54TH ANNUAL REPORT AND ACCOUNTS 2015

VOLTA RIVER AUTHORITY

Contents

MISSION STATEMENT

The VRA exists to power the economies and raise the living standards of the people of Ghana and West Africa. We supply reliable electricity in a safe manner to add economic, financial and social value to our operations to satisfy and meet stakeholder expectations.

VISION STATEMENT

Setting the standard for public sector excellence in Africa

PROFILE OF THE VOLTA RIVER AUTHORITY

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

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

Power Activities

The Authority operates a total installed electricity generation capacity of 1,970MW. This is made up of two hydroelectric plants on the Volta River, with installed capacities of 1,020MW and 160MW at the Akosombo and Kpong Generating Stations, respectively. Hydro generation currently accounts for 48 percent of the total system supply.

This is complemented by a number of thermal facilities as follows: 330MW installed capacity at Aboadze, near Takoradi; an additional 220MW installed capacity joint venture between VRA and TAQA from Abu Dhabi, expanded into a combined cycle plant to increase the capacity by 110MW was commissioned in 2015. A 132MW (T3) Megallan Plant commissioned in 2012 also at the Aboadze enclave has not been operational since February, 2014 owing to turbine failure.

The VRA has also developed a number of thermal plants in Tema, which includes the 110MW Tema Thermal 1 Power Plant (TT1PP), an 80MW Mines Reserve Power Plant (MRP) both commissioned in 2008 and a 50MW Tema Thermal 2 Power Plant (TT2PP) commissioned in 2010. An additional 200MW simple cycle plant located at Kpone, Kpone Thermal Power Station (KTPS), near Tema, is expected to be commissioned in 2016.

As part of the expansion programme, we are collaborating with CENIT Power in a Joint Venture (JV) to convert the Tema TTIPP/TCTPP plants into combined cycle. A Brazilian contractor has been engaged to undertake the project, with a Standard Chartered Bank financing arrangement and a Partial Risk Guarantee demand from the World Bank. Additionally, VRA and Globeleq have signed a Joint Development Agreement (JDA) for the development of a 400MW Combined Cycle Gas Turbine (CCGT) Power Plant at Aboadze. VRA and Beijing Fusing Xiaocheng Electronic Technology Stock Company Ltd. (BXC) also executed a JDA on August 11, 2015 for the VRA/BXC Project. BXC engaged a Consultant to undertake the technical audit of the plant and feasibility studies for the project.

PROFILE OF THE VOLTA RIVER AUTHORITY Continued

Renewable Development

The VRA is committed to renewable energy development to protect the environment and public health, and also help reduce emissions that cause global climate change, while ensuring a system of diversity and security in electricity supply.
Furtherance, the Authority is working with two wind developers, Vestas and El Sewedy, to develop 150MW of wind power at 4 sites in the southern parts of the country; Anloga, Anyanui, Lekpoguno and Akplabanya. The sites were selected based on the wind resource availability. Feasibility studies and Environment and Social Impact Assessments (ESIA) for the identified sites are being conducted.

VRA also aims at expanding its 2.5MWp Solar PV plant at Navrongo in the Upper East Region of Ghana which was commissioned in 2012. The Authority in collaboration with the Government of Ghana is working with KfW to finance the construction of the additional 12MWp Solar PV plants in Kaleo and Lawra in the Upper West Region.

In addition, feasibility studies for the 48MW Pwalugu Multipurpose hydro dam project is progressing steadily. ESIA is being conducted by Mott MacDonald Ltd/Eviron Engineering Management Consult.

The VRA, through the Northern Electricity Distribution Company Ltd. (NEDCo), is the sole distributor of electricity in the Brong-Ahafo, Northern, Upper East, Upper West, and parts of Ashanti and Volta Regions of Ghana. Originally, NEDCo was developed as an integral part of the larger Northern Electrification and System Reinforcement Project (NESRP) to extend the national electricity grid to northern Ghana. NEDCo has a customer population of 698,353 and a load demand of about 175MW.

Customers

The VRA's major bulk customers are the Electricity Company of Ghana (ECG) and Northern Electricity Distribution Company (NEDCo). Power sold to ECG and NEDCo cater mainly for domestic, industrial and commercial concerns in the southern and northern sectors of the country, respectively. Bulk sales are also made to a number of mining companies, including; AngloGold Ashanti, Newmont Ghana Gold Ltd., Goldfields Ghana Ltd., and Golden Star Resources Group. Others are Aluworks, Akosombo Textiles Ltd., and Diamond Cement Ghana Ltd.

Links to Customers and Neighbouring Countries

The VRA reaches its customers in Ghana and neighbouring countries through GRIDCo. GRIDCo's transmission system covers the entire country, and is also connected with the national electricity grids of Cote d'lvoire, Compagnie Ivoirienne d'Electricité (CIE); Togo, Communauté Electrique du Benin (CEB); and Burkina Faso (SONABEL). These interconnections now serve as part of the arrangement under the West Africa Power Pool (WAPP).

Relations with Some Statutory Bodies

In pursuance of the Authority's operations, VRA has working relations with the following statutory bodies; Energy Commission, Public Utilities Regulatory Commission (PURC) and the Ministry of Power (MoP), which plays a supervisory role.

PROFILE OF THE VOLTA RIVER AUTHORITY Continued

Sub-Regional Cooperation

The VRA is participating in the development of a power pooling mechanism to provide the West Africa sub-region with increased accessibility, availability and affordability to electricity under the auspices of the Economic Community of West African States (ECOWAS). The 330kV transmission line constructed by GRIDCo from Aboadze to Tema under the West Africa Power Pool Project (WAPP) was completed in December 2014. The line however has not been energized following the delay in the completion of the Momehagou (Togo) component of the project.

The VRA is also the major foundation customer of the West African Gas Pipeline Project (WAGP), which saw the construction of a 20-inch diameter 600km long natural gas transmission pipeline from Nigeria to Ghana and associated facilities to support the energy requirements of the West Africa sub-region.
The United Nations Development Programme (UNDP), acknowledging the VRA's distinctive competencies in power system operations, appointed the VRA as the principal consulting agency that implemented an Emergency Power Programme (EPP) in Liberia after years of conflict. The EPP was in two phases: construction and operation. It provided 2.65MVA of power to a section of Monrovia through distribution grids in Congo Town and Kru Town and was intended to serve institutional customers such as hospitals, schools, police stations, and social and community facilities and for street lighting along the main route of the grid.

The VRA is a founding member of the Association of Power Utilities of Africa (APUA), initially termed (UPDEA). APUA aims to promote the integration and development of the African power sector through active cooperation among its members and also between its members on one hand and all international power sector organizations and donors on the other. 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).

Non Power Activities

CORPORATE SOCIAL RESPONSIBILITY (CSR)

The VRA continued to demonstrate its social responsiveness through various programmes designed to enhance the socio-economic and physical environment of the lakeside and downstream communities. This includes the annual commitment of the cedi equivalent of US$500,000.00 to a Resettlement Trust Fund to support development initiatives in 52 resettlement towns. In addition, VRA's Community Development Program (CDP) sets out a framework for guiding the process of support for the development of all communities impacted by the operations of the Authority.

The Authority continued to run its first and second cycle schools as well as provided the health needs of staff, their dependents and the local communities within its operational areas in Akosombo, Aboadze, Akuse and Accra. VRA has signed a Memorandum of Understanding with the Asuogyaman District Health Management Team (DHMT) to provide services to communities along the Volta Lake in the fight against Malaria, Bilharzia and other water-borne diseases. Also, the VRA with the assistance of the John Hopkins University Centre for Communication has developed a strategy document for malaria control. The

PROFILE OF THE VOLTA RIVER AUTHORITY Continued

document sets out the framework for action by the VRA in creating a malaria-free environment for its workforce, their families and the surrounding communities.

We maintain a dredging programme at the estuary of the Volta River at Ada to reduce the incidence of Bilharzia, and to restore the ecosystem in the area. Furthermore, VRA runs afforestation programmes aimed at reducing siltation of the Volta Lake through the restoration of permanent vegetative cover on the slopes bordering the Lake.

VRA also administers Local Authority functions in the Akosombo Township in accordance with Executive Instrument (EI) 42, 1989.

SUBSIDIARY COMPANIES

In fulfillment of its responsibility to provide facilities and assistance for the socio-economic development of the Volta Basin, the Authority operates three subsidiary companies, namely: Akosombo Hotels Limited, the Volta Lake Transport Company Limited and the Kpong Farms Limited.

Akosombo Hotels Ltd.

The Akosombo Hotels Limited (Volta Hotel), incorporated in 1991, runs a three-star hotel, restaurant and modern conference/seminar facilities. The MV Dodi Princess that provides cruise along the Lake to promote tourism is expected back in service by the end of the year.

Volta Lake Transport Company Ltd.

The Volta Lake Transport Company Limited, incorporated in 1970, operates river transportation for passengers, bulk haulage of petroleum products and significant quantity of cement, and cross-lake ferry services along the Volta Lake.

Kpong Farms Ltd.

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. KFL was established to harness the water resources of the Volta Lake at Kpong for the use of viable agricultural ventures and for the Farm to serve as a demonstration project in a modern agricultural system for the community and the nation at large.

As at the close of the year, the Board's decision to close down KFL was in force and as such, the Farm was not operating as a fully-fledged going concern.

THE VOLTA RIVER AUTHORITY BOARD

Board Members of the Volta River Authority as at December 31, 2015

Ambassador Lee Ocran
Management Practitioner
CHAIRMAN

Ing. Isaac Kirk Koffi
Chief Executive
MEMBER

Nana Mprah Besemuna III
Traditional Ruler
MEMBER

Togbi Tepre Hodo IV
Lawyer/Traditional Ruler
MEMBER

Alhaji Attah Nantogmah Mahamadu
Lawyer
MEMBER

Mrs. Alice Osei Okrah
Investment Banker
MEMBER

Mr. Stephen Opare
Structural Engineer
MEMBER

Mr. Ahmed Yakubu Salifu
Freight Forwarder, Banker/Accountant
MEMBER

Mr. Ludwig Hlodze
Public Administrator/Development Consultant, **MEMBER**

Executive and Management Staff as at December 31, 2015

OFFICE OF THE CHIEF EXECUTIVE

POSITION	NAME
Chief Executive	Ing. Isaac Kirk Koffi
Director, Audit	James J. Napour
Ag. Board Secretary	Claudia Gyeke-Aboagye (Mrs)
Manager, Corporate Communications	Samuel Fletcher

ENGINEERING AND OPERATIONS BRANCH

POSITION	NAME
Deputy Chief Executive	Ing. Richard N.A. Badger
Ag. Director, Thermal Generation (SBU)	Ing. Richard Oppong Mensah
Director, Engineering Services	Ing. Charles Addo
Director, Hydro Generation	Ing. Kwesi B. Amoako
Director, Technical Services	Vacant

FINANCE BRANCH

POSITION	NAME
Deputy Chief Executive	Alexandra Totoe (Ms.)
Director, Procurement	Ing. Richmond Evans-Appiah
Director, Finance	Ebenezer Tagoe
Director, Planning & Power Business	Ing. Bernard Kofi Ellis
Director, Management Information System	Dr. Isaac A. Doku

SERVICES BRANCH

POSITION	NAME
Deputy Chief Executive	Ing. Joseph W. Sutherland
Director, Legal Services	K.T.K. Agban
Director, Human Resources	George Koranteng
Managing Director, PROPCo (SBU)	William Bobie
Director, General Services	Abla Fiadjoe (Ms.)
Director, Environment & Sustainable Dev't	Ing. Theo Okai
General Manager, VRA Schools (SBU)	Bevelyn Asamoah (Mrs.)
Medical Director, VRA Hospitals (SBU)	Dr. Rebecca Acquaah-Arhin (Mrs.)
Chief Learning Officer, VRA Academy	Efua Garbrah-Sarfo
Manager, Corporate Risk Unit	Christian Cobbinah

- Mrs. Harriet Wereko-Brobby is on secondment to the West African Gas Pipeline Company Limited as General Manager, Corporate Affairs.

CHAIRMAN'S STATEMENT

The year 2015 for the VRA was challenging and filled with uncertainties, largely because our operations were affected by the rather volatile macroeconomic indicators and other unfavourable environmental factors in the energy sector. In spite of the challenges and uncertainties that we had to operate with, we pursued real opportunities for continued growth and development of the power sector.

Generation

A substantial proportion of the total energy system requirement for 2015 was supplied from hydro sources. The total power generated from hydro amounted to 4,974,718GWh with Akosombo Generating Station alone generating 4,156,168GWh while the Kpong Generating Station provided 818,550GWh. Our thermal facilities contributed 2,741,338.27GWh to the total generation. Additionally, 1,336,161KWh of electricity was purchased from TICO to supplement generation from the VRA's facilities. The total power generation was 9,052.22GWh compared to 10,460.57GWh generated in 2014. This was due to the supply deficit resulting from the power crises.

VRA recorded the highest peak load demand of 1,933.00MW on the power system on December 29, 2015. This was lower than the peak demand of 1970.90MW on January 1, 2014 by 1.9 percent. The peak demand exceeded the maximum supply level of the generation system.

The Takoradi Thermal Power Station achieved 85.43 percent plant availability factor due to an extended major inspection; Unit 32G2 was limited to 60MW due to load tunnel temperature limitation for a period while Unit 32G3 was mostly run with the Heat Recovery Steam Generator 2 Unit (HRSG2), peaking at 82MW when coupled with the Heat Recovery Steam Generator 1 unit (HRSG1). The Tema Thermal Complex posted an availability and capacity utilization factor of 82.93 percent and 66.7 percent compared to the actual targets of 85 percent and 75 percent respectively. Conversely, the Akosombo and Kpong Generating Stations combined to achieve a consolidated maintenance accomplishment of 98.82 percent.

It is imperative to note that there was no system collapse as a result of no system disturbances in the year 2015. This satisfactory system performance since 2014 and throughout 2015 is attributable to the installation of new Digital Governors (with governor control), Digital Exciters coupled with the activation of Power System Stabilizers (PSS), as well as, the vigilance and timely response of duty operators.

VRA's efforts at modernizing and prolonging the life span of the Kpong Generating Station progressed steadily. With about 60% of work on Unit 2 completed, commissioning is scheduled for the middle of March, 2016. It is anticipated that the Unit would return to service by April, 2016. It is also anticipated that the facility, after the retrofit, would be able to run for another 30 years.

Portfolio Growth

The exponential growth in energy demand has required that VRA puts in measures to expand its energy infrastructure. In line with this, we continued to pursue our energy infrastructure development programme with tenacity.

VRA is expanding the capacity of the Tema Thermal 2 Power Plant (TT2PP) by 38MW. Major construction and installation works of the two (2) SGT400 and the one (1) SGT300 Turbines including their control rooms and other auxiliaries have been completed. Pre-commissioning checks on 50G4 has been completed whiles that of 50G7 and 50G8 are respectively at 60% and 45% as the end of December 2015. Commercial

CHAIRMAN'S STATEMENT Continued

Operations Date (COD) is expected to be achieved in 2016. Work on the first phase of the simple cycle 220MW Kpone Thermal Power Plant progressed steadily. Overall construction was 95% completed. Both Units were undergoing commissioning. Unit 67GT11 had achieved first fire on natural gas but could not be synchronized due to gas supply challenges. Cold commissioning of 67GT12 was started in December 2015. The plant is expected to be commissioned in 2016.

Additionally, feasibility studies being conducted by Mott Macdonald on the 48MW Pwalugu multipurpose hydro dam is progressing in earnest. Furthermore, plans to develop a 186MW Thermal Power Plant (designated T4) as an additional generating facility at the Takoradi Thermal Power Station is still on course. VRA is awaiting the issuance of a government guarantee for the project to commence. Additionally, as part of our energy portfolio diversification, VRA is collaborating with Shenzhen Energy Group Ltd. of China for the development of a 2x350MW Supercritical coal-fired power plant at Aboano in the Ekumfi District. Shandong Electric Power Engineering Consulting Institute and CCCC-FHDI Engineering Company have completed feasibility studies and the project is expected to commence in April, 2017.

Renewable Energy Development Programme

Renewable energy is one of the most constructive and cost effective ways to address the challenges of high energy cost, energy security and global climate change. The VRA is thus steadily growing its footprints in this venture. We are working with two wind power developers; Vestas and El Sewedy to develop 100-150MW at four locations in the southern part of Ghana. Furthermore, we are poised to increase our solar generation from 2.5MW to 14MW at Lawra and Kaleo in the Upper West Region of Ghana.

Gas Supply

To ensure we have a sustained gas supply to power our thermal facilities, VRA led initiatives to increase gas supply from Ghana Gas and N-Gas to guarantee the supply of adequate, reliable and stable power to meet the increasing load demand.

In view of this, VRA initiated Gas Supply Agreements (GSA) with potential suppliers from Nigeria. The option of using Liquefied Natural Gas (LNG) also remained a priority to the Authority in the course of the year under review. In that regard, the Authority considered proposals received through the Ministry of Power (on behalf of GoG) on the proposed Emergency LNG Project in Tema by West African Gas Limited (WAGL). In addition, the Tema LNG Project proposed by Quantum Power Ghana Gas (QPRGG) to deliver re-gasified LNG to our plants in Tema in the long term was also considered.

Financial Health

Revenue from sale of electricity increased by 14 percent (GH¢301.74)) million to GH¢2340.52 million over the previous year's sales of GH¢2038.78 million. This was mainly due to Government of Ghana's subsidy of GH¢303.57 million received in 2015 in respect of tariff shortfall and 15 percent increase in the average Bulk Generation Tariff (BGT) from GH¢0.134235/kwh in 2014 to GH¢0.154143/kwh in 2015. The average tariff of deregulated mines on the other hand reduced from US$0.219625/kwh in 2014 to US$0.1322225/kwh in 2015.

A 26 percent depreciation of the average GH¢/US$ exchange rate from GH¢2.9341/US$1 in 2014 to GH¢3.7050/US$1 in 2015 also contributed to the increase in sales revenue. The volume of electricity

CHAIRMAN'S STATEMENT Continued

sold however decreased by 1,236GWh (12 percent) from GH¢10,135GWh in 2014 to 8,899GWh in 2015.

Management Information Systems

We successfully undertook an upgrade of the Storage Area Network (SAN) at the data centres. We also collaborated with the E-Business Technical Team and successfully automated the back-up process for the Oracle E-Business Suite. Migration of users from the Proof of Concept (POC) LYNC to the Enterprise LYNC Communications platform was also successfully completed.

Staff Matters

The Authority enjoyed industrial harmony during the period under review. We embarked on an exercise to restructure three non-power departments namely; Real Estates, VRA Schools and VRA Hospitals. The objective for the restructuring is to enable VRA concentrate on the core mandate of power generation to increase efficiency and effectiveness to compete favourably in the emerging energy market.

The Authority continued to provide opportunities and support for the development of knowledge and skills by staff, consistent with the needs of the business. Training and development programs, covering all categories of employees were thus provided in-house, and complemented with external, local and overseas courses. This is in line with the policy of ensuring that the VRA has the requisite human resource capability at all times to meet current and future business demands.

Corporate Social Responsibility

VRA continued to be responsive to the needs of the communities in our operational areas. Our Corporate Social Responsibility (CSR) initiatives focused on contributing to the welfare of communities, particularly in the areas of education, enterprise and skills development with the objective of providing jobs, enhancing employability and reducing the effects of poverty. We awarded Forty Six (46) and Sixteen (16) scholarships for second cycle and tertiary students respectively, under the VRA Community Development Programme.

Additionally, we completed and handed over 30 separate units of Biofil Toilet Systems worth One Hundred and Five Thousand Ghana Cedis (GHc105,000.00) as well as provided two 16-seater Aqua Privy Toilets and 8 polytanks to the Aboadze and Abuesi communities.

The VRA shall continue to partner with key stakeholders to consolidate our relations in building a formidable, self-sustaining power utility for the socio-economic development of Ghana and its neighbours.

On behalf of the Board, I thank the Management and Staff of the VRA for their tenacity of purpose and continued commitment to hard work to ensure that VRA remains competitive in the electricity market.

Ambassador Lee Ocran
CHAIRMAN

OPERATIONS REVIEW

(a) Power Generation

The Authority recorded the highest peak load demand of 1933.00MW on its power system on December 29, 2015. This is lower than the peak demand of 1970.90MW in 2014, by 1.9 percent. A total of 9,052.22GWh of electricity was generated at our generating plants at Akosombo, Kpong, Tema, and Aboadze in 2015, a decrease of 13 percent over 10,460GWh generated in 2014. The Authority was challenged in meeting the high peak demand because of fuel supply challenges; prolonged forced outages at some of our thermal plants; inability to commission new plants on schedule; and low water level in the reservoir at Akosombo. Load relief was obtained mainly from the Electricity Company of Ghana (ECG), Northern Electricity Distribution Company (NEDCo), Volta Aluminum Company (VALCO), Communaute du Benin (CEB), and customers such as the mines and other industries, depending on the system conditions. Among the effects were the destabilization of the electrical system and the load management that persisted for almost one year. A maximum of 990MW load was shed, resulting in a loss of about 4,315 GWh of energy to domestic customers and a loss of 502 GWh of energy to CEB.

To ensure optimum operation of the power system, we continued with our maintenance activities on all our generating facilities and equipment. At Akosombo Generating Station (AGS), we executed 99.62 percent of planned unit maintenance work and 99.69 percent of planned maintenance on the balance of plant and outside services equipment.

The Navrongo Solar Plant achieved 89.00 percent of planned maintenance activities. Corrective maintenance activities were also carried out on all our generating units. The plant availability and forced outage factor at AGS was 90.5 percent and 0.23 respectively. The plant availability and forced outage factor at Kpong Generating Station was 72.97 percent and 0.27 percent respectively. The two plants therefore performed above consolidated target of 84 percent. The Navrongo Solar Power Plant had an availability factor of 100 percent.

The Takoradi Thermal Power Station achieved 85.43 percent availability factor due to extended major inspection on Unit 32G1. Unit 32G2 was limited to 60MW due to load tunnel temperature limitation for a period while Unit 32G3 was mostly run with HRSG2, peaking at 82MW when coupled with HRSG1. The Tema Thermal Complex availability and capacity utilization factor was 82.93 percent and 65.7 percent compared to 85 percent and 75 percent targets respectively.

The Kpong Generating Station (KGS) retrofit being undertaken by Andritz Hydro GmbH attained important milestones during the period. These include completion of sand blasting and painting of stay vanes, discharge ring and draft tube cone. The Rotor poles, static balancing, aligning and leveling of the runner on Unit 2 have been installed successfully. New service station switchboards for Units 1 & 2 have also been commissioned into service. The retrofit is aimed at modernizing the facility and extending the life of the plant for the next 30 years.

The relay upgrade project aimed at replacing all six electro-mechanical relays with digital protection relaying system at the Akosombo Generating Station (AGS) was completed in August, 2015. The new digital system which has been successfully commissioned and operating smoothly is to provide effective, high speed and precision protection on the generators. They are also equipped with communication network capable of being integrated into the future System Communication and Data Acquisition system (SCADA). Additionally, installation works on the Low Voltage Switchgear replacement project was completed in August, 2015. All the old LV Switchgears have been replaced, tested and commissioned. The replacement was occasioned by the increased rate of failures of the breakers.

The Authority continued to pursue its energy infrastructure development activities in relation to generation expansion, enhancement of power supply and system reliability and other infrastructural works.
We are committed to developing the hydroelectric project at Pwalugu in the Northern Region. ESIA being undertaken by Mott Macdonald is progressing steadily.

Renewable Energy Development Programme

A renewable energy development programme is one of the most constructive, cost effective ways to address the challenges of high energy prices, energy security, air pollution, and global climate change. Hydroelectric power is currently the largest producer of renewable energy in Ghana. Hydro generation currently accounts for 48 percent of the total system supply, and is the largest share of the ramping capacity.

Solar Power Development

VRA has installed a 2.5MWp Solar PV plant in Navrongo in the Upper East Region of Ghana and plans to install an additional 12MWp Solar PV at Kaleo and Lawra in the Upper West Region of Ghana. VRA in collaboration with the Government of Ghana is working with KfW to finance the construction of the 12MWp Solar PV Plants.

Wind Power Development

We are working with two wind power developers, Vestas and El Sewedy, to develop 150MW of wind power at 4 selected locations, namely; Anloga, Anyanui, Lekpoguno and Akplabanya based on their wind resource availability. The Anloga and Anyanui sites are to be developed by Vestas as Wind Power Project 1. The sites at Lekpoguno and Akplabanya are put together as Wind power project 2 to be developed in conjunction with El Sewedy. We are currently undertaking feasibility and ESIA studies for the four selected sites.

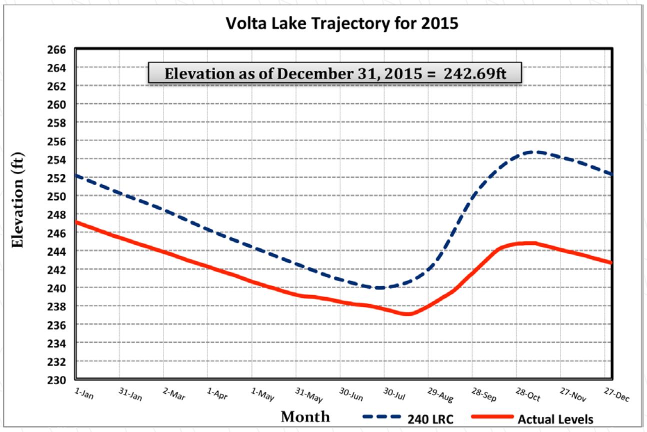
OPERATIONS REVIEW Continued

Coal-Fired Power Plant

VRA is collaborating with Shenzhen Energy Corporation, China for the development of a 2x350MW Supercritical technology coal-fired facility. Out of the 4 potential sites; Domunli, Otuam, Aboano and Discove shortlisted, Aboano in the Ekumfi district of the Central Region was selected. Shandong Electric Power Engineering Consulting Institute and CCCC-FHDI Engineering Company have completed feasibility studies for the project. GRIDCo has also completed the preliminary grid impact study for the project.

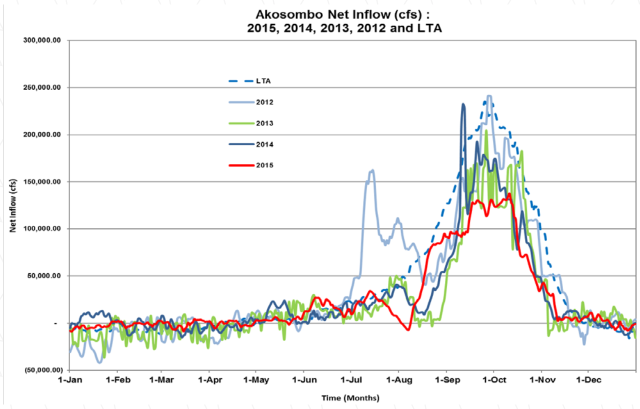
Volta Lake records low levels in 2015

The year saw the lowest water level of 237.09ft being recorded from August 14-16, 2015. The year began with a reservoir level of 247.13ft (75.32m) and ended with a level of 242.69ft (73.97m). Conversely, after the inflow season, the maximum water level attained was 244.80ft.



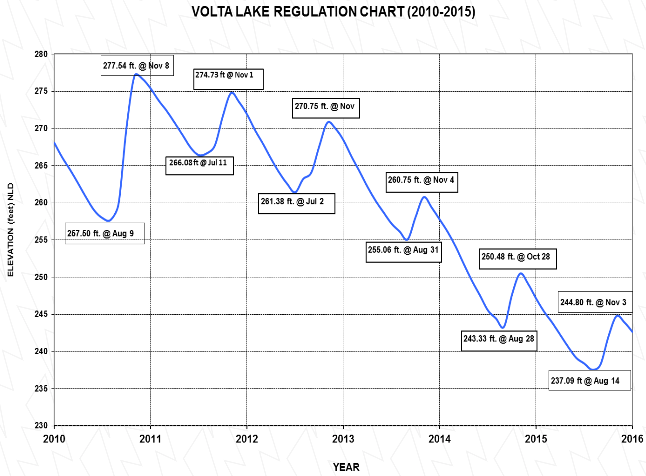
Hydrograph Pattern

The 2015 inflow season (June-November) was characterized by below-normal performance of weather indicators such as Inter Tropical Boundary (ITP) position which determines the region of concentration of rain, moisture depth and atmospheric pressure levels in the sub region. This led to below-normal rainfall in the country which resulted in below average inflow into the Volta Lake. The annual net inflow into the Volta Lake was 21,968 MCM (17.81 MAF). This is about 30 percent below the long-term average inflow of 31,606 MCM (25.38 MAF). The instantaneous peak inflow into the reservoir was 4,042m3/s (142,752cfs). This occurred on October 12, 2015.



Volta Lake Regulation

The Volta Lake was regulated between elevations 75.33m (247.13ft.) at the beginning of the year and 72.27m (237.09ft), the minimum Lake elevation at the end of the dry season. The lowest Volta Lake elevation was recorded on August 14, 2015. This represents a drop of 3.06m (10.04ft.) from the beginning of the year. The Volta Lake attained a maximum elevation of 73.40m (244.80ft.) on November 3, 2015. The Volta Lake elevation at the end of the year was 73.97m (242.69ft.)



Electricity Demand and Supply

A substantial proportion of the total system energy requirement for 2015 was supplied from hydro sources. This represents about 55 percent of the total system energy supply of 9,052,217KWh. Total power generation from hydro amounted to 4,974,718GWh. Akosombo Generating Station generated 4,156.168GWh while Kpong Generating Station generated 818.550GWh. Total thermal generation was 2,741,338.27KWh. Takoradi Thermal Power Station (TTPS) generated 1,783,884KWh; Tema Thermal Power Complex (TTPC) also generated 926,824.27KWh. A total of 1,336,161KWh was purchased from TICO to supplement generation from VRA's own facilities.

Power Sales

Power sale to customers in 2015 was 8,765.17GWh which was 10.12% lower than the 2014 figure of 9,751.75GWh. The total power sale comprised 6,293.46GWh to electricity distribution companies, 550.57GWh to export customers and 1,921.14GWh to bulk customers. Of the total power sale to the electricity distribution companies, 5,172.45GWh was to Electricity Company of Ghana (ECG), 1,024.40GWh to Northern Electricity Distribution Company (NEDCo) and 96.60GWh to Enclave Power Company (EPC). For export customers, the Authority sold 496.84GWh and 53.73GWh to Communauté Electrique du Bénin (CEB) and Société Nationale d'électricité du Burkina (SONABEL) respectively.

Power sale to the bulk customers consisted of 1,226.92GWh to mining companies and 694.22GWh to industrial/

OPERATIONS REVIEW Continued

commercial customers. The mining companies included AngloGold Ashanti (AAGL), Newmont Ghana Gold Ltd (NGGL), Newmont Golden Ridge Ltd. (NGRL), Goldfields Ghana Ltd. (GFGL), Golden Star Resources Group, Perseus Mining Ghana Ltd. (PMGL), Adamus Resources Ltd., Owere Mines, Prestea Sankofa Gold Ltd. (PSGL) and Great Consolidated Diamonds Ghana Ltd., while the industrial/commercial were Aluworks, Akosombo Textile Ltd., Diamond Cement Ghana Ltd. and Savanna Diamond Company Ltd.

Tariffs

As part of the major tariff review, the Authority submitted tariff proposal for sale of electricity to ECG and NEDCO and subsequently participated in the public hearings on the tariff proposals. As a result, in December, 2015 the Public Utilities Regulatory Commission approved new tariffs for regulated customers; particularly the Bulk Generation Charge (VRA) was adjusted upwards from GHp14.6047/kWh to GHp21.0816/kWh effective December 14, 2015. Based on the terms and conditions of the respective power sale and purchase agreements, the electricity tariffs for bulk customers and export customers were adjusted periodically.

Sale Contracts

In order to ensure the financial viability of VRA and meet the requirements of customers, VRA intensified efforts at reviewing and executing Power Sale and Purchase Agreements (PSPAs) with the customers. In 2015, VRA concluded and executed PSPAs with Newmont Ghana Gold Ltd. and Newmont Golden Ridge Ltd. The term of the Power Exchange Agreement between VRA and CEB was also extended from ten (10) to thirteen (13) years. In addition, negotiations with other customers such as ECG, AAGL, GFGL, PMGL and ARL reached advanced stage.

Gas Supply

To ensure we have a sustained gas supply to power our thermal facilities, VRA led initiatives to increase gas supply from Ghana Gas and N-Gas to guarantee the supply of adequate, reliable and stable power to meet the increasing load demand.

In view of this, VRA initiated Gas Supply Agreements (GSA) with potential suppliers from Nigeria. The option of using Liquefied Natural Gas (LNG) also remained a priority to the Authority in the course of the year under review. In that regard, the Authority considered proposals received through the Ministry of Power (on behalf of GoG) on the proposed Emergency LNG Project in Tema by West African Gas Limited (WAGL). In addition, the Tema LNG Project proposed by Quantum Power Ghana Gas (QPRGG) to deliver re-gasified LNG to our plants in Tema in the long term was also considered.

Financial Health

Revenue from sale of electricity increased by 14 percent (GH¢305.20) million to GH¢2,535.93 million over the previous year's sales of GH¢2,230.73 million. This was mainly due to Government of Ghana's subsidy of GH¢303.57 million received in 2015 in respect of tariff shortfall and 15 percent increase in the average Bulk Generation Tariff (BGT) from GH¢0.134235/kwh in 2014 to GH¢0.154143/kwh in 2015. The average tariff of deregulated mines on the other hand reduced from US$0.219625/kwh in 2014 to US$0.1322225/kwh in 2015.

A 26 percent depreciation of the average GH¢/US$ exchange rate from GH¢2.9341/US$1 in 2014 to GH¢3.7050/US$1 in 2015 also contributed to the increase in sales revenue. The volume of electricity sold however decreased by 1,236GWh (12 percent) from GH¢10,135GWh in 2014 to 8,899GWh in 2015.

Management Information System

We successfully undertook the upgrade of the Storage Area Network (SAN) at the data centres and achieved a systems uptime of 96.8 percent. We collaborated with the E-Business Technical Team and successfully automated the back-up process for the Oracle E-Business Suite. Migration of users from the Proof of Concept (POC) LYNC to the Enterprise LYNC Communications platform was successfully completed. The platform would allow users to undertake both voice and video communications over the corporate network. The piloted Voice over IP (VoIP) telephony was extended to new work locations including the Tema Thermal Power Complex, Kpone Thermal Power Plant and VRA Academy Akuse.

Staff Matters

The Corporate staff strength as at December 31, 2015 was 3084. This reflects an increase of 85 compared to 2999 in 2014. The number of contract staff was 166. A total of 105 separated from the services of the Authority. Thirty-two (32) internal appointments and 51 external appointments were made during the year.

The industrial atmosphere was generally calm except a moment of tension generated by Management's decision to restructure three non-power operations of the VRA, namely; VRA Schools, Real Estate and Security and VRA Hospitals Departments. The restructuring is to allow VRA concentrate on the core mandate of electricity generation to enable VRA adapt itself to the change in the energy business environment and strengthen its ability to compete in the growing energy market.

The Authority pursued the policy of providing opportunities and support for capacity building for staff, consistent with the needs of the business. Training and development programmes for all categories of employees were thus provided in-house; complemented with external, local and overseas training.

Two Long Service award ceremonies were organised in the year to reward staff loyalty and service.

Real Estates

VRA continues to manage the Akosombo Township as a Local Authority in accordance with El 42 of May, 1989. The

OPERATIONS REVIEW Continued

Akosombo Management Committee (AMC) meets quarterly to consider issues relating to the Township.

Revenue collection from Local Authority activities for the year 2015 was GH¢194,726.20. This amount will be shared equally between the Authority and the Asuogyaman District Assembly in accordance with the existing agreement.

Other notional and cash receipts yielded by the Real Estate Department were GH¢4,223,927.20. Total revenue generated for the period amounted to GH¢4,418,653.40.

At Aboadze Township, guest house operations recorded an amount of GH¢314,520.00 as notional income for services rendered to the Authority with a total of 2,910 guests whilst the restaurant operations realised a gross notional profit of GH¢231,589.68. Poolside, Service Charges/rentals to third parties realized a cash revenue of GH¢40,152.00 and GH¢16,020.00 respectively.

At Akuse Township, 2,697 guests mainly VRA staff on training courses were catered for at the Authority's guest houses. Operations from the Club Complex yielded revenue of GH¢61,631.00. The Mess Hall and guest houses realised a notional revenue of GH¢444,957.40 and GH¢574,571.00 respectively.

At Accra/Tema Estates, the Authority's guest house catered for one guest. The Head Office canteen realized a notional revenue of GH¢199,501.50 and cash sales of GH¢125,780.76.

In Akosombo, a total of 215 guests were catered for at the Authority's guest houses while the trading outlets at the Maritime Club, Swimming Pool, Community Centre and the Dobson Club house realised a total amount of GH¢434,766.60. The Mess Hall also realised a notional revenue of GH¢313,450.50.

The Real Estate and Security Department's current core activities is centered mainly on providing services to the Authority. Future plans for the department is aimed at capitalizing on its existing infrastructure to undertake third party business to diversify its income earning activities from the Authority.

VRA Hospitals Ltd.

The VRA operates three hospitals in Accra, Akosombo and Aboadze, and a clinic at Akuse. The Authority's designated panel of doctors provided medical care for staff and their dependents at all the VRA locations, NEDCo and other subsidiaries. Out-patient attendance at the four facilities was 187,328, which was 0.3 percent lower than last year's figure of 187,909. Total number of admissions was 6,116, a decrease of 1.6 percent compared to last year's figure of 6,217. The paying public population constituted about 71.87 percent of the overall out-patient load and 94.72 percent for the in-patient load in all medical facilities. Over 80 percent of these figures were National Health Insurance clients.

Important milestones achieved in the year include; establishment of a Physiotherapy Unit at Akosombo Hospital, commissioning of a Breast Care Centre (collaboration between VRA & Motec-Life (UK) and furnished facilities for VRA College of Nursing. The school is scheduled to commence operations in 2016.

Akosombo Hotels Ltd. (Volta Hotel)

VRA funded the construction of a 176-seater cruise boat, Dodi Princess II at approximately $1.5 million dollars. Furthermore, the hotel is constructing a 50 bedroom facility from its Internally Generated Funds (IGF) as part of the hotel expansion programme.

SUBSIDIARIES

We are supporting various entities in our investment portfolio guided by the National Public Private Partnership (PPP) Policy where applicable to seek various investments requiring private investor participation. The purpose of restructuring will allow the VRA to concentrate on the core requisite of power generation so as to increase efficiency and effectiveness to enable it adapt itself to the challenges of change in the emerging energy market.

Some potential investors have been identified through a competitive tendering process in line with the leasing and development of the Kpong Farms. Their proposals have been evaluated for recommendations to be made to the Authority. This arrangement is expected to allow VRA retain control and ownership of the Kpong Farms Ltd. land and facilities while protecting the VRA from business and financial risks associated with agricultural production.

As part of Volta Lake Transport Company Limited's (VLTC) re-evaluation of strategies to attract funding to turn its operations around, a stakeholders' forum at Akosombo deliberated on the Eastern Corridor Multi-Modal Transport System (ECMMTS) and particularly, the role of lake transport in line with National Strategy. The VLTC in the short-term plans to secure five new 5-tonner forklifts and rehabilitate existing ones; repair vessels and other navigational systems to keep them in operation as well as rehabilitate main engines to improve operational efficiency.

To facilitate re-organisation of the non-power operations; Real Estate; VRA Schools; and Hospitals into Subsidiary Business Units (SBUs), the Authority in May, 2015 inaugurated nine (9) Member Boards for each of the SBUs. Our expectation is that the Boards would provide direction to the entities in order to ensure they are able to compete in the environment in which they operate as full-fledged, stand alone, self-financing subsidiary companies of the Authority.

CORPORATE SOCIAL RESPONSIBILITY

VRA continued its Corporate Social Responsibility (CSR) activities, particularly in the communities where we operate. Our CSR initiatives are aimed at contributing to the wellbeing of communities; but also towards skills development, education and enterprise development thereby promoting jobs, alleviating poverty and improving employability. We continue to build local capabilities to deliver local solutions, under our local content policy. Specifically, we undertook the following activities:

- Attended Emergency Preparedness Plan (EPP) and

OPERATIONS REVIEW Continued

Environmental Management Plan (EMP) training workshops with stakeholders in the impacted communities.

- Participated in meetings/seminars of the UN Global Compact Network Ghana. VRA has been elected as a member of the Steering Committee.

- Prepared a Framework Document for the development of Aqua culture on the Volta Lake.

- Completed and handed over 30 separate units of Biofil Toilet Systems worth One Hundred and Five Thousand Ghana Cedis (GHc105,000.00) to the people of Kebenu.

- Organized a one-day Career Guidance and Teaching Programme for students at Akwamuman Senior High School and provided two 16-seater Aqua Privy toilets and 8 polytanks to Aboadze and Abuesi Communities.

Rewarding Excellence and Promoting Good Corporate Governance

FINANCIAL REVIEW

FOR THE YEAR ENDED 31 DECEMBER 2015

POWER PRODUCTION

The total electricity generated from both VRA hydro and thermal sources decreased by 2,033GWh (21%) from 9,749GWh in 2014 to 7,716GWh in 2015; this includes generation and transmission substations use of 33GWh (2014: 58GWh). Generation from hydro sources decreased by 2,682GWh (35%) from 7,656GWh in 2014 to 4,975GWh in 2015. Thermal generation however increased by 31% (649GWh) from 2,092GWh in 2014 to 2,741GWh in 2015.

To supplement generation from VRA's own plants, a gross power amount of 1,559GWh (2014: 763GWh) was purchased from Compagnie Ivoirienne d' Electricité (CIE) of Cote D' Ivoire and Takoradi International Company Ltd (TICO) of Ghana. The Authority however exported 17GWh (2014: 57GWh) to CIE.

	Change		2015		2014	
	GWh	%	GWh	%	GWh	%
VRA Hydro:						
Akosombo	(2,352)	-36%	4,156	45%	6,509	62%
Akuse	(329)	-29%	819	9%	1,148	11%
	(2,682)	-35%	4,975	54%	7,657	73%
VRA Thermal:						
TTPS	894	100%	1,784	19%	890	8%
TT1PP	(156)	-22%	541	6%	697	7%
TT2PP	(8)	-3%	215	2%	223	2%
T3	(57)	-65%	31	0%	87	1%
MRPP	(25)	-100%	170	2%	195	2%
	(649)	-31%	2,741	30%	2,092	20%
Total Energy by VRA:	(2,033)	-21%	7,716	83%	9,749	93%
Purchases & Imports:						
TICO	624	88%	1,336	14%	712	7%
CIE	173	340%	223	2%	51	0%
	797	104%	1,559	17%	763	7%
Total Energy Generated & Bought	(1,236)	11.8%	9,275	100%	10,512	100%

Revenue

Revenue from sale of electricity increased by 14% (GH¢305.20 million) to GH¢2,535.93 million over the previous year's sales of GH¢2,230.73 million. This was mainly due Government of Ghana's subsidy of GH¢303.57 million received in 2015 in respect of tariff shortfall and 15% increase in the average Bulk Generation Tariff (BGT) from GH¢0.134235/kwh in 2014 to GH¢0.154143/kwh in 2015. The average tariff of deregulated mines on the other hand reduced from US$0.219625/kwh in 2014 to US$0.132225/kwh in 2015. A 26% depreciation of the average GH¢/US$ exchange rate from GH¢2.9341/US$1 in 2014 to GH¢3.7050/US$1 in 2015 also contributed to the increase in sales revenue. The volume of electricity sold however decreased by 1,236 GWh (12%) from 10,135GWh in 2014 to 8,899 GWh in 2015

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¢386.87 million (19%) from GH¢2,052.34 million in 2014 to GH¢2,439.21 million in 2015. This is attributable to the combined effect of the following:

- 104% increase in volume of electricity purchased from CIE and TICo (2015: 1,559Gwh; 2014: 763Gwh)
- 55% reduction in the volume of light crude oil (LCO) used from 3.52 million barrels in 2014 to 1.58 million barrels in 2015.
- 75% reduction in the volume of distillate fuel oil (DFO) used from 5.70 million litres in 2014 to 1.40 million litres in 2015.

Financial Review for the year ended 31 december 2015 - Continued

- 193% increase in amount of gas used for power generation from 11,091,779.24 million MMbtu in 2014 to 32,481,439.97 million MMbtu in 2015. The impact of this was minimal due to the significant reduction in crude oil price in 2015.
- decrease in crude oil price from an average of US$107.11/bbl in 2014 to an average of US$54.98/bbl in 2015.
- 26% depreciation of the average GH¢/US$ exchange rate from GH¢2.9341/US$1 in 2014 to GH¢3.7050/US$1 in 2015.

Administrative Expenses

Administrative expenses increased by GH¢296.21 million (68%) to GH¢733.42 million (2014: GH¢437.21 million).
This was mainly due to GH¢271.80 million increase in provisions in respect of receivables due from ECG, Enclave Power, TICO and distress mines amounting to GH¢881.22. The increase in provision represents 37% of the total administrative expenses.

The increase in administrative expenses was also due to a 4% increase in staff costs, 56% increase in repairs and maintenance costs, 10% increase in depreciation expense. Other administrative cost, which includes LC, commitment, and facility processing fees and bank charges also increased by 10% from GH¢54 million in 2013 to GH¢122 million as a result of increased transactions with the banks.

Other Operating Income

Other operating income decreased by 73 from GH¢173.56 million in 2014 to GH¢100.43 million in 2015. This is attributable mainly to an average decrease of 189% in the Subsidiaries other operating income. It was also due to decrease in TAPCo's Interest on Shareholder Advances from GH¢58.32 million in 2014 to zero in 2015.

Operating Loss

The operating loss of the Group in 2015 was GH¢524.68 million compared to a loss of GH¢74.13 million in 2014. The 2015 operating loss was mainly due to the combined effect of increase in total operating revenue by GH¢232.52 million (10%) from GH¢2,415.42 million in 2014 to GH¢2,647.94 million in 2015 viz-a-viz an increase of GH¢418.10 million (16%) in total operating cost from GH¢2,489.55 million in 2014 to GH¢3,172.60 million in 2015. The operating loss represents a negative return of 4.85% on average revalued net fixed assets (2014: 1.49%) compared to the covenanted 8%.

Net Loss

The Group ended the year 2015 with a net after tax loss of GH¢1,308.92 million (2014: 799.93 million). The loss for the year is after charging depreciation of fixed assets of GH¢301.28 million (2014: GH¢246.29 million) and with Government of Ghana's domestic consumers' subsidy of GH¢303.57 in 2015 (2014: nil). After further charging a loss on exchange fluctuation on foreign debt of GH¢453.06 million (2014: GH¢685.70 million), exchange gain of GH¢171.90 million (2014: GH¢292.29 million) and financial expenses of GH¢519.88 million (2014: GH¢308.67 million)

2016 OPERATIONAL & FINANCIAL OUTLOOK

The expected national system demand for 2016 is 16,798GWh, comprising customer demand of 16,159GWh, generation and substation usage of 63GWh and transmission losses of 576GWh.

The Authority plans to generate a total of 11,003GWh whilst Bui Hydro Plant and the Independent Power Producers would generate 5,492 with a supply deficit of 303GWh. The Authority's generation breakdown is as follows: 3,910GWh from hydro sources, 2,109GWh from the Takoradi Thermal Plant, 473GWh from the TT1PP, 23GWh from the TT2PP, none from the Mines Reserve Plant, 713GWh from the Kpone Thermal Power Plant, 4GWh from the Solar Plant, 1,592GWh from AMERI and 108 from imports. The Takoradi International Company (TICO) is expected to supply 2,071GWh. Thus, VRA is expected to generate 65.50% of the national electricity load whilst Bui Hydro Plant and the IPPs will supply 32.69% with the remainder of 1.80% as an additional supply required.

The expected power sale for 2016 is GH¢3,739.61 million assuming a Bulk Generation Tariff of GHp21.0816/kWh. The other income of about GH¢193.53 million, includes a premium of GH¢66.11 million meant for administrative costs of gas supply to SAPP. The estimated direct operating cost to be incurred on system generation by the Authority and supply from TICO is GH¢3,192.43 million.

However, total administrative cost is estimated at GH¢340.22 million (excluding the Strategic Business Units- SBUs) whilst interest expense and loss on exchange fluctuation on foreign debt would amount to GH¢531.85 million.

Depreciation provision made for the direct operating and administrative costs are expected to be GH¢209.62 million and GH¢36.99 million respectively. The expected net operational support to Health Services, PROPCo and VRA Schools is GH¢37.10million.

Financial Summary (VRA)

		2011	2012	2013	2014	2015
		GH¢'000	GH¢'000	GH¢'000	GH¢'000	GH¢'000
Income from Sale of Electricity		1,110,794	1,749,836	2,116,002	2,038,784	2,340,520
Other Operating Income		36,048	50,188	64,604	105,739	97,132
Operating and General Expenses		1,008,183	1,877,200	1,932,572	2,243,085	2,874,211
Depreciation		111,209	124,547	105,074	152,815	190,347
Operating Profit/(Loss)		138,659	(77,176)	248,034	(98,562)	(436,559)
Financial Expenses		37,694	50,358	78,821	308,674	519,881
Financial Income		2,371	2,529	4,286	7,116	6,465
Exchange Fluctuation on Foreign Debt		(14,677)	(14,388)	(87,911)	(685,698)	(453,055)
Government Assistance/Subvention/subsidy		-	360,784	664,274	-	303,569
Net Profit/(Loss)		80,201	(122,533)	52,249	(996,046)	(1,357,515)
Property, Plant and Equipment (Cost/Valuation)		5,223,330	6,552,146	6,095,727	9,200,708	11,013,893
Property, Plant and Equipment (Net Book Value)		2,616,064	2,910,931	2,714,940	5,194,847	4,621,843
Capital Work in Progress		253,383	391,411	626,855	1,107,520	1,696,303
Current Assets		1,077,285	1,566,696	2,265,622	3,808,948	4,404,978
Current Liabilities		434,735	819,842	1,397,556	3,375,867	5,611,585
Investment by the Rep of Ghana		495,449	495,449	495,449	495,449	495,449
Capital Surplus		2,617,578	2,894,692	2,654,564	3,890,413	4,502,991
Retained Earnings		294,592	278,923	590,859	(287,872)	(1,469,378)
Long term loans		281,097	324,792	444,749	829,004	1,344,960
Ghana Cedi (GH¢) to US$ Exchange Rate		1.5841	1.8846	2.1616	3.2001	3.7944
Return on Average Equity	%	4.50	(2.16)	6.63	2.48	11.27
Return on Average Net Fixed Assets - Plant in operation	%	6.05	(2.79)	9.72	(2.93)	(10.12)
Current Assets Ratio	Times	2.48	1.91	1.62	1.13	0.79
Debt Service Ratio	Times	1.85	0.09	0.42	0.02	0.07
Gearing Ratio	%	8.18	8.77	11.77	19.95	37.43
GWh Generated and Purchased less Station Use (X 106)	GWh	10,055	11,175	11,323	11,323	9,245
Total production Expenses including depreciation per MWh	GH¢	100	168	171	198	311

Financial Review for the year ended 31 december 2015 - Continued

Financial Summary (VRA)

		2011	2012	2013	2014	2015
Total cost of production including depreciation and interest but excluding Debt Fluctuation per MWh	GH¢	104	172	178	225	367
Average Revenue/MWh Generated and Purchased	GH¢	114	161	193	189	264
Total Installed Capacity	MW	1,730	1,730	2,104	2,104	2,104
Ratio of gross hydro generation to firm capability of Akosombo and Kpong	%	143.47	153	149	145	145
System Peak Demand	MW	1,644	1,674	1,791	1,853	1,853
Ratio of Systems Peak Demand to Installed Capacity	%	95.03	96.75	85	88	84

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

The directors present the audited financial statements of the Authority and its subsidiaries for the year ended 31 December, 2015.

DIRECTORS' RESPONSIBILITY STATEMENT

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

The Authority's directors are responsible for the preparation of the group financial statements that give a true and fair view of Volta River Authority, comprising the statement of financial position at 31 December, 2015, and the statements of profit or loss and other 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 director's report.

The Authority's directors are also responsible 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, 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.
There was no change in the nature of business of the Authority during the year.

STATE OF AFFAIRS OF THE AUTHORITY

The directors consider the state of affairs of the Authority and its subsidiaries to be satisfactory and have made an assessment of the Authority's ability to continue as a going concern and have no reason to believe the Authority will not be a going concern in the year ahead.

FINANCIAL RESTRUCTURING

As stated in note 25, the Authority incurred a net loss for the year ended 31 December, 2015 of GH¢1, 357,515,000 (2014: Loss of GH¢ 996,046,000) and at that date, its current liabilities exceeded its current assets by GH¢ 1,206,607,000 (2014: GH¢ 433,081,000). The Authority continues to make losses and is unable to settle all its liabilities with available funds.

The continued viability of the Authority is dependent on injection of additional funds by way of debt and aggressive pursuit and recovery of receivables to enable it to operate and generate the necessary cash flows to meet its liabilities as and when they fall due.

The directors in conjunction with the Public Utility Regulatory Commission (PURC) are currently negotiating with funding agency to raise a total amount of US$ 2billion to clear the net inter utility debt amongst the players in the power sector of which includes VRA.

Once that is concluded, all the exposures of VRA up to June 30, 2016 would be paid and VRA financials restored to normalcy.
To avert the recurring of debt build up in the power sector, a cash flow waterfall arrangement will be implemented and operationalized immediately to ensure that revenues from ECG are distributed amongst all stakeholders in a systematic and equitable manner. Under this arrangement, all of ECG's revenues will be escrowed on monthly basis and payments to Independent Power Producer (IPPs) and fuel for power generation will be deducted first.

Secondly, debt service for the US$ 2billion used to clear the net inter utility debt amongst the players in the power sector

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

will also be taken off. The residue will then be distributed among the State Owned Power Utilities (SOPUs) according to the tariff structure. This arrangement will ensure that there is liquidity amongst the SOPUS to operate whilst averting the build-up of receivables.

Again, the Public Utility Regulatory Commission (PURC) approved a Bulk Generation Tariff (BGT) effective December, 2015. The Authority has also reviewed its tariffs with its bilateral customers. This is expected to impact positively on the operations and cash flow of the Authority.

APPROVAL OF THE FINANCIAL STATEMENTS

The financial statements were approved by the board of directors on 29 June, 2016 and are signed on its behalf by:

Isaac Kirk Koffi
Chief Executive

Ambassador Lee Ocran
Board Chairman

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

We have audited the consolidated and separate financial statements of Volta River Authority which comprise the statements of financial position at 31 December 2015, statements of profit or loss and other 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, as set out on pages 16 to 50.

DIRECTORS' RESPONSIBILITY FOR THE FINANCIAL STATEMENTS

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

AUDITOR'S RESPONSIBILITY

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with International Standards on Auditing. Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgement, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation of financial statements that give a true and fair view 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 entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by Management, as well as evaluating the overall presentation of the financial statements.

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

OPINION

In our opinion, the financial statements give a true and fair view of the consolidated and separate financial position of Volta River Authority at 31 December 2015 and its consolidated and separate financial performance and consolidated and separate cash flows for the year then ended 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).

KPMG

Signed by: Nathaniel D. Harlley (ICAG/P/1056)
For and on behalf of:
KPMG: (ICAG/F/2016/0038)
CHARTERED ACCOUNTANTS
13 YIYIWA DRIVE, ABELENKPE
P O BOX GP 242
ACCRA

29 June, 2016

STATEMENTS OF FINANCIAL POSITION
AT 31 DECEMBER 2015

		VRA		GROUP	
		2015	2014	2015	2014
	Note	GH¢'000	GH¢'000	GH¢'000	GH¢'000
Assets					
Property, Plant and Equipment	8b	6,318,146	5,113,381	7,216,938	5,965,156
Intangible Assets	8d	-	-	35	49
Investment in Subsidiaries	9	375,861	257,044	-	-
Investment in Equity Securities	10	-	-	14,104	14,104
Other Long Term Investments	10b	64,381	58,200	64,381	58,200
Trade and Other Receivables	12	14,136	15,448	864,155	608,434
Non-Current Assets		**6,772,524**	**5,444,073**	**8,159,613**	**6,645,943**
Inventory	11	241,673	207,051	270,803	210,500
Trade and Other Receivables	12	3,863,870	3,328,414	3,906,582	3,353,824
Taxation	-	-	-	986	939
Short Term Investments	13	56,557	47,665	76,094	69,074
Cash and Bank Balances	14	242,878	225,818	289,305	278,252
Current Assets		**4,404,978**	**3,808,948**	**4,543,770**	**3,912,589**
Total Assets		**11,177,502**	**9,253,021**	**12,703,383**	**10,558,532**
Equity					
Investment by Republic of Ghana	17	495,449	495,449	495,449	495,449
Retained Earnings Account		(1,469,378)	(287,872)	(781,973)	(10,826)
Revaluation Surplus	18	4,502,991	3,890,413	5,231,192	4,833,846
Debt Contingency Fund Reserve	19	64,381	58,200	64,381	58,200
Total Equity		**3,593,443**	**4,156,190**	**5,009,049**	**5,376,669**
Liabilities					
Other Payables	15	220,126	165,426	220,126	165,426
Capital Grant	15	-	-	16,902	18,275
Deferred Tax	7b	-	-	170	151
Long Term Borrowings	16	1,752,348	1,555,538	1,752,348	1,555,538
Non-Current Liabilities		**1,972,474**	**1,720,964**	**1,989,546**	**1,739,390**
Trade and other Payables	15	2,645,771	798,940	2,638,448	833,303
Current Tax	7	-	-	100,082	32,087
Borrowings	16	2,965,814	2,576,927	2,966,257	2,577,083
Current Liabilities		**5,611,585**	**3,375,867**	**5,704,787**	**3,442,473**
Total Liabilities		**7,584,059**	**5,096,831**	**7,694,333**	**5,181,863**
Total Equity and Liabilities		**11,177,502**	**9,253,021**	**12,703,382**	**10,558,532**

The notes on pages 16 to 49 form an integral part of the financial statements.

Ambassador Lee Ocran
Board Chairman

Isaac Kirk Koffi
Chief Executive

STATEMENTS OF COMPREHENSIVE INCOME
FOR THE YEAR ENDED 31 DECEMBER 2015

		VRA		GROUP	
		2015	2014	2015	2014
	Note	GH¢'000	GH¢'000	GH¢'000	GH¢'000
Revenue	2(a)	2,340,520	2,038,784	2,547,508	2,241,853
Cost of Sales	3	(2,187,016)	(1,848,486)	(2,439,206)	(2,052,344)
		153,504	**190,298**	**108,302**	**189,509**
Other Operating Income	2(b)	97,132	105,739	100,432	173,567
Administrative Expenses	4	(687,195)	(394,599)	(733,418)	(437,207)
		(590,063)	**(288,860)**	**(632,986)**	**(263,640)**
Operating (Loss)		**(436,559)**	**(98,562)**	**(524,684)**	**(74,131)**
Financial Income	5	6,465	7,116	84,846	8,386
Financial Expenses	6	(519,881)	(308,674)	(519,881)	(308,674)
Exchange Gain		45,515	89,772	171,904	292,292
Exchange (Loss) on Foreign Debts		(453,055)	(685,698)	(453,055)	(685,698)
(Loss) for the year before taxation		**1,357,575**	**996,046**	**1,240,870**	**(767,825)**
Taxation	7a	-	-	(68,050)	(32,103)
(Loss) for the year after taxation			-		
Other Comprehensive Income		**(1,357,515)**	**(996,046)**	**(1,308,920)**	**(799,928)**
Revaluation of PPE	18	794,768	1,372,175	942,018	1,650,251
Total Comprehensive Income		**(562,747)**	**376,129**	**(366,902)**	**850,323**

The notes on pages 16 to 50 form an integral part of the financial statements.

STATEMENT OF CHANGES IN EQUITY
FOR THE YEAR ENDED 31 DECEMBER 2015

VRA	Republic of Ghana Contribution GH¢'000	Retained Earnings GH¢'000	Revaluation Surplus GH¢'000	Debt Contingency Fund Reserve GH¢'000	Total Equity GH¢'000
Balance as at December 31, 2013	495,449	590,859	2,654,564	39,189	3,780,061
Loss for the year 2014	-	(996,046)	-	-	(996,046)
Other comprehensive income	-	-	1,372,175	-	1,372,175
Total comprehensive income	495,449	(405,187)	4,026,739	39,189	4,156,190
Transfer to Retained Earnings	-	136,326	(136,326)	-	-
Transfer to Debt Contingency Fund Reserve	-	(19,011)	-	19,011	-
Balance as at December 31, 2014	495,449	(287,872)	3,890,413	58,200	4,156,190
Loss for the year 2015	-	(1,357,515)	-	-	(1,357,515)
Other comprehensive income	-		794,768	-	794,768
Total comprehensive income	495,449	(1,645,387)	4,685,181	58,200	3,593,443
Transfer to Retained Earnings	-	182,190	(182,190)	-	-
Transfer to Debt Contingency Fund Reserve	-	(6,181)	-	6,181	-
Balance as at December 31, 2015	495,449	(1,469,378)	4,502,991	64,381	3,593,443

The notes on pages 16 to 50 form an integral part of the financial statements

GROUP	Republic of Ghana Contribution GH¢'000	Retained Earnings GH¢'000	Revaluation Surplus GH¢'000	Debt Contingency Fund Reserve GH¢'000	Total Equity GH¢'000
Balance as at December 31, 2013	495,449	667,339	3,324,369	39,189	4,526,346
Loss for the year 2014	-	(799,928)	-	-	(799,928)
Other comprehensive income	-	-	1,650,251	-	1,650,251
Total comprehensive income	495,449	(132,589)	4,974,620	39,189	5,376,669
Transfer to Retained Earnings	-	140,774	(140,774)	-	-
Transfer to Debt Contingency Fund Reserve	-	(19,011)	-	19,011	-
Balance as at December 31, 2014	495,449	(10,826)	4,833,846	58,200	5,376,669
Loss for the year 2015	-	(1,308,920)	-	-	(1,308,920)
Other comprehensive income	-		941,300	-	941,300
Total comprehensive income	495,449	(1,319,746)	5,775,146	58,200	5,009,049
Transfer to Retained Earnings	-	543,954	(543,954)	-	-
Transfer to Debt Contingency Fund Reserve	-	(6,181)	-	6,181	-
Balance as at December 31, 2015	495,449	(781,973)	5,231,192	64,381	5,009,049

The notes on pages 16 to 50 form an integral part of the financial statements

STATEMENTS OF CASH FLOWS
FOR THE YEAR ENDED 31 DECEMBER 2015

		VRA		GROUP	
		2015	2014	2015	2014
	Note	GH¢'000	GH¢'000	GH¢'000	GH¢'000
Net Cash flow used in operating Activities	23	705,639	(1,313,423)	543,622	(1,283,911)
Cash flows from investing activities					
Interest Received	5	6,465	7,116	84,846	8,386
Purchasing of Property, plant and equipment	8b	(11,852)	(71,750)	(21,592)	(74,676)
Proceeds from sale of property, plant and equipment	8c	179	732	179	732
Long Term Investments		-	-	(35,170)	(14,120)
Payments towards capita work-in-progress	8a	(588,783)	(480,665)	(589,729)	(481,169)
Net cash used in investing activities		(593,991)	(544,567)	(561,466)	(560,847)
Cash flows from financing activities					
Net inflows from long term borrowing	16	442,572	298,169	442,572	298,169
Net (Outflows) from Medium term borrowing	16	(409,077)	415,231	(409,077)	415,231
Net (Outflows)/Inflows from short term borrowing		(571,326)	1,115,830	(571,326)	1,115,830
Shareholders Advance to NEDco		-	-	118,817	-
Net cash from financing activities		(537,831)	1,829,230	(419,014)	1,829,230
Decrease in cash and cash equivalents in the year		(426,183)	(28,760)	(436,858)	(15,528)
Cash and cash equivalents at the beginning of the year	24	164,580	156,052	238,267	210,554
Exchange Rate Fluctuation on Cash and Cash Equivalents		52,640	37,288	56,035	43,241
Cash and cash equivalent at the end of the year	24	(208,963)	164,580	(142,556)	238,267

The notes on pages 16 to 50 form an integral part of the financial statements.

NOTES TO THE FINANCIAL STATEMENTS
FOR THE YEAR ENDED 31 DECEMBER 2015

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 for the year ended 31 December, 2015.

BASIS OF PREPARATION

1.1 Basis of measurement

The financial statements have been prepared on a historical cost basis, except for properties, land and buildings, 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 International Financial Reporting Standards (IFRS) and its interpretations adopted by the International Accounting Standard Board (IASB).

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 cedi have been rounded to the nearest thousand, except when otherwise indicated.

1.3 Basis of consolidation

The Authority's 2014 consolidated financial statements include the results of the Authority and its subsidiaries.

SUBSIDIARIES

In accordance with IFRS 10, a 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. Investment in subsidiaries are measured at cost in the parent's separate financial statements. The subsidiaries consolidated are Volta Lake Transport Company (VLTC), Akosombo Hotel Limited (AHL), Northern Electricity Distribution Company (NEDCo) and Takoradi Power Company Limited (TAPCO)

Restructuring of subsidiary

On 01 January, 2013, the Volta River Authority (VRA) restructured its operations and as a result transferred its operating division formerly known as Northern Electricity Department into Northern Electricity Company Limited (NEDCo).

Through the restructuring, NEDCo became the wholly-owned subsidiary of VRA. NEDCo has therefore been consolidated as part of the VRA Group from December, 2013 for years ended 31 December, 2014 and 2015

Transactions eliminated on consolidation

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

1.4 New standards and interpretations not adopted

A number of new standards, amendments to standards and interpretations are effective for annual periods beginning after 1 January, 2016, and have not been applied in preparing these financial statements. Those which may be relevant to the Authority are set out below. The Group does not plan to adopt this standard early and the extent of the impact has not been determined.

Standard/Interpretation		Effective date
IFRS 16	Leases	1 January 2019
IFRS 9	Financial Instruments	1 January 2018
IFRS 15	Revenue from contracts with customers	1 January 2018
IAS 1	Disclosure Initiative	1 January 2016

NOTES TO THE FINANCIAL STATEMENTS
FOR THE YEAR ENDED 31 DECEMBER 2015 Continued

IFRS 16 Leases
IFRS 16 was published in January, 2016. It sets out the principles for the recognition, measurement, presentation and disclosure of leases for both parties to a contract, ie the customer ('lessee') and the supplier ('lessor'). IFRS 16 replaces the previous leases Standard, IAS 17 Leases, and related Interpretations. IFRS 16 has one model for lessees which will result in almost all leases being included on the Statement of Financial position. No significant changes have been included for lessors.

The standard is effective for annual periods beginning on or after 1 January, 2019, with early adoption permitted only if the entity also adopts IFRS 15. The transitional requirements are different for lesees and lessors. The group is assessing the potential impact on the financial statements resulting from the application of IFRS 16.

IFRS 9 Financial Instruments
On 24 July, 2014, the IASB issued the final IFRS 9 Financial Instruments Standard, which replaces earlier versions of IFRS 9 and completes the IASB's project to replace IAS 39 Financial Instruments: Recognition and Measurement.
This standard will have a significant impact on the Group, which will include changes in the measurement bases of the Group's financial assets to amortised cost, fair value through other comprehensive income or fair value through profit or loss. Even though these measurement categories are similar to IAS 39, the criteria for classification into these categories are significantly different. In addition, the IFRS 9 impairment model has been changed from an "incurred loss" model from IAS 39 to an "expected credit loss" model, which is expected to increase the provision for bad debts recognised in the Group.
The standard is effective for annual periods beginning on or after 1 January, 2018 with retrospective application, early adoption is permitted.

IFRS 15 Revenue from contracts with customers
The standard contains a single model that applies to contracts with customers and two approaches to recognising revenue: at a point in time or over time. The model features a contract-based five-step analysis of transactions to determine whether, how much and when revenue is recognised.

This new standard will most likely not have a significant impact on the Group. The Group is currently in the process of performing a more detailed assessment of the impact of this standard on the Group and will provide more information in the year ending 31 December, 2016 financial statements.

The standard is effective for annual periods beginning on or after 1 January, 2018, with early adoption permitted.

Disclosure Initiative (Amendments to IAS 1)
The amendments provide additional guidance on the application of materiality and aggregation when preparing financial statements.
The amendments apply for annual periods beginning on or after 1 January, 2016 and early application is permitted.
This amendment will not have any significant impact on the Authority's financial statements

1.5.0 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

1.5.1 Revenue

(i) Sale of electricity
Revenue is recognized to the extent that the economic benefit will flow to the Group and the revenue can be reliably measured. Revenue is measured at the fair value of the consideration received, excluding discounts, and rebates. Revenue from the sale of electricity is measured at the fair value of the consideration received or receivable, net of returns, trade discounts, taxes and volume rebates. Revenue from the sale of electricity is recognized when the electricity is transmitted to the customer, recovery of the consideration is probable and the amount of revenue can be measured reliably.

(ii) Connection fees
Fees paid by customers when connected to the electricity are recognized as income to the extent that the fee does not cover future commitments.

(iii) Rendering of services
Revenue from rendering of services is recognised when the services had been rendered, recovery of the consideration is probable and the amount of revenue can be measured reliably.

1.5.2 Finance Income
Interest income is recognized as interest accrues using the effective interest method. Interest income is included in finance income in profit or loss.

1.5.3 Government Grant
Grant and assistance from the government are recognised as deferred income at fair value when it can reasonably be

NOTES TO THE FINANCIAL STATEMENTS
FOR THE YEAR ENDED 31 DECEMBER 2015 Continued

assumed that the grant will be received and that the Authority will meet the conditions of 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 a non-current asset is deducted from the cost of the related asset to get the carrying value of the asset. A grant intended to cover expenses is reported in profit and loss on a systematic basis in the periods in which the expenses are recognised.

1.5.4 Foreign currency translations
Transactions in foreign currencies are translated into the functional currency at the prevailing exchange rate at the date of the transaction. On the reporting date, monetary assets and liabilities in foreign currencies are translated at the exchange rate ruling at the reporting date. Exchange rate differences arising from translation of currencies are recognised in the profit and loss.

1.5.5 Financial assets
The Group initially recognises financial assets (loans and receivables, debt securities) on the date when they originate and all other financial assets and financial liabilities on the date of trade. Subsequent measurements are at fair value and changes therein, including any interest or dividend income recognised in the profit or loss.
The Group derecognises a financial asset when the contractual rights to the cash flow from the asset expire, or it transfers the rights to receive the contractual cash flows in a transaction in which substantially all risk and rewards of ownership of the financial asset are transferred, or it retain control over the transferred asset. Any interest in such derecognised financial assets that is created by the Group is recognised as a separate asset or liability. The Group derecognises a financial liability when its contractual obligation are discharged, cancelled or expired. The Authority's financial assets include cash and bank balance, trade and other receivable, short term investment.

1.5.6 Loans and Receivables
Receivables are non-derivative financial assets with fixed or determinable payments that are not quoted in an active market. Such financial assets are carried at amortized cost using the effective interest rate method. Trade receivables are reported at the amount expected to be paid, less impairments which are assessed both individually and collectively. Impairment losses on trade receivables are reported under operating expenses. Trade receivables have a short anticipated term and are therefore valued at a nominal amount without discounting. The Group considers evidence of impairment for these assets at both an individual and a collective level. All individually significant assets are individually assessed for any impairment. Those found not to be impaired are then collectively assessed for impairment. Collective assessment is carried out by grouping assets with similar risk characteristics.

1.5.7 Financial liabilities
Initial recognition
Financial liabilities within the scope of IAS 39 are classified as other financial liabilities category. The Authority determines the classification of its financial liabilities at initial recognition. Financial liabilities are recognized initially at fair value and in the case of loans and borrowings, less directly attributable transaction costs.
The Authority's financial liabilities include trade and other payables, bank overdraft, loans and borrowings.

Subsequent measurement
The measurement of financial liabilities depends on their classification. After initial recognition, interest bearing loans and borrowings are subsequently measured at amortized cost using the effective interest method. Gains and losses are recognized in profit or loss when the liabilities are derecognized.

1.5.8 Offsetting of financial instruments
Financial assets and financial liabilities are offset and the net amount reported in the balance sheet if, and only if, there is a currently enforceable legal right to offset the recognized amounts and there is an intention to settle on a net basis.

1.5.9 Properties, plant and equipment

(i) Recognition and Measurement
Items of property, plant and equipment are measured at revalued amount less accumulated depreciation. Purchased software that is integral to the functionality of the related equipment is capitalized 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).

(ii) Subsequent cost
The cost of replacing part of an item of property, plant or equipment is recognized 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 recognized in the income statement as incurred.

NOTES TO THE FINANCIAL STATEMENTS
FOR THE YEAR ENDED 31 DECEMBER 2015 Continued

(iv) Depreciation

Depreciation is calculated and recognized in the profit or loss on a straight-line basis over the estimated useful lives of each part of an item of property, plant and equipment. Leased assets are amortised over the shorter of the lease term and their useful lives. Freehold land is not depreciated.

(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 includes the cost of materials and direct labour, and any other costs 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.

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 rates used are shown in the table below:

Asset	Rate of Depreciation (%)	No. of Years
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 Townships	2.5	40
Buildings	2.5	40
Hydro Generating Plant and Machinery	Between 2.2 and 4.0	33 - 45
Aviation and Marine Equipment	12.5	8
Motor Vehicles	Between 10.0 and 25.0	4.0- 10.0
Equipment and Furniture	Between 12.5 and 25.0	4.0 - 8.0
Meters/Consumer Connections	Between 4.0 and 5.0	20 - 25
Thermal Generating Plants and Machinery	Between 4.0 and 10.0	10 - 25
Distribution Network	Between 2.5 and 4.0	25 - 40
Computer Equipment	Between 20.0 and 25.0	4.0 - 5.0
Communication Equipment	Between 3.3 and 6.67	15 - 30

Leased assets are amortised over the useful life of the asset. However, if there is no reasonable certainty that the Authority 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.

1.5.10 Intangible assets

Software acquired by the Authority is stated at cost less accumulated amortization and accumulated impairment losses Subsequent expenditure on software assets is capitalized only when it increases the future economic benefits embodied in the specific asset to which it relates. All other expenditure is expensed as incurred. Amortization is recognized in the 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.

NOTES TO THE FINANCIAL STATEMENTS
FOR THE YEAR ENDED 31 DECEMBER 2015 Continued

1.5.11 Borrowing costs
Borrowing costs are recognized, as an expense, in the period in which they are incurred, except to the extent that they are capitalized. Borrowing costs that are directly attributable to the acquisition, construction or production of a qualifying asset are capitalized 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 costs that are not directly attributable to the acquisition, construction or production of a qualifying asset are recognised in profit or loss.
All borrowing costs are recognised using the effective interest method.

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

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

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

1.5.14 Employee benefits - Short-term 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.

1.6.0 Determination of fair values
A number of the company's accounting policies and disclosures require the determination of fair value, for both financial and non-financial assets and liabilities. Fair values have been determined for measurement and/or disclosure purposes based on the following methods. (See note1.4)

Property, plant and equipment

The fair value of items of plant, equipment, fixtures and fittings is based on the market approach and cost approaches using quoted market prices for similar items when available and replacement cost when appropriate.

Trade and other receivables

The fair value of trade and other receivables including service concession receivables is estimated as the present value of future cash flows, discounted at the market rate of interest at the reporting date. This fair value is determined for disclosure purposes.

Non-derivative financial liabilities

Fair value, which is determined for disclosure purposes, is calculated based on the present value of future principal and interest cash flows, discounted at the market rate of interest at the reporting date. For finance leases the market rate of interest is determined by reference to similar lease agreements.

1.7.0 Significant accounting judgments, estimates and assumptions
The preparation of the financial statements in conformity with IFRS requires the Authority's Management to make estimates and assumptions that affect the reported amounts of assets and liabilities, revenues and expenses and disclosure of contingent assets and liabilities at the date of the financial statements.
The determination of estimates requires the exercise of judgement based on various assumptions and other factors such as historical experience, current and expected economic conditions. Actual results could differ from those estimates.

Estimates and judgements are continually evaluated based on historical experience and other factors, including expectations of future events that are believed to be reasonable under the circumstances.
The estimates and assumptions that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year are discussed below.

NOTES TO THE FINANCIAL STATEMENTS
FOR THE YEAR ENDED 31 DECEMBER 2015 Continued

1.7.1 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, an indexation model was developed to uplift the asset values in the years between full physical valuations. Effectively, the indexation model acts as an interim valuation mechanism, which uplifts the results of the previous physical valuation by the application of appropriate indices to reflect the general economic cost levels of the assets value.

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 and translated into Ghanaian cedi terms for accounting 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-procured from the United States and Europe. Furthermore, most of the items are obtained from advanced countries like the United States, Europe and Asia (China) where price levels are fairly stable or increase marginally. The Authority thus assumed that the US inflation rates fairly represents the general price levels for foreign purchases made by the VRA.

1.7.2 Impairment

The recoverability of the carrying value of property, plant and equipment is reviewed on a continuous basis, using mainly estimates of future discounted cash flows or realisable values. Where impairment has occurred it is recognised in the profit and loss.

1.7.4 Contingencies

By their nature, contingencies will only be resolved when one or more future events occur or fail to occur. The assessment of such contingencies inherently involves the exercise of significant judgement and estimates of the outcome of future events.

1.8.0 Risk and risk management

The Authority'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:

- Standardized 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 overarching responsibility for internal control and risk management at Volta River Authority. The Board has, in turn, given Volta River Authority's Management a risk mandate. Management allocates this mandate to Volta River Authority's business units in accordance with a delegation structure. Each unit manages its own risks and has some room to manoeuvre within its respective mandate. The results achieved by the units are followed up on a continuous basis and reported to the Executive Management by an independent risk control function, Internal Audit, which is also responsible for monitoring the Authority's overall risk mandate.

1.8.2 Risks at Volta River Authority

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

1.8.2.1 Political Risk

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

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

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:

NOTES TO THE FINANCIAL STATEMENTS
FOR THE YEAR ENDED 31 DECEMBER 2015 Continued

- Administrative risks - the risk of loss due to defects in the Authority'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 Authority's risk. Electricity prices are determined by Public Utility Regulatory Commission (PURC).

To determine the value of electricity price risk in electricity generation, the Authority 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 Authority's Business Development and Sales Department.

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

1.8.2.6 Fuel Price Risk
Measurement and management of fuel price risk is conducted within the Finance Department. Fuel prices are affected by macroeconomic factors, among other things. The Authority manages fuel price risk by forecasting and analyzing price trends.

1.8.2.7 Investment Risk
The Authority 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 risks associated with each individual investment are assessed.

1.8.2.8 Plant Risk
The Authority's largest insurable risks are associated with the operation of power generation plants. The Authority'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 minimized 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 fails to meet its contractual obligations and arises principally from the Authority's receivables from customers.

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

NOTES TO THE FINANCIAL STATEMENTS
FOR THE YEAR ENDED 31 DECEMBER 2015 Continued

Exposure to credit risk

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

	GROUP	
	2015	2014
	GH¢'000	GH¢'000
Trade receivables	3,206,667	2,528,858
Other receivables	1,777,901	1,372,752
Cash and Bank	289,305	278,252
Short term investment	76,094	69,074
	5,349,967	4,248,936

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

	GROUP	
	2015	2014
	GH¢'000	GH¢'000
Whole sale	766,492	777,201
Distribution to end-users	2,440,175	1,751,657
	3,206,667	2,528,858

Impairment losses

The ageing of trade receivables at the reporting date was:

VRA	Gross	Impairment allowance	Gross	Impairment allowance
	31-Dec-15	31-Dec-15	31-Dec-14	31-Dec-14
	GH¢'000	GH¢'000	GH¢'000	GH¢'000
Not past due	559,618	-	476,983	-
Past due 30-60 days	187,817	-	75,559	-
Past due 60-90 days	195,898	-	129,120	-
Past due 90-120 days	338,586	-	379,074	-
Past due 120 days and above	1,553,687	330,040	1,159,466	58,246
	2,835,606	330,040	2,220,202	58,246

NOTES TO THE FINANCIAL STATEMENTS
FOR THE YEAR ENDED 31 DECEMBER 2015 Continued

GROUP	Gross	Impairment allowance	Gross	Impairment allowance
	31-Dec-15	31-Dec-15	31-Dec-14	31-Dec-14
	GH¢'000	GH¢'000	GH¢'000	GH¢'000
Not past due	632,848	-	654,434	-
Past due 30-60 days	212,394	-	104,717	-
Past due 60-90 days	221,535	-	143,698	-
Past due 90-120 days	382,893	-	437,387	-
Past due 120 days and above	1,756,998	344,184	1,188,622	72,390
	3,206,668	344,184	2,528,858	72,390

The impairment allowance is related to specific trade receivables.

1.8.2.10 Liquidity risk

Liquidity risk is the risk that the Authority will not be able to meet its financial obligations as and when they fall due. The Authority's approach to managing liquidity is to ensure, as far as possible, that it will always have sufficient liquid funds to meet its liabilities when due, under both normal and stressed conditions, without incurring unacceptable losses or damage to the Authority's reputation.

The Authority manages its cash position and future outflows on an ongoing daily basis. The Authority ensures that it has sufficient cash on demand to meet expected operational expenses and liabilities as and when they fall due. The following are the contractual maturities of financial liabilities, including interest payments and excluding the impact of netting arrangements.

December 31, 2015 –VRA

	Total amount	Less than 6 months	6-12 months	1-2 years	3-4 years	More than 5 years
	GH¢'000	GH¢'000	GH¢'000	GH¢'000	GH¢'000	GH¢'000
Trade payables	2,549,887	1,242,680	1,307,207	-	-	-
Payables to related parties	34,243	-	34,243	-	-	-
Accrued expenses	868	-	868	-	-	-
Sundry creditors	82,232	41,391	40,841	-	-	-
Loan interest	250,961	250,961	-	-	-	-
Short term loan	2,158,515	1,079,258	1,079,258	-	-	-
Medium term loan	455,328	113,832	113,832	113,832	113,832	-
Long term loan	1,344,960	23,970	23,970	47,940	416,360	832,719
Overdraft	508,398	508,398	-	-	-	-
Other payables	220,126	220,126	-	-	-	-
	7,605,518	**3,481,484**	**2,599,351**	**161,772**	**530,192**	**832,719**

NOTES TO THE FINANCIAL STATEMENTS
FOR THE YEAR ENDED 31 DECEMBER 2015 Continued

December 31, 2014-VRA

	Total amount	Less than 6 months	6-12 months	1-2 years	3-4 years	More than 5 years
	GH¢'000	GH¢'000	GH¢'000	GH¢'000	GH¢'000	GH¢'000
Trade payables	811,059	389,308	421,751	-	-	-
Payables to related parties	-	-	-	-	-	-
Accrued expenses	20,438	20,438	-	-	-	-
Sundry creditors	36,052	18,026	18,026	-	-	-
Loan interest	118,355	118,355	-	-	-	-
Short term loan	2,307,608	1,153,804	1,153,804	-	-	-
Medium term loan	768,596	192,149	192,149	192,149	192,149	-
Long term loan	828,848	21,031	21,031	42,062	248,293	496587
Overdraft	109,059	109,059	-	-	-	-
	5,000,015	**2,022,170**	**1,806,761**	**234,211**	**440,442**	**496,587**

December 31, 2014-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	2,569,847	389,308	2,180,539	-	-	-
Accrued expenses	5,905	5,905	-	-	-	-
Sundry creditors	82,782	41,391	41,391	-	-	-
Loan interest	250,961	250,961	-	-	-	-
Short term loan	2,158,515	1,079,258	1,079,258	-	-	-
Medium term loan	455,328	113,832	113,832	113,832	113,832	-
Long term loan	1,344,960	34,120	34,120	68,241	402,826	805,653
Overdraft	508,841	508,841	-	-	-	-
Other payables	269,285	220,126	32,257	16,902	-	-
	7,646,424	**2,643,742**	**3,481,397**	**198,975**	**516,658**	**805,653**

NOTES TO THE FINANCIAL STATEMENTS

FOR THE YEAR ENDED 31 DECEMBER 2015 Continued

December 31, 2015 –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	811,059	389308	421,751	-	-	-
Accrued expenses	20,438	20,438	-	-	-	-
Sundry creditors	36,052	18,026	18,026	-	-	-
Loan interest	118,355	118,355	-	-	-	-
Short term loan	2307,608	1,153,804	1,153,804	-	-	-
Medium term loan	768,596	192,149	192,149	192,149	192,149	-
Long term loan	829,004	21,031	21,031	42,062	248,293	496,587
Overdraft	109,059	109,059	-	-	-	-
	5,000,171	**2,022,170**	**1,806,761**	**234,211**	**440,442**	**496,587**

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 company's income or the value of its holdings of financial instruments. The objective of market risk management is to manage and control market risk exposures within acceptable parameters, while optimising the return on risk.

(i) Currency risk

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

Exposure to currency risk

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

2015-in thousands	USD	EUR	SDR	KD	CHF	GBP	SKR	CAD	ZAR	UA
Accounts receivable	453,900	-	-	-	-	-	-	-	-	-
Cash and bank balances	39,152	9,907	-	-	-	12	-	-	-	-
Investments	25,039	-	-	-	-	-	-	-	-	-
Accounts payable	(558,911)	(17,071)	-	(0)	(176)	(1095)	(1365)	(2,097)	1,877	-
Borrowings	(728,272)	(31,706)	(69,169)	(6,627)	-	-	-	-	-	22,810
	(769,092)	**(38,870)**	**(69,169)**	**(6,627)**	**(176)**	**(1,083)**	**(1,365)**	**(2,667)**	**1,877**	**22,810**

NOTES TO THE FINANCIAL STATEMENTS
FOR THE YEAR ENDED 31 DECEMBER 2015 Continued

2014-in thousands	USD	EUR	SDR	KD	CHF	GBP	SKR	CAD	UA
Accounts receivable	319,534	-	-	-	-	-	-	-	-
Cash and bank balances	36,986	13,001	-	-	-	272	-	-	-
Investments	26,031	-	-	-	-	-	-	-	-
Accounts payable	(157,331)	(15,135)	-	(156)	(152)	(974)	(1365)	(2,097)	-
Borrowings	(806,846)	(24,157)	(77,315)	(6,627)	-	-	-	-	(19,748)
	(581,626)	**(26,291)**	**(77,315)**	**(6,783)**	**(152)**	**(702)**	**(1,365)**	**(2,667)**	**(19,748)**

The following exchange rates were applied during the year:

December 2015	USD	EUR	SDR	KD	CHF	GBP	SKR	CAD
Reporting date spot rate	**3.7944**	**4.1514**	**5.3116**	**12.6182**	**3.8345**	**5.6265**	**0.4513**	**2.7290**
Average rate	**3.7050**	**4.0827**	**5.2806**	**12.5211**	**3.8527**	**5.6620**	**0.4403**	**2.9135**
December 2014	USD	EUR	SDR	KD	CHF	GBP	SKR	CAD
Reporting date spot rate	3.2001	3.8959	4.6412	10.9428	3.2400	4.9791	0.4117	2.7541
Average rate	2.9341	3.8719	4.6036	10.6656	3.1927	4.8251	0.4141	2.6581

Sensitivity

A 5% strengthening of the GH¢, as indicated below, against the currencies above at 31 December, 2015 would have increased (decreased) profit or loss by the amounts 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 variables, in particular interest rates, remain constant. The analysis is performed on the same basis for 2014, albeit that the reasonably possible foreign exchange rate variances were different, as indicated below:

Effect in thousands of GH¢

	USD	EUR	SDR	KD	CHF	GBP	SKR	CAD	UA
December, 2015	**145,912**	**8,068**	**18,370**	**4,181**	**34**	**305**	**31**	**286**	**6,033**
December, 2014	**93,063**	**5,121**	**17,942**	**3,711**	**25**	**175**	**28**	**367**	**4,620**

A 5% weakening of the Ghana cedi against the currencies above at 31 December 2015 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:

	2015	2014
	GH¢'000	GH¢'000
Financial assets	76,094	69,074
Financial liabilities	**4,763,690**	4,132,621

NOTES TO THE FINANCIAL STATEMENTS
FOR THE YEAR ENDED 31 DECEMBER 2015 Continued

The Group does not account for any fixed-rate financial assets or financial liabilities at fair value through profit or loss, and the group does not designate derivatives (interest rate swap) as hedging instruments under a fair value hedge accounting model. Therefore, a change in interest rates at the reporting date would not affect profit or loss.

2a Revenue

	VRA			
	2015		2014	
	GH¢'000	GH¢'000	GH¢'000	GH¢'000
Sale of Electricity				
Electricity Company of Ghana	5,109	774,442	5,872	789,274
Mines	1,231	666,162	1,553	727,792
Akosombo Textiles	8	4,514	10	5,838
Aluworks	8	2,851	8	4,416
Diamond Cement	49	18,482	46	13,659
Volta Aluminium Co. Ltd.	573	100,858	611	96,811
Others	133	23,394	174	7,744
GRIDCo (Transmission Loss Recoveries)	443	65,640	565	75,628
Government subsidies*	-	303,569	-	-
Substation Use (GRIDCo.)	7	1,048	6	771
Northern Electricity Dept. (NED)	1,013	153,605	998	133,690
Local Customers	**8,574**	**2,114,565**	**9,843**	**1,855,623**
Communauté Electrique Du Benin	498	152,710	443	116,473
Compagne Ivoirienne d'Electricité	17	-	20	5,519
Société National D'elect Du Burkina	13	5,640	12	4,692
Sonable Youga Mines	40	20,710	41	17,771
Free Zone Companies	102	46,895	94	38,706
Foreign Customers	**670**	**225,955**	**610**	**183,161**
Ferry Services	-	-	-	-
Hospitality Services	-	-	-	-
Other Subsidiaries (Note 22)	-	-	-	-
Total	**9,244**	**2,340,520**	**10,453**	**2,038,784**

*This amount represents tariff shortfalls which the government of Ghana absorbed as subsidy to domestic consumers in Ghana in 2015.

NOTES TO THE FINANCIAL STATEMENTS
FOR THE YEAR ENDED 31 DECEMBER 2015 Continued

2a Revenue

	GROUP			
	2015		2014	
	GH¢'000	GH¢'000	GH¢'000	GH¢'000
Sale of Electricity				
Electricity Company of Ghana	5,109	774,442	5,872	789,274
Mines	1,231	666,162	1,553	727,792
Akosombo Textiles	8	4,514	10	5,838
Aluworks	8	2,851	8	4,416
Diamond Cement	49	18,482	46	13,659
Volta Aluminium Co. Ltd.	573	100,858	611	96,811
Others	133	23,394	174	7,744
GRIDCo (Transmission Loss Recoveries)	443	65,640	565	75,628
Government subsidies*	-	303,569	-	-
Substation Use (GRIDCo.)	7	1,048	6	771
Northern Electricity Dept. (NED)	668	349,014	680	325,634
Local Customers	**8,229**	**2,309,974**	**9,525**	**2,047,567**
Communauté Electrique Du Benin	498	152,710	443	116,473
Compagne Ivoirienne d'Electricité	17	-	20	5,519
Société National D'elect Du Burkina	13	5,640	12	4,692
Sonable Youga Mines	40	20,710	41	17,771
Free Zone Companies	102	46,895	94	38,706
Foreign Customers	**670**	**225,955**	**610**	**183,161**
Ferry Services	-	7,531	-	7,615
Hospitality Services	-	4,048	-	3,510
Other Subsidiaries (Note 22)	-	11,579	-	11,125
Total	**8,899**	**2,547,508**	**10.135**	**2,241,853**

*This amount represents tariff shortfalls which the government of Ghana absorbed as subsidy to domestic consumers in Ghana in 2015.

NOTES TO THE FINANCIAL STATEMENTS
FOR THE YEAR ENDED 31 DECEMBER 2015 Continued

2b. Other Operating Income

	VRA		GROUP	
	2015	2014	2015	2014
	GH¢'000	GH¢'000	GH¢'000	GH¢'000
Real Estates	11,469	11,262	10,874	10,762
Health Services	13,995	12,000	13,995	12,000
Schools	6,894	6,612	6,894	6,612
Service Charge	35,983	24,058	35,983	24,058
Profit on Sale of Fixed Assets	135	543	135	543
Gas Sales Proceeds	21,351	17,566	21,351	17,566
Other Income	7,305	33,698	11,200	102,026
Total	**97,132**	**105,739**	**100,432**	**173,567**

3. Cost of Sales/Operating Costs

	VRA		GROUP	
	2015	2014	2015	2014
Analysis by budget centre:	GH¢'000	GH¢'000	GH¢'000	GH¢'000
Generation: Hydro	34,168	36,691	34,168	36,691
Thermal	1,612,345	1,101,763	1,612,345	1,101,763
Distribution (NEDCo)	-	-	149,486	86,566
Purchase of Electricity	374,812	579,960	374,812	610,853
Depreciation	165,691	130,072	268,395	216,471
Total	**2,187,016**	**1,848,486**	**2,439,206**	**2,052,344**

	VRA		GROUP	
	2015	2014	2015	2014
Analysis by budget element:	GH¢'000	GH¢'000	GH¢'000	GH¢'000
Salaries and Related Expenses	76,345	70,485	149,508	137,505
Materials and Spares Consumed	-	9,128	10,629	9,953
Repairs & Maintenance	69,354	62,031	76,815	70,586
Fuel Handling and Usage	1,479,018	942,933	1,479,018	942,933
Purchase of Electricity	374,813	579,960	374,813	579,521
Transmission Service Charge	-	-	41,700	31,332
Depreciation	165,691	130,072	268,395	216,471
Other Operating Costs	21,795	53,877	38,328	64,043
Total	**2,187,016**	**1,848,486**	**2,439,206**	**2,052,344**

NOTES TO THE FINANCIAL STATEMENTS
FOR THE YEAR ENDED 31 DECEMBER 2015 Continued

4. Administrative Expenses

	VRA		GROUP	
	2015	2014	2015	2014
	GH¢'000	GH¢'000	GH¢'000	GH¢'000
Central Services	297,289	258,310	335,284	293,842
Schools	18,973	15,729	18,973	15,729
Real Estates	44,592	42,090	44,592	42,090
Health Services	29,890	26,947	29,890	26,947
Depreciation	24,656	22,743	32,884	29,819
Provision for Bad and Doubtful Debts	271,795	28,780	271,795	28,780
Total	**687,195**	**394,599**	**733,418**	**437,207**

	VRA		GROUP	
	2015	2014	2015	2014
Analysis by budget element:	GH¢'000	GH¢'000	GH¢'000	GH¢'000
Salaries and Related Expenses	167,763	158,415	185,282	177,315
Materials and Spares Consumed	-	3,946	6,966	5,149
Repairs & Maintenance	19,776	11,982	21,929	14,084
Other Operating Costs	474,600	197,183	485,766	210,328
Depreciation	24,656	22,743	32,884	29,819
Audit Fees	400	300	591	512
Total	**687,195**	**394,599**	**733,418**	**437,207**
Total Operating & Admin Cost	**2,874,210**	**2,243,085**	**3,172,624**	**2,489,551**

5. Financial Income

	VRA		GROUP	
	2015	2014	2015	2014
	GH¢'000	GH¢'000	GH¢'000	GH¢'000
Interest & Investment Income	6,465	7,116	84,846	8,386
Total	**6,465**	**7,116**	**84,846**	**8,386**

NOTES TO THE FINANCIAL STATEMENTS
FOR THE YEAR ENDED 31 DECEMBER 2015 Continued

6. Financial Expenses

	VRA		GROUP	
	2015	2014	2015	2014
	GH¢'000	GH¢'000	GH¢'000	GH¢'000
Interest on Long Term Loans	9,645	10,219	9,645	10,219
Interest on Medium Term Loans	68,116	45,944	68,116	45,944
Interest on Short Term Loans	392,906	240,717	392,906	240,717
Interest on Overdrafts	31,217	8,953	31,217	8,953
Interest on Delayed Invoices	17,997	2,841	17,997	2,841
Total	**519,881**	**308,674**	**519,881**	**308,674**

7. Taxation (Group)

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

7a. Tax Payable

	GH¢'000	GH¢'000	GH¢'000	GH¢'000
	Bal. at Jan.1	Payments	Charge for the Year	Bal. at Dec.31
2014	32,087	-	-	32,087
2015	-	(36)	68,031	67,995
Total	**32,087**	**(36)**	**68,031**	**100,082**

7b. Deferred Tax

	2015	2014
	GH¢'000	GH¢'000
Balance at Jan. 1	151	-
Charge to Income Statement	19	151
Balance at Dec. 31	**170**	**151**

NOTES TO THE FINANCIAL STATEMENTS
FOR THE YEAR ENDED 31 DECEMBER 2015 Continued

8a. Capital Work-in-Progress

GROUP

2014					2015			
Generation Assets	Power Distribution Network	Others	Total		Generation Assets	Power Distribution Network	Others	Total
GH¢'000	GH¢'000	GH¢'000	GH¢'000		GH¢'000	GH¢'000	GH¢'000	GH¢'000
192,367	397,125	38,700	**628,192**	Balance as at Jan. 1	608,951	432,894	67,516	**1,109,361**
471,682	35,769	45,646	**553,097**	Additions during the year	488,462	98,667	26,806	**613,935**
(2,142)	-	(1,045)	**(3,187)**	Write off	-	-	(6,466)	**(6,466)**
(52,956)	-	(15,785)	**(68,741)**	Transfers during the year	-	(1,734)	(16,006)	**(17,740)**
608,951	**432,894**	**67,516**	**1,109,361**	**Balance as at Dec. 31**	**1,097,413**	**529,827**	**71,850**	**1,699,090**

NOTES TO THE FINANCIAL STATEMENTS
FOR THE YEAR ENDED 31 DECEMBER 2015 Continued

8b. Property, Plant and Equipment

GROUP 2015	Dam Power-house and Civil Works	Generating Plant & Machinery	Power Distribution Network	Townships	Buildings	Floating Craft	Motor Vehicles	Equipment & Furniture	Total
A. VALUATION	GH¢'000	GH¢'000	GH¢'000	GH¢'000	GH¢'000	GH¢'000	GH¢'000	GH¢'000	GH¢'000
Balance as at Jan. 1, 2015	5,340,617	2,948,322	2,286,007	442,849	336,418	250,997	129,326	44,741	**11,779,277**
Disposals	-	-	-	-	-	-	(5,438)	(3)	**(5,441)**
Revaluation surplus	1,040,626	589,900	447,340	81,399	63,497	14,478	24,098	7,152	**2,268,490**
Additions during the year	26	1,585	1,422	7,200	81	1,585	7,002	2,691	**21,592**
Balance as at Dec 31, 2015	**6,381,269**	**3,539,807**	**2,734,769**	**531,448**	**399,996**	**267,060**	**154,988**	**54,581**	**14,063,918**
B. DEPRECIATION									
Balance as at Jan. 1, 2015	2,828,688	1,849,245	1,579,682	289,961	69,135	176,590	104,816	25,365	**6,923,482**
Disposal/Transfers	-	-	-	-	-	-	(5,178)	(2)	**(5,180)**
Charge for the period	61,187	102,283	99,742	8,861	3,004	6,641	11,661	7,917	**301,296**
Revaluation surplus	549,160	362,664	310,026	56,325	10,346	13,777	19,862	4,312	**1,326,472**
Balance as at Dec 31, 2015	**3,439,035**	**2,314,192**	**1,989,450**	**355,147**	**82,485**	**197,008**	**131,161**	**37,592**	**8,546,070**
C. CARRYING AMOUNT									
Balance as at Dec 31, 2015	**2,942,234**	**1,225,615**	**745,319**	**176,301**	**317,511**	**70,052**	**23,827**	**16,989**	**5,517,848**
Capital Work-in-Progress as at December 31, 2015 (Note 8a)									**1,699,090**
									7,216,938

NOTES TO THE FINANCIAL STATEMENTS

FOR THE YEAR ENDED 31 DECEMBER 2015 Continued

8b. Property, Plant and Equipment

GROUP 2014	Dam Power-house and Civil Works	Generating Plant & Machinery	Power Distribution Network	Townships	Buildings	Floating Craft	Motor Vehicles	Equipment & Furniture	Total
A. VALUATION	GH¢'000	GH¢'000	GH¢'000	GH¢'000	GH¢'000	GH¢'000	GH¢'000	GH¢'000	GH¢'000
Balance as at Jan. 1, 2014	3,575,028	1,911,849	1,528,282	296,837	234,340	224,918	93,505	23,824	**7,888,583**
Disposals	-	-	-	-	-	-	(12,108)	(23)	**(12,131)**
Revaluation surplus	1,765,589	980,949	757,571	145,929	100,775	24,564	43,317	9,455	**3,828,149**
Additions during the year	-	55,524	154	83	1,303	1,515	4,612	11,485	**74,676**
Balance as at Dec 31, 2014	**5,340,617**	**2,948,322**	**2,286,007**	**442,849**	**336,418**	**250,997**	**129,326**	**44,741**	**11,779,277**
B. DEPRECIATION									
Balance as at Jan. 1, 2014	1,862,064	1,179,269	1,001,450	189,412	46,537	146,588	73,305	14,004	**4,512,629**
Disposal/Transfers	-	-	-	-	-	-	(11,923)	(19)	**(11,942)**
Charge for the period	50,728	77,585	82,418	7,434	2,704	7,270	10,123	6,635	**244,897**
Revaluation surplus	915,896	592,391	495,814	93,115	19,894	22,732	33,311	4,745	**2,177,898**
Balance as at Dec 31, 2014	**2,828,688**	**1,849,245**	**1,579,682**	**289,961**	**69,135**	**176,590**	**104,816**	**25,365**	**6,923,482**
C. CARRYING AMOUNT									
Balance as at Dec 31, 2014	**2,511,929**	**1,099,077**	**706,325**	**152,888**	**267,283**	**74,407**	**24,510**	**19,376**	**4,855,795**
Capital Work-in-Progress as at Dec 31,2014 (Note 8a)									**1,109,361**
									5,965,156

NOTES TO THE FINANCIAL STATEMENTS
FOR THE YEAR ENDED 31 DECEMBER 2015 Continued

8b. Property, Plant and Equipment

VRA 2015	Dam Power-house and Civil Works	Generating Plant & Machinery	Townships	Buildings	Floating Craft	Motor Vehicles	Equipment & Furniture	Total
A. VALUATION	GH¢'000	GH¢'000	GH¢'000	GH¢'000	GH¢'000	GH¢'000	GH¢'000	GH¢'000
Balance as at Jan. 1, 2015	5,340,617	2,948,322	442,849	252,119	74,531	107,211	35,059	**9,200,708**
Disposals	-	-	-	-	-	(5,438)	(3)	**(5,441)**
Revaluation surplus	1,040,626	589,900	81,399	53,600	14,478	20,523	6,248	**1,806,774**
Additions during the year	26	1,585	7,200	-	-	560	2,481	**11,852**
Balance as at Dec 31, 2015	**6,381,269**	**3,539,807**	**531,448**	**305,719**	**89,009**	**122,856**	**43,785**	**11,013,893**
B. DEPRECIATION								
Balance as at Jan. 1, 2015	2,828,688	1,849,245	289,961	48,472	70,923	87,853	19,705	**5,194,847**
Disposal/Transfers	-	-	-	-	-	(5,178)	(2)	**(5,180)**
Charge for the period	61,187	102,283	8,861	1,821	1,289	8,374	6,562	**190,377**
Revaluation surplus	549,160	362,664	56,325	9,416	13,777	17,214	3,450	**1,012,006**
Balance as at Dec 31, 2015	**3,439,035**	**2,314,192**	**355,147**	**59,709**	**85,989**	**108,263**	**29,715**	**6,392,050**
C. CARRYING AMOUNT								
Balance as at Dec 31, 2015	**2,942,234**	**1,225,615**	**176,301**	**246,010**	**3,020**	**14,593**	**14,070**	**4,621,843**
Capital Work-in-Progress as at Dec 31, 2015 (Note 8a)								**1,696,303**
								6,318,146

NOTES TO THE FINANCIAL STATEMENTS
FOR THE YEAR ENDED 31 DECEMBER 2015 Continued

8b. Property, Plant and Equipment

VRA 2014	Dam Power-house and Civil Works	Generating Plant & Machinery	Townships	Buildings	Floating Craft	Motor Vehicles	Equipment & Furniture	Total
A. VALUATION	GH¢'000	GH¢'000	GH¢'000	GH¢'000	GH¢'000	GH¢'000	GH¢'000	GH¢'000
Balance as at Jan. 1, 2014	3,575,028	1,911,849	296,837	167,936	49,967	78,178	15,932	**6,095,727**
Disposals	-	-	-	-	-	(12,066)	(23)	**(12,089)**
Revaluation surplus	1,765,589	980,949	145,929	82,931	24,564	37,437	7,921	**3,045,320**
Additions during the year	-	55,524	83	1,252	-	3,662	11,229	**71,750**
Balance as at Dec 31, 2014	**5,340,617**	**2,948,322**	**442,849**	**252,119**	**74,531**	**107,211**	**35,059**	**9,200,708**
B. DEPRECIATION								
Balance as at Jan. 1, 2014	1,862,064	1,179,269	189,412	31,404	46,240	62,441	9,956	**3,380,786**
Disposal/Transfers	-	-	-	-	-	(11,881)	(19)	**(11,900)**
Charge for the period	50,728	77,585	7,434	1,647	1,951	7,979	5,492	**152,816**
Revaluation surplus	915,896	592,391	93,115	15,421	22,732	29,314	4,276	**1,673,145**
Balance as at Dec 31, 2014	**2,828,688**	**1,849,245**	**289,961**	**48,472**	**70,923**	**87,853**	**19,705**	**5,194,847**
C. CARRYING AMOUNT								
Balance as at Dec 31, 2014	**2,511,929**	**1,099,077**	**152,888**	**203,647**	**3,608**	**19,358**	**15,354**	**4,005,861**
Capital Work-in-Progress as at Dec 31, 2014 (Note 8a)								**1,107,520**
								5,113,381

NOTES TO THE FINANCIAL STATEMENTS
FOR THE YEAR ENDED 31 DECEMBER 2015 Continued

8c. Disposal of Property, Plant and Equipment

	VRA		GROUP	
	2015	2014	2015	2014
	GH¢'000	GH¢'000	GH¢'000	GH¢'000
Cost	5,441	12,089	5,441	12,089
Accumulated Depreciation-chec accumulated depreciati	(5,180)	(11,900)	(5,396)	(11,900)
Carrying amount	261	189	261	189
Revaluation on disposed assets	216	-	216	-
Net Carrying Amount	45	189	45	189
Proceeds from Disposal	179	732	179	732
Profit /(Loss) on disposal	134	543	134	543

8d. Intangible Assets Cost

Balance as at January 1	-	-	71	71
Additions	-	-	-	-
Balance as at December 31	-	-	71	71
Amortization				
Balance as at January 1	-	-	22	8
Charge for the year	-	-	14	14
Balance as at December 31	-	-	36	22
Carrying Amount	-	-	35	49

9. Investments in Subsidiaries

TAPCO (100% owned)	169,113	169,113	-	-
VLTC (100% owned)	1,123	1,123	-	-
AHL (100% owned)	5,625	5,625	-	-
NEDCo (100%)	200,000	81,183	-	-
	375,861	257,044	-	-

10. Investment in Equity Securities

TICO (10% owned)	-	-	4,516	4,516
WAGP (16.38%)	-	-	9,588	9,588
	-	-	14,104	14,104

NOTES TO THE FINANCIAL STATEMENTS
FOR THE YEAR ENDED 31 DECEMBER 2015 Continued

10b. Other Long Term Investments

	VRA		GROUP	
	2015	2014	2015	2014
	GH¢'000	GH¢'000	GH¢'000	GH¢'000
Debt Contingency Fund Investment	64,381	58,200	64,381	58,200
	64,381	58,200	64,381	58,200

11. Inventories

Inventory and spare parts	42,769	38,026	71,973	41,589
Write down for obsolescence	-	-	(74)	(114)
	42,769	38,026	71,899	41,475
Fuel for Thermal Plant	198,904	169,025	198,904	169,025
	241,673	207,051	270,803	210,500

12. Trade and Other Receivables

Trade Receivables	2,835,606	2,220,202	3,206,667	2,528,858
Impairment loss allowance	(330,040)	(58,246)	(344,184)	(72,390)
	2,505,566	2,161,956	2,862,483	2,456,468
Prepayments	98,271	101,060	119,819	101,189
Amount due from related parties	322,879	339,967	-	-
Other Receivables	925,824	715,169	1,756,442	1,372,752
Staff Advances	25,466	25,710	31,993	31,849
	3,878,006	3,343,862	4,770,737	3,962,258
Current	3,863,870	3,328,414	3,906,582	3,353,824
Non-current	14,136	15,448	864,155	608,434
	3,878,006	3,343,862	4,770,737	3,962,258

13. Short Term Investments

Foreign Currency	-	-	-	-
Local Currency	56,557	47,665	76,094	69,074
	56,557	47,665	76,094	69,074

NOTES TO THE FINANCIAL STATEMENTS
FOR THE YEAR ENDED 31 DECEMBER 2015 Continued

14. Cash and Bank

	VRA		GROUP	
	2015	2014	2015	2014
	GH¢'000	GH¢'000	GH¢'000	GH¢'000
Foreign Currency	196,181	124,805	196,608	143,085
Local Currency	46,427	100,679	92,409	134,809
Cash on Hand	270	334	288	358
	242,878	225,818	289,305	278,252

15. Payables

Current Portion

Trade Payables	2,528,428	735,480	2,569,847	776,812
Amounts due to related parties	34,243	12,997	-	-
Sundry Payables	82,232	34,379	82,782	34,679
Capital Grant	-	-	1,373	1,374
Accruals and Provisions	868	16,084	5,905	20,438
	2,645,771	798,940	2,659,907	833,303

Non-Current Portion

Other Payables	220,126	165,426	220,126	165,426
Capital Grant	-	-	16,902	18,275
	220,126	165,426	237,028	183,701
Total Payable	2,865,897	964,366	2,896,935	1,017,003

16. Borrowings

Current Portion

Long Term Loans payable within one year	47,940	42,061	47,940	42,061
Bank overdrafts	508,398	108,903	508,841	109,059
Loan interest and commitment charges	250,961	118,355	250,961	118,355
Short-term borrowings	2,158,515	2,307,608	2,158,515	2,307,608
	2,965,814	2,576,927	2,966,257	2,577,083

Non-Current Portion

Amount due after one year but before five years	455,328	768,595	455,328	768,595
Amount due after five years but before ten years	389,106	331,602	389,106	331,602
Over ten years	907,914	455,341	907,914	455,341
	1,752,348	1,555,538	1,752,348	1,555,538
Total borrowing	4,718,162	4,132,465	4,718,605	4,132,621

NOTES TO THE FINANCIAL STATEMENTS
FOR THE YEAR ENDED 31 DECEMBER 2015 Continued

16. Borrowings-continued (VRA)

	Balance as at 01.01.2015	Drawings	Repayments	HIPC Loan Adjustment	Exchange Variation	Balance as at 31.12.2015
	GH¢'000	GH¢'000	GH¢'000	GH¢'000	GH¢'000	GH¢'000
Long Term Loans						
Kpong Hydro Project						
European Dev Fund (EDF)	2,134	-	-	(1,555)	259	**839**
Rural Electrification						
Kuwait Fund - 339	8,619	-	-	-	1,320	**9,939**
Akosombo Retrofit						
IDA -2109 GH	5,602	-	-	(1,725)	932	**4,809**
Takoradi Thermal Power						
IDA 2682 GH	70,245	-	-	(44,858)	13,339	**38,726**
Kuwait Fund	37,709	-	-	-	5,773	**43,482**
Societe General -T3	211,105	12,284	-		39,232	**262,621**
Other Loans						
Kuwait Fund 657-330kV	26,185	-	-	-	4,009	**30,194**
IDA-4213- 330kV	135,867	-	-	-	19,625	**155,492**
IDA-4092- 330kV	122,079	-	-	-	17,634	**139,713**
IDA-4356-GEDAP	25,079	-	-	-	3,578	**28,657**
AfDB (GEDAP)	54,305	11,909	-	-	8,197	**74,411**
AfDB (WAPP)	38,095	3,069	-	-	5,176	**46,340**
AFD (Akuse Retrofit)	91,980	32,812	-	-	5,989	**130,781**
KTPP-MRP	-	382,499	-	-	3,542	**378,956**
Subtotal: Long Term Loans	**829,004**	**442,572**	**(-)**	**(48,138)**	**121,521**	**1,344,960**

NOTES TO THE FINANCIAL STATEMENTS
FOR THE YEAR ENDED 31 DECEMBER 2015 Continued

16. Borrowings-continued (VRA)

	Balance as at 01.01.2014	Drawings	Repayments	HIPC Loan Adjustment	Exchange Variation	Balance as at 31.12.2015
	GH¢'000	GH¢'000	GH¢'000	GH¢'000	GH¢'000	GH¢'000
Medium Term Loan						
Ecobank	160,365		(163,674)	-	3,309	**-**
Africa Export & Import Bank	480,015	-	(117,188)	-	92,501	**455,328**
Ecobank	128,215	-	(128,215)	-	-	**-**
Subtotal: Medium Term Loans	**768,595**		**(409,077)**	**-**	**95,810**	**455,328**
Loan Interest and Commitment Charges	**118,355**	**519,881**	**(387,275)**	**-**	**-**	**250,961**
Short Term Loans						
Ecobank	378,285	576,915	(876,156)	-	61,688	**140,732**
Standard Chartered Bank	248,288	-	(9,979)	-	46,595	**284,904**
Zenith Bank	90,173	-	-	-	-	**90,173**
Ghana International Bank	56,064	-	(37,183)	-	10,790	**29,671**
Access Bank	114,629	14,316	(15,265)	-	9,993	**123,673**
GT Bank	82,591	7,545	(24,152)	-	6,651	**72,635**
Sahara Energy Resources	334,029	-	-	-	62,034	**396,063**
Stanbic Bank	114,024	49,662	(35,188)	-	-	**128,498**
Cal Bank	208,657	106,413	(132,405)	-	16,384	**199,048**
UniBank	114,079	334,483	(142,043)	-	30,007	**336,526**
Fidelity Bank (USD)	28,588	4,185	-	-	5,615	**38,388**
Fidelity Bank (GH¢)	42,155	4,097	(10,263)	-	-	**35,989**
First Atlantic Bank (USD)	99,223	11,930	(21,342)	-	19,502	**109,313**
Universal Merchant Bank (GH¢)	40,082	5,043	(24,000)	-	-	**21,125**
Universal Merchant Bank (USD)	128,004	-	-	-	23,772	**151,776**
United Bank of Africa	228,737	76,973	(303,569)	-	(2,141)	**-**
Subtotal: Short Term Loans	**2,307,608**	**1,191,562**	**(1,631,545)**	**-**	**290,890**	**2,158,515**
Bank Overdraft	108,903	525,975	(125,480)	-	-	**508,398**
Grand Total	**4,132,465**	**3,729,235**	**(3,734,965)**	**(45,509)**	**636,936**	**4,718,162**

NOTES TO THE FINANCIAL STATEMENTS
FOR THE YEAR ENDED 31 DECEMBER 2015 Continued

16. Borrowings-continued (GROUP)

	Balance as at 01.01.2015	Drawings	Repayments	HIPC Loan Adjustment	Exchange Variation	Balance as at 31.12.2015
	GH¢'000	GH¢'000	GH¢'000	GH¢'000	GH¢'000	GH¢'000
Long Term Loans						
Kpong Hydro Project						
European Dev Fund (EDF)	2,134	-	-	(1,555)	259	**839**
Rural Electrification						
Kuwait Fund - 339	8,619	-	-	-	1,320	**9,939**
Akosombo Retrofit						
IDA -2109 GH	5,602	-	-	(1,725)	932	**4,809**
Takoradi Thermal Power						
IDA 2682 GH	70,245	-	-	(44,858)	13,339	**38,726**
Kuwait Fund	37,709	-	-	-	5,773	**43,482**
Societe General -T3	211,105	12,284	-		39,232	**262,621**
Other Loans						
Kuwait Fund 657-330kV	26,185	-	-	-	4,009	**30,194**
IDA-4213- 330kV	135,867	-	-	-	19,625	**155,492**
IDA-4092- 330kV	122,079	-	-	-	17,634	**139,713**
IDA-4356-GEDAP	25,079	-	-	-	3,578	**28,657**
AfDB (GEDAP)	54,305	11,909	-	-	8,197	**74,411**
AfDB (WAPP)	38,095	3,069	-	-	5,176	**46,340**
AFD (Akuse Retrofit)	91,980	32,812	-	-	5,989	**130,781**
KTPP-MRP	-	382,499	-	-	3,542	**378,956**
Subtotal: Long Term Loans	**829,004**	**442,572**	**(-)**	**(48,138)**	**121,521**	**1,344,960**

NOTES TO THE FINANCIAL STATEMENTS
FOR THE YEAR ENDED 31 DECEMBER 2015 Continued

16. Borrowings-continued (GROUP)

	Balance as at 01.01.2014	Drawings	Repayments	HIPC Loan Adjustment	Exchange Variation	Balance as at 31.12.2015
	GH¢'000	GH¢'000	GH¢'000	GH¢'000	GH¢'000	GH¢'000
Medium Term Loan						
Ecobank	160,365		(163,674)	-	3,309	-
Africa Export & Import Bank	480,015	-	(117,188)	-	92,501	**455,328**
Ecobank	128,215	-	(128,215)	-	-	-
Subtotal: Medium Term Loans	**768,595**		**(409,077)**	**-**	**95,810**	**455,328**
Loan Interest and Commitment Charges	**118,355**	**519,881**	**(387,275)**	**-**	**-**	**250,961**
Short Term Loans						
Ecobank	378,285	576,915	(876,156)	-	61,688	**140,732**
Standard Chartered Bank	248,288	-	(9,979)	-	46,595	**284,904**
Zenith Bank	90,173	-	-	-	-	**90,173**
Ghana International Bank	56,064	-	(37,183)	-	10,790	**29,671**
Access Bank	114,629	14,316	(15,265)	-	9,993	**123,673**
GT Bank	82,591	7,545	(24,152)	-	6,651	**72,635**
Sahara Energy Resources	334,029	-	-	-	62,034	**396,063**
Stanbic Bank	114,024	49,662	(35,188)	-	-	**128,498**
Cal Bank	208,657	106,413	(132,405)	-	16,384	**199,048**
UniBank	114,079	334,483	(142,043)	-	30,007	**336,526**
Fidelity Bank (USD)	28,588	4,185	-	-	5,615	**38,388**
Fidelity Bank (GH¢)	42,155	4,097	(10,263)	-	-	**35,989**
First Atlantic Bank (USD)	99,223	11,930	(21,342)	-	19,502	**109,313**
Universal Merchant Bank (GH¢)	40,082	5,043	(24,000)	-	-	**21,125**
Universal Merchant Bank (USD)	128,004	-	-	-	23,772	**151,776**
United Bank of Africa	228,737	76,973	(303,569)	-	(2,141)	**-**
Subtotal: Short Term Loans	**2,307,608**	**1,191,562**	**(1,631,545)**	**-**	**290,890**	**2,158,515**
Bank Overdraft	109,059	525,262	(125,480)	-	-	**508,841**
Grand Total	**4,132,621**	**2,679,277**	**(2,553,377)**	**(48,138)**	**508,221**	**4,718,605**

NOTES TO THE FINANCIAL STATEMENTS
FOR THE YEAR ENDED 31 DECEMBER 2015 Continued

16. Borrowings – continued

Details of the long term long term loans are shown below:

LOAN	CURRENCY	CONTRACT AMOUNT	INTEREST RATE (%)	MATURITY DATE
EDF	EUR	8,980,000.00	1.00	2016
KUWAIT 657	KD	5,000,000.00	3.50	2025
IDA 4092	SDR	26,500,000.00	4.50	2025
IDA 4213	SDR	30,800,000.00	4.50	2046
IDA 4356	SDR	3,436,597.00	5.30	2047
IDA 2109	SDR	15,200,000.00	7.75	2009
IDA 2682 TTPP	SDR	120,560,000.00	8.00	2016
AfDB (GEDAP)	USD	20,000,000.00	0.75	2028
AfDB (WAPP)	UA	14,870,000	0.75	2028
AFD (Kpong Retrofit Project)	EUR	50,000,000.00	1.99	2032

17. Investment by the Republic of Ghana

	VRA		GROUP	
	2015	2014	2015	2014
	GH¢'000	GH¢'000	GH¢'000	GH¢'000
Balance at the beginning of the year	495,449	495,449	495,449	495,449
Balance at close of year	**495,449**	**495,449**	**495,449**	**495,449**

NOTES TO THE FINANCIAL STATEMENTS
FOR THE YEAR ENDED 31 DECEMBER 2015 Continued

18. Revaluation Surplus

The Capital Surplus arises as a result of carrying property, plant and equipment in the Balance sheet at current replacement cost. The movement on the surplus is analyzed as below:

	VRA		GROUP	
	2015	2014	2015	2014
	GH¢'000	GH¢'000	GH¢'000	GH¢'000
Balance at beginning of year	3,890,413	2,654,564	4,833,846	3,324,369
Adjustment	-	-	(718)	-
Surplus for the year	794,768	1,372,175	942,018	1,650,251
Transfer to Retained Earnings Account	(182,190)	(136,326)	(543,954)	(140,774)
Balance at close of year	4,502,991	3,890,413	5,231,192	4,833,846

19. Debt Contingency Fund Reserve

The amount of GH¢64.38 million (2014: GH¢58.20 million) represents the appropriation out of Retained Earnings towards the building of an external fund (in foreign exchange) to be used by the Authority to meet its debt obligations during periods of operational difficulties.

20. Comparative information

The previous year's figures have been re-arranged and reclassified, where necessary, for the purpose of comparison with current year's figures.

21. Government Grant

This is made up 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.

22. Reclassification of Subsidiaries Revenue

This relates to Revenues of Subsidiaries which were reclassified from Other Income to mainstream revenue line.

NOTES TO THE FINANCIAL STATEMENTS
FOR THE YEAR ENDED 31 DECEMBER 2015 Continued

23. Reconciliation of operating profit to operating cash flow

	VRA		GROUP	
	2015	2014	2015	2014
	GH¢'000	GH¢'000	GH¢'000	GH¢'000
(Loss)/Profit after tax	(1,357,515)	(996,046)	(1,308,920)	(799,928)
Adjustments for :				
Depreciation & Amortization	190,347	152,815	301,279	246,290
Exchange (Gain)/Loss	407,540	558,638	281,151	393,406
(Profit)/Loss on disposal of property plant and equipment	(135)	(543)	(135)	(543)
Investment income	(6,465)	(7,116)	(84,705)	(8,386)
Interest expense	519,881	308,674	519,881	308,674
Capital Work-in-progress written off	6,466	3,187	6,466	3,187
Amortization of Grant	-	-	-	(1,431)
Tax Expense	-	-	68,050	32,103
Operating (Loss)/Profit before working capital changes	(239,881)	19,609	(216,933)	173,372
Changes in inventories	(34,622)	36,671	(60,303)	37,579
Changes in receivables	(534,114)	(1,328,343)	(654,116)	(1,552,424)
Changes in payables	1,901,531	175,257	1,862,311	274,218
Cash Inflow/(outflow) from operating activities	1,092,914	(1,096,806)	930,959	(1,067,255)
Tax Paid	-	-	(62)	(39)
Interest Paid	(387,275)	(216,617)	(387,275)	(216,617)
Net Cash inflow (outflow) outflow used in operating activities	705,639	(1,313,423)	543,622	(1,283,911)

24. Cash and cash equivalents

	VRA		GROUP	
	2015	2014	2015	2014
	GH¢'000	GH¢'000	GH¢'000	GH¢'000
Cash and Bank Balances	242,878	225,818	289,305	278,252
Short Term Investments	56,557	47,665	76,094	69,074
Bank Overdraft	(508,398)	(108,903)	(507,955)	(109,059)
Cash and cash equivalents	**(208,963)**	**164,580**	**(142,556)**	**238,267**

NOTES TO THE FINANCIAL STATEMENTS
FOR THE YEAR ENDED 31 DECEMBER 2015 Continued

25. FINANCIAL RESTRUCTURING

The Authority incurred a net loss for the year ended 31 December 2015 of GH¢1, 357,515,000 (2014: Loss of GH¢ 996,046,000) and at that date, its current liabilities exceeded its current assets by GH¢ 1,206,607,000 (2014: GH¢ 433,081,000). The Authority continues to make losses and is unable to settle all its liabilities with available funds.

The continued viability of the Authority is dependent on injection of additional funds by way of debt and aggressive pursuit and recovery of receivables to enable it to operate and generate the necessary cash flows to meet its liabilities as and when they fall due.

The directors in conjunction with the Public Utility Regulatory Commission (PURC) are currently negotiating with funding agency to raise a total amount of US$ 2billion to clear the net inter utility debt amongst the players in the power sector of which includes VRA.

Once that is concluded, all the exposures of VRA up to June 30, 2016 would be paid and VRA financials restored to normalcy.

To avert the recurring of debt build up in the power sector, a cash flow waterfall arrangement will be implemented and operationalized immediately to ensure that revenues from ECG are distributed amongst all stakeholders in a systematic and equitable manner. Under this arrangement, all of ECG's revenues will be escrowed on monthly basis and payments to Independent Power Producer (IPPs) and fuel for power generation will be deducted first. Secondly, debt service for the US$ 2billion used to clear the net inter utility debt amongst the players in the power sector will also be taken off. The residue will then be distributed among the State Owned Power Utilities (SOPUs) according to the tariff structure. This arrangement will ensure that there is liquidity amongst the SOPU to operate whilst averting the build-up of receivables.

Again, the Public Utility Regulatory Commission (PURC) approved a Bulk Generation Tariff (BGT) effective December 2015. The Authority has also reviewed its tariffs with its bilateral customers. This is expected to impact positively on the operations and cash flow of the Authority.