss:					
Revaluation of Property, Plant and Equipment	18	8,004,536	8,503,971	11,226,143	15,034,171
Other Comprehensive Income, net of tax		8,004,536	8,503,971	11,226,143	15,034,171
Total Comprehensive Income		8,115,429	8,616,727	10,948,960	15,094,169

Financial Review for the year ended 31 December 2022

NOTES TO THE FINANCIAL STATEMENT FOR THE YEAR ENDED 31 DECEMBER, 2022

STATEMENT OF CHANGES IN EQUITY FOR THE YEAR ENDED 31 DECEMBER 2022

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
2022					
Balance at 1st January, 2022	4,433,938	(279,085)	14,097,485	38,921	18,291,259
* Prior Year Adjustment		(21,907)			(21,907)
Profit (Loss) for the year	-	110,893	-	-	110,893
Other Comprehensive Income	-	-	8,004,536	-	8,004,536
					-
Total Comprehensive Income	-	110,893	8,004,536	-	8,115,429
Additional Investments in VRA	183,776	-	-	-	183,776
Transfer to Retained Earnings (Note 18)	-	240,064	(240,064)	-	-
Transfer to Debt Contingency Fund Reserve	-	-	-	-	-
Balance at 31st December, 2022	4,617,714	49,966	21,861,957	38,921	26,568,558
2021					
Balance as at 1st January 2021	4,305,586	(750,510)	5,952,182	38,921	9,546,179
* Prior Year Adjustment	-	-	-	-	-
Profit (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	18,291,259

Financial Review for the year ended 31 December 2022

NOTES TO THE FINANCIAL STATEMENT FOR THE YEAR ENDED 31 DECEMBER, 2022

STATEMENT OF CHANGES IN EQUITY FOR THE YEAR ENDED 31 DECEMBER 2022

GROUP

	Republic of Ghana	Retained Earnings	Revaluation	Debt Contingency	Government of Ghana	Other	Total
	Contribution	Surplus		Fund Reserve	Grant	Reserves	Equity
	GH¢'000	GH¢'000	GH¢'000	GH¢'000	GH¢'000	GH¢'000	GH¢'000
Balance at 1st January, 2022	4,433,938	(397,449)	22,308,331	38,921	1,232	-	26,384,973
Profit / (Loss) for the year	-	(277,183)	-	-	-	-	(277,183)
Other Comprehensive Income	-	-	11,308,697	-	-	-	11,308,697
Total Comprehensive Income	-	(277,183)	11,308,697	-	-	-	11,031,514
Additional Investments in VRA	183,776	-	-	-	-	-	183,776
*Prior year adjustments	-	378,170	(85,264)	-	-	-	292,906
Government of Ghana Grant	-	-	-	-	1,366	-	1,366
Transfer to Retained Earnings (Note 18)	-	-	(396,329)	-	-	-	(396,329)
Balance at 31st December, 2022	4,617,714	(296,462)	33,135,435	38,921	2,598	-	37,498,205
2021							
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	128,352	-	-	-	-	-	128,352
*Prior year adjustments	-	(1,653)	(7,486)	-	-	-	(9,139)
Government of Ghana Grant	-	-	-	-	-	-	-
Transfer to Retained Earnings (Note 18)	-	420,314	(420,314)	-	-	-	-
Transfer to Debt Contingency Fund Reserve	-	-	-	-	-	-	-
Balance at 31st December, 2021	4,433,938	(397,449)	22,308,331	38,921	1,232	-	26,384,973

* relates to transfer of capital reserves to retained earnings in 2022

Financial Review for the year ended 31 December 2022

NOTES TO THE FINANCIAL STATEMENT FOR THE YEAR ENDED 31 DECEMBER, 2022

STATEMENT OF CASH FLOW FOR THE YEAR ENDED 31 DECEMBER 2022

	Note	VRA		GROUP		
		2022	2021	2022	2021	
		GH¢'000	GH¢'000	GH¢'000	GH¢'000	
Net Cash from Operating Activities		22	637,248	646,220	964,059	1,021,557
Cash Flows from Investing Activities						
Interest Received			-	-	5,552	4,679
Purchasing of Property, Plant and Equipment			(6,481)	(45,998)	(121,227)	(70,350)
Proceeds from sales of Property, Plant and Equipment		8c	546	48	546	48
Deferred expenditure			-	-	-	-
Acquisition of short term investment			-	-	353,412	-
Acquisition of long term investments			(549)	(14,218)	(549)	(14,218)
Payments towards Capital Works-In-Progress			(324,350)	(133,589)	(324,334)	(133,520)
Net Cash used in investing activities			(330,834)	(193,757)	(86,600)	(213,360)
Cash flows from Financing Activities						
Net inflows from increase in stated capital			183,776	-	185,142	1,351
Proceeds from loans and borrowings			69,836	72,283	84,249	51,225
Repayment of borrowings			(163,426)	(241,739)	(224,867)	(215,540)
Payment of finance lease obligations			-	(497,344)	-	(496,038)
Shareholders advance			-	-	7,583	4,019
Net Cash used in financing activities			90,186	(666,800)	52,107	(654,983)
Net increase/(decrease) in Cash and cash equivalents			396,600	(214,337)	929,566	153,213
Cash and cash equivalents at the beginning of the year		14	564,155	778,491	1,106,328	962,225
Exchange rate fluctuation on cash and cash equivalents			-	-	137,253	(9,111)
Cash and cash equivalents at the end of the year			960,756	564,155	2,173,147	1,106,328

Financial Review for the year ended 31 December 2022

NOTES TO THE FINANCIAL STATEMENT FOR THE YEAR ENDED 31 DECEMBER, 2022

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 2022 and the Group's interest in associates. The separate financial statements as at and for the year ended 31st December, 2022 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 16d - leases: whether an arrangement contains a lease.
- Note 16d - lease classification.
- Note 10 - consolidation: whether the Group has significant influence even though it holds less than 20 per cent of the voting rights of another entity.

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 19c - 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

Financial Review for the year ended 31 December 2022

NOTES TO THE FINANCIAL STATEMENT FOR THE YEAR ENDED 31 DECEMBER, 2022

the US inflation rates fairly represents the general price levels for foreign purchases made by the VRA.

1.3 Basis of Consolidation

The Authority's 2022 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 recognized in profit or loss.

Any contingent consideration payable is measured at fair value at the acquisition date. If the contingent consideration is classified as equity, then it is not re-measured and settlement is accounted for within equity. Otherwise, subsequent changes in the fair value of the contingent consideration are recognised in profit or loss.

Subsidiaries

Subsidiary is an entity which the Group has power over, rights to variable returns and the ability to use its power to affect those returns. The accounting policies of subsidiaries have been changed when necessary to align them with the policies adopted by the Group. The financial statements of subsidiaries are included in the consolidated financial statements from the date on which control commences until the date when control ceases. The financial statements of the subsidiaries used to prepare the consolidated financial statements were prepared as of the Authority's reporting date. The subsidiaries consolidated are Volta Lake Transport Company (VLTC), Akosombo Hotel Limited (AHL), Northern Electricity Distribution Company (NEDCo), Takoradi Power Company Limited (TAPCO), VRA Health Services Limited (VHSL), and VRA Property Holding Company Limited (PROPCo).

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 14 "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. The IASB tentatively decided to defer the effective date

Financial Review for the year ended 31 December 2022

NOTES TO THE FINANCIAL STATEMENT FOR THE YEAR ENDED 31 DECEMBER, 2022

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.

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.

Financial Review for the year ended 31 December 2022

NOTES TO THE FINANCIAL STATEMENT FOR THE YEAR ENDED 31 DECEMBER, 2022

(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.

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

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

1.5.6 Financial Instruments

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

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

The Group derecognises a financial asset when the contractual rights to the cash flow from the asset expires, 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 retains 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 comprises Cash and Bank Balances, short term investments, shareholder advances to subsidiaries 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

Financial Review for the year ended 31 December 2022

NOTES TO THE FINANCIAL STATEMENT FOR THE YEAR ENDED 31 DECEMBER, 2022

the actual losses are likely to be greater or lesser than suggested by historical trends.

1.5.8 Financial Liabilities

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

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

1.5.9 Offsetting of financial instruments

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

1.5.10 Property, Plant and Equipment

(i) Recognition and Measurement

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

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

However, the increase is 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 revaluation 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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NOTES TO THE FINANCIAL STATEMENT FOR THE YEAR ENDED 31 DECEMBER, 2022

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		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.

Financial Review for the year ended 31 December 2022

NOTES TO THE FINANCIAL STATEMENT FOR THE YEAR ENDED 31 DECEMBER, 2022

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

Financial Review for the year ended 31 December 2022

NOTES TO THE FINANCIAL STATEMENT FOR THE YEAR ENDED 31 DECEMBER, 2022

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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NOTES TO THE FINANCIAL STATEMENT FOR THE YEAR ENDED 31 DECEMBER, 2022

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 will be available against which the asset can be utilised. Deferred tax assets are reviewed at each reporting date

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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

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this, the group conducts active business intelligence activities and maintains contacts with key decision makers and relevant stakeholders. The Group also belongs to various national and international trade organisations.

1.8.2.2 Operational Risk

Operational 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, and controls and follow-up routines.
- Legal risks - this includes risk of loss arising from the non-fulfilment of contracts due to shortcomings in documentation, counterparties lacking the right to enter into contracts or uncertainties regarding contract validity.
- IT risks - the risk of loss due to defects in IT systems.
- Safety risks - the risk of outages due to deficient safety work.

1.8.2.3 Electricity Price Risk

Electricity Price Risk is the risk that has the greatest bearing on the Group's operations. Electricity prices are determined by the Public Utilities Regulatory Commission (PURC).

To determine the value of electricity price risk in electricity generation, the Group simulates an anticipated outcome in the electricity tariffs. Forecasts of anticipated generation levels are drawn up, which then serve as the basis for how much is to be anticipated as losses due to tariffs.

1.8.2.4 Price Category Risk

Price Category risk arises when the price of electricity differs between various customer categories. Volta River Authority's price categories risk is controlled centrally and is managed by the Group's Commercial Services 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 owed 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	
	2022	2021	2022	2021
	GH¢'000	GH¢'000	GH¢'000	GH¢'000
Trade Receivables	5,751,756	4,161,037	7,192,180	5,816,172
Receivables from related parties	1,780,910	1,690,782	-	-
Other receivables including receivable from Government of Ghana but excluding fuel receivable from Tema Oil Refinery	1,724,616	1,817,006	1,740,285	1,834,400
Staff Debtors	41,175	37,948	47,598	43,102
Cash and cash equivalents (excluding cash-on-hand)	927,495	480,820	1,779,544	975,299
Long-term investments	174,726	60,839	1,245,176	1,764,199
Short-term investments	-33,261	83,334	393,604	131,029
	10,433,939	8,331,766	12,398,387	10,564,200

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

	VRA		Group	
	2022	2021	2022	2021
	GH¢'000	GH¢'000	GH¢'000	GH¢'000
Wholesale (ECG)	1,949,762	1,949,762	1,949,762	1,949,762
Distribution to end-users	3,801,994	2,211,275	5,242,418	3,866,409
	5,751,756	4,161,037	7,192,180	5,816,172

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NOTES TO THE FINANCIAL STATEMENT FOR THE YEAR ENDED 31 DECEMBER, 2022

Impairment Losses

The ageing of trade receivables at the reporting date was:

VRA

	Gross	Impairment allowance	Gross	Impairment allowance
	31-Dec-22	31-Dec-22	31-Dec-21	31-Dec-21
	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	4,202,825	230,666	2,612,107	286,406
	5,751,756	230,666	4,161,038	286,406

GROUP

	Gross	Impairment allowance	Gross	Impairment allowance
	31-Dec-22	31-Dec-22	31-Dec-21	31-Dec-21
	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	292,484	4,060,717	321,451
	7,192,180	292,484	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.

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NOTES TO THE FINANCIAL STATEMENT FOR THE YEAR ENDED 31 DECEMBER, 2022

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, 2022 - VRA	Total amount	Less than 6 months	6-12 months	1-2 years	3-4 years	More that 5 years
	GH¢'000	GH¢'000	GH¢'000	GH¢'000	GH¢'000	GH¢'000
Trade payables	8,046,568	8,024,264	22,304	-	-	-
Payable to related parties	275,783		275,783	-	-	-
Accrued Expenses	5,613	5,613	-	-	-	-
Sundry creditors, excluding statutory obligations	13,719	9,603	4,116	-	-	-
Borrowings, excluding finance lease obligations	2,284,560	519,442	336,016	307,275	875,827	246,000
Other payables- non-current	270,067	-	-	270,067	-	-
Finance Lease Obligations	2,470	2,470	-	-	-	-
	10,898,780	8,561,392	638,219	577,342	875,827	246,000

December 31, 2021 - VRA	Total amount	Less than 6 months	6-12 months	1-2 years	3-4 years	More that 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

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NOTES TO THE FINANCIAL STATEMENT FOR THE YEAR ENDED 31 DECEMBER, 2022

December 31, 2022 - 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	8,805,101	7,247,026	1,558,075	-	-	-
Payable to related parties	-	-	-	-	-	-
Accrued Expenses	5,613	5,613	-	-	-	-
Sundry creditors, excluding statutory obligations	837,293	760,622	76,671	-	-	-
Borrowings, excluding finance lease obligations	2,284,560	808,171	216,292	307,275	866,202	86,620
Other payables- non-current	270,067	-	-	270,067	-	-
Finance Lease Obligations	2,470	2,470	-	-	-	-
	12,205,105	8,823,902	1,851,038	577,342	866,202	86,620

December 31, 2021 - GROUP

	Total amount	Less than 6 months	6-12 months	1-2 years	3-4 years	More than 5 years
	GH¢'000	GH¢'000	GH¢'000	GH¢'000	GH¢'000	GH¢'000
Trade payables	6,911,799	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	2,019,953	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.

Financial Review for the year ended 31 December 2022

Exposure to Currency Risk

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

2022-in thousands	USD	EUR	SDR	KD	CHF	GBP	SKR	CAD	ZAR	UA
Account receivable	707,970									-
Cash and Bank balances	95,352	1,862				-				
Investments	14,329									-
Account payables	(946,864)	(9,721)	-	(261)	-	(37)	(286)	(15)	(11)	-
Borrowings	(172,713)	(71,398)		(4,325)						-
	(301,926)	(79,257)	-	(4,586)	-	(37)	(286)	(15)	(11)	-
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 payables	(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)	-
December 2022	USD	EUR	SDR	KD	CHF	GBP	SKR	CAD	ZAR	UA
Reporting date spot rate	8.3150	8.8558	13.6074	33.3232	8.9907	10.0084	0.7950	6.1373	0.4902	11.4133
Average rate	8.2695	8.6484	11.9647	29.2965	8.6421	10.1236	0.8104	6.3203	0.5013	11.5590
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	0.3950	8.2804

Sensitivity

A 5% strengthening of the GH¢, as indicated below, against the currencies above at 31st December, 2022 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 2021, albeit that the reasonably possible foreign exchange rate variance were different, as indicated below:

Financial Review for the year ended 31 December 2022

NOTES TO THE FINANCIAL STATEMENT FOR THE YEAR ENDED 31 DECEMBER, 2022

Effect in thousands of GH¢

	USD	EUR	SDR	KD	CHF	GBP	SKR	CAD	ZAR	UA
2022	(124,839)	(34,272)	-	(6,718)	-	(19)	(12)	(5)	(0)	-
2021	(166,592)	(18,373)	-	(4,408)	-	(14)	(10)	(18)	(0)	-

A 5% weakening of the Ghana Cedi against the currencies above at 31st December 2022 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	
	2022	2021	2022	2021
	GH¢'000	GH¢'000	GH¢'000	GH¢'000
Fixed Rate Instruments				
Financial Liabilities	2,470	2,470	2,470	1,260,058
Variable rate Instruments				
Financial Assets	33,261	83,334	393,604	131,029
Financial Liabilities	2,284,560	1,799,610	2,284,560	542,026

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, 2022				
Financial Liabilities	247	(247)	247	(247)
31st December, 2021				
Variable rate instruments	228,456	(228,456)	228,456	(228,456)

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

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Revenue	VRA				GROUP			
	2022		2021		2022		2021	
	GWh	GH¢'000	GWh	GH¢'000	GWh	GH¢'000	GWh	GH¢'000
2a. Sale of Electricity								
Electricity Company of Ghana	4,990	1,352,447	4,342	1,105,530	4,990	1,352,447	4,342	1,105,530
Mines	1,496	1,256,858	1,410	816,434	1,496	1,256,858	1,410	816,434
Akosombo Textiles	3	1,343.00	3	1,333	3	1,343	3	1,333
Aluworks	2	1,557.00	6	2,700	2	1,557	6	2,700
Diamond Cement	26	13,038.00	35	15,740	26	13,038	35	15,740
Volta Aluminium Co. Ltd.	772	171,993.00	772	123,522	772	171,993	772	123,522
Others	157	30,195	141	29,161	157	30,195	141	29,161
GRIDCo (Transmission Loss Recoveries)	922	156,960	1,105	265,203	922	156,960	1,105	265,203
Substation Use (GRIDCo.)	11	3,023	10	2,935	11	3,023	10	2,935
Northern Electircity Dist. Co.(NEDCo)	1,824	716,132	1,753	596,406	1,110	1,002,487	1,059	884,186
Local Customers	10,203	3,703,546	9,577	2,958,964	9,489	3,989,901	8,883	3,246,744
Communaute Electrique Du Benin	743	476,779	574	282,628	743	476,779	574	282,628
Compagne Ivoirienne d'Electricité	267	270,965	197	138,059	267	270,965	197	138,059.42
Société National D'elect Du Burkina	20	19,466	20	13,617	20	19,466	20	13,617
Sonabel Youga Mines	7	5,323	42	29,208	7	5,323	42	29,208
Sonabel Bolga-Ougadougou	1,177	885,083	900	431,534	1,177	885,083	900	431,534
Free Zone Companies	228	92,368	232	78,196	228	92,368	232	78,196
Foreign Customers	2,442	1,749,984	1,965	973,242	2,442	1,749,984	1,965	973,242
Total Sale of Electricity	12,645	5,453,530	11,542	3,932,207	11,931	5,739,885	10,848	4,219,986

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NOTES TO THE FINANCIAL STATEMENT FOR THE YEAR ENDED 31 DECEMBER, 2022

2b. Other Operating Income

	VRA		Group	
	2022	2021	2022	2021
	Ghc'000	Ghc'000	Ghc'000	Ghc'000
Real Estates	15,710	11,905	15,710	11,905
Health Services	-	-	37,950	29,819
Schools	26,749	12,221	26,749	12,221
Service Charge	64,461	41,970	64,461	41,970
Profit on Sale of Fixed Assets	546	48	546	48
Gas Sales Proceeds	36,633	22,735	36,633	22,735
PROPCo	-	-	8,308	-
Other Income	22,062	43,227	144,394	114,696
Ferry Services	-	-	24,066	24,447
Hospitality Services	-	-	10,988	7,796
	-	-	-	-
Total	166,161	132,106	369,805	265,637

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	
	2022	2021	2022	2021
	Ghc'000	Ghc'000	Ghc'000	Ghc'000
	-	127,294	-	127,294
	-	127,294	-	127,294

3. Cost of Sales/ Operating Costs

Analysis by budget center:

	VRA		Group	
	2022	2021	2022	2021
	Ghc'000	Ghc'000	Ghc'000	Ghc'000
Generation: Hydro	93,042	61,161	93,042	61,161
Thermal	1,829,477	1,475,620	1,829,477	1,441,167
Distribution(NEDCo)	-	-	440,205	352,232
Purchase of Electricity	1,739,147	1,189,007	1,757,309	1,213,907
Depreciation	697,135	329,157	1,115,186	429,606
Total	4,358,801	3,054,944	5,235,219	3,498,073

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NOTES TO THE FINANCIAL STATEMENT FOR THE YEAR ENDED 31 DECEMBER, 2022

3. Cost of Sales/ Operating Costs	VRA		Group	
	2022	2021	2022	2021
	Ghc'000	Ghc'000	Ghc'000	Ghc'000
Analysis by cost element:				
Salaries and Related Expenses	209,650	162,657	424,694	338,075
Materials and Spares Consumed	-	-	38,869	13,612
Repairs and Maintenance	161,491	65,658	171,946	81,926
Fuel Handling and Usage	1,501,097	1,306,803	1,501,097	1,272,350
Purchase of Electricity	1,739,147	1,189,007	1,757,309	1,213,908
Transmission Service Charge	-	-	151,258	125,196
Depreciation	697,135	329,157	1,115,187	429,606
Other Operating Costs	50,281	1,663	74,859	23,400
Total	4,358,801	3,054,944	5,235,220	3,498,072

4. Administrative Expenses	VRA		Group	
	2022	2021	2022	2021
	Ghc'000	Ghc'000	Ghc'000	Ghc'000
Analysis by budget center:				
Central Services	442,590	404,826	604,916	517,681
Schools	50,157	38,676	50,157	38,676
Real Estates	104,661	83,383	104,661	83,383
Health Services	-	-	77,907	63,756
Depreciation	83,135	36,456	103,112	55,938
Impairment Loss on Receivables	46,907	-	72,162	-
Total	727,450	563,341	1,012,915	759,433

Analysis by cost element :				
Salaries and Related Expenses	397,651	316,634	555,811	436,164
Repairs & Maintenance	38,047	24,400	44,291	29,266
Other Administrative Cost	148,681	174,172	220,799	221,631
Depreciation	83,135	36,456	103,112	55,938
Employees Benefits	12,088	11,162	15,162	13,925
Audit Fees	-	-	32	24
Audit Expenses	218	218	344	312
Directors Remuneration	723	299	1,202	639
Impairment Loss on Receivables	46,907	-	72,162	1,534
Total	727,450	563,341	1,012,915	759,433
Total Operating & Admin Cost	5,086,251	3,618,285	6,248,135	4,257,506

Financial Review for the year ended 31 December 2022 (Continued)

NOTES TO THE FINANCIAL STATEMENT FOR THE YEAR ENDED 31 DECEMBER, 2022

5a. Financial Income	VRA		Group	
	2022	2021	2022	2021
	Ghc'000	Ghc'000	Ghc'000	Ghc'000
Interest & Investment Income	9,125	7,811	169,655	240,346
	9,125	7,811	169,655	240,346

6. Financial Expenses	VRA		Group	
	2022	2021	2022	2021
	Ghc'000	Ghc'000	Ghc'000	Ghc'000
Interest on Long Term Loans	7,159	3,496	7,159	3,496
Interest on Medium Term Loans	36,944	39,751	36,944	39,751
Interest on Short Term Loans	2,423	4,753	6,790	8,172
Finance Cost on Ameri Finance Lease	-	1,308	-	1,308
Finance Cost on Defined Benefit Obligations	33,287	29,836	33,287	29,836
Interest on Delayed Invoices	36,653	8,452	36,653	8,452
Total	116,466	87,596	120,833	91,015

7. Taxation (Group)

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	
	2022	2021
	Ghc'000	Ghc'000
Current Tax Expense - Note 7 (b)	99,220	55,431
Deferred Tax Expense - Note 7 c.	(139)	(141)
	99,081	55,290

Financial Review for the year ended 31 December 2022 (Continued)

NOTES TO THE FINANCIAL STATEMENT FOR THE YEAR ENDED 31 DECEMBER, 2022

7b. Current Tax

Movement in current tax balance are shown below:

2022	Bal.at Jan 1	Payment	Charge for the year	Adjustments	Bal. at Dec.31
	Ghc'000	Ghc'000	Ghc'000	Ghc'000	Ghc'000
Before 2019	185,710				185,710
2019	84,309				84,309
2020	48,714				48,714
2021	55,431				55,431
2022	-	-	99,220		99,220
	374,164	-	99,220	-	473,384

2021	Bal.at Jan 1	Payment	Charge for the year	Adjustments	Bal. at Dec.31
	Ghc'000	Ghc'000	Ghc'000	Ghc'000	Ghc'000
Before 2018	181,112				181,112
2018	56,458				56,458
2019	84,309				84,309
2020	48,714				48,714
2021	-	-	55,431	-	55,431
	370,593	-	55,431	-	426,024

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

	Group	
	2022	2021
	Ghc'000	Ghc'000
Current tax payable	473,384	426,024
Current tax receivable	(2,145)	(1,163)
Total	471,239	424,861

7c. Deferred Tax

Movements in Deferred Taxes are shown below:

	Group	
	2022	2021
	Ghc'000	Ghc'000
Balance at 1 January	411	552
Charged to profit or loss	(139)	(141)
Balance at 31st December	272	411

Financial Review for the year ended 31 December 2022 (Continued)

NOTES TO THE FINANCIAL STATEMENT FOR THE YEAR ENDED 31 DECEMBER, 2022

8a. Capital Work-in-Progress

GROUP	Generation Assets	Power Distribution Network	Others	Total
	Ghc'000	Ghc'000	Ghc'000	Ghc'000
2022				
Balance as at Jan 1, 2022	695,514	193,657	228,908	1,118,079
Reclassification	-	-	-	-
	695,514	193,657	228,908	1,118,079
Additions during the year	279,818	81,831	1	361,650
Write off	-	-	-	-
Transfers	-	(61,852)	(37,299)	(99,151)
Balance as at Dec 31, 2022	975,332	213,636	191,610	1,380,578
2021	Ghc'000	Ghc'000	Ghc'000	Ghc'000
Balance as at Jan 1, 2021	690,779	196,619	106,110	993,507
Reclassification	-	-	0	-
Additions during the year	151,541	5,014	134,866	291,421
Write off	-	-	(700.34)	(700.34)
Transfers	(146,806)	(7,976)	(11,367)	(166,149)
Balance as at Dec 31, 2021	695,514	193,657	228,908	1,118,079

VRA	Generation Assets	Power Distribution Network	Others	Total
	Ghc'000	Ghc'000	Ghc'000	Ghc'000
2022				
Balance as at Jan 1, 2022	695,514	39,759	226,096	961,369
Reclassification	-	-	-	-
	695,514	39,759	226,096	961,369
Additions during the year	279,818	81,831	-	361,649
write off	-	-	-	-
Transfers during the year	-	-	(37,299)	(37,299)
Transfer to NEDCo	-	-	-	-
Balance as at Dec 31, 2022	975,332	121,590	188,797	1,285,719
2021	Ghc'000	Ghc'000	Ghc'000	Ghc'000
Balance as at Jan 1, 2021	690,779	34,745	102,256	827,780
Reclassification	-	-	-	-
Additions during the year	151,541	5,014	134,533	291,088
write off	-	-	(700)	(700)
Transfers	(146,806)	-	(9,993)	(156,799)
Transfer to NEDCo	-	-	-	-
Balance as at Dec 31, 2021	695,514	39,759	226,096	961,369

Financial Review for the year ended 31 December 2022 (Continued)

8b. Property, Plant and Equipment

	Dam Power House and Civil Works	Generating Plant & Machinery	Townships	Building	Floating Craft	Motor Vehicles	Equipment & Furniture	Total
	Ghc'000	GHc'000	Ghc'000	Ghc'000	Ghc'000	Ghc'000	Ghc'000	Ghc'000
VRA 2022								
A. VALUATION								
Balance as at Jan 1, 2022	11,548,808	11,408,923	818,533	394,048	125,235	201,913	130,059	24,627,519
Transfer & Adjustments								-
Disposal						-		-
Revaluation surplus	5,024,023	5,432,671	333,411	235,223	59,355	38,781	27,357	11,150,821
Additions (including transfers from CWIP)	-	-	-	-		6,263	218	6,481
Balance as at Dec. 31, 2022	16,572,831	16,841,594	1,151,944	629,271	184,590	246,957	157,634	35,784,821
B. DEPRECIATION								
As At Jan.1, 2022	3,372,955	3,823,644	229,618	24,120	94,190	139,876	110,175	7,794,578
Disposal/Transfers						-		-
Charge for the period	182,053	511,384	38,645	20,478	5,060	14,413	8,236	780,269
Revaluation surplus	1,130,397	1,820,743	101,036	18,461	44,573	12,048	19,027	3,146,285
Balance as at Dec 31, 2022	4,685,405	6,155,771	369,299	63,059	143,823	166,337	137,438	11,721,132
C. Carrying Amount								
Balance as at Dec. 31, 2022	11,887,426	10,685,823	782,645	566,212	40,767	80,620	20,196	24,063,689
Work-in-Progress as at Dec 31, 2022 (Note 8a)								1,285,719
								25,349,408

Financial Review for the year ended 31 December 2022 (Continued)

8b. Property, Plant and Equipment

VRA 2021

A. VALUATION

	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
Balance as at Jan 1, 2021	9,813,766	7,627,575	744,561	440,686	102,092	124,006	61,598	18,914,285
Transfer & Adjustments								-
Disposal						(112)		(112)
Revaluation surplus	1,735,042	3,775,894	67,217	(52,422)	23,143	51,057	67,416	5,667,347
Additions (including transfers from CWIP)	-	5,453	6,755	5,784		26,961	1,044	45,998
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

B. DEPRECIATION

As At Jan.1, 2021	5,509,179	4,058,095	392,896	38,092	102,015	113,065	52,359	10,265,701
Disposal/Transfers						(112)		(112)
Charge for the period	131,962	190,956	24,179	10,172	28	5,571	2,745	365,613
Revaluation surplus	(2,268,187)	(425,407)	(187,458)	(24,143)	(7,853)	21,352	55,071	(2,836,624)
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

C. 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
								17,794,30

Financial Review for the year ended 31 December 2022 (Continued)

8b. Property, Plant and Equipment

	Dam Power House and Civil Works	Generating Plant & Machinery	Power Distribution Network	Townships	Building	Floating Craft	Motor Vehicles	Equipment& Furniture	Total
	Ghc'000	Ghc'000	Ghc'000	Ghc'000	Ghc'000	Ghc'000	Ghc'000	Ghc'000	Ghc'000
GROUP 2022									
A. VALUATION									
Balance as at Jan 1, 2022	11,548,808	11,408,923	9,662,243	835,883	634,936	576,322	354,189	200,513	35,221,817
Transfers/Adjustments			61,852	(4,803)	53	-	1,670	-	58,771.58
Disposal							-		-
Revaluation surplus	5,024,023	5,432,671	4,630,663	320,864	304,821	59,355	88,212	39,169	15,899,778
Additions (including transfers from CWIP)		511	-	-	455	497	2,228	1,924	5,614
Bal as at Dec. 31, 2022	16,572,831	16,842,105	14,354,758	1,151,944	940,264	636,174	446,298	241,606	51,185,980
B. DEPRECIATION									
As at Jan. 1, 2022	3,372,954	3,759,143	2,820,816	243,287	68,533	456,406	237,198	154,130	11,112,467
Disposal/Transfers							-		-
Charge for the period	182,053	512,175	396,391	38,792	26,465	27,801	30,566	15,441	1,229,683
Revaluation Adjustment	1,130,397	1,820,743	1,400,652	88,133	26,457	44,573	31,832	26,462	4,569,249
as at Dec 31, 2022	4,685,404	6,092,061	4,617,859	370,212	121,455	528,780	299,596	196,032	16,911,399
C. NET BOOK VALUE									
As at Dec 31, 2022	11,887,429	10,750,044	9,736,899	781,732	818,809	107,394	146,703	45,573	34,274,581
									1,380,578
									35,655,159

Financial Review for the year ended 31 December 2022 (Continued)

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									
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)	-
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
Prior Year Adjustment		-							-
Disposal/Transfers			-		-		(112)		(112)
Charge for the period	135,552	190,956	59,693	24,326	12,752	11,398	13,490	6,512	454,679
Revaluation Adjustment	(2,271,777)	(425,407)	(1,105,232)	(187,458)	(41,397)	(7,853)	34,787	71,619	(3,929,127)
as at Dec 31, 2021	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 2022 (Continued)

NOTES TO THE FINANCIAL STATEMENT FOR THE YEAR ENDED 31 DECEMBER, 2022

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	
	2022	2021	2022	2021
	Ghc'000	Ghc'000	Ghc'000	Ghc'000
Cost	399	112	399	1,025
Accumulated Depreciation	(399)	(112)	(399)	(1,025)
Carrying amount	-	-	-	0
Revaluation on disposed assets	-	-	-	-
Net Carrying Amount	-	-	-	-
Proceeds from Disposal	546	48	546	48
Adjustment	-	-	-	-
Profit /(loss) on disposal	546	48	546	48

8d Intangible Assets				
Cost				
Balance as at Jan 1	-	-	160	159
Additions	-	-	-	-
Balance as at Dec. 31	-	-	160	159
Amortisation				
Balance as at Jan 1	-	-	160	129
Charge for the year	-	-	-	29
Balance as at Dec 31	-	-	160	159
Carrying Amount	-	-	-	-

9a. Investment in Subsidiaries				
TAPCO(100% owned)	169,113	169,113	-	-
VLTC(100% owned)	1,123	1,123	-	-
AHL (100% owned)	5,624	5,625	-	-
PROPCO (100%)	36,046	36,046	-	-
NEDCo(100 %)	200,000	200,000	-	-
VHSL (100% Owned)	48,919	48,369	-	-
	460,825	460,276	-	-

All the subsidiaries are incorporated in the Republic of Ghana.

9b. Investment in Equity Securities managed by TAPCo

TICO (10% Owned)	4,516	4,516
WAGPCo (16.38% Owned)	851,754	9,588
	856,270	14,104

Financial Review for the year ended 31 December 2022 (Continued)

NOTES TO THE FINANCIAL STATEMENT FOR THE YEAR ENDED 31 DECEMBER, 2022

10 Other Long Term Investments

	VRA		Group	
	2022	2021	2022	2021
	Ghc'000	Ghc'000	Ghc'000	Ghc'000
Debt Contingency Fund	119,146	60,839	119,146	60,839
Other Long Term Investment	55,580		1,126,030	1,703,360
	<u>174,726</u>	<u>60,839</u>	<u>1,245,176</u>	<u>1,764,199</u>

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	
	2022	2021	2022	2021
	Ghc'000	Ghc'000	Ghc'000	Ghc'000
Inventory and spare parts	268,017	245,632	333,415	293,402
Write down for obsolescence	-	-	-	-
	<u>268,017</u>	<u>245,632</u>	<u>333,415</u>	<u>293,402</u>
Fuel for Thermal Plant	234,468	186,080	234,468	186,080
	<u>502,485</u>	<u>431,712</u>	<u>567,883</u>	<u>479,482</u>

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

12 Trade and other Receivables

	VRA		Group	
	2022	2021	2022	2021
	Ghc'000	Ghc'000	Ghc'000	Ghc'000
Trade Receivables	5,751,756	4,161,037	7,192,180	5,816,172
Provision for expected credit losses	(230,666)	(183,759)	(292,484)	(220,338)
	<u>5,521,090</u>	<u>3,977,278</u>	<u>6,899,696</u>	<u>5,595,833</u>
Prepayments	112,191	135,959	217,096	197,359
Amounts due from related parties	1,780,910	1,690,782	56,976	379
Amount due from Government of Ghana in respect of the AMERI transaction - Note 2(c)	1,131,700	-	1,131,700	-
Other Receivables	1,724,616	1,817,006	1,740,285	1,834,400
Staff Advances	41,175	37,948	47,598	43,102
	<u>10,311,682</u>	<u>7,658,972</u>	<u>10,093,352</u>	<u>7,671,073</u>
Current	10,288,370	7,635,703	10,070,040	7,647,803
Non-current	23,312	23,269	23,312	23,269
	<u>10,311,682</u>	<u>7,658,972</u>	<u>10,093,352</u>	<u>7,671,073</u>

Financial Review for the year ended 31 December 2022 (Continued)

NOTES TO THE FINANCIAL STATEMENT FOR THE YEAR ENDED 31 DECEMBER, 2022

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	
	2022	2021	2022	2021
	Ghc'000	Ghc'000	Ghc'000	Ghc'000
Foreign Currency	809,341	343,473	817,563	343,473
Local Currency	117,647	137,073	961,215	624,505
Cash on Hand	507	274	766	7,321
Cash and cash equivalents in the statement of financial position	927,495	480,820	1,779,544	975,299
Short term investments	33,261	83,334	393,604	131,029
Bank overdraft	-	-	-	-
Cash and cash equivalents in the statement of cash flows	960,756	564,154	2,173,147	1,106,328

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

15 Payables

	VRA		GROUP	
	2022	2021	2022	2021
	Ghc'000	Ghc'000	Ghc'000	Ghc'000
Current Portion				
Trade Payables	8,046,568	6,315,782	8,805,101	6,911,799
Amount due to related parties	275,783	74,388	-	-
Sundry Payables	13,719	14,649	837,293	129,030
Capital Grant	-	-	44,122	1,209
Accruals and Provisions	27,034	-	5,613	3,444
	8,363,104	6,404,819	9,692,130	7,045,482
Capital Grant	-	-	-	-
Non-Current Portion				
Other Payables	270,067	269,740	270,067	270,615
Deferred Tax	-	-	272	411
Capital Grant (Note 20)	-	328	49,068	43,859
	270,067	270,068	319,407	314,884
Total Payables	8,633,171	6,674,887	10,011,537	7,360,366

Financial Review for the year ended 31 December 2022 (Continued)

NOTES TO THE FINANCIAL STATEMENT FOR THE YEAR ENDED 31 DECEMBER, 2022

16a	Borrowings	VRA		Group	
		2022	2021	2022	2021
		Ghc'000	Ghc'000	Ghc'000	Ghc'000
	Current Portion				
	Current portion of long and medium term loans	159,648	99,835	-	-
	Finance lease obligations due within 1 year	2,470	2,470	2,470	2,470
	Bank Overdrafts	-	-	-	3
	Loan interest and commitment charges	71,950	326,305	71,950	326,305
	Short-term borrowings	62,363	27,609	62,363	27,609
		<u>296,431</u>	<u>456,219</u>	<u>136,783</u>	<u>356,387</u>
	Non-Current Portion				
	Finance lease obligations due after 1 year	-	-	-	-
	Amount due after one year but before five years	638,591	399,340	798,239	499,175
	Amount due after five years but before ten years				
	Amount due after ten years	1,352,008	946,521	1,352,008	946,521
		<u>1,990,599</u>	<u>1,345,861</u>	<u>2,150,247</u>	<u>1,445,696</u>
	Total Borrowing	<u>2,287,030</u>	<u>1,802,080</u>	<u>2,287,030</u>	<u>1,802,083</u>

Financial Review for the year ended 31 December 2022 (Continued)

NOTES TO THE FINANCIAL STATEMENT FOR THE YEAR ENDED 31 DECEMBER, 2022

16b. Borrowings - Movement in loan balances

The following shows the movement in loan balances during the year

VRA

	Balance as at 1-01-2022	Drawings	Repayments	Adjustment	Exchange Variation	Balance as at 31-12-2022
	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	16,093				10,155	26,248
Kuwait Fund	70,405				47,481	117,886
Societe General - T3	416,629				158,875	575,504
AFD(Kpong GS Retrofit)	287,621		(31,050)		84,037	340,608
KfW GoG 17MW Photovoltaic System	108,177	33,753			26,313	168,243
KfW GoG 12MW Photovoltaic System II	16,774	42,396			(4,164)	55,006
EIB (Kpong GS Retrofit)	30,822	24,737			12,954	68,513
Subtotal: Long Term Loans	946,521	100,886	(31,050)	-	335,651	1,352,008
Medium Term Loans						
ABSA/STANBIC \$120M		732,324	(193,262)		259,178	798,239
Afrexim \$185m	499,175		(509,575)		10,400	-
Subtotal: Medium Term Loan	499,175	732,324	(702,837)		269,578	798,239
Total: Long and Medium Term Loans	1,445,696	833,210	(733,887)	-	605,229	2,150,247
Loans interest and commitment charges						
	326,305		(254,355)		-	71,950

VRA

	Balance as at 01.01.2022	Drawings	Repayments	Exchange Variation	Balance as at 31-12-2022
	GH c'000	GH c'000	GH c'000	GH c'000	GH c'000
Short Term Loans					
Ghib	27,609	94,415	(32,973)	(26,688)	62,363
Subtotal: Short Term Loans	27,609	94,415	(32,973)	(26,688)	62,363
Finance lease obligations - Note 16c					
	2,470	-	-	-	2,470
Total Borrowings	1,802,080	927,625	(1,021,215)	578,541	2,287,031

Financial Review for the year ended 31 December 2022 (Continued)

NOTES TO THE FINANCIAL STATEMENT FOR THE YEAR ENDED 31 DECEMBER, 2022

16b. Borrowings - Movement in loan balances

The following shows the movement in loan balances during the year

GROUP

	Balance as at 1-01-2022	Drawings	Repayments	Adjustment	Exchange Variation	Balance as at 31-12-2022
	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	16,093	-	-	-	10,155	26,248
Kuwait Fund	70,405	-	-	-	47,481	117,886
Societe General - T3	416,629	-	-	-	158,875	575,504
AFD(Kpong GS Retrofit)	287,621	-	(31,050)	-	84,037	340,608
KfW GoG 17MW Photovoltaic System	108,177	33,753	-	-	26,313	168,243
KfW GoG 12MW Photovoltaic System II	16,774	42,396	-	-	(4,164)	55,006
EIB (Kpong GS Retrofit)	30,822	24,737	-	-	12,954	68,513
Subtotal: Long Term Loans	946,521	100,886	(31,050)	-	335,651	1,352,008
Medium Term Loans						
ABSA/STANBIC \$120M	-	732,324	(193,262)	-	259,178	798,240
Afrexim \$185m	499,175	-	(509,575)	-	10,400	-
Subtotal: Medium Term Loan	499,175	732,324	(702,837)	-	269,578	798,240
Total: Long and Medium Term Loans	1,445,696	-	(733,887)	-	605,229	2,150,248
Loans interest and commitment charges	326,305	-	(254,355)	-	-	71,950
Short Term Loans						
GHIB	27,609	94,415	(32,973)	-	(26,688)	62,363
Subtotal: Short Term Loans	27,609	94,415	(32,973)	-	(26,688)	62,363
Finance lease obligations - Note 16c	2,470	-	-	-	-	2,470
Total Borrowings	1,802,080	927,625	(1,021,215)	-	578,541	2,287,031

Financial Review for the year ended 31 December 2022 (Continued)

NOTES TO THE FINANCIAL STATEMENT FOR THE YEAR ENDED 31 DECEMBER, 2022

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	KWD	3,446,000	4%	2029
IDA 4356	SDR	5,232,026	5.30%	2047
AFD(Kpong GS Retrofit Project)	EUR	23,609,533	1.99	2041

16c. Finance Lease Obligations

Finance lease liabilities are payable as follows:

VRA

	Minimum Lease Payments		Interest		Present Value of Minimum Lease Payment	
	2022	2021	2022	2021	2022	2021
	GH¢'000	GH¢'000	GH¢'000	GH¢'000	GH¢'000	GH¢'000
Less than one year	2,469	2,469	-	-	2,469	2,469
Between one and five years	2,469	2,469	-	-	2,469	2,469

Group

	Minimum Lease Payments		Interest		Present Value of Minimum Lease Payment	
	2022	2021	2022	2021	2022	2021
	GH¢'000	GH¢'002	GH¢'000	GH¢'000	GH¢'000	GH¢'000
Less than one year	3,344	3,344	-	-	3,344	3,344
Between one and five years	-	-	-	-	-	-
	3,344	3,344	-	-	3,344	3,344

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 2022 (Continued)

NOTES TO THE FINANCIAL STATEMENT FOR THE YEAR ENDED 31 DECEMBER, 2022

17. Investment by the Republic of Ghana

	VRA		GROUP	
	2022	2021	2022	2021
	GH¢'000	GH¢'000	GH¢'000	GH¢'000
Balance at beginning of the year	4,433,937	4,305,586	4,433,937	4,305,586
Addition during the year	183,776	128,352	183,776	128,352
Balance at close of the year	4,617,713	4,433,937	4,617,713	4,433,937

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

	VRA		GROUP	
	2022	2021	2022	2021
	GH¢'000	GH¢'000	GH¢'000	GH¢'000
Balance at beginning of the year	14,097,485	5,952,182	22,305,621	7,701,961
Surplus for the year	8,004,536	8,503,971	11,226,143	15,034,171
Adjustments				(7,486)
Transfer to Retained Earnings	(240,064)	(358,668)	(396,329)	(420,314)
Balance at close of the year	21,861,957	14,097,485	33,135,435	22,308,332

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 2022 (Continued)

NOTES TO THE FINANCIAL STATEMENT FOR THE YEAR ENDED 31 DECEMBER, 2022

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

	VRA		GROUP	
	2022	2021	2022	2021
	GH¢'000	GH¢'000	GH¢'000	GH¢'000
Long-service award	49,749	46,460	74,408	69,073
Severance Benefit	26,450	25,122	37,223	34,458
Post-Retirement medical benefit	194,925	172,381	211,344	186,801
	<u>271,124</u>	<u>243,963</u>	<u>322,975</u>	<u>290,331</u>

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		GROUP	
	2022	2021	2022	2021
	GH¢'000	GH¢'000	GH¢'000	GH¢'000
Balance at 1 January	46,459	40,655	69,072	58,908
Included in profit or loss:				
Current service cost	4,895	4,746	6,795	6,481
Past service cost	-	-	-	-
Net interest	6,676	5,902	10,129	9,798
	<u>11,571</u>	<u>10,648</u>	<u>16,924</u>	<u>16,279</u>
Included in other comprehensive income:				
Actuarial loss (gain arising from):				
Actuarial loss (gain arising from)				
Demographic/Financial Assumptions	(684)	3,362	(360)	4,448
Other sources	(684)	3,362	(360)	4,448
Benefits paid	<u>(7,597)</u>	<u>(8,207)</u>	<u>(11,227)</u>	<u>(10,563)</u>
Balance at 31 December	<u>49,749</u>	<u>46,459</u>	<u>74,409</u>	<u>69,073</u>

Financial Review for the year ended 31 December 2022 (Continued)

NOTES TO THE FINANCIAL STATEMENT FOR THE YEAR ENDED 31 DECEMBER, 2022

Severance Benefit

	VRA		Group	
	2022	2021	2022	2021
	GH¢'000	GH¢'000	GH¢'000	GH¢'000
Balance at 1 January	25,122	20,635	34,458	28,119
Included in profit or loss:				
- Current service cost	1,444	1,349	2,057	1,887
- Past services cost				
- Net interest	3,454	2,858	4,934	4,438
	4,898	4,206	6,991	6,325
Included in other comprehensive income:				
actuarial loss (gain arising from)			-	-
- Demographic/Financial assumptions	635	4,371	1,168	4,904
- Other sources	-	-		
	635	4,371	1,168	4,904
Benefits paid	(4,205)	(4,090)	(5,394)	(4,890)
Balance at 31 December	26,450	25,122	37,223	34,458

Post-retirement medical benefit

	VRA		GROUP	
	2022	2021	2022	2021
Balance at 1 January	172,381	157,054	186,801	172,516
Included in profit or loss:				
- Current service cost	5,749	5,066	6,308	5,556
- Past services cost				
- Net interest	23,156	21,076	25,364	23,461
	28,905	26,142	31,672	29,018
Included in other comprehensive income:				
actuarial loss (gain arising from)	-	-	-	-
Demographic/Financial assumptions	(612)	(5,476)	(6,049)	(9,124)
other sources				
	(612)	(5,476)	(6,049)	(9,124)
Benefits paid	(5,749)	(5,339)	(1,081)	(5,608)
Balance at 31 December	194,925	172,381	211,343	186,801

Financial Review for the year ended 31 December 2022 (Continued)

NOTES TO THE FINANCIAL STATEMENT FOR THE YEAR ENDED 31 DECEMBER, 2022

Total

	VRA		GROUP	
	2022	2021	2022	2021
	GH¢'000	GH¢'000	GH¢'000	GH¢'000
Balance at 1 January	243,963	218,344	290,331	259,543
Included in profit or loss:				
- Current service cost	12,088	11,162	15,162	13,925
- Past services cost	-	-	-	-
- Net interest	33,286	29,836	40,426	37,697
	45,374	40,998	55,588	51,622
Included in other comprehensive income:				
Actuarial loss (gain arising from)				
- Demographic/Financial assumptions	(662)	2,256	(273)	227
- Other sources	(662)	2,256	(273)	227
Benefits paid	(17,551)	(17,635)	(22,671)	(21,061)
Balance at 31 December	271,124	243,963	322,975	290,331

c. Defined benefits obligations-acturial assumptions

The following are the principal assumptions at reporting date

	VRA		GROUP	
	2022	2021	2022	2021
Inflation rate	10.00%	13.00%	10.00%	13.00%
Discount rate	13.00%	16.00%	13.00%	16.00%
Nominal inflation gap	3.00%	3.00%	3.00%	3.00%
Withdrawal Rate	2.50%	2.50%	2.50%	2.50%
Retirement age	60 years	60 years	60 years	60 years

Mortality in 2022 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.

Financial Review for the year ended 31 December 2022 (Continued)

NOTES TO THE FINANCIAL STATEMENT FOR THE YEAR ENDED 31 DECEMBER, 2022

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
	GH¢'000	GH¢'000	GH¢'000	GH¢'000
Profit (Loss) after Tax	110,893	112,757	(283,231)	59,857
Adjustments for:				
Depreciation & amortisation	780,270	365,613	1,218,267	451,120
Exchange (Gain) / Loss	315,206	380,779	71,223	287,431
Profit on disposal of Property, Plant and Equipment	(546)	(48)	(546)	(48)
Investment Income	(9,125)	(7,811)	(162,017)	(136,150)
Finance expense	116,466	87,596	116,466	87,596
Capital Work-in-progress written off				
Prior year adjustments	-	-	-	-
Amortisation of grant	-	-	(1,209)	(1,209)
Tax Expense	-	-	98,383	55,430
	1,313,164	938,887	1,057,336	804,028
Changes in:				
- Inventories	9,227	8,775	(8,400)	(1,500)
- Receivables	577,433	343,948	696,751	575,196
- Payables	(1,289,737)	(671,008)	(814,125)	(386,340)
- Provisions and defined benefits	27,161	25,619	32,644	30,788
Cash Generated from Operating activities	637,248	646,220	964,206	1,022,173
Tax paid	-	-	(146)	(615)
Interest paid	-	-	-	-
Net cash from operating activities	637,248	646,220	964,059	1,021,557

Financial Review for the year ended 31 December 2022 (Continued)

NOTES TO THE FINANCIAL STATEMENT FOR THE YEAR ENDED 31 DECEMBER, 2022

23. Going concern consideration

The Authority recorded a net profit of GH¢110.89 million for the year ended 31 December, 2022 (2021: GH¢112.76 million) and as at the date, the current assets exceeded current liabilities by GH¢3,092.08 million (2021: current liabilities exceeded assets by GH¢1,770.53 million)

24. Capital Commitments

There was capital commitments of GH¢33.44 million for the year. (2021: GH¢12.85 million). The Group had a contract with Zakhem Construction Ghana Limited for the engineering, procurement and construction of a single-cycle power plant at Tema and Synohydro.

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 favourable to the Authority.

26. Related parties

Related party transactions

	VRA		Group	
	2022	2021	2022	2021
	GH¢'000	GH¢'000	GH¢'000	GH¢'000
Sale of Power				
NEDCo	716,132	596,406	716,132	596,406
Purchase of Power				
TICO	335,538	335,538	335,538	335,538

