VOLTA RIVER AUTHORITY

FIFTY FIRST ANNUAL REPORT & ACCOUNTS 2012

VOLTA RIVER AUTHORITY

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, as a body corporate with the mandate to operate mainly as a power generation, transmission and distribution utility. 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 now been largely restricted to generation of electricity. The amendment has a key function of creating the requisite environment to attract independent power producers (IPPs) onto the Ghana energy market.

The transmission function has been separated into an entity, designated Ghana Grid Company (GRIDCo). 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, and complemented by a 330MW Combined Cycle Thermal Plant at Aboadze, near Takoradi. A further 220MW Thermal Plant, Takoradi International Company (TICO) is owned as a joint venture with TAQA, from Abu Dhabi in the United Arab Emirates. This is expected to be converted into a 330MW combined cycle plant and commissioned in 2014. Additional development of 132MW (T3) Magellan plant at the same site at Aboadze was commissioned in 2012.

The VRA has developed a number of plants in Tema. These include a 110MW Tema Thermal 1 Power Plant, an 80MW Mines Reserve Plant, both commissioned in 2008. A 50 MW Tema Thermal 2 Power Plant commissioned in 2010; and additional development of a 200MW Thermal Plant located at Kpone, near Tema, by 2014.

Additional development of 110 MW renewable energy capacity – wind and solar – beginning with the construction of the first 2 MW solar plant, expected to be commissioned in 2013; and of one year of wind measurement, both of which commenced in 2012.

The Authority has begun feasibility studies for the development of 140 MW of hydro dams at Pwalugu and Juale in the Northern Region.

The VRA has a strong commitment to renewable energy development to protect the environment and public health and help reduce emissions that cause climate change, while ensuring a system of diversity and security in electricity supply. Renewable energy is economically competitive with the fossil fuel. Renewable resources are expected to play an increasingly vital role in the power generation mix over the next century.

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, NED 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. The new subsidiary company, NEDCO, has a customer population of nearly 400,000 and a load demand of about 130MW.

Customers

The VRA's major bulk customer is the Electricity Company of Ghana (ECG). Power sold to ECG caters mainly for domestic, industrial and commercial concerns. Bulk sales are also made to a number of mining companies, including AngloGold Ashanti, Newmont Ghana Gold Ltd., Goldfields Ghana Ltd., Golden Star Resources Group. Others are Aluworks, Akosombo Textile Ltd., and Diamond Cement Ghana Ltd. International energy sales to neighbouring countries include Togo, Benin and Burkina Faso.

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'Ivoire, 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).

Regional Cooperation

The VRA is participating in the development of a power pooling mechanism to provide the West Africa sub-region increased accessibility, availability and affordability to electricity under the auspices of the Economic Community of West African States (ECOWAS). In this context, GRIDCo is building the Ghana component of a new 330kV transmission line, which starts from Aboadze to Tema, and then to Momehagou (Togo) under the West Africa Power Pool Project.

The line is expected to be completed and commissioned in 2014. However, the Aboadze to Tema transmission line has been commissioned.

The VRA is the major foundation customer of the West African Gas Pipeline Project (WAGP), which involves the construction of a 20 - inch 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 objective of the VRA's participation in the WAGP is to obtain natural gas from Nigeria to operate its thermal facilities, and thereby reduce significantly the cost of thermal generation, while increasing electricity availability, accessibility and affordability and protecting the environment. The project has been completed and gas is now being supplied to the VRA thermal facilities. Occasionally, accidental damage to the pipeline disrupts gas supply to thermal facilities and exposes the plants to power generation and financial risks.

Recognizing the VRA's distinctive competencies in power system operations, the United Nations Development Programme (UNDP), appointed the VRA as the principal consulting agency for the implementation of an Emergency Power Programme (EPP) in Liberia after years of conflict. Consequently, the VRA embarked on a power construction scheme to restore power to Monrovia and other critical institutions.

The VRA is a founding member of the Union of Producers, Transporters and Distributors of Electric Power in Africa (UPDEA). UPDEA 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 hand. UPDEA 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).

Commercialization Initiatives

The Authority has also embarked on a programme to turn its portfolio of non-power operations into progressively self-financing subsidiaries. The aim is to inject greater efficiency into the operations of these important but non-core activities of the VRA while the Authority focuses more effectively on power generation, and thereby enhance its competitive advantage in the West African sub-region.

These operating subsidiaries are the Akosombo Hotels Limited, and the Volta Lake Transport Company. Business plans have also been developed for all the other areas: Kpong Farms Limited; the Schools; the Health Services; and the Real Estate department.

The VRA continues to demonstrate its social responsiveness through various programmes designed to enhance the socio-economic and physical environment of the lakeside and downstream communities.

This social investment includes annual commitment of the cedi equivalent of US$500,000.00 to a Resettlement Trust Fund to support development initiatives in 52 resettlement towns. The fund has been used to support projects for environmental improvement, social welfare, public health, education, electricity, potable water supply and sanitation. In addition, VRA has introduced a new Community Development Programme (CDP). The 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 CDP also seeks to improve the previous Community Development Initiative (CDI) Framework Document. It aims at promoting the empowerment of the Communities to take action for development.

The VRA runs hospitals in Accra, Akosombo and Aboadze, equipped with excellent facilities. The VRA also provides free specialist and general medical care to communities along the Volta Lake accessible only by boat, through its medical boat christened MV *ONIPA NUA.*

Malaria has become endemic with economic consequences. To make a total effort to increase the effectiveness of malaria control and prevention, the VRA has enlisted the support of other institutions. Consequently, as an alternative to the VRA medical boat services, the Authority has in a joint effort signed a Memorandum of Understanding with the Asuogyaman District Health Management Team (DHMT) to provide services to communities along the Volta Lake to fight malaria, Bilharzia and other water-borne diseases. The VRA with the assistance of The Johns Hopkins University Center for Communication Programs Voices for a Malaria-free Future Project has developed a Strategy Document for malaria control. This document sets out the framework for action by the VRA in creating a Malaria-free environment for its workforce, workers' families and their surrounding communities.

The Authority maintains 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. VRA also runs afforestation programmes aimed at reducing siltation of the Volta Lake through the restoration of permanent vegetative cover on the slopes bordering the Lake.

The VRA runs first and second cycle schools for children of staff and others living in Akosombo, Akuse and Aboadze. It also administers Local Authority functions in the Akosombo Township.

Relations with statutory regulatory bodies

The relevant regulatory environment of the energy sub sector consists of the Ministry of Energy, Energy Commission, and the Public Utilities and Regulatory Commission (PURC).

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

SUBSIDIARY COMPANIES

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

Akosombo Hotels Ltd

The Akosombo Hotels Limited, incorporated in 1970, runs a three-star hotel, restaurant, modern conference/seminar facilities, pleasure activities, including cruising on the Lake by *MV Dodi Princess*, and promotes tourism. MV Dodi Princess which was gutted by fire is being reconstructed to resume operations in 2014.

Volta Lake Transport Company

The Volta Lake Transport Company, 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

Kpong Farms Ltd, originally set up in 1982 as a resource centre of excellence for research into modern agricultural practices, played a significant role in the overall agricultural development of

Ghana through activities in livestock, rice production, meat processing, and the cultivation of pawpaw for export as a foreign exchange earner. Local interns and expatriates from Egypt, Pakistan and the United States of America have also received training at the Farms.

The VRA has recapitalized the operations of Kpong Farms Ltd., and is seeking strategic investors in a joint venture partnership to transform the Farms into a profitable agribusiness.

THE VOLTA RIVER AUTHORITY BOARD

The Members of the Board of the Volta River Authority as at 31st December 2012:

Chairman	Prof. Akilagpa Sawyerr *Professor/Lawyer*
Member	Kweku Andoh Awotwi *Chief Executive,* *Volta River Authority*
Member	Mr. Johnny Elvis Essilfi Turkson *Lawyer*
Member	Togbi Gbordzor III *Traditional Ruler/Civil Engineer*
Member	Alhaji Attah Nantogmah Mahamadu *Lawyer*
Member	Mrs. Marietta Brew Appiah-Opong *Lawyer*
Member	Hon. Rev. Dr. Joses Asare-Akoto *MP, Asuogyaman*
Member	Mr. Ahmed Yakubu Salifu *Freight Forwarder, Banker/Accountant*
Member	Mr. Danny Anang *Managing Director, Daben Cleansing Services*

Secretary	Raymond John Lartey Volta River Authority

Principal Officers (VRA Management) as at 31st December, 2012:

Office of the Chief Executive

Chief Executive	-	Kweku Andoh Awotwi
Director, Audit	-	Vacant
Director, Planning & Business Development	-	Bernard Kofi Ellis
Director, Centre of Excellence	-	Edwin M. Gbekor
Director, Integrated Generation Information Sys.	-	Ing. Theo Nii Okai
Board Secretary		Raymond J. Lartey
Manager, Corporate Communications Unit	-	Samuel Kwesi Fletcher

Engineering and Operations Branch

Deputy Chief Executive	-	Ing. Isaac Kirk Koffi
Director, Special Engineering Projects	-	Ing. Stephen Doku
Director, Projects & Systems Monitoring	-	Ing. William Amuna
Director, Thermal Generation	-	Ing. Richard N.A. Badger
Director, Engineering Services	-	Ing. William Sam-Appiah
Director, Hydro Generation	-	Ing. Kwesi B. Amoako

Finance Branch

Deputy Chief Executive	-	Alexandra Totoe (Ms.)
Director, Procurement	-	Ing. Richmond Evans Appiah
Director, Finance	-	Ebenezer Tagoe
Director, Investment	-	Samuel K. Gyawu
Director, ICT Infrastructure	-	Dr. Isaac A. Doku

Services Branch

Deputy Chief Executive	-	Maxwell E.Y. Odoom
Director, Legal Services	-	Angelina Mornah Domakyaareh (Mrs.)
Director, Human Resources	-	Isaac K. Aidoo
Director, Corporate Risk Management	-	Ing. Joseph W. Sutherland
Director, Real Estate & Security	-	Vacant
Director, General Services	-	Abla Fiadjoe (Ms.)
Director, Environment & Sustainable Dev't	-	Patrick Okrah Kwakye
General Manager, VRA Schools	-	Arnold Seshie
Ag. Director, Health Services	-	Dr. Rebecca Acquaah-Arhin (Mrs.)

On Secondment: Mrs. Harriet Wereko-Brobby is on secondment to the West African Gas Pipeline Project as General Manager, Corporate Affairs.

CHAIRMAN'S STATEMENT

The year 2012 has been a challenging and demanding economic period. The robust financial and operational results attained by the Authority in 2011 were more than offset by a coincidence of factors, including the following:

- Disruption in supply of gas to fuel the VRA thermal plants as well as that of Sunon Asogli, resulting from the accidental rapture to the West African Gas Pipeline off the coast of Togo;
- Insufficiency of the capacity reserve margin available in Ghana's electricity system, resulting in periodic country-wide load-shedding, that continued into 2013; and
- Tariffs that barely covered operational and maintenance costs, not to speak of investments in generation expansion.

The Volta River Authority ended the fiscal year 2012 with a Net Income Loss of GH¢90.15 million compared to a Net Profit of GH¢82.64 million in 2011, a swing of GHS170 million within twelve months! The primary cause of this reversal in profit situation was the doubling of the unit cost of every kilowatt of electricity produced by the VRA, as it was compelled to turn to the use of expensive crude oil, occasionally diesel, in place of gas. Among the practical effects were the destabilization of the electricity system and the load management programme that persisted for almost a year.

The situation was exacerbated by the failure of the PURC to grant any tariff increase since 2011, in the face of the escalating cost of electricity production. Thus, though revenue from sale of electricity rose to GHS1,749, from GHS1,111 the previous year (an increase of 58%), this was offset by an over 200% increase in cost of crude oil required to run our plants. The unsurprising consequence was the enormous and persistent liquidity shortage experienced by the Authority to this day, which we have barely survived by resort to direct Government assistance with the purchase of our crude oil requirements, but which has stunted business growth for the VRA.

On behalf of the Authority, I am pleased to report that, over the period, the Government of Ghana paid to the VRA an amount of GHS361 million to make up for the acknowledged shortfalls in tariff, effectively a subsidy to domestic consumers in Ghana.

Turning to generation and power supply, the Akosombo and Kpong plants combined to perform at 96.8% above ours and the PURC's own performance benchmarks; the Takoradi thermal plants registered 75.7% plant availability and 57.6% capacity utilization; while the new Tema thermal plants performed satisfactorily. Additionally, the Takoradi steam unit which had been out of service for a year for repairs is now back in service operating at full capacity. Though the Takoradi thermal plant, in particular, did not perform to the PURC benchmark of 85%, the overall 2012 thermal performance establishes the substantial secular improvements we have seen over the last four years.

Clearly, our results will continue to be driven in part by factors outside our control, such as the uncertainty in gas supply and volatility in crude oil prices. The Authority's challenge is, therefore, to optimize the internal factors that lie within our control, in particular plant availability and keeping a tight lid on our administrative overheads.

Portfolio Growth

You will be glad to hear that, while the grievous challenges of 2012 took their toll on our energies and time, they did not dim our vision, nor did they slow our efforts at transforming the Authority into a stronger, world-class organization in the medium term. We are satisfied that in 2012, we continued to lay the groundwork for driving productivity and increasing efficiency for the future.

We focused on a number of generation expansion projects designed to ensure electricity availability and accessibility, expected to add 500 MW in new capacity in the short-to-medium term. These include:

- Commissioning in 2012 of a 132 MW (T3) (Magellan) plant at Aboadze;
- Conversion of the 220 MW Takoradi International Company (TICO) Thermal Plant into a 330 MW combined cycle plant - financing arrangements have been concluded and construction work started in 2012;
- Development of the first 2 MW solar power plant, expected to be commissioned in 2013;
- Commencement of feasibility studies aimed at expanding the 110 MW single cycle Tema Thermal plant (TT1PP) into a 330 MW combined cycle plant by PB Power, an international engineering services company;
- Expansion of electricity accessibility and availability under the *Ghana Energy Development and Access Programme* (GEDAP). This project, which is in two parts, involves the development of the Kumasi Second Bulk Supply Point and distribution networks, funded by the African Development Bank (AfDB); and a sub-component of GEDAP, the NEDCO Intensification Project, which seeks to improve electricity accessibility, funded by the International Development Association (IDA) of the World Bank. This project is expected to improve the network operation, supply reliability, power quality and safety and increase access to prospective customers and secure additional revenue.
- Expansion of electricity accessibility and availability under the *Ghana Energy Development and Access Programme* (GEDAP). This project, which is in two parts, involves the development of the Kumasi Second Bulk Supply Point and distribution networks, funded by the African Development Bank (AfDB); and a sub-component of GEDAP, the NEDCO Intensification Project, which seeks to improve electricity accessibility, funded by the International Development Association (IDA) of the World Bank. This project is expected to improve the network operation, supply reliability, power quality and safety and increase access to prospective customers, as well as securing additional revenue.

Takoradi 3 Project Status

The Takoradi 3 simple cycle plant was partially completed in 2012, with the entire combined cycle project coming on stream early 2013. Unfortunately, there was an explosion in one of the units in June, which led our contractors to recommend a complete shutdown for preventive and maintenance work. Two of the units are expected to take 3-6 months to repair; the two, more damaged units, 6-9 months.

The Takoradi 3 project was commissioned in 2008, in the wake of the 2006-7 energy crisis. The equipment was procured and the purchase directly by Government, and only recently handed over to the VRA to manage. Introspect, a more seamless approach, with VRA playing a more

proactive technical role in the specification and acquisition of the equipment, may have avoided some of the current difficulties faced in dealing with new and unfamiliar technology. Anyhow, we look forward to the independent contractor's report, which will form the basis for how we operate these new machines in the coming years.

Strategy Review

The fragility of our gas supply system has made its resolution the highest priority for us. We have deepened our exploration of other alternatives of gas supply, talking with with gas producers in Nigeria, and Ghana, including ENI, the holders of the Sankofa Non-Associated Gas field. We have led initiatives to explore the possibility of securing additional gas supplies through re-gasified Liquefied Natural Gas (LNG), imported from around the world. If successful, these supplies will complement current sources in Ghana and Nigeria, and go a great way to stabilize the Authority's operations and electricity supply generally in the country.

Commercialization of Non-Power Generation Functions

Perhaps, the most important milestone achieved in 2012 was the operationalization of the Northern Electricity Distribution Company (NEDCO), into a standalone, on course to becoming a full-fledged, autonomous, self-sustaining commercial enterprise. This was in recognition of the need to remove the distribution bottlenecks in the sector. To attract the necessary resources to minimize the inefficiencies and distribution losses in the sector, and to make it a profitable endeavour, remains critical for VRA to work with NEDCO – and this we are doing.

We have also continued our efforts to refocus our non-core functions to make them self-financing strategic business units (SBUs), so we could concentrate our efforts on our core functions. Happily, we have witnessed steady improvements in the Authority's non-power areas. Of our operating subsidiaries, Akosombo Hotels Limited (AHL) and Volta Lake Transport Company (VLTC), the former recorded its second continuous year of profit in eleven years; while the latter registered a loss, primarily because of a very large depreciation charge brought about by a substantial revaluation of its assets. Business plans have been developed for five of the six other areas: Kpong Farms Limited (KFL); the Schools; the Health Services; and the Real Estate Departments.

Performance Management: *The Balanced Scorecard*

As previously reported, a new performance management system, the *Balanced Scorecard (BSC),* was introduced in 2011 to provide a framework for aligning individual performance with departmental and corporate goals, and for assessing and rewarding performance. Applied in 2012, for the second year in a row, this *BSC* has become a primary lever ion our efforts to create a performance-driven organization.

Corporate Social Responsibility

The Authority launched a re-reformulated and re-focused Community Development Programme (CDP) in 2012. The programme consists of a framework for guiding support for development of all communities affected by the operations of the Authority, and for improving the existing Community Development Initiative (CDI) Framework, which aims at empowering the communities to take action for development. The thematic areas are:

- Water
- Health
- Agriculture

It is hoped that this focusing will yield long-term benefit in the coming years.

The Authority sponsored a number of priority programmes in the areas of rural electrification, health, education, water resources, capacity building, culture, community development and democratic governance, and made various donations to governmental and non-governmental organizations. A total of GH¢200,000 was committed in sponsorships, donations and philanthropy. The Authority also committed the cedi equivalent of US$500,000 to the VRA Resettlement Fund to support projects for environmental improvement, social welfare, public health, education, electricity, potable water supply and sanitation.

Conclusion

As I have indicated, and as everybody knows, 2012 was a difficult year – precisely as foreshadowed in my report a year ago, even before the West African Gas Pipeline was broken, with all its specific consequences. Unfortunately, many of the issues I highlighted then, in particular, the need for a holistic sector-wide effort to address the challenges of the electricity sector remains unaddressed. After the trauma of last year, the need to address these issues has become ever more urgent. I fervently hope that the new Authority when established, will seize the challenge to provide the necessary leadership and work effectively with the rest of the sector in addressing those and other fundamental, transformative issues.

Speaking for my colleagues on the Authority, I would like to express to management and staff our pride and gratitude for their efforts in helping the Authority undergo the process of re-inventing itself, right through the trying times of the last twelve months. We are confident this will continue and, thereby, ensure the successful attainment of the Authority's vision of being a world-class organization in the medium term.

It has been a privilege for us to serve the people of Ghana through service on the Volta River Authority, and we thank the Government for allowing us that opportunity.

Akilagpa Sawyerr

CHAIRMAN

POWER OPERATIONS

Ghana's rapid economic growth drives electricity demand growth

Ghana's economy and electricity demand growth are linked. Electricity demand has increased more than 10 per cent per annum over the last four years. The factors of electricity demand growth include Ghana's population growth at 2.3 per cent per annum and GDP growth at 2.10 per cent per annum.

Electricity demand is projected to grow at more than 6 per cent per annum over the next 10 years. The rapid demand growth in electricity has resulted in a dwindling of the system capacity reserve margin, and excessive pressure on existing generating facilities, and this often exposes the system to supply risk during periods of supply deficit. The effect of the electricity demand and supply imbalance is heightened by an energy generation capacity gap.

Consequently, our efforts had therefore been focused on initiatives to develop new capacity to meet the nation's current and future demand, and also increase system security and reliability and achieve our corporate mission.

Portfolio Growth

A number of generation expansion projects designed to ensure electricity availability and accessibility are expected to add 500 MW in new capacity in the short-to-medium term. These include:

- A 132 MW (T3) (Magellan) plant at Aboadze commissioned in 2012;
- Conversion of the 220 MW Thermal Plant, Takoradi International Company ("TICo"), into a 330 MW combined cycle plant. Financing arrangement has been concluded and construction work started in 2012;
- Development of 110 MW renewable energy capacity – wind and solar – the first 2 MW solar plant commissioned in 2013, and one year of wind measurement started in 2012;
- Commencement of feasibility studies for the development of 140 MW of hydro dams at Pwalugu and Juale in the Northern Region.

Development of 300MW Tema Thermal Power Project

PB Power, an international engineering services company, which provides engineering services for projects associated with electricity generation, transmission and distribution is currently undertaking a feasibility study at expanding the 110 MW Single Cycle Tema Thermal Plant (TT1PP) into a 330MW Combined Cycle Plant.

Renewable Energy Development Programme Seeks to Diversify Generation Portfolio

We are committed to the development of renewable energy, in particular wind and solar energy in the generation mix to reduce fossil fuels imports with accompanying price volatility while protecting the environment. As oil and gas are expendable products, renewable resources would play an increasingly vital role in the power generation mix over the next century. Hydroelectric power is currently the largest producer of renewable energy in Ghana. Hydro generation currently accounts for nearly 70% of the total system supply.

Solar Power Development

The VRA is also planning to develop up to 10 MW of solar power generation in the next three years in the northern part of the country where the resource is abundant. The first 2 MW of solar power is expected to be commissioned by the first quarter of 2013.

Wind power development

The Authority is also planning to develop 150 MW of wind power at locations in the southern part of the country where conditions are ideal. This development of this resource would be carried out through a joint venture arrangement with an internationally reputable partner with expertise in that field. The services of a consultant have been secured to advise and assist the VRA with the development and design of the project. The development of renewable energy demonstrates the resolve of the VRA to have different fuel sources and technologies to generate electricity so that we can have a constant supply and are not overly dependent on one type of generation.

Biomass Energy Development

The Authority seeks to develop biomass energy through private participation. These include a sugarcane/biogas to energy plant, a biomass (bamboo) to energy plant and a municipal waste to energy plant.

Emission Credit Development

The VRA is equally planning to identify projects whose carbon emission can be reduced to qualify the VRA to benefit from emission credits. Discussions were held with three identified institutions which had made unsolicited proposals to VRA to assist in the development and acquisition of emission credits. These projects include fuel switching of the Mines Reserve Plant, the fuel

switch and expansion of the Takoradi plant, fuel switch at the 50 MW Tema thermal plant and the potential development of the Bonyere thermal plant.

POWER SYSTEM DEVELOPMENT

To improve electricity accessibility and availability, the VRA is expanding its power system under a project designated *Ghana Energy Development and Access Programme* (GEDAP). The project, which is in two parts, involves the development of the Kumasi Second Bulk Supply Point and distribution networks, funded by the African Development Bank. A sub-component of GEDAP, the *NED Intensification Project*, which seeks to improve access to electricity, is being funded by the International Development Association (IDA) of the World Bank. The project is expected to improve the network operation, supply reliability, power quality and safety and increase access to prospective customers and secure additional revenue.

Generator Step-up Transformer Project - Akosombo Generating Station

We are undertaking a *Generator Step-Up Transformer Project* to improve the reliability of the Hydro Generation System at Akosombo. The Akosombo Hydro Power Generating Station which operates six units with total installed capacity of 1,072 MW, was built over 40 years with six generator Step-up Transformers. Since 2002 four of the transformers had been replaced with new and more efficient ones. The remaining two transformers are also being replaced to improve system reliability.

West African Gas Pipeline

The West African Gas Pipeline (WAGP) Gas inflow which was relatively high averaged about 90 mmscfd prior to the damage to the pipeline. The WAGP was damaged on August 28, 2012 and this caused an interruption in gas supplies to VRA. The Sunon Asogli Plant which runs solely on the gas purchased from VRA supplied from the WAGP has been shut down as a result of the incident. A Force Majeure has been declared. Preliminary reports indicate that about 70m of pipe has been destroyed. The pipeline repair works is expected to be completed by the end of November, 2012. VRA is making every effort to acquire or procure additional gas supplies from other independent sources.

GHANA SUPPLY

The VRA is expecting indigenous gas from the Jubilee Fields and other fields to be brought on stream in the short – to – medium term. A working visit to Atuabo in the Western Region by our site engineers indicated that first gas from the Processing Plant should be expected in the first quarter of 2013 and VRA should expect 90 – 100mmscfd of gas. The VRA has also explored other alternatives of gas supply with ENI, a multi-national Italian oil and gas company. The VRA has taken initiatives to secure additional and reliable gas supplies through LNG imports for thermal generation through it UK based consultants, Gas Strategies on the LNG Project. The Millennium Challenge Corporation (MCC) and the United States Trade and Development Agency (USTDA) have expressed interest in the possibility of financing the infrastructure component of the Liquefied Natural Gas (LNG) project. The World Bank is also interested in the LNG project because it is a regional project expected to make gas available to Sithe Global's thermal power projects (450 MW Domunli, Ghana and 450 MW Maria Gleta, Benin).

NATURAL GAS SUPPLY

Nigeria Gas

The commissioning of the Lagos Beach Compressors was completed during the year, and about 80 MMscf/day of gas is being supplied to Takoradi and Tema to run TTPS, TT1PP, TT2PP and the Asogli Plant. The official start date for gas supply from the WAGP to VRA is expected to be January 1, 2013 and VRA is expected to receive a minimum supply of 80MMscf/day from the start date till February 2013 when the supply is expected to increase to 110MMscf/day. The contractual volume of 123MMscf/day is expected in February 2012.

Millennium Challenge Account- Ghana Compact II Programme

The Millennium Challenge Account (MCA) is a United States innovative approach to foreign assistance that delivers substantial new resources to selected group of developing countries to support development. The VRA is taking advantage of the MCA under the Ghana Compact II programme for the funding of a 450 MW Thermal project at Domunli in the Western Region and a 2 MW solar power project in the Northern Region.

POWER GENERATION

Hydro Generation

The net inflow into the Volta Lake during the flood season was 34,834 MCM (28.24 MAF). This was about 12 percent above the long-term average net inflow of 31,010 MCM (25.14 MAF).

The Volta Lake attained a maximum elevation of 82.88 m (271.90 ft.) from the beginning of the year. The minimum Lake elevation at the end of the dry season was 79.67 m (261.38ft.)

During sustained dry periods, hydro lake storage levels are important indicators of overall supply risks. With increasing addition of thermal plants and the development of renewable energy in the generation portfolio in the short to medium term, the supply risk is significantly moderated.

Hydrograph Pattern

The 2012 Inflow Hydrographs and monthly Net Inflow Comparison for 2012, 2011 and LTA are shown as figure 1 and 2 below:

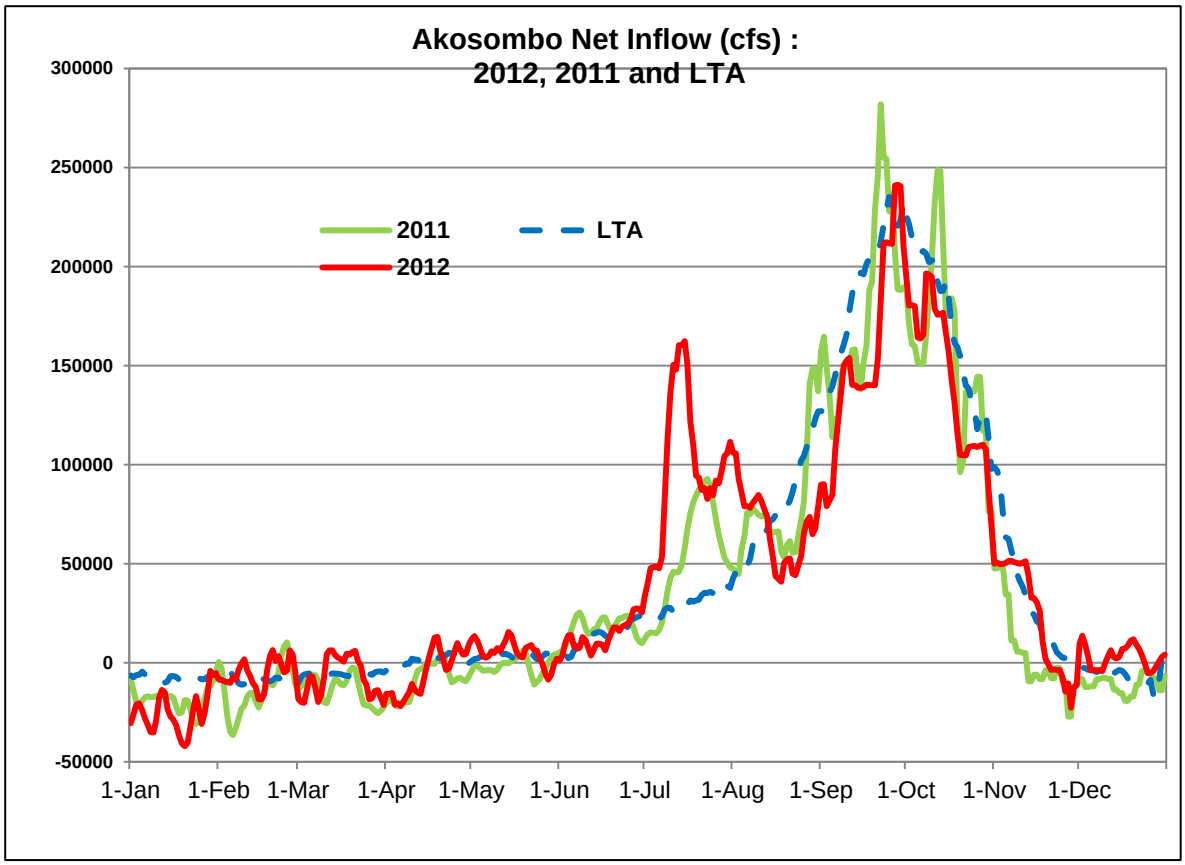


Figure 1: Volta Lake Hydrograph

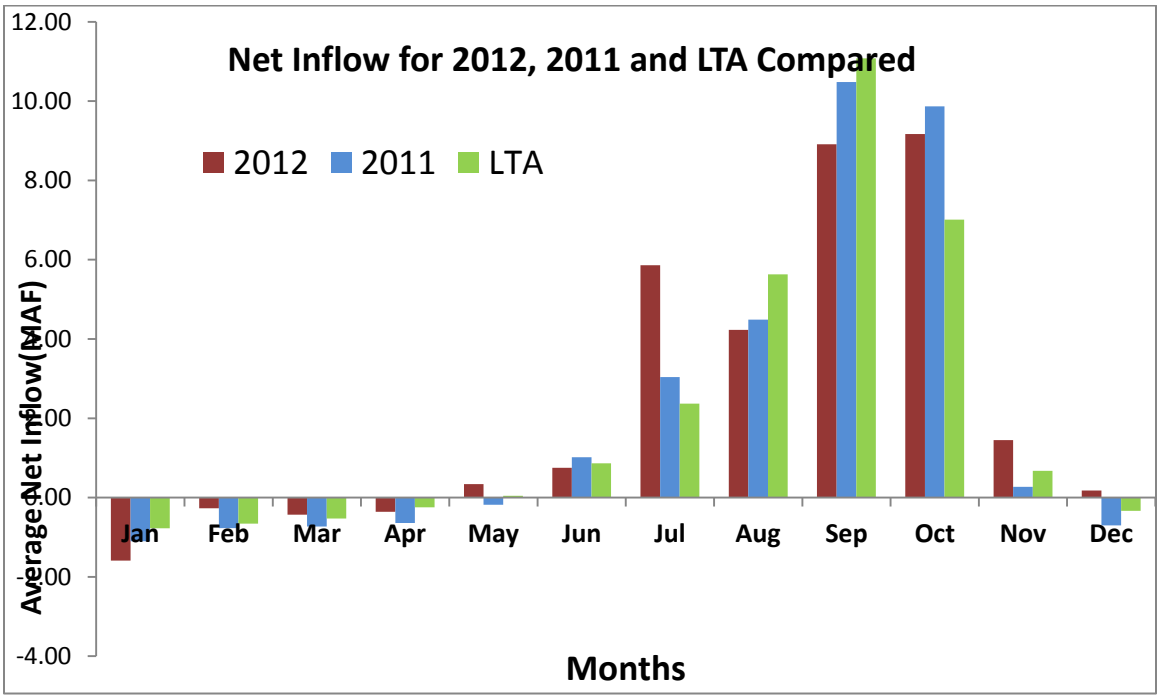
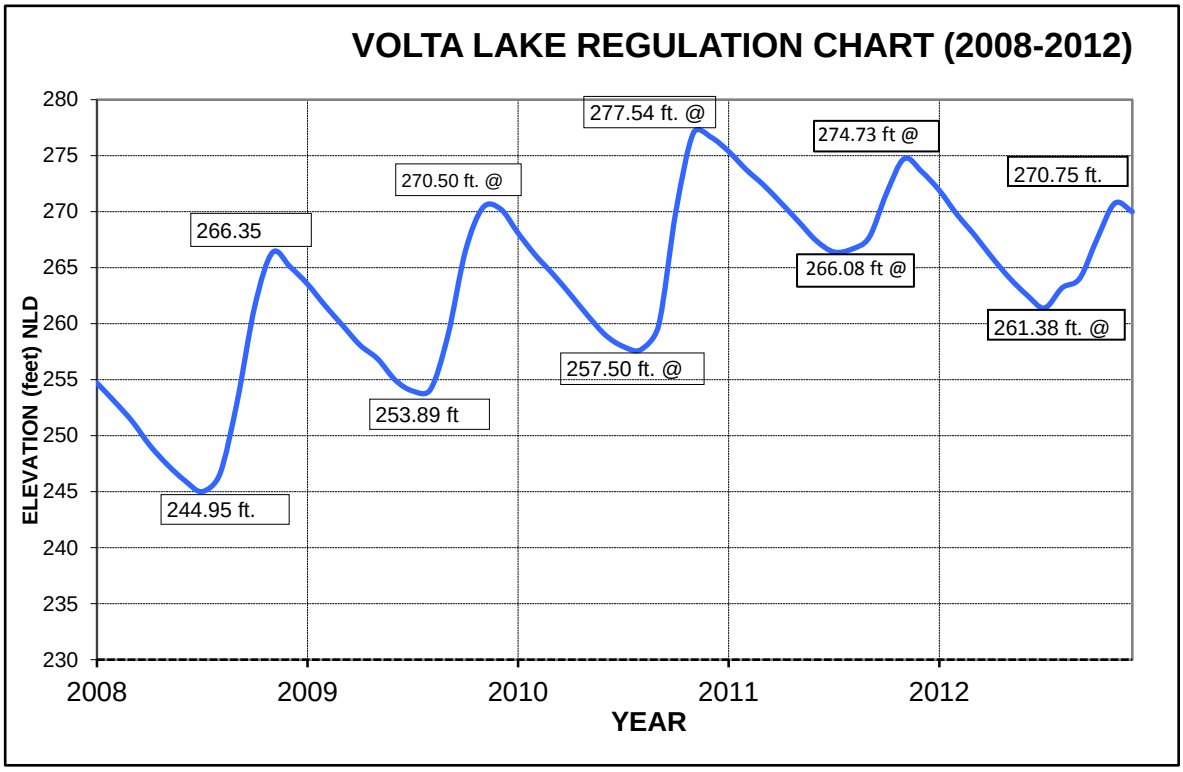


Figure 2: Monthly Net Inflow Comparison 2012, 2011

The Volta Lake regulation chart for 2008 - 2012 is shown below as Figure 3.



Hydro Energy Generation

The total hydro generation from Akosombo GS and Kpong GS was 8,067.66 GWh GWh. This is made up of 6,949.52 GWh and 1,118.14 GWh from Akosombo and Kpong plants respectively. This represents average draft rates of 19.04 GWh/day and 3.07 GWh/day from Akosombo and Kpong plants respectively.

Electricity Demand and Supply

POWER SALES

Total energy sold to VRA's customers in 2012 was **11,172** GWh. ECG, the largest customer of VRA consumed about **7,002** GWh, representing 62.67% of the total energy sold. The total energy supplied to VRA's customers for the year 2012 increased from 10,024 GWh to 11,172 GWh, an increase of about 11.45%. The table below shows the consumption of the various categories of VRA customers.

GHANA ENERGY SALES

GHANA SALES (LOCAL CUSTOMERS)

CUSTOMERS	2011		2012	
	Quantity (GWh)	Value (GH¢' 000)	Quantity (GWh)	Value (GH¢' 000)
ECG	6,035	493,464	7,002	591,616
MINES	1,301	265,275	1,386	328,388
AKOSOMBO TEXTILES	15.0	3,070	11.0	2,448
ALUWORKS	8.0	1,800	8.0	1,905
DIAMOND CEMENT	51.0	7,480	50.0	8,133
OTHERS	40	2,319	45	2,553
NED	729	59,376	822	69,483
TRANSMISSION LOSS RECOVERIES .(GRIDCO)	485	60,201	515	42,967
SUBSTATION USE (GRIDCo)	5	431	6	465
SUB-TOTAL	8,669	893,416	9,845	1,047,958

GHANA SALES (FOREIGN CUTOMERS)

CUSTOMERS	2011		2012	
	Quantity (GWh)	Value (GH¢' 000)	Quantity (GWh)	Value (GH¢' 000)
VALCO	597	48,770	613	60,386
FREE ZONE CONPANIES	39	9,025	47	10,659
SUB-TOTAL	636	57,795	660	71,046

EXPORTS

EXPORTS	2011		2012	
	Quantity (GWh)	Value (GH¢' 000)	Quantity (GWh)	Value (GH¢' 000)
CEB	647	82,794	566	82,572
SONABEL	6	844	7	1,492
YOUGA MINE	39	6,104	37	8,060
CIE	27.0	5,239	57	7,838
SUB-TOTAL	719	94,982	667	99,961
GRAND TOTAL	**10,024**	**1,046,194**	**11,172**	**1,218,965**

Electricity Production and Transmission.

A table of electricity produced and transmitted for 2011 and 2012 is as follows:

		2011	2012	Change
A	Total Energy Generation at Akosombo GS	6,498.891 GWh	6,949.518 GWh	6.9%
B	Total Energy Generation at Kpong GS	1,067.095 GWh	1,121.134 GWh	5.1%
C	Total Energy Generation at Takoradi Thermal GS	1,149.488 GWh	1,061.019 GWh	-7.7%
D	Total Energy Generation at Takoradi TICO Thermal GS	658.758 GWh	1,167.760 GWh	77.3%
E	Total Energy Generation at Mines Reserve Power Station	12.772 GWh	19.645 GWh	53.8%
F	Total Energy Generation at Tema Thermal 1 Power Station	561.684 GWh	622.240 GWh	10.8%
G	Total Energy Generation at Tema Thermal 2 Power Station	50.436 GWh	140.532 GWh	178.6%
H	Total Energy Generation at CENIT Power Station an IPP	.000 GWh	94.168 GWh	#DIV/0!
I	Total Energy Generation at Sunon-Asogli Power Station an IPP	1,224.170 GWh	847.760 GWh	-30.7%
J	Total Energy Generated at all Generating stations **(A+B+C+D+E+F+G+H+I)**	11,223.294 GWh	12,023.776 GWh	7.1%
K	Energy imported from CIE for VRA use	80.931 GWh	96.993 GWh	19.8%
L	Energy imported from CEB for VRA use	-	-	-
M	Total Energy Imported From CEB and CIE **(K+L)**	80.931 GWh	96.993 GWh	19.8%

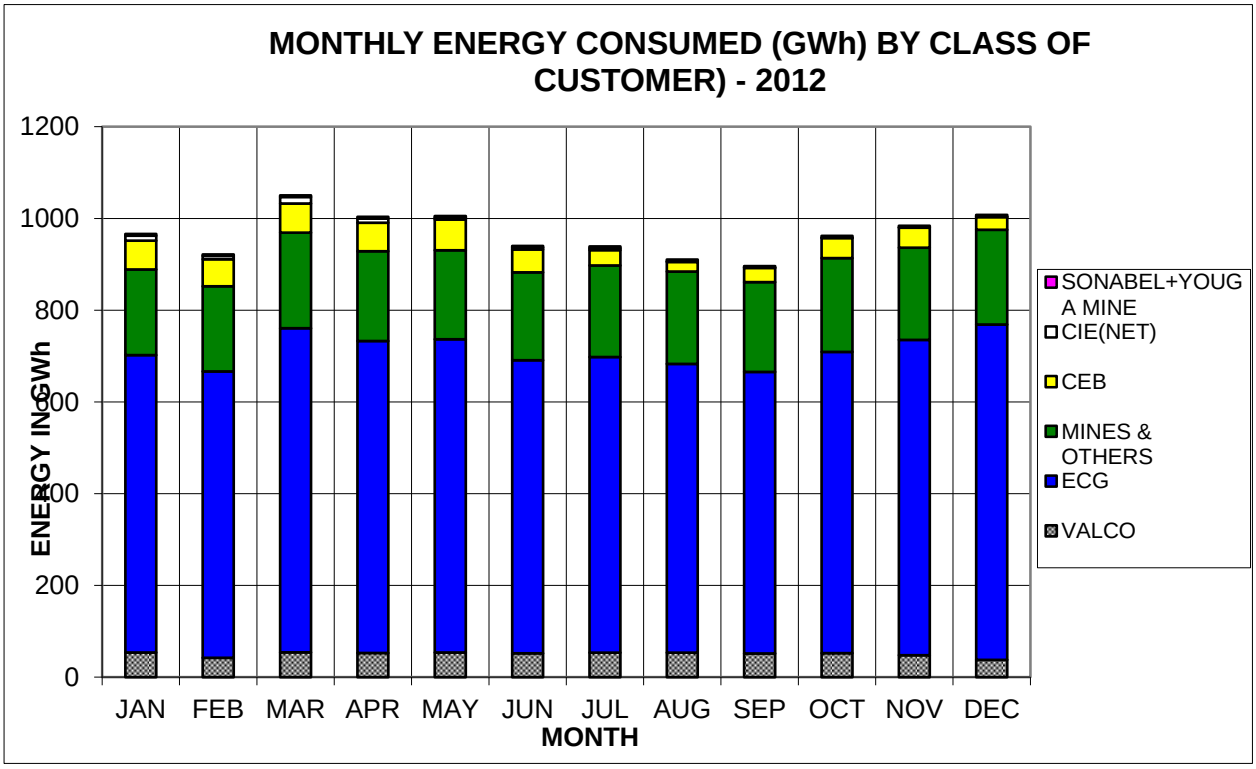
N	Total Energy Generated Plus Imports **(J+M)**	11,304.226 GWh	12,120.769 GWh	7.2%
O	Total Energy Used at all Generating Stations	24.150 GWh	36.393 GWh	50.7%
P	Energy Input to Transmission Systems **(M-O-E)**	11,267.303 GWh	12,084.376 GWh	7.3%
Q	Energy used in the Substations	5.276 GWh	5.461 GWh	3.5%
R	Energy Exported & Sold to CEB From VRA	646.356 GWh	566.107 GWh	-12.4%
S	*** Energy Exported & Sold to SONABEL From VRA	44.418 GWh	43.879 GWh	-1.2%
T	Energy wheeled to CEB From CIE	84.217 GWh	49.372 GWh	-41.4%
U	Energy Exported to CIE From VRA	27.114 GWh	57.117 GWh	110.7%
V	Total Energy Exported and wheeled **(R+S+T+U)**	802.104 GWh	716.475 GWh	-10.7%
W	Total Consumption within Ghana (incl. VALCO)	9,994.346 GWh	10,920.682 GWh	9.3%
X	Total External Sales (CEB,CIE & SONABEL) **(R+S+U)**	717.887 GWh	667.103 GWh	-7.1%
Y	Total Energy Billed **(W+X-E)**	10,679.550 GWh	11,587.785 GWh	8.5%
Z	Transmission Losses **(P+T-Q-V-W+E)**	562.566 GWh	491.130 GWh	-12.7%
AA	Percentage of Transmission Losses **Z/(P-Q)*100**	5.0%	4.1%	-18.6%
AB	Maximum Peak Generated (MW)	1,664.6 MW	1,728.9 MW	3.9%

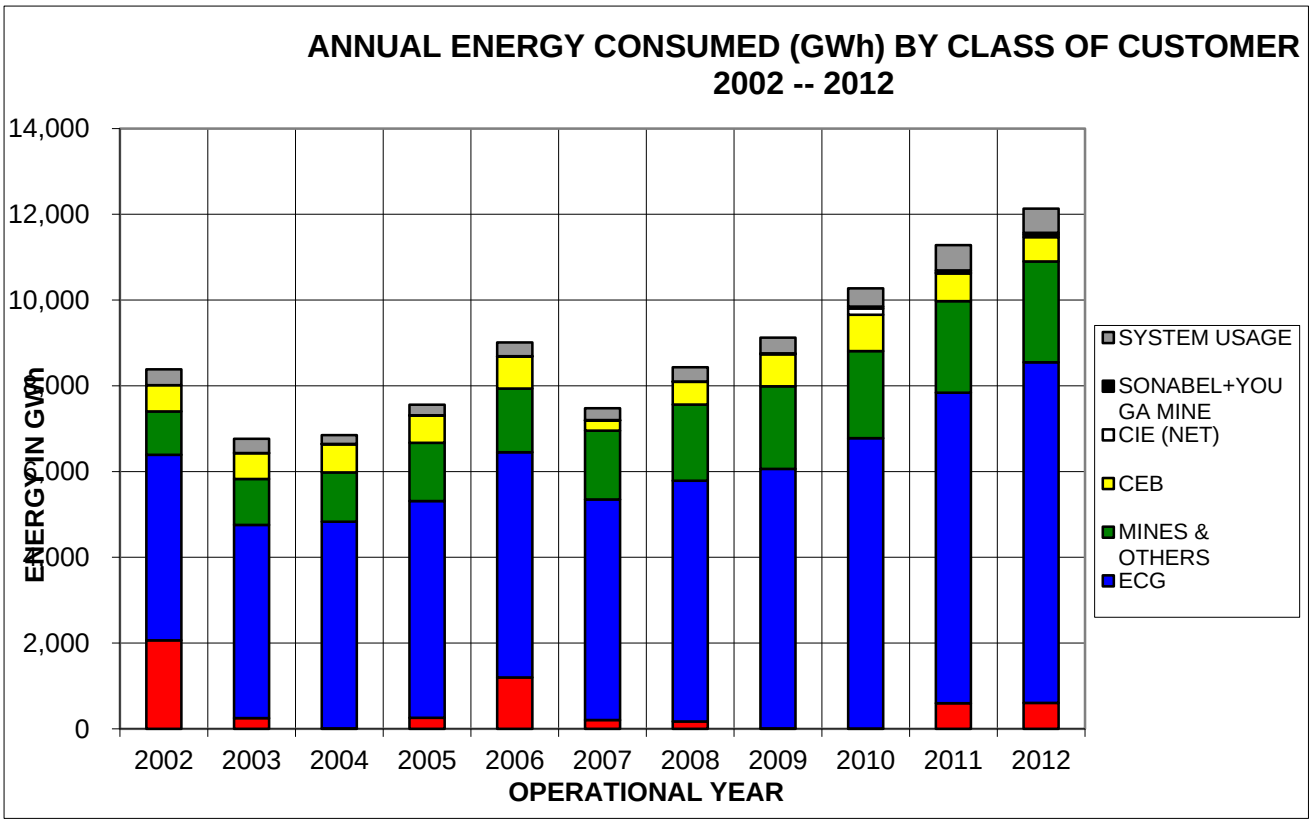
AC	Average Demand **(N/8.76)** (MW)	1,290.4 MW	1,383.6 MW	7.2%
AD	Load Factor **(AC/AB)**	77.5%	80.0%	3.2%
AE	Average plant discharge at Akosombo GS	1,302.62 cu.m/sec (46,029.00 cfs)	1,360.55 cu.m/sec (48,076.00 cfs)	4.4%

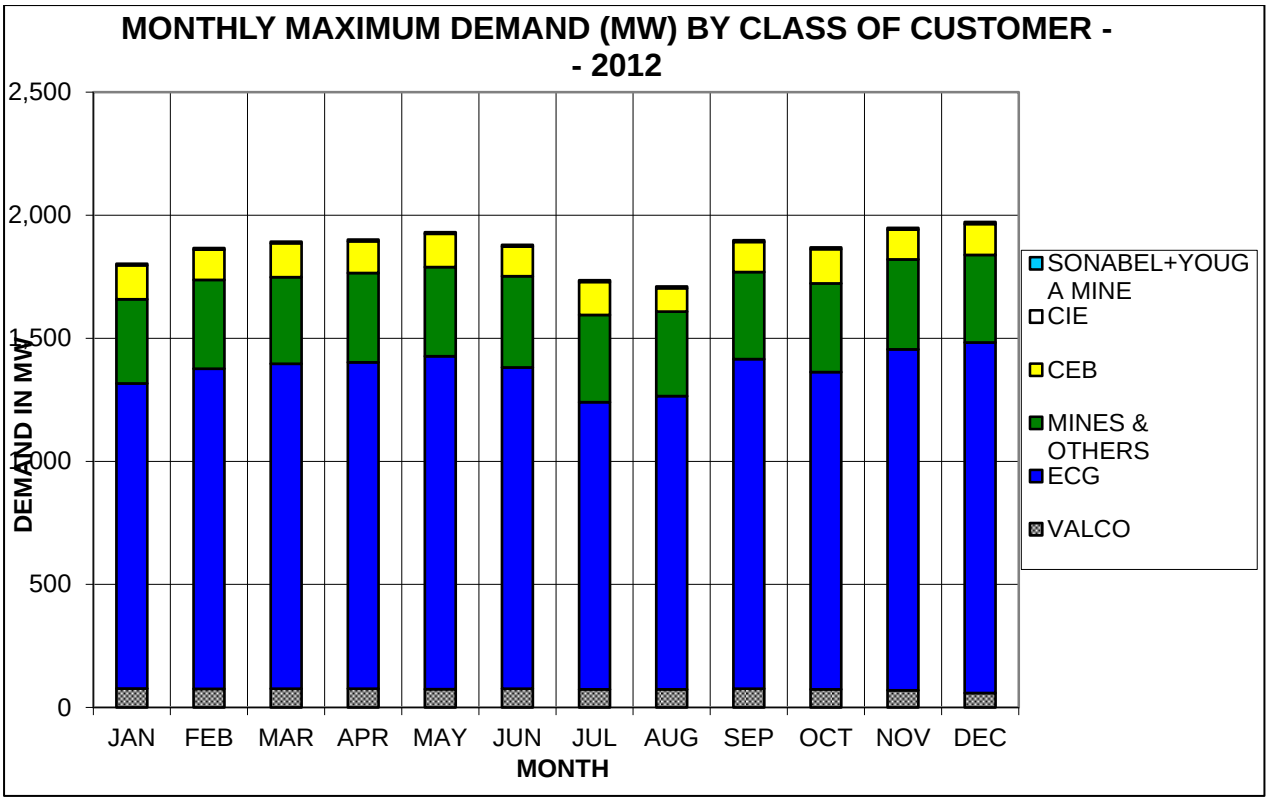
Note:

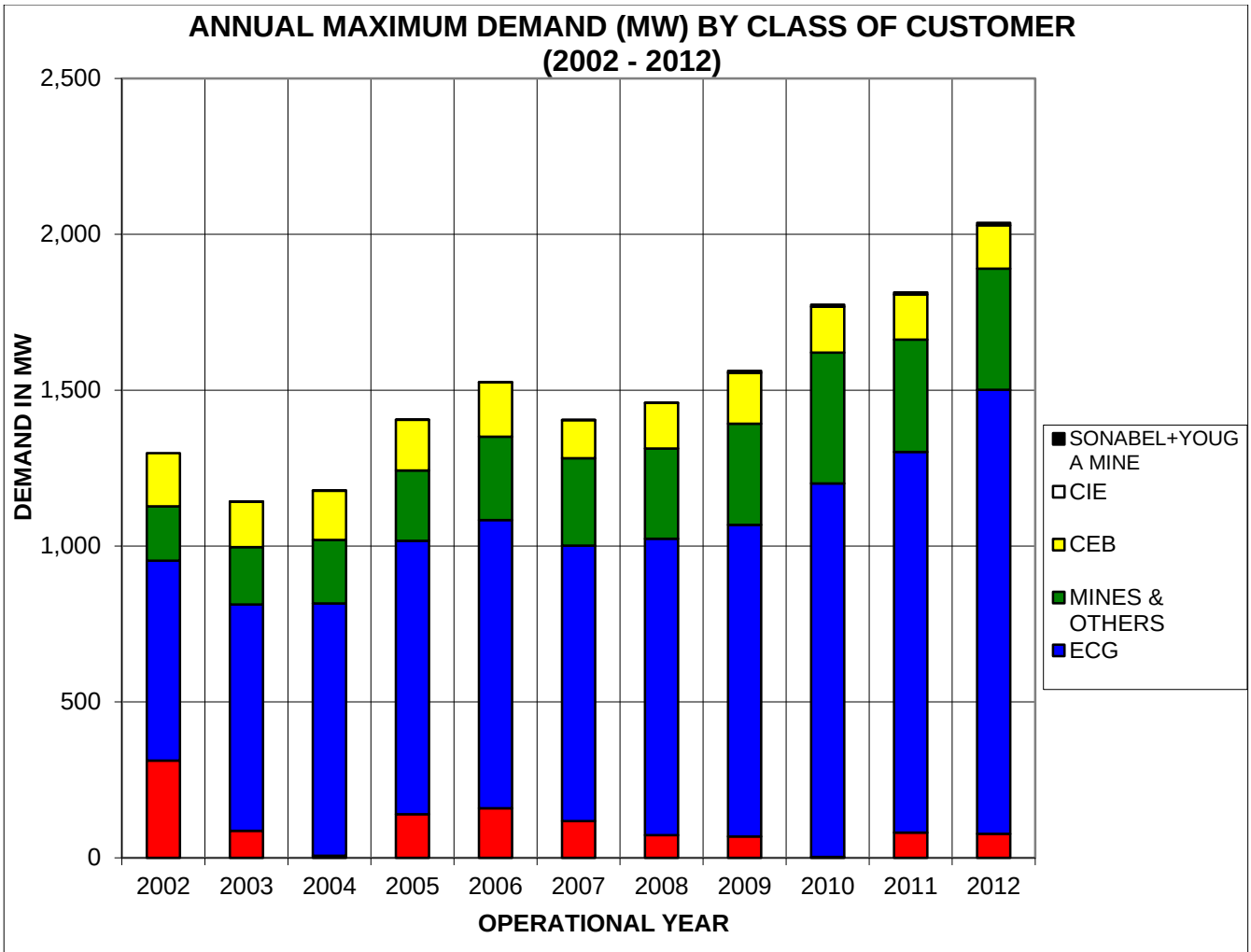
1.*** Energy exported to Sonabel includes supply to Youga Mine which started from October 2009

GHANA ENERGY SALES

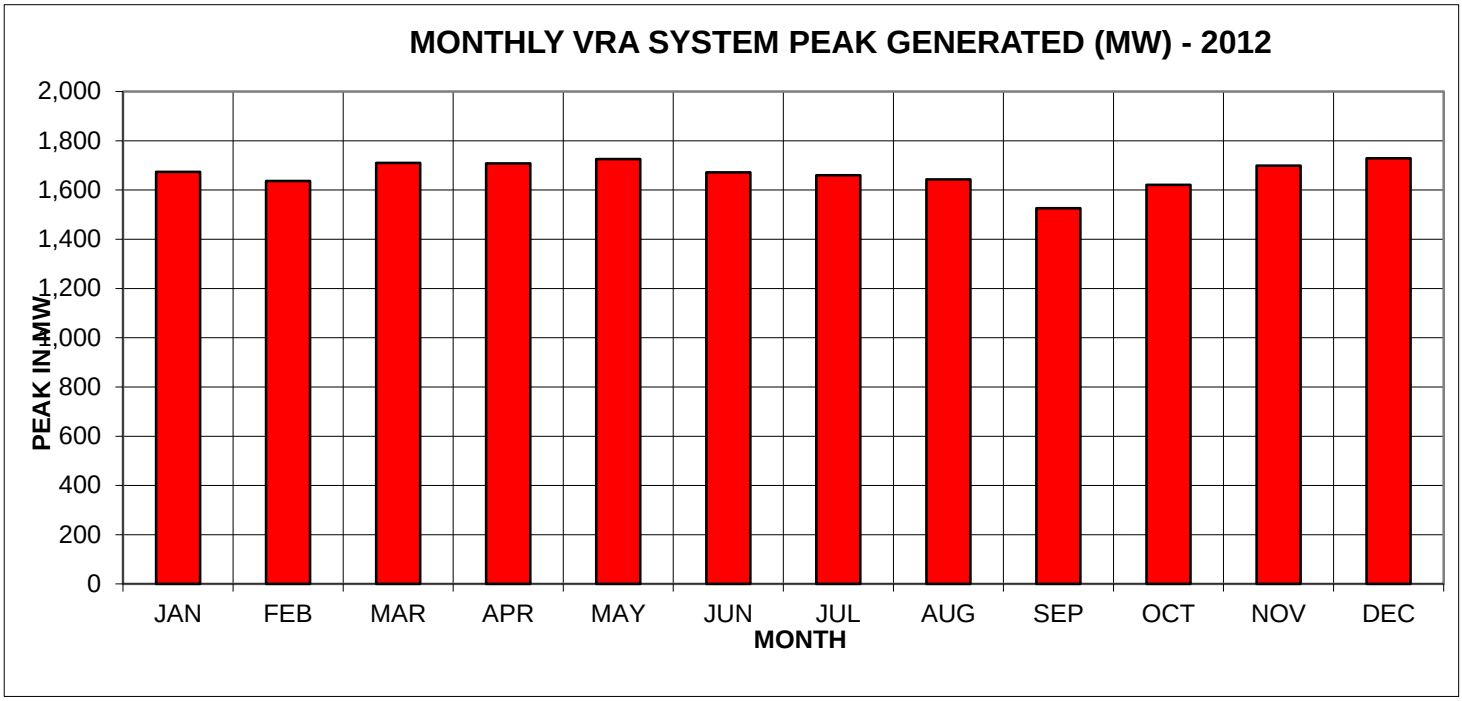








1. The reduction in 1999 demand was due to domestic load curtailement. Also there was load curtailment in 2006 and 2007
2. The maximum demand for 2002 is higher than that of 2003 because valco's load was curtailed.
3. Supply to SONABEL (border towns Po and Leo) commenced in 2003 but is insignificant and therefore not visible


MONTHLY VRA SYSTEM PEAK GENERATED (MW) - 2012
PEAK IN MW
2,000
1,800
1,600
1,400
1,200
1,000
800
600
400
200
0
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
OCT
NOV
DEC
MONTH

Plant Performance Review

The VRA is a reliability-focused organization. The optimum performance of our hydro generating facilities and standard operating systems and maintenance culture deployed throughout our plant and equipment helped boost reliability. Planned preventive maintenance of auxiliary equipment at both plants at Akosombo and Kpong were 100% accomplished. This enabled us to rely on our hydro facilities to generate 66.7% of the total system supply from our hydro sources. The average unit availability achieved at the Akosombo and Kpong Generating Stations were 99.10% and 94.40% respectively. The availability values compare favourably with industry average and median of 82.24% and 91.13% respectively.

The annual plant availability and capacity utilization factors attained at the Takoradi Thermal Power Station were 75.65% and 57.59% respectively. Reduced availability and capacity utilization compared to planned target was due to unscheduled outage on 32G1 to replace and align accessory gearbox and extended HGPI outage duration on 32G2.

The Station's total generation was 1,061.02GWh while the total station and township consumption was 12.7911Gwh.

With regard to the Tema Thermal Power Complex, 47G1 unit was in service throughout the year except for the periods of unplanned outages. 50G1, 50G2, 50G3, 50G5 and 50G6 units were also available except for periods of forced outages and dispatched as and when necessary by the System Control Centre (SCC).

Major System Disturbance

Three major system disturbances occurred. The frequency of system collapse experienced during the year was higher than that of 2011.

EUCG STATISTICS

The VRA's Hydro Generation Department joined the Electric Utility Cost Group (EUCG) in 2012 and became a member of the EUCG's Technical Committee on Hydro – Hydroelectric Productivity Committee (HPC). The EUCG is a global association of energy and electric utility professionals who discuss current and emerging industry issues, share best practice and exchange data for benchmarking purposes.

Consequently, Hydro Generation Department submitted cost and performance data on the two hydraulic stations, Akosombo and Kpong Generating Stations and attended the data review meeting in Philadelphia, USA. Hydro Generation's Department has therefore adopted the North American Electric Reliability Corporation's (NERC) Generation Availability Data Systems (GADS) reporting

format. This format follows best practice. The NERC GADS reporting format is also consistent with IEEE Standard Definitions for Use in Reporting Electric Generating Unit Reliability, Availability, and Productivity (EEE standard 762). Our involvement in the activities of EUCG demonstrates our commitment to world class excellence.

The Akosombo Generating Station has been ranked by the EUCG of the US, in the ***Top 5 in the World.***

Environmental Review

No major significant environmental problems occurred during the year. However, the efficiency of our environmental monitoring was impaired by defective equipment analyzers.

NO_x and SO_2 Emission Monitoring

Stack NO_x monitoring at the Takoradi Thermal Power Station was carried out for most part of the year. NO_x emissions were within the Environmental Protection Agency maximum limit of 460 ug/m^3 for most part of the year. Various environmental data such as noise, and dust particulate as well as waste water discharge data were monitored and were EPA compliant.

Emission Credit Development

The VRA appointed Stanbic Bank to undertake preparation and registration of the VRA Solar and Wind Energy Projects with the CDM Executive Board. ENRCAP of France is also undertaking CDM for the Kpone and Takoradi 3 Thermal Power projects.

REVIEW OF POWER SUPPLY CONTRACTS/AGREEMENTS

Review and negotiation of existing and new Power Sales and Purchase Agreements (PSPA) as well as Term Sheets for our customers were either fully or partially completed for execution except that the contracting structure contained in these agreements /Term Sheets were considered unsuitable for the new Wholesale Electricity Market provided in the LI 1937. As a consequence all negotiations and execution of PSPA and Term Sheets have been suspended to enable the VRA to design appropriate contracting structure:

A consultant appointed for the purpose by the VRA prepared and submitted a Draft Master Power Sales and Purchase Agreement for a customer forum held from August 21-22, 2012 at the Movenpick Ambassador Hotel, Accra. Inputs gathered from the forum enriched the Draft Master Power Sales and Purchase Agreement.

CUSTOMER RELATIONS

The VRA is putting much more emphasis on customer service and striving to achieve service excellence by staying close to the customer. We therefore undertook various customer relations activities that involved customer visits, customer queries and new service

enquiries. We visited 14 customers in their head offices or their factories/mine sites to discuss service quality, billing and operations. Analysis of the feedback obtained from these customers showed that customers were 71% satisfied with our services.

Negotiations with the Takoradi International Company (TICO)

TICO (TAQA) (T2) is expected to be converted from a 220 MW simple cycle plant into a 330 MW combine cycle plant. The VRA is preparing to negotiate the best terms for VRA as the Oftaker in the T2 Expansion project. The Engineering Procurement and Expansion (EPC) contractor selection process is in progress. The key issues have been identified and negotiation on these are in progress. The project agreements include:

- Power Purchase Agreement
- Services Agreement
- Government Consent and Support Agreement
- Site Lease Agreement

REGULATION AND WHOLESALE ELECTRICITY MARKET

We actively participated in meetings organized by the Electricity Technical Committee of the Energy Commission and made inputs for the Licence Application Manuals for Service Providers and Natural Gas Supply Industries.

The PURC reviewed the Bulk Generation Charge for VRA for the period March – May 2012 and June – August 2012 and the necessary data were provided to support the exercise. For the two periods, the PURC did not announce any tariff increase, rather the Government of Ghana provided subsidy in the form of payment for cargoes of LCO for thermal power generation. Two quarterly reports on the service delivery of VRA were submitted to the PURC for assessment.

The VRA participated in two workshops on Transmission and Ancillary Pricing Model as well as Dispatch Data Exchange Manual for stakeholders by GRIDCO.

NON - CORE OPERATIONS

PERFORCEMENT ENHANCEMENT

Human Resource Development

"Growth and Learning and Value Creation"

Operating across the country with 3,046 permanent employees, VRA's core business is power generation, but also operates a wide range of non-core commercial functions as well. With such a diverse range of commercial interests over the years, engendering a homogenous culture across work locations has been possible largely due to strong leadership support for the VRA's human resource function and a heavy focus on alignment of HR with business strategy. All human resource initiatives, actions and priorities are aligned to the corporate strategy.

Performance Management: *The Balanced Scorecard*

The VRA operates a new performance management system, with built-in performance related incentive scheme. At the beginning of each year, every staff member sits down with their supervisor to review set targets and objectives which feed into the corporate objectives, so there is a linkage to measuring people and to the overall business strategy. The new system, the *Balanced Scorecard,* provides a framework for aligning individual performance with departmental and corporate goals, and assessing and rewarding performance accordingly. Launched in 2011 after a long period of preparation, the system has proved quite successful, already changing staff performance and motivation, despite some initial teething problems unavoidable at the start of a novel system.

Through an intentional focus on human capital, the VRA is pursuing vigorously business development driven change management processes in order to increase productivity and efficiency in a competitive deregulated energy market, and thereby establish distinctive capabilities and excellence. Consequently, the human resource base has become crucial to the change processes. The keystone of our human resource development strategy is anchored on the "Learning and Growth" perspective of the Balanced Scorecard (BSC) approach to strategic management in the utility industry.

A high premium is therefore placed on the ability of the VRA to mobilize and sustain the process of change required to execute the strategy. To achieve success, the VRA's culture, its leadership and its employees are aligned to corporate strategic goals. The Authority strives to create a congenial professional environment aimed at developing motivated, efficient and experienced human resources through strategic planning that encourages employees to share knowledge to create the climate for action.

One of the core competencies that drives the VRA is 'energizing the organization. Leadership is key to this competency.

With a strong focus on leadership, the Authority creates the congenial environment that propagates the vision of the VRA and inspires and motivates people to execute on the vision of the Authority.

In line with its "Learning and Growth" objectives, the VRA sponsored 1,074 employees who attended 359 courses locally and off-shore during the year. A total of 420 staff were trained in 213 overseas programmes.

Training on Oracle Self Services Human Resource Platform (SSHR)

Training on the Oracle SSHR was organized for all directors during the year. The course was essentially intended to:

- Expose management staff to the features and functionalities of the Self-Service Module.
- Equip management staff with the necessary skills to enable them perform on-line supervisory functions on Self-Service transactions initiated by their subordinates.
- Provide capabilities to participants to carry out self-service transactions on their own behalf and on behalf of their subordinates.

Roll Out of Self Service HR

The Self Service HR and Manager Self HR modules on the Oracle HRMS were rolled out to all employees of the Authority during the year. This was part of a systematic programme to progressively roll out all the components of the Self Service HR to employees of the Authority.

E-Business Suite Project – Creation of New Business Group

The creation of new Business Group by Consolidated Ventures (CV), a consulting group implementing Oracle Financials for the Authority necessitated the migration of relevant staff data into the new environment.

Industrial Relations

The industrial climate was quite peaceful. The Authority organized sensitization workshops on a new Reward Management System to obtain feedback from staff. A review of the reward system reflects the VRA's new Reward Policy through increment, bonus, promotions, talent management, placement and recognition of critical/ scarce skills. The linkages between performance management and new job hierarchies are to enhance salary administration.

Health and Safety

Health and safety is a priority for the VRA. The VRA continues to make dramatic improvements in its management of risk, health and safety to safeguard asset integrity, wellness and deliver cost savings to the business

The VRA operates a definitive health and safety policy, which involves hazard and risk assessment and control, safe work procedures, worker competency and training, work site inspection emergency response plan, incident investigation, and monitoring and evaluation.

To make the health and safety policy effective, weekly meetings are held to help employees internalize safety principles and practices. These weekly meetings are also aimed at enlisting staff involvement and commitment and to build a 'positive health and safety culture.'

The VRA collects and acts on information that shows that the system is actually working and delivering effective control of risk and health.

As a principle every employee accepts personal responsibility for his or her safety and health, outlined in a frame work for managing health and safety set out in the Authority's Safety Manual. The health and safety policy provides the means to ensure that all employees, including managers, supervisors and temporary staff, are adequately instructed and trained to:

- Ensure that people doing especially dangerous work have the necessary training, experience and other qualities to carry out the work safety.
- Arrange for access to sound advice and help
- Learn by example: demonstrate commitment and provide clear direction-let everyone know that health and safety is important.
- Ensure that managers, supervisors, and team leaders understand their responsibilities and have the time and resources to carry them out.
- Ensure everyone knows what they must do and how they will be held accountable.
- Provide information about hazards, risks prevention measures to employees.

Generating electricity to feed the national grid and match consumer demand requires high levels of plant reliability. Unplanned plant outages and failing to meet generating contractual obligations have an immediate and detrimental impact on business. The need for safe, secure and reliable supply is crucial. Unavailability of our plant once we are up and running is very costly and damages our reputation for reliability with the national grid. The VRA has highlighted its vulnerability to a major incident and the need to make process safety management a priority. The VRA's Projects and System Monitoring has developed a Process Safety Audit Tool using process safety indicators to help reinforce existing practices in the business and has identified a number of gaps, common across all sites, that highlight vulnerabilities around process safety. The VRA is a mature business that is running and monitoring its plant safely and efficiently. In 2010, the VRA established a Corporate Risk Management Centre to co-ordinate a common approach to risk management and process safety. The VRA is carrying out risk assessment to ensure certainty in the achievement of its corporate strategic objectives.

The VRA is committed to prompt and supportive health care delivery system for its employees and their families as well as the communities in the areas of operation through corporate hospitals and clinics. The VRA operates three hospitals at Akosombo, Aboadze, and Accra and a clinic at Akuse. Staff members and their dependants at all VRA locations including the new subsidiary, NEDCO are also catered for by the Authority's designated panel of doctors.

The VRA has a proactive, quality, health, safety and environment policy that focuses on people, property and the environment. Consequently, every employee is mandatorily required to undergo compulsory medical examination during their annual vacation leave period. This health obligation forms part of the VRA's excellence management system.

Improved performance has led to a significant reduction in insurance premiums, injury and keeping employees at work which in turn affects the bottom line of the business.

Total outpatient attendance at the four health facilities was 195,937, 20.8% higher than the preceding year's figure of 162,149. Significant Increases were recorded in all the facilities due to expansion in specialist services.

Total number of admissions was 5,977, an increase of 24.5% compared to last year's figure of 4,801. The paying public constituted about 73.54% of the overall out-patient load and 94.96% for the in-patient load in all the medical facilities. Over 90% of this figure were National Health Insurance clients.

The Akosombo Hospital continued to support the training of medical professionals from the medical schools, nursing training schools and other tertiary institutions.

Total income for the year was GHc7, 211,774.00 and expenditure, GHc15, 738,013. The financial recovery rate was 49.42%. The income for 2011 was GHc6,354,237.00 while the expenditure was GHc14, 663,328.00 and the financial recovery rate was 43%.

Nursing is a rigorous discipline, which requires updated information on a regular basis to ensure best possible care is provided to patients. Consequently, we are establishing a Nursing Training School in Akosombo to enhance health delivery.

MANAGEMENT INFORMATION SYSTEMS (MIS)

Cost Efficiency Perspective

To ensure operational excellence, The VRA is strengthening its Information and Communication Technology capability readiness to become a value-driven organization, and create value for its stakeholders. This strategic focus would assist the Authority manage its assets for higher return on investment, asset utilization, and higher productivity leading to a bigger share of the electricity market in West Africa.

The VRA has therefore made significant investments in ICT resources. The Authority undertook three key projects at the beginning of the year. These were:

- Rehabilitation and Extension of the LAN/WAN Project (Southern Sector)
- Data Centre Upgrade and Disaster Recovery Solution
- Audio/Video Conferencing
- Bandwidth Optimization.

Extension of the Local Area Network/Wide Area Network (LAN/WAN) Project)

This project involved the implementation of the MPLS Wide Area Network and the upgrading of the bandwidth of all the WAN links from two megabyte per second (2Mbps) to one

hundred megabyte per second (100Mbps). The link from the Head Office to the Data Centre in Akosombo was also upgraded from 2Mbps to STM-1 link of 115 Mbps by Vodafone and twenty megabyte per second (20 Mbps) dedicated bandwidth was provided by GRIDCO between the Data Centre and the Disaster Recovery site.

Virtual LANs (VLANs) were created based on building. VLANs has enabled quick resolution of problems and minimized the downtime impact on users in case of PC problem. Work is about 75% complete in Akuse, 55% complete in Accra while that of Aboadze is outstanding.

Data Centre (DC) Upgrade and Disaster Recovery (DR)

The project which is about 98% complete with the installation of physical servers, access control, environmental monitoring systems, air-conditioning systems, storage systems fire suppression systems and refurbishment of the physical areas at both the DC and DR sites. IT technologies including virtualization, replication and enterprise backup solutions have been implemented.

Audio/Video Conferencing

This project has been rescheduled for 2013 due to financial constraints. However, the Lync deployment service planning engagement took place with a Microsoft engineer. Lync is a product to be used for the project. This workshop provided the capacity for the deployment of Lync.

Bandwidth Optimization

This was implemented with Riverbed devices at the Head Office, Akosombo Data Centre and Tema, with the aim of improving access to resources on the Authority's LAN/WAN.

E-Business Suite Project

We made significant progress on the Hospital Information Management Systems project. In particular we accomplished the following:

- Patient digitalization module has been deployed and is in use.
- Registration module of the Hospital Information System (HIMS) in all locations (Accra, Akosombo, Akuse and Aboadze) was deployed.
- Remaining Admission, Discharge and Transfer (ADT) module is ready for deployment.
- Finance, Medical Stores and warehouse (Supply chain), Pharmacy and e-Claims modules ready for configuration and testing
- Nursing Information System, Charting Module, Physician Computer Order Entity, Radiology Module, Lab Module are 70-80 per cent complete
- Public health module is about 20 per cent complete.
- Trained all records staff and some nurses at all locations to use the Register module.

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Portfolio Diversification of Non-Core Functions in Real Estate, Hospital and Schools

The VRA is taking steps to convert the non-power operations in the areas of Real Estate, Hospital and Schools into progressively self-financing subsidiaries. This will assist to inject greater efficiency in the running of a significant chunk of non-power activities by exposing them to open market forces. These initiatives are designed to position the VRA to focus more effectively on power generation as its core activity and assist the VRA to achieve competitive advantage in the West African sub-region.

The Authority, through the Akosombo Management Committee (AMC), continued to perform Local Authority functions in accordance with Executive Instrument 42 which defines the VRA's obligations towards the Akosombo Town. The AMC collected through the Local Authority activities an amount of GH¢140,216.88 while non-local Authority activities yielded GH¢1,596,818.05 bringing the total revenue generated during the period to GHc1,737,034.88. The Local Authority component will be shared equally by the Authority and the Asuogyaman District Assembly in accordance with the existing agreement.

An amount of GHc202,684.75 was collected as rent income from non-staff which exceeded the target of GHc192,000.00.

In Akuse township, operations from the Club Complex yielded a revenue of GH¢36,523.41 while the while the Mess Hall and guest houses realized a revenue of GH¢98,849.80 and GH¢268,468.77 respectively.

In Aboadze, township operations from guest houses yielded an amount of GH¢6,915.00 while the restaurant operations realized a gross profit of GH¢232,818.047. Swimming pool, Service charges, rental and rent receivables also realized a revenue of GH¢5,896.00 and GH¢16,801.00 respectively.

In Accra/Tema Estates, the Head Office canteen and cash sales realized a revenue of GH¢54,154.30 and GH¢23,016.74 respectively.

At Akosombo, the trading outlets at Maritime club, swimming pool, community centre and Dobson club house realized a total amount of GH¢342,340.35 and Ohemaa LX1 generated U$18, 765.74

ESTABLISHMENT OF CENTRE OF EXCELLENCE

As a learning organization, we are setting up a Centre of Excellence Academy to build capacity training and adapt state – of – the - art technologies and expand our frontiers of knowledge so that we can remain competitive. A Director has been appointed for the purpose to lead the realization of this vision.

VRA INVESTMENT INITIATIVES

Since 2009 the VRA embarked on important initiatives and projects to accelerate its preparation for the imminent competition and deregulation of the power sector. Accordingly, the Authority's vision of setting the standard for public sector excellence in Africa is the building block behind the entire reorganization process. Among the four pillars underpinning the corporate strategic objective is the commercialization of the existing subsidiaries and other non-power functions to ensure value addition and increased profitability.

A new investment directorate has been established to focus on the current investment portfolio of the Authority categorized as follows:

- Existing Non-Power Subsidiaries: Akosombo Hotels Limited (AHL), Volta Lake Transport Company Limited (VLTC), Kpong Farms Limited (KFL).
- Power Subsidiaries: Northern Electricity and Distribution Company Limited (VRA/NEDCO), TAPCO (Overseeing VRA's interest in TICO and WAPCO)
- VRA Non-Power Departments undergoing final phase of restructuring: VRA Hospitals, VRA Schools,
- Real Estate and Security Department
- New Business Ventures: Yet to be determined.

The success of these entities depends to a large extent on how the Authority is able to perform its parental role through strategic engagement of the management of the subsidiaries through a dedicated department within the Authority that will lead the transformation process, monitor performance and strengthen the Authority's oversight over the subsidiaries to ensure that they increase shareholder value at all times.

To fulfill these objectives, the Investment Directorate was re-established on October 1, 2012.

SUBSIDIARIES

COMMERCIALIZATION INITIATIVES

OPERATIONALIZATION OF NEDCO

We are implementing a business strategy designed to achieve economic efficiency with strong emphasis on innovative technology of the NEDCO and creating new opportunities for economic growth. Consequently, NEDCO is being operationalized as a full-fledged, independent distribution company, wholly owned by the VRA.

Accordingly, a Managing Director, has been appointed for NEDCO while a Board has been installed.

NEDCO's power purchase from the VRA during the year was 728,568,954kWh, an increase of 13.2% from the previous year's figure of 643,824kWh, out of which 519,099,450kWh was sold, representing an increase of 11.5% over the previous year's figure of 465,422,896kWh. Billed revenue was GH¢125,142,914 and billed revenue collection amounted to

GH¢97,008,124 representing 77% collection rate. Accounts receivable stood at GH¢95,367,695 with a receivable lag of 325 days.

Customer population stood at 380,046. The average growth of customers was 11% increase over the previous year's figure. NEDCO recorded 20.2% distribution loss, worsening from 19.6% the previous year. Total revenue collection was GH¢87,280.275 while total expenditure stood at GH¢15,408,392.70.

A total of 5,177 SHEP connections were completed during the year. One thousand and eighty-seven spans of low voltage network were upgraded. HV/LV networks were extended by about 132km. while 14,226 new services excluding NEP/SHEP were made to the existing network. A total of 1,231 interconnections and 309 illegal connections were detected and removed from the network in various areas. A total of 3,059 meters were installed in various areas for flat-rate customers.

Akosombo Hotels Ltd

The Akosombo Hotels Ltd., incorporated in 1970, is a 3-star luxury hotel with 35 rooms, including four suites and a privilege house, a discotheque, pleasure activities, including cruising on the lake by MV Dodi Princess, a swimming pool, two luxurious conference halls and a double tennis court and golf course, located on a hilltop overlooking the Akosombo hydro-electric Dam. The VRA has also commercialized its Executive Yacht, previously used exclusively by the Presidency of the Republic of Ghana and the VRA Executive. It has a living room, a conference hall with LCD TV/DVD and mini-cocktail in the living room. The Executive yacht is ideal for meetings in a congenial environment, family, couple on honey moon, executive/fishing groups, etc. The cruising facilities which have also been commercialized include: a-4-person capacity speed boat, and a 4-15 passenger conference research boat, MV Tilapia.

Operational performance for 2010 was marked by a stronger result with total revenue 57.49% higher. Real value for total revenue for 2011 was GH¢3,315,823 compared to GH¢2,105,367 in 2010. Occupancy for 2011 was 61% compared to 59% in 2010. Direct operating result for 2011 was GH¢930,706 compared to GH¢330,175 in 2010. Direct operating cost for 2011 was GH¢2,385,117 compared to GH¢1,775,192 in 2010. Net operating profit before depreciation for 2011 was GH¢503,471 compared to a net loss of GH¢225,326 in 2010. Depreciation for the period 2011 was GH¢208,811 compared to GH¢198,280 in 2010. Net operating profit after depreciation for 2011 was GH¢294,660 compared to a net loss of GH¢423,606 in 2010. Property, plant and equipment for 2011 was GH¢3,487,914 compared to GH¢3,541,413 in 2010.

Financial Outlook

The Hotel will be stepping up its marketing drive and pursue programme activities and strategies expected to yield 19% growth in revenue and 10% reduction in cost. Our management operations systems are expected to yield an average year end occupancy of 70% to further turn around the fortunes of the Hotel.

Volta Lake Transport Company

The Volta Lake Transport Company, 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 Limited

Incorporated in 1982, Kpong Farms Ltd. (KFL) was designed to serve as a resource *centre of excellence* for training in modern agricultural practices. KFL has been a leader in process innovation in the planning and implementation of agricultural operations. KFL has introduced a number of groundbreaking innovations. The most prominent of this is a soya bean processing technology known as "Extruding" which has been introduced into the country by the Farm. The technology involves the processing of soya bean into Full Fat Soya (FFS), an important ingredient for livestock feed which is in high demand. KFL has also demonstrated the possibilities of irrigation for all-year cereal production. KFL has cut a niche for itself in particular the production of livestock, rice and poultry. But lately due to liquidity concerns, KFL is no longer operational. The VRA is therefore seeking strategic investors in a joint venture arrangement to transform the operations of Kpong Farms Ltd into a profitable agribusiness.

CORPORATE SOCIAL RESPONSIBILITY

The VRA considers its corporate responsibility as a business imperative. Indeed for us in the VRA corporate responsibility is not a moral obligation but a standard practice. We believe that our right to exist depends on our responsiveness to the external environment. The Authority believes that when an active interest is taken in the well-being of the communities, a number of long-term benefits of community support, loyalty, and goodwill is gained.

The VRA's aim is to have a positive impact on the people, culture and communities in which the Authority operates, and to contribute to the growth and development of the economy. For this reason, the VRA has had a long history and tradition of engagement in corporate social investment. The Authority's community investment initiatives help build capacity and stimulate economic development.

The VRA is sensitive to its reputation and strives on a continuing basis to meet commitments to customers, the business community and communities in which its operations are integrated. As a socially responsible corporate citizen, the VRA is a signatory to the UN Global Compact, and reports compliance with the Compact's set of core values in the areas of human rights, labour standards, the environment and anti-corruption.

Golden Jubilee Scholarship

The Authority awarded scholarships tenable at the Senior Secondary School level to fifty successful students in its community's following the celebration of its 50th anniversary. The VRA also launched its Community Development Programme (CDP). The 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 CDP seeks to improve the existing Community Development Initiative (CDI) Framework Document for promoting the empowerment of the communities to take action for development.

As an organization committed to excellence, the VRA takes its Corporate Social Responsibility seriously. The following projects and programmes were therefore undertaken in CSR:

- Sponsored a number of national priority programmes such as rural electrification projects, health, water resources, education, capacity building, culture, community development and governance, and made various donations to governmental and non-governmental organizations. By the end of 2010, the VRA had committed over GH¢200,000.00 in sponsorships, donations and philanthropy.
- Continued to commit the cedi equivalent of US$500,000 to the VRA Resettlement Fund to support projects for environmental improvement, social welfare, public health, education, electricity, potable water supply and sanitation.

FINANCIAL STATEMENTS

31 DECEMBER 2012

VOLTA RIVER AUTHORITY

ANNUAL REPORTS AND FINANCIAL STATEMENTS

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CORPORATE INFORMATION

BOARD OF DIRECTORS	Prof. Akilagpa Sawyerr – *Chairman* Mr. Kweku A. Awotwi – *Chief Executive* Mr. John E. E. Turkson Togbi Gbordzor III Alhaji Attah Nantogmah Mahamadu Mrs. Marietta Brew Appiah- Oppong Mr. Ahmed Yakubu Salifu Hon. Rev. Dr. Joses Asare-Akoto Mr. Danny Anang
SECRETARY	Mr. Raymond J. Lartey
REGISTERED OFFICE	Electro Volta House P. O. Box M77 Accra
AUDITORS	KPMG Marlin House 13 Yiyiwa Drive Abelenkpe P.O. Box GP 242 Accra
BANKERS	Access Bank Ghana Limited Bank of Ghana Bank of Africa Ghana Limited Barclays Bank Ghana Limited CAL Bank Limited Ecobank Ghana Limited Fidelity Bank Ghana Limited Ghana Commercial Bank Limited Ghana International Bank Plc Guaranty Trust Bank Ghana Limited Merchant Bank Ghana Limited SG-SSB Limited Standard Chartered Bank Ghana Limited Stanbic Bank Ghana Limited United Bank for Africa Ghana Limited Unibank Ghana Limited Union Bank of Switzerland Zenith Bank Ghana Limited

FINANCIAL REVIEW FOR THE YEAR ENDED 31 DECEMBER 2012

Power Production

The total electricity generated from both VRA hydro and thermal sources increased by 595GWh (6%) from 9,320GWh generated in 2011 to 9,915GWh in 2012; this includes generation and transmission substations use of 45GWh (2011: 45GWh). Generation from hydro sources increased by 510GWh (7%) from 7,561GWh in 2011 to 8,071GWh in 2012. Thermal generation also increased by 85GWh (5%) from 1,759GWh in 2011 to 1,844GWh in 2012.

To supplement generation from VRA's own plants, a gross power amount of 1,296GWh (2011: 737GWh) was purchased from Compagnie Ivoirienne d' Electricité (CIE) of Cote D' Ivoire and Takoradi International Company Ltd (TICO) of Ghana. The Authority however exported 57GWh (2011: 28GWh) to CIE.

	Change		2012		2011	
	GWh	%	GWh	%	GWh	%
VRA Hydro:						
Akosombo	456	7%	6,950	62%	6,494	65%
Akuse	54	5%	1,121	10%	1,067	11%
	510	**7%**	**8,071**	**72%**	**7,561**	**76%**
VRA Thermal:						
TTPS	(77)	-7%	1,061	9%	1,138	11%
TT1PP	64	11%	622	6%	558	6%
TT2PP	92	188%	141	1%	49	0%
MRPP	6	43%	20	0%	14	0%
	85	**5%**	**1,844**	**27%**	**1,759**	**17%**
Total Energy by VRA	**595**	**12%**	**9,915**	**12%**	**9,320**	**93%**
Purchases & Imports						
TICO	511	78%	1,168	10%	657	7%
CIE	48	60%	128	1%	80	1%
	559	**138%**	**1,296**	**11%**	**737**	**8%**
Total Energy Generated & Bought	**1,154**	**11.5%**	**11,211**	**100%**	**10,057**	**100%**

Revenue

Revenue from sale of electricity increased by 58% (GH¢638.83 million) to GH¢1,749.39 million over the previous year's sales of GH¢1,110.56 million. This was mainly due to increase in the volume of electricity sold of 1,118GWh (11%) from 9,814GWh in 2011 to 10,932GWh in 2012, increase in deregulated mining companies' tariff from US$0.1305/kWh in 2011 to US$0.1580/kWh in 2012 and a 19% depreciation of the average GH¢/US$ exchange rate from GH¢1.5217/US$1 in 2011 to GH¢1.8181/US$1 in 2012. Also, the government of Ghana paid to VRA an amount of GH¢360.78m in respect of tariff shortfalls which government absorbed as subsidy to domestic consumers in Ghana.

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¢849.90 million (105%) from GH¢806.68 million in 2011 to GH¢1,656.58 million in 2012

- 210% increase in the volume of crude oil used from 1.68 million barrels in 2011 to 5.20 million barrels in 2012.
- 39% increase in the volume of distillate fuel oil used from 11,322 cubic meters in 2011 to 15,723 cubic meters 2012.

FINANCIAL REVIEW FOR THE YEAR ENDED 31 DECEMBER 2012 - CONTINUED

- decrease in amount of gas used for power generation from 11,518,001 million MMbtu in 2011 to 3,911,685 million MMbtu.
- decrease in crude oil price from an average of US$119.40/bbl in 2011 to an average of US$113.72 in 2012.

Administrative expenses

Administrative expenses increased by GH¢26.83 million (13%) to GH¢238.80 million (2011: GH¢211.97 million). This was mainly due to a 26% increase in staff costs.

Other operating income

Other operating income increased by 31% from GH¢48.54 million in 2011 to GH¢63.78 million in 2012. This is attributable mainly to increases in subsidiaries' income, hospitals' revenue, service charge revenue and proceeds from gas sales.

Operating Profit

The operating loss of the Group in 2012 was GH¢82.22 million compared to a profit of GH¢140.45 million in 2011. The 2012 operating loss was mainly due to the combined effect of increase in total operating revenue by GH¢654.07 million (56%) from GH¢1,159.10 million in 2011 to GH¢1,813.16 million in 2012 viz-a-viz an increase of GH¢876.73 million (86%) in total operating cost from GH¢1,018.65 million in 2011 to GH¢1,895.38 million in 2012. The operating loss represents a return of negative 2.59% on average revalued net fixed assets (2011: 5.39%) compared to the covenanted 8%.

Net Profit / (Loss)

The Group ended the year 2012 with a net loss of GH¢90.15 million (2011: profit GH¢82.64 million). The loss for the year is after charging depreciation of fixed assets of GH¢129.59 million (2011: GH¢111.60 million), loss on exchange fluctuation on foreign debt of GH¢14.39 million (2011: loss of GH¢14.68 million), and financial expenses of GH¢50.39million (2011: 37.75million). Financial Income of GH¢35.62 million (2011: GH¢2.37 million) and exchange gain of GH¢21.23 million (2011: exchange loss of GH¢7.75 million) have also been taken into account.

2013 OPERATIONAL & FINANCIAL OUTLOOK

The expected national system demand for 2013 is 13,862 GWh, comprising customer demand of 13,312 GWh and transmission losses of 550 GWh.

The Authority plans to generate a total of 10,426 GWh whilst Sunon Asogli Power Plant (SAPP), CENIT Power Plant and Bui Hydro Plant provide 1,010 GWh, 745GWh and 331GWh respectively. The Authority's generation breakdown is as follows: 7,100 GWh from hydro sources, 2,101 GWh from the Takoradi Thermal Plant, 745 GWh from the TT1PP, 224 GWh from the TT2PP, 255 GWh from the Takoradi T3 Plant and 2GWh from the Solar Plant. The Takoradi International Company (TICO) is expected to supply 1,351 GWh. The Mines Reserve Plant (MRP) diesel thermal plant is on standby for the year. Thus, VRA is expected to generate 85% of the national electricity load whilst Bui Hydro Plant and the IPPs provide the remainder of 15%.

The expected power sales for 2013 is GH¢1,368.72 million assuming a Bulk Generation Tariff of GHp8.4495/kWh. The Other income of about GH¢30.42 million, includes a premium of GH¢8.16 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¢2,178.81 million.

FINANCIAL REVIEW FOR THE YEAR ENDED 31 DECEMBER 2012 - CONTINUED

However, total administrative cost is estimated at GH¢140.16 million (excluding the Strategic Business Units- SBUs) whilst Interest expense and loss on Exchange fluctuation on foreign debt would amount to GH¢72.47 million. Depreciation provision made for the direct operating and administrative costs are expected to be GH¢126.36 million and GH¢11.78 million respectively. The expected net operational support to NEDCo, Health Services, PROPCo and VRA Schools is GH¢83.40 million.

Total capital expenditure for the year is estimated at GH¢492.24 million, including a support of GH¢51.81 million to NEDCo, GH¢11.49 million to the SBUs and GH¢4.92 million to the Subsidiaries. The amount of GH¢391.34 million will be expended on generation, civil construction and infrastructure, transmission (WAPP) and the balance of GH¢32.68 million would be spent on research and development, asset purchases and other projects.

At the current Bulk Generation Tariff of GHp8.4495/kWh, the Authority expects to end 2013 with a net loss of about GH¢1,075.71 million compared to the net loss of GH¢122.53 million in 2012. This will however be reduced to GH¢307.25 million as a result of expected Government of Ghana assistance (in lieu of economic tariff) of GH¢768.46 million. The expected year-end cash balance for 2013 is GH¢12.39 million (2012: GH¢198.39 million). It should be noted that the year-end cash balance of GH¢12.39 million would be realised provided the Government of Ghana supports the Authority with at least GH¢768.46 million for the purchase of Light Crude Oil. The 2013 budgeted rate of return on average net fixed assets is negative 27.81%.

FINANCIAL REVIEW FOR THE YEAR ENDED 31 DECEMBER 2012 - CONTINUED

Financial Summary (VRA)

	2008	2009	2010	2011	2012
	GH¢'000	GH¢'000	GH¢'000	GH¢'000	GH¢'000
Income from Sale of Electricity	616,591	754,821	1,077,464	1,110,794	1,749,836
Other Operating Income	60,031	22,893	36,862	36,048	50,188
Operating and General Expenses	763,311	761,090	1,053,421	1,008,183	1,877,200
Depreciation	60,937	80,552	77,468	111,209	124,547
Operating Profit/(Loss)	(86,689)	11,290	53,429	138,659	(77,176)
Financial Expenses	23,292	50,091	36,567	37,694	50,358
Financial Income	3,939	3,507	4,906	2,371	2,529
Exchange Fluctuation on Foreign Debt	(34,003)	(38,699)	(8,343)	(14,677)	(14,388)
Government Assistance[1]	264,032	-	477,120	-	360,784
Net Profit / (Loss)	122,535	(76,958)	29,880	80,201	(122,533)
Property, Plant and Equipment (Cost/Valuation)	3,312,448	3,999,163	4,171,985	5,223,330	6,552,146
Property, Plant and Equipment (Net Book Value)	1,694,472	1,964,759	1,968,398	2,616,064	2,910,931
Capital Work in Progress	164,140	208,610	278,501	253,383	391,411
Current Assets	623,626	729,442	867,412	1,077,285	1,566,696
Current Liabilities	402,482	490,120	373,319	434,735	819,842
Investment by the Rep of Ghana	18,329	18,329	495,449	495,449	495,449
Capital Surplus	1,715,362	2,052,106	2,059,524	2,617,578	2,894,692
Retained Earnings	78,614	43,191	141,723	294,592	278,923
Long term loans	197,492	218,471	241,435	281,097	324,792
Ghana Cedi (GH¢) to US$ Exchange Rate	1.2134	1.4340	1.4532	1.5841	1.8846

[1] Government Assistance of GH¢447.12 million received in 2010 was treated as government's additional equity in the VRA. On the other hand, the assistance of GH¢264.03 million received in 2008 was treated as revenue grant to the VRA whilst the GH¢360.78 million received 2012 has been treated as Government subsidy to domestic power consumers.

FINANCIAL REVIEW FOR THE YEAR ENDED 31 DECEMBER 2012 - CONTINUED

Financial Summary (VRA)

		2008	2009	2010	2011	2012
Return on Average Equity [2]	%	(4.79)	0.53	2.13	4.50	(2.16)
Return on Average Net Fixed Assets - Plant in operation [3]	%	(5.11)	0.62	2.72	6.05	(2.79)
Current Assets Ratio	Times	1.55	1.49	2.32	2.48	1.91
Debt Service Ratio	Times	0.10	0.30	0.55	1.85	0.09
Gearing Ratio	%	10.16	9.54	8.87	8.18	8.77
GWh Generated and Purchased less Station Use (X 106)	GWh	8,144	9,127	10,227	10,055	11,175
Total production Expenses including depreciation per MWh	GH¢	94	83	103	100	168
Total cost of production including depreciation and interest but excluding Debt Fluctuation per MWh	GH¢	97	89	107	104	172
Average Revenue/MWh Generated and Purchased	GH¢	83	85	109	114	161
Total Installed Capacity	MW	1,730	1,730	1,730	1,730	1,730
Ratio of gross hydro generation to firm capability of Akosombo and Kpong [4]	%	117.46	130.49	132.75	143.47	153.15
System Peak Demand	MW	1,367	1,478	1,391	1,644	1,674
Ratio of Systems Peak Demand to Installed Capacity	%	79.02	85.43	80.40	95.03	96.76

[2] This is based on the operating profit or loss before exchange fluctuation, interest and commitment charges
[3] On replacement cost basis
[4] This is based on the firm capacity of Akosombo and Kpong of 5,270GWh

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 2012.

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.

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.

APPROVAL OF THE FINANCIAL STATEMENTS

The financial statements were approved by the board of directors on …… and are signed on its behalf by:

……	……..
Board Chairman	**Chief Executive**

INDEPENDENT AUDITORS' REPORT
TO THE MEMBERS OF 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 2012, statements of comprehensive income, changes in equity and cash flows for the year then ended, and the notes to the financial statements, which include a summary of significant accounting policies and other explanatory notes, as set out on pages 17 to 55.

Directors' Responsibility for the financial statements

The 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.

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 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 and fair presentation of the financial statements 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 as at 31 December 2012 and its consolidated and separate financial performance and 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).

.....
Signed by: Nathaniel D. Harlley (ICAG/P/1056)
For and on behalf of:
KPMG: (ICAG/F/0036)
CHARTERED ACCOUNTANTS
13 YIYIWA DRIVE, ABELENKPE
P O BOX GP 242
ACCRA

....., 2013

STATEMENTS OF COMPREHENSIVE INCOME
FOR THE YEAR ENDED 31 DECEMBER 2012

2011					2012	
VRA	Group				**VRA**	**Group**
GH¢'000	GH¢'000	Note		Note	**GH¢'000**	**GH¢'000**
1,110,794	1,110,560	2(a)	Revenue	*2(a)*	**1,749,836**	**1,749,385**
(806,679)	(806,679)	3	Cost of Sales	*3*	**(1,656,583)**	**(1,656,583)**
304,115	303,881				**93,253**	**92,802**
36,048	48,537	2(b)	Other Operating Income	*2(b)*	**50,188**	**63,777**
(201,504)	(211,970)	4	Administrative Expenses	*4*	**(220,617)**	**(238,796)**
(165,456)	(163,433)				**(170,429)**	**(175,019)**
138,659	140,448		**Operating Profit/(loss)**		**(77,176)**	**(82,217)**
2,371	2,371	5	Financial Income	*5*	**2,529**	**35,617**
(37,694)	(37,745)	6	Financial Expenses	*6*	**(50,358)**	**(50,389)**
(8,458)	(7,747)		Exchange Gain/(Loss)		**16,860**	**21,231**
(14,677)	(14,677)		Exchange Fluctuation Gain/(Loss) on Foreign Debts		**(14,388)**	**(14,388)**
80,201	82,650		**Profit/(loss) for the year before taxation**		**(122,533)**	**(90,146)**
-	(8)	7	Taxation	*7*	**-**	**-**
80,201	82,642		**Profit/(loss) for the year after taxation**		**(122,533)**	**(90,146)**
			Other comprehensive Income:			
633,179	714,590	*17*	Capital surplus	17	**389,557**	**389,500**
-	42,938		Revaluation of Investment		**-**	**49,342**
713,380	840,170		**Total Comprehensive Income**		**267,024**	**348,696**

The notes on pages 17 to 55 form an integral part of the financial statements.

STATEMENTS OF FINANCIAL POSITION
AT 31 DECEMBER 2012

2011					2012	
VRA	Group				**VRA**	**Group**
GH¢'000	GH¢'000	Note		Note	**GH¢'000**	**GH¢'000**
			Non Current Assets			
2,869,447	2,956,818	8	Property, Plant and Equipment	*8*	**3,302,342**	**3,386,105**
198,818	279,276	9	Long Term Investments	*9*	**205,129**	**371,467**
10,195	10,195	11	Trade and other Receivables	*11*	**14,874**	**14,874**
3,078,460	3,246,289				**3,522,345**	**3,772,446**
			Current Assets			
238,551	239,309	10	Inventory	*10*	**135,280**	**136,312**
662,667	661,419	11	Trade and other Receivables	*11*	**1,207,648**	**1,206,730**
	-	7	Taxation	7	**-**	**357**
25,074	25,313	12	Short Term Investments	*12*	**25,378**	**26,333**
150,993	160,997	13	Cash and Bank Balances	*13*	**198,390**	**210,891**
1,077,285	1,087,038				**1,566,696**	**1,580,623**
			Current Liabilities			
337,726	333,442	14	Trade and other Payables	*14*	**365,680**	**366,394**
-	21	7	Taxation	7	**-**	**-**
97,009	98,289	15	Borrowings	15	**454,162**	**455,239**
434,735	431,752				**819,842**	**821,633**
642,550	655,286		**Net Current Assets**		**746,854**	**758,990**
3,721,010	3,901,575		Total Assets less Current liabilities		**4,269,199**	**4,531,436**
			Non-Current Liabilities			
24,837	25,013	*14*	Other Payables	*14*	**81,635**	**81,811**
259,782	259,936	*15*	Long term Borrowings	*15*	**484,149**	**484,303**
284,619	284,949				**565,784**	**566,114**
3,436,391	3,616,626		**Net Assets**		**3,703,415**	**3,965,322**
			Financed by:			
495,449	495,449	*16*	Investment by Republic of Ghana	*16*	**495,449**	**495,449**
294,592	389,121		Retained Earnings Account		**278,923**	**459,629**
2,617,578	2,703,284	*17*	Capital Surplus	*17*	**2,894,692**	**2,975,893**
28,772	28,772	*18*	Debt Contingency Fund Reserve	*18*	**34,351**	**34,351**
3,436,391	3,616,626				**3,703,415**	**3,965,322**

The notes on pages 17 to 55 form an integral part of the financial statements

Akilagpa Sawyerr
Board Chairman

Kweku A. Awotwi
Chief Executive

STATEMENT OF CHANGES IN EQUITY
FOR THE YEAR ENDED 31 DECEMBER 2012

VRA	GoG Contribution	Retained Earnings	Capital Surplus	Debt Contingency Fund Reserve	Total Equity
	GH¢'000	GH¢'000	GH¢'000	GH¢'000	GH¢'000
Balance as at January 1, 2011	**495,449**	**141,723**	**2,059,524**	**26,315**	**2,723,011**
Changes in equity for 2011:					
Profit / (Loss) for the year 2011	-	80,201	-	-	**80,201**
Other comprehensive income	-	-	633,179	-	**633,179**
Transfer to Retained Earnings	-	75,125	(75,125)	-	**-**
Transfer to Debt Contingency Fund Reserve	-	(2,457)	-	2,457	**-**
Balance as at December 31, 2011	**495,449**	**294,592**	**2,617,578**	**28,772**	**3,436,391**
Changes in equity for 2012:					
Profit / (Loss) for the year 2012	-	(122,533)	-	-	**(122,533)**
Other comprehensive income	-	-	389,557	-	**389,557**
Transfer to Retained Earnings	-	112,443	(112,443)	-	**-**
Transfer to Debt Contingency Fund Reserve	-	(5,579)	-	5,579	-
Balance as at December 31, 2012	**495,449**	**278,923**	**2,894,692**	**34,351**	**3,703,415**

The notes on pages 17 to 55 form an integral part of the financial statements

STATEMENT OF CHANGES IN EQUITY
FOR THE YEAR ENDED 31 DECEMBER 2012

GROUP	GoG Contribution	Retained Earnings	Capital Surplus	Debt Contingency Fund Reserve	Total Equity
	GH¢'000	GH¢'000	GH¢'000	GH¢'000	GH¢'000
Balance as at January 1, 2011	**495,449**	**190,628**	**2,063,819**	**26,315**	**2,776,211**
Changes in equity for 2011:					
Prior Year Adjustment	-	244			**244**
Profit for the year 2011	-	82,642	-	-	**82,642**
Revaluation of Investment	-	42,939			**42,939**
Other comprehensive income	-	-	714,590	-	**714,590**
Transfer to Retained Earnings	-	75,125	(75,125)	-	**-**
Transfer to Debt Contingency Fund Reserve	-	(2,457)	-	2,457	**-**
Balance as at December 31, 2011	**495,449**	**389,121**	**2,703,284**	**28,772**	**3,616,626**
Changes in equity for 2012:	-	-	-	-	**-**
Loss for the year 2012	-	(90,146)	-	-	**(90,146)**
Revaluation of Investment	-	49,342			**49,342**
Other comprehensive income	-	-	389,500	-	**389,500**
Transfer to Retained Earnings	-	116,891	(116,891)	-	**-**
Transfer to Debt Contingency Fund Reserve	-	(5,579)	-	5,579	**-**
Balance as at December 31, 2012	**495,449**	**459,629**	**2,975,893**	**34,351**	**3,965,322**

The notes on pages 17 to 55 form an integral part of the financial statements

STATEMENTS OF CASH FLOWS
FOR THE YEAR ENDED 31 DECEMBER 2012

2011					2012	
VRA	Group				**VRA**	**Group**
GH¢'000	GH¢'000	Note		Note	**GH¢'000**	**GH¢'000**
229,870	230,672	20	**Net Cash flow from operating activities**	20	**(301,825)**	**(293,407)**
-	-					
229,870	230,672				**(301,825)**	**(293,407)**
			Cash flows from investing activities			
2,371	2,371		Interest Received		**2,529**	**2,529**
(127,914)	(128,257)		Purchase of Property, plant and equipment		**(6,042)**	**(7,588)**
3,701	3,701		Proceeds from sale of property, plant and equipment		**305**	**324**
25,117	25,117		Payments towards capital work in progress		**(172,117)**	**(172,117)**
(2,457)	(2,457)		Long Term investments		**(6,311)**	**(9,755)**
(99,182)	(99,525)		**Net cash used in investing activities**		**(181,636)**	**(186,607)**
			Cash flows from financing activities			
39,662	39,662		Net Inflows from long term borrowing		**224,367**	**224,367**
(2,404)	(2,404)		Net (Outflows) from Medium term borrowing		**-**	**-**
(41,018)	(41,279)		Net (Outflows)/Inflows from short term borrowing		**340,641**	**340,438**
(42,440)	(42,475)		Interest paid		**(50,358)**	**(50,389)**
(46,200)	(46,496)		**Net cash from financing activities**		**514,650**	**514,416**
84,488	84,651		**Increase in cash and cash equivalents in the year**		**31,189**	**34,402**
69,930	80,011		**Cash and cash equivalents at the beginning of the year**		**154,419**	**164,662**
154,418	164,662	21	**Cash and cash equivalents at the end of the year**	21	**185,608**	**199,064**

The notes on pages 17 to 55 form an integral part of the financial statements

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. The address of the Authority's registered office and principal place of business is Electro Volta House, Accra. 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.

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

1.3 Basis of consolidation

The Authority's 2012 consolidated financial statements include the results of the Authority and its subsidiaries which were IFRS compliant as at the reporting date.

Subsidiaries

Subsidiaries are entities controlled by the Group. The accounting policies of subsidiaries have been changed when necessary to align them with the policies adopted by the Group. Losses applicable to the non-controlling interests in a subsidiary are allocated to the non-controlling interests even if doing so causes the non-controlling interests to have a deficit balance. The subsidiaries consolidated are Volta Lake Transport Company (VLTC), Akosombo Hotel Limited (AHL) and Takoradi Power Company Limited (TAPCO)

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 Use of estimates and judgment

The preparation of financial statements complying with IFRS requires the use of certain critical accounting estimates. It also requires management to exercise its judgment in the process of applying the Authority's accounting policies. The estimates and the associated assumptions are based on historical experience and various other factors that are believed to be reasonable under the circumstances, the results of which form the basis of making the judgments about carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates.

1.5 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 2012, 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
IAS 1 amendment	***Presentation of Financial Statements: Presentation of Items of Other Comprehensive Income***	**Annual periods beginning on or after 1 July 2012**
IFRS 1 amendment	***Government Loans***	**Annual periods beginning on or after 1 January 2013**
IFRS 7 amendment	***Offsetting Financial Assets and Liabilities***	**Annual periods beginning on or after 1 January 2013**
IFRS 10	***Consolidated Financial Statements***	**Annual periods beginning on or after 1 January 2013**
IFRS 11	***Joint Arrangements***	**Annual periods beginning on or after 1 January 2013**
IFRS 12	***Disclosure of Interests in Other Entities***	**Annual periods beginning on or after 1 January 2013**
IFRS 13	***Fair Value Measurement***	**Annual periods beginning on or after 1 January 2013**
IAS 19 amendments	***Employee benefits***	**Annual periods beginning on or after 1 January 2013**
IAS 27	***Separate Financial Statements (2011)***	**Annual periods beginning on or after 1 January 2013**
IAS 28	***Investments in Associates and Joint Ventures (2011)***	**Annual periods beginning on or after 1 January 2013**
IFRS 2009-2011	***Annual improvement to various Standards***	**Annual periods beginning on or after 1 January 2013**
IFRS 10, IFRS 12 and IAS 27	***Amendments to Joint Arrangements, Disclosure of Interests in Other Entities and Separate Financial Statements (2011)***	**Annual periods beginning on or after 1 January 2014**

Standard/Interpretation		Effective date
IAS 32 amendments	***Offsetting Financial Assets and Financial Liabilities***	**Annual periods beginning on or after 1 January 2014**
IFRS 9 (2009)	***Financial Instruments***	**Annual periods beginning on or after 1 January 2015**
IFRS 9 (2010)	***Financial Instruments***	**Annual periods beginning on or after 1 January 2015**

Amendment to IAS 1 Presentation of Financial Statements

The amendment to IAS 1 will be adopted for the first time for the financial reporting period ending 31 December 2013.

The Group will present those items of other comprehensive income that may be reclassified to profit or loss in the future separately from those that would never be reclassified to profit or loss. The related tax effects for the two sub-categories will be shown separately.

This is a change in presentation and will have no impact on the recognition or measurement of items in the financial statements.

This amendment will be applied retrospectively and comparative information will be restated.

Amendment to IFRS 1 Government Loans

IAS 20 as amended required existing preparers of financial statements to measure government loans with a below-market rate of interest at fair value on initial recognition. Existing preparers were required to apply the 2008 amendments to IAS 20 prospectively. However, a corresponding exception to retrospective application was not provided to first-time adopters at that time. This meant that first-time adopters may have been required to use hindsight in measuring government loans with below-market rates of interest at fair value at their dates of origination. The amendment to IFRS 1 First-time Adoption of International Financial Reporting Standards eliminates the need to use hindsight when measuring government loans on transition to IFRS.

If a first-time adopter applies the measurement requirement prospectively, then it uses the previous GAAP carrying amount of a government loan with a below-market rate of interest as the carrying amount of the loan in its opening IFRS statement of financial position.

Subsequently, the entity measures the loan at amortised cost, using an effective interest rate that is calculated at the date of transition.

The amendment does not affect the presentation of government loans upon transition to IFRS. The presentation of government loans as equity or liability continues to follow the requirements in IAS 32 Financial Instruments Presentation.

The requirements and guidance in the amendment does not preclude a first-time adopter from applying to government loans the exemption in IFRS 1 on designating previously recognised financial instruments at fair value through profit or loss to government loans.

The amendments will be effective for annual periods beginning on or after 1 January 2013; earlier application is permitted.

This amendment will not have any significant impact on the Authority's financial statements

Amendments to IFRS 7 Financial Instruments: Disclosures: Offsetting Financial Assets and Financial Liabilities

The amendments contain new disclosure requirements for financial assets and financial liabilities that are offset in the statement of financial position; or are subject to enforceable master netting arrangements or similar agreements.

Based on the new disclosure requirements the Group will have to provide information about what amounts have been offset in the statement of financial position and the nature and extent of rights of set-off under master netting arrangements or similar agreements.

The amendments are effective for annual periods beginning on or after 1 January 2013 and interim periods within those annual periods.

This amendment will not have any significant impact on the Authority's financial statements.

IFRS 10 Consolidated Financial Statements

IFRS 10 will be adopted for the first time for the financial reporting period ending 31 December 2013. The standard may be applied retrospectively. IFRS 10 introduces a single control model to assess whether an investee should be consolidated. This control model requires entities to perform the following in determining whether control exists:

- Identify how decisions about relevant activities are made
- Assess whether the entity has power over relevant activities by considering only the entity's substantive rights
- Assess whether the entity is exposed to variability in returns, and
- Assess whether the entity is able to use its power over the investee to affect returns for its own benefit

Control should be assessed on a continuous basis and should be reassessed as facts and circumstances change.

This amendment will not have a significant impact on the Authority's financial statements.

IFRS 11 Joint Arrangements

The standard will be applied retrospectively, subject to certain transitional provisions.
IFRS 11 clarifies the classification of joint arrangements depending on whether parties have rights to and obligations for the underlying assets and liabilities.
Under IFRS 11, joint arrangements are divided into two types, each having its own accounting model.

- Joint operations, under which the jointly controlling parties, known as joint operators, have rights to assets and obligations for the liabilities, relating to the arrangement.
- Joint ventures, under which the joint controlling parties, known as joint ventures, have rights to the net assets of the arrangement

In terms of IFRS 11, all joint ventures will have to be equity accounted.

This amendment will not have a significant impact on the Anthority's financial statements.

IFRS 12 Disclosure of Interests in Other Entities

IFRS 12 will be adopted for the first time for the financial reporting period ending 31 December 2013.
IFRS 12 combines, in a single standard, disclosure requirements for subsidiaries, associates and joint arrangements, as well as unconsolidated structured entities.

The required disclosures aim to provide information to enable users evaluate

- The nature of, and risks associated with, an entity's interests in other entities, and
- The effects of those interests on the entity's financial position, financial performance and cash flows

The adoption of this standard will increase the level of disclosure provided for interests in subsidiaries, joint arrangements, associates and structured entities.

IFRS 13 Fair Value Measurement

IFRS 13 will be adopted for the first time for the financial reporting period ending 31 December 2013. The standard will be applied prospectively and comparatives will not be restated.
IFRS 13 introduces a single source of guidance on fair value measurement for both financial and non-financial assets and liabilities by defining fair value, establishing a framework for measuring fair value and setting out disclosures requirements for fair value measurements. The key principles in IFRS 13 are as follows:

- Fair value is an exit price
- Measurement considers characteristics of the asset or liability and not entity-specific characteristics
- Measurement assumes a transaction in the entity's principal (or most advantageous) market between market participants
- Price is not adjusted for transaction costs
- Measurement maximises the use of relevant observable inputs and minimises the use of unobservable inputs
- The three-level fair value hierarchy is extended to all fair value measurements

This amendment will not have an impact on the Authority's financial statements.

Amendments to IAS 19 Employee Benefits

The amendment has introduced the following key changes which are not expected to have any impact on the Authority's financial statements.

- Actuarial gains and losses are recognised immediately in other comprehensive income. The corridor method and the recognition of actuarial gains and losses in profit or loss is no longer permitted
- Past service costs as well as gains and losses on curtailments / settlements are recognised in profit or loss
- Expected returns on plan assets are calculated based on the rates used to discount the defined benefit obligation
- The definitions of short-term and other long-term employee benefits have been amended and the distinction between the two depends on when the entity expects the benefit to be settled

Additional amendments are of a presentation nature and will not have a significant impact on the Authority's financial statements.

IAS 27 (2011) Separate Financial Statements

IAS 27 (2011) will be adopted for the first time for the financial reporting period ending 31 December 2013.

IAS 27 (2011) supersedes IAS 27 (2008). IAS 27 (2011) carries forward the existing accounting and disclosure requirements for separate financial statements, with some minor clarifications.

This amendment will not have a significant impact on the Authority's separate financial statements.

IAS 28 (2011) Investments in Associates and Joint Ventures

IAS 28 (2011) will be adopted for the first time for the financial reporting period ending 31 December 2013.

IAS 28 (2011) supersedes IAS 28 (2008) and carries forward the existing accounting and disclosure requirements with limited amendments. These include:

- IFRS 5 is applicable to an investment, or a portion of an investment, in an associate or a joint venture that meets the criteria to be classified as held-for-sale; and
- On cessation of significant influence or joint control, even if an investment in an associate becomes an investment in a joint venture or vice versa, the group does not re-measure the retained interest.

This amendment will not have a significant impact on the Authority's financial statements.

IFRS 2009-2011 Annual improvement to various Standards

(i) IFRS 1 First-time Adoption of International Financial Reporting Standards (Repeated application of IFRS1)

The amendment clarifies the applicability of IFRS 1 to an entity that has IFRS in a previous reporting period, but whose most recent previous annual financial standards do not contain an explicit and unreserved statement of compliance with IFRS. If such an entity presents its financial statements in accordance with IFRS again, then it is now allowed, rather than required, to apply IFRS 1.

A repeated adopter that elects not to apply IFRS 1 in the above situation has to apply IFRS retrospectively in accordance with IAS 8 Accounting Policies, Changes in Accounting Estimates and Errors, as if it had never stopped applying IFRS. Such entity should also disclose the reason for electing to apply IFRS on a continuous basis.

Irrespective of whether the repeated adopter applies IFRS 1, it is required to disclose the reason why it stopped applying IFRS and is resuming the application of IFRS.

The above option is available regardless of whether it existed at the time the entity previously applied IFRS. For example, the above option is available to a repeated adopter that previously applied SIC 8 First-time Application of IASs as the Primary Basis of Accounting.

This amendment will not have a significant impact on the Authority's financial statements.

Borrowing cost exemption

IFRS 1 is amended to clarify how the exemption should be applied for borrowing costs relating to qualifying assets for which the commencement date of capitalization is before date of transition to IFRS.

After the amendment, if a first-time adopter of IFRS chooses to apply the exemption, then:

- It should not restate borrowing costs; and
- It should account for borrowing costs incurred on or after the date of transition (for an earlier date, as permitted by IAS 23 Borrowing Costs) in accordance with IAS 23. This includes borrowing costs that have been incurred on qualifying assets already under construction at that date.

This amendment will not have a significant impact on the Authority's financial statements.

(ii) IAS 1 Presentation of Financial Statements (Comparative information beyond minimum requirements)

IAS 1 is amended to clarify that only one comparative period – which is the preceding period-, is required for a complete set of financial statements.

If an entity presents additional comparative information, the additional information need not be in the form of complete set of financial statements. However, such information should be accompanied by related notes and should be in accordance with IFRS.

Presentation of the Opening statement of financial position and related notes

IAS 1 requires the presentation of an opening balance of financial position (sometimes referred to as the 'third statement of financial position') when an entity applies an accounting policy retrospectively, or makes a retrospective restatement or reclassification. IAS 1 is amended to clarify that:

- The opening statement of financial position is required only if:
  - a change in accounting policy;
  - a retrospective restatement; or
  - a reclassification

  has an effect on the information in that statement of financial position;

- Except for disclosures required under IAS 8, notes relating to the opening statement of financial position are no longer required; and
- The appropriate date for the opening statement of financial position is the beginning of the preceding period, rather than the beginning of the earliest comparative period presented. This is regardless of whether an entity provides additional comparative information beyond the minimum comparative information requirements.

The amendment explains the requirement for the presentation of notes relating to additional comparative information and those relating to the opening statement of financial statements are different, because the underlying objectives are different.

Consequential amendments have been made to IFRS 1 and IAS 34 Interim Financial Reporting

This amendment will not have a significant impact on the Authority's financial statements.

(iii) IAS 16 Property, Plant and Equipment (Classification of Servicing Equipment)

This amendment to IAS 16 clarifies the accounting for spare parts, stand-by equipment and servicing equipment. The definition of 'property, plant and equipment' in IAS 16 is now considered in determining whether these items should be accounted for under that standard. If these items do not meet the definition, then they are accounted for using IAS 2, Inventories.

This amendment will not have a significant impact on the Authority's financial statements.

(iv) IAS 32 Financial Instruments: Presentation (Income tax consequences of distributions)

Income taxes on distribution to holders of equity instruments and on transaction costs of equity transactions have been clarified in amendments to IAS 32, these are now to be accounted for in accordance with IAS 12 Income Taxes.

The amendment removes a perceived inconsistency between IAS 32 and IAS 12. Before the amendment, IAS 32 indicated that distributions to holders of equity instrument are recognized directly in equity, net of any related income tax. However, IAS 12 generally requires the tax consequences of dividends to be recognized in profit or loss.

A similar consequential amendment has been made to IFRIC 2 Members' Share in Co-operative entities and Similar Instruments.

This amendment will not have a significant impact on the Authority's financial statements.

(v) IAS 34 Interim Financial Reporting (Segment assets and liabilities)

IAS 34 is amended to align the disclosure requirements for segment assets and segment liabilities in interim financial reports with those in IFRS 8 Operating Segments.

IAS 34 now requires separate disclosure of total assets and liabilities for a particular reportable segment:

- only when the amount is regularly provided to the chief operating decision maker; and
- where there has been a material change from the amount disclosed in the last annual financial statements for that reportable segment.

Amendments to (IFRS 10), Joint Arrangements (IFRS 12) Disclosure of Interests in Other Entities and
(IAS 27) Separate Financial Statements (2011)

Under this amendment, a qualifying investment entity is required to account for investments in controlled entities- as well as investments in associates and joint ventures- at fair value through profit or loss (FVTPL); the only exception would be subsidiaries that are considered extensions of the investment entity's investing activities. The consolidation exception is mandatory – not optional.

The parent of an investment entity (that is not itself an investment entity) is still required to consolidate all subsidiaries.

The amendment also requires new disclosures including quantitative data about the investment entity's exposure to risks arising from its unconsolidated subsidiaries. The disclosures now apply to the investee as a single investment rather than to the consolidated investee's underlying financial assets and financial liabilities.

The amendments apply to annual periods beginning on or after 1 January 2014. However, early adoption is permitted, which means that a qualifying investment entity might be able to adopt the amendments as early as 31 December 2012.

This amendment will not have a significant impact on the Authority's financial statements.

Amendments to IAS 32 Financial Instruments: Presentation: Offsetting Financial Assets and Financial Liabilities

The amendments clarify that an entity currently has a legally enforceable right to set-off if that right is:

- **not contingent on a future event; and**
- **enforceable both in the normal course of business and in the event of default, insolvency or bankruptcy of the entity and all counterparties.**

The amendments are effective for annual periods beginning on or after 1 January 2014 and interim periods within those annual periods. Earlier application is permitted.

This amendment will not have any significant impact on the Authority's financial statements.

IFRS 9 (2009) Financial Instruments

IFRS 9 will be adopted for the first time for the financial reporting period ending 31 December 2015. The standard will be applied retrospectively, subject to transitional provisions.

IFRS 9 addresses the initial measurement and classification of financial assets and will replace the relevant sections of IAS 39.
Under IFRS 9 there are two options in respect of the classification of financial assets, namely, financial assets measured at amortised cost or at fair value. Financial assets are measured at amortised cost when the business model is to hold assets in order to collect contractual cash flows and when they give rise to cash flows that are solely payments of principal and interest on the principal outstanding. All other financial assets are measured at fair value. Embedded derivatives are no longer separated from hybrid contracts that have a financial asset host.

This amendment will not have a significant impact on the Authority's financial statements.

IFRS 9 (2010) Financial Instruments

IFRS 9 (2010) will be adopted for the first time for the financial reporting period ending 31 December 2015. The standard will be applied retrospectively, subject to transitional provisions.

IFRS 9 (2010) addresses the measurement and classification of financial liabilities and will replace relevant sections of IAS 39.

Under IFRS 9 (2010), the classification and measurement requirements of financial liabilities are the same as per IAS 39, except for the following two aspects:

- Fair value changes for financial liabilities (other than financial guarantees and loan commitments) designated at fair value through profit or loss, that are attributable to the changes in the credit risk of the liability will be presented in other comprehensive income (OCI). The remaining amount of the fair value change is recognised in profit or loss. However, if this requirement creates or enlarges an accounting mismatch in profit or loss, then the whole fair value change is presented in profit or loss. The determination as to whether such presentation would create or enlarge an accounting mismatch is made on initial recognition and is not subsequently reassessed.

- Under IFRS 9 (2010) derivative liabilities that are linked to and must be settled by delivery of an unquoted equity instrument whose fair value cannot be reliably measured, are measured at fair value

IFRS 9 (2010) incorporates guidance in IAS 39, dealing with fair value measurement and accounting for derivatives embedded in a host contract that is not a financial asset, as well as the requirements of IFRIC 9 Reassessment of Embedded Derivatives.

This amendment will not have a significant impact on the Authority's financial statements.

1.6.0 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

1.6.1 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 customer 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.

1.6.2 Interest Income

Interest income is recognized as interest accrues using the effective interest method. Interest income is included in finance income in the income statement

1.6.3 Government Grant

Grant and assistance from the government are reported at fair value when it can reasonably be assumed that the grant will be received and that the Authority will meet the conditions of the grant. 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 the income statement as income over the same periods as the expenses.

1.6.4 Foreign currency translations

The Authority's consolidated financial statements are presented in Ghana cedi, which is the Authority's functional currency. That is the currency of the primary economic environment in which the Authority operates.

Transactions in foreign currencies are translated into the functional currency at the prevailing exchange rate at the date of the transaction. On the balance sheet date, monetary assets and liabilities in foreign currencies are translated at the exchange rate ruling at the year end. Exchange rate differences arising from translation of currencies are recognised in the statement of comprehensive income.

1.6.5 Financial assets

Financial assets within the scope of IAS 39 are classified as financial assets at fair value through profit or loss, and loan receivables, held-to-maturity investments, available-for-sale financial assets, or derivatives designed as hedging instrument. Financial assets are
recognized initially at fair value plus, in the case of investment not at fair value through profit or loss, directly attributable transaction costs.

The Authority's financial assets include cash and short–term deposits, trade and other receivables.

1.6.6 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 bad debts which are assessed individually. 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.

1.6.7 Financial liabilities

Initial recognition

Financial liabilities within the scope of IAS 39 are classified as financial liabilities at fair value through profit or loss or loans and borrowings, as appropriate. 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, directly attributable transaction costs.

The Authority's financial liabilities include trade and other payables, bank overdraft, loans and borrowings, financial guarantee contracts, and derivative financial instruments.

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 the income statement when the liabilities are derecognized.

1.6.8 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.

1.6.9 Fair value of financial instrument

The fair value of financial instruments that are actively traded in organized financial markets is determined by reference to quoted market bid prices at the close of business on the balance sheet date.

1.6.10 Properties, plant and equipment

(i) Recognition and Measurement

Items of property, plant and equipment are measured at cost less accumulated depreciation and impairment losses. Cost includes expenditures that are directly attributable to the acquisition of the asset. The cost of self-constructed assets 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. 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.

(iii) Depreciation

Depreciation is calculated and recognized in the income statement 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.

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.

1.6.11 Intangible assets

Software acquired by the company 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 income statement on a straight-line basis over the estimated useful life of the software, from the date that it is available for use. The estimated useful life of software is up to five years.

1.6.12 Borrowing costs

Borrowing costs directly attributable to the acquisition, construction or production of an asset that necessarily takes a substantial period of time to get ready for its intended use or sale are capitalized as part of the cost of the respective assets.

1.6.13 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.

1.6.14 Cash and short-term deposits
Cash and short-term deposits in the balance sheet comprise cash at bank and on hand and short-term deposits with an original maturity of three months or less.

1.6.15 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.

1.7.0 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.

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.

Intangible assets
The fair value of other intangible assets is based on the discounted cash flows expected to be derived from the use and eventual sale of the assets.

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.

1.8.0 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.

1.8.1 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 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 inflations 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.

1.8.2 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 income statement.

1.8.3 Financial instruments

The estimated fair value of financial instruments is determined at discrete points in time based on relevant market information. The fair value is calculated with reference to market rates using industry valuation techniques and appropriate models

1.8.4 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.

1.9.0 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

1.9.1 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.

1.9.2 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:

1.9.2.1 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.

1.9.2.2 Operational Risk

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

- Administrative 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

1.9.2.3 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

1.9.2.4 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.

1.9.2.5 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.

1.9.2.6 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.

1.9.2.7 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.

1.9.2.8 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.

1.9.2.9 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.

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	
	2012	2011
	GH¢000	GH¢000
Trade receivables	**921,788**	473,401
Trade receivables from related companies	**3,314**	1,157
Other receivables	**234,687**	173,169
Cash and cash equivalents	**199,064**	164,662
	1,358,853	812,389

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

	2012	2011
	GH¢000	GH¢000
Whole sale	**277,617**	218,130
Distribution to end-users	**644,171**	255,272
	921,788	473,402

Impairment losses

The ageing of trade receivables at the reporting date was:

VRA

	Gross	Impairment allowance	Gross	Impairment allowance
	31-Dec-12	31-Dec-12	31-Dec-11	31-Dec-11
	GH¢'000	GH¢'000	GH¢'000	GH¢'000
Not past due	234,862	-	120,601	-
Past due 30-60 days	168,121	-	86,329	-
Past due 60-90 days	158,399	-	81,337	-
Past due 90-120 days	132,469	-	68,022	-
Past due 120 days and above	224,176	35,034	115,113	35,712
	918,027	**35,034**	**471,402**	**35,712**

GROUP

	Gross	Impairment allowance	Gross	Impairment allowance
	31-Dec-12	31-Dec-12	31-Dec-11	31-Dec-11
	GH¢'000	GH¢'000	GH¢'000	GH¢'000
Not past due	239,202	-	122,600	-
Past due 30-60 days	167,978	-	86,329	-
Past due 60-90 days	158,265	-	81,337	-
Past due 90-120 days	132,357	-	68,092	-
Past due 120 days and above	223,986	35,183	115,113	35,901
	921,788	**35,183**	**473,471**	**35,901**

The impairment allowance is related to specific trade receivables.

1.9.2.10 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, 2012-Group

	Total amount	less than 6 months	6-12 months	1-2 years	more than 5 years
	GH¢'000	GH¢'000	GH¢'000	GH¢'000	GH¢'000
Trade payables	318,691	318,691	-	-	-
Payables to related parties	5,441	2,987	1,402	1,052	-
Accrued expenses	11,386	11,386	-	-	-
Sundry creditors	30,876	18,526	12,350	-	-
Loan Interest	14,027	14,027	-	-	-
Short term loan	373,949	186,975	186,974	-	-
Medium Term Loan	188,460	31,410	31,410	125,640	-
Long Term Loan	324,946	14,552	14,552	29,103	266,739
	1,267,776	**598,554**	**246,688**	**155,795**	**266,739**

December 31, 2011-Group

	Total amount	less than 6 months	6-12 months	1-2 years	more than 5 years
	GH¢'000	GH¢'000	GH¢'000	GH¢'000	GH¢'000
Trade payables	289,598	271,645	17,953	-	-
Payables to related parties	19,628	8,137	9,641	1,850	-
Accrued expenses	1,363	1,363	-	-	-
Sundry creditors	22,853	12,341	10,512	-	-
Loan Interest	16,937	16,937	-	-	-
Short term loan	38,389	37,787	602	-	-
Medium Term Loan	2,401	-	-	2,401	-
Long Term Loan	281,251	4,263	17,052	63,945	195,991
	672,420	**352,473**	**55,760**	**68,196**	**195,991**

1.9.2.11 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:

2012 – in thousands	**USD**	**EUR**	**SDR**	**KD**	**CHF**	**GBP**	**KR**	**CAD**	**UA**
Accounts receivable	175,324	-	-	-	-	-	-	-	-
Cash and bank balances	73,243	-	-	-	-	19	-	-	-
Investments	10,927	-	-	-	-	-	-	-	-
Accounts payable	(145,201)	(4,523)	-	-	(4,079)	-	(923)	(144)	-
Borrowings	(277,639)	(1,228)	(81,679)	(7,032)	-	-	-	-	(12,550)
	(163,346)	**(5,751)**	**(81,679)**	**(7,032)**	**(4,079)**	**19**	**(923)**	**(144)**	**(12,550)**

2011 – in thousands	**USD**	**EUR**	**SDR**	**KD**	**CHF**	**GBP**	**SKR**	**CAD**	**UA**
Accounts receivable	70,335	-	-	-	-	-	-	-	-
Cash and bank balances	54,284	53	-	-	-	21	-	-	-
Investments	10,236	-	-	-	-	-	-	-	-
Accounts payable	(157,350)	(509)	-	(123)	(738)	(5)	(3,573)	-	-
Borrowings	(1,299)	(4,482)	(84,064)	(89,627)	(827)	-	-	-	-
	(23,794)	**(4,938)**	**(84,064)**	**(89,750)**	**(1,565)**	**16**	**(3,573)**	**-**	**-**

The following exchange rates were applied during the year:

December 2012	**USD**	**EUR**	**SDR**	**KD**	**CHF**	**GBP**	**SKR**	**CAD**
Reporting date spot rate	**1.8846**	**2.4848**	**2.8987**	**6.6982**	**2.0585**	**3.0410**	**0.2889**	**1.8959**
Average rate	**1.8181**	**2.3107**	**2.7923**	**6.4989**	**1.9401**	**2.8723**	**0.2682**	**1.8177**
December 2011	USD	EUR	SDR	KD	CHF	GBP	SKR	CAD
Reporting date spot rate	1.5841	2.0510	2.5130	5.8810	1.6838	2.4456	0.2294	1.5531
Average rate	1.5217	2.1097	2.4518	5.6209	1.7177	2.4378	0.2346	1.5383

Sensitivity

A 5% strengthening of the GHS, as indicated below, against the currencies above at 31 December 2012 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 2011, albeit that the reasonably possible foreign exchange rate variances were different, as indicated below:

Effect in thousands of GHS

	USD	EUR	SDR	KD	CHF	GBP	SKR	CAD	UA
December, 2012	**15,392**	**715**	**11,840**	**2,355**	**420**	**(3)**	**14**	**14**	**1,893**
December, 2011	1,885	506	10,563	26,391	132	2	41	-	-

A 5% weakening of the Ghana cedi against the currencies above at 31 December 2012 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:

	2012	2011
	GH¢'000	GH¢'000
Financial assets	**26,333**	25,313
Financial liabilities	**939,542**	358,225

These instruments have fixed interest rates and are therefore not affected by changes in interest rates.

2a. Revenue

2011				2012		
	VRA	Group	**Sale of Electricity**		**VRA**	**Group**
GWh	GH¢'000	GH¢'000		**GWh**	**GH¢'000**	**GH¢'000**
6,035	493,464	493,464	Electricity Company of Ghana	**7,002**	**591,511**	**591,511**
1,301	265,275	265,275	Mines	**1,386**	**397,706**	**397,706**
15	3,070	3,070	Akosombo Textiles	**11**	**2,448**	**2,448**
8	1,800	1,800	Aluworks	**8**	**1,905**	**1,905**
51	7,480	7,480	Diamond Cement	**50**	**8,133**	**8,133**
597	48,770	48,770	Volta Aluminium Co. Ltd	**613**	**60,386**	**60,386**
40	2,319	2,085	Others	**45**	**2,553**	**2,102**
485	60,201	60,201	GRIDCo (Transmission Loss Recoveries)	**515**	**43,494**	**43,494**
-	-	-	Government subsidies*	**-**	**360,784**	**360,784**
5	431	431	Substation Use (GRIDCo)	**6**	**466**	**466**
519	123,978	123,978	Northern Electricity Dept (NED)	**582**	**150,771**	**150,771**
9,056	1,006,788	1,006,554	**Local Customers**	**10,218**	**1,620,157**	**1,619,706**
647	82,794	82,794	Communauté Electrique Du Benin	**566**	**101,140**	**101,140**
27	5,239	5,239	Compagne Ivoirienne d'Electricité	**57**	**8,328**	**8,328**
6	844	844	Société National D' elect Du Burkina	**7**	**1,492**	**1,492**
39	6,104	6,104	Sonable Youga Mines	**37**	**8,060**	**8,060**
39	9,025	9,025	Free Zone Companies	**47**	**10,659**	**10,659**
758	104,006	104,006	**Foreign Customers**	**714**	**129,679**	**129,679**
9,814	1,110,794	1,110,560	**Total**	**10,932**	**1,749,836**	**1,749,385**

*This amount represents tariff shortfalls which the government of Ghana absorbed as subsidy to domestic consumers in Ghana in 2012.

2b. Other Operating Income

2,751	2,751	Real Estates	**4,161**	**3,833**
6,355	6,355	Health Services	**7,703**	**7,693**
3,898	3,898	Schools	**5,803**	**5,803**
12,012	12,012	Service Charge	**18,155**	**18,041**
3,483	3,483	Profit on Sale of Fixed Assets	**303**	**303**
4,970	4,970	Gas Sales Proceeds	**7,390**	**7,390**
2,579	15,068	Other Income	**6,673**	**20,714**
36,048	48,537	**Total**	**50,188**	**63,777**

2011			2012	
		3. Cost of Sales/Operating costs		
VRA	Group		**VRA**	**Group**
		Analysis by budget centre:		
GH¢'000	GH¢'000		**GH¢'000**	**GH¢'000**
15,070	15,070	Generation: Hydro	**19,063**	**19,063**
344,526	344,526	Thermal	**795,603**	**795,603**
71,934	71,934	Distribution (NED)	**95,671**	**95,671**
273,116	273,116	Purchase of Electricity	**634,176**	**634,176**
102,033	102,033	Depreciation	**112,070**	**112,070**
806,679	806,679		**1,656,583**	**1,656,583**
		Analysis by cost element:		
72,126	72,126	Salaries and related expenses	**92,361**	**92,361**
4,013	4,013	Materials and spares consumed	**3,452**	**3,452**
-	-	Repairs & maintenance	**47,558**	**47,558**
295,326	295,326	Fuel, Handling and Usage	**698,481**	**698,481**
273,116	273,116	Purchase of Electricity	**634,176**	**634,176**
102,033	102,033	Depreciation	**112,070**	**112,070**
60,065	60,065	Other operating costs	**68,485**	**68,485**
806,679	806,679		**1,656,583**	**1,656,583**
		4. Administrative Expenses		
VRA	Group		**VRA**	**Group**
		Analysis by budget centre:		
GH¢'000	GH¢'000		**GH¢'000**	**GH¢'000**
135,246	145,319	Central Services	**132,077**	**145,218**
10,070	10,070	Schools	**13,342**	**13,342**
33,389	33,389	Real Estate	**41,522**	**41,522**
13,623	13,623	Health Services	**21,199**	**21,199**
9,176	9,569	Depreciation	**12,477**	**17,515**
201,504	211,970		**220,617**	**238,796**
		Analysis by cost element:		
85,665	88,584	Salaries and related expenses	**106,691**	**111,705**
2,731	3,452	Materials and spares consumed	**4,176**	**4,820**
6,899	6,899	Repairs and maintenance	**20,749**	**20,749**
97,033	103,466	Other administrative costs	**76,524**	**84,007**
9,176	9,569	Depreciation	**12,477**	**17,515**
201,504	211,970		**220,617**	**238,796**
1,008,183	1,018,649	**Total Operating & Admin Cost**	**1,877,200**	**1,895,379**

Included in both cost of sales and administrative expenses are amounts of **GH¢0.56m** and **GH¢2.8m** utilized and unutilized respectively in a commodity option transaction for purchase of crude oil. The transaction was entered into in order to hedge against fluctuations in crude oil prices.

2011			**2012**	
5. Financial Income				
VRA	Group		**VRA**	**Group**
GH¢'000	GH¢'000		**GH¢'000**	**GH¢'000**
2,371	2,371	Interest and Investment Income	**2,529**	**35,617**
2,371	2,371		**2,529**	**35,617**

6. Financial Expenses				
VRA	Group		**VRA**	**Group**
GH¢'000	GH¢'000		**GH¢'000**	**GH¢'000**
8,038	8,089	Interest on Long Term Loans	**9,483**	**9,514**
2,745	2,745	Interest on Medium Term Loans	**3,132**	**3,132**
22,125	22,125	Interest on Short Term Loans	**30,455**	**30,455**
4,786	4,786	Interest on Overdrafts	**7,288**	**7,288**
37,694	37,745		**50,358**	**50,389**

7. Taxation

The Authority is set up as a state owed corporation 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.

	Balance at		Charged to	Balance at
	1/1/12	Payments	P/L Account	31/12/12
Year	GH¢'000	GH¢'000	GH¢'000	GH¢'000
2012	21	(378)	-	(357)
	----	-------	---	------
	21	(378)	-	(357)
	==	====	==	===

8a. Capital Work-in-Progress

VRA

2011					2012			
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**
150,593	123,039	4,869	278,501	Balance as at Jan. 1	55,355	188,811	9,218	**253,384**
18,801	65,772	4,679	89,252	Additions during the year	43,463	113,933	14,721	**172,117**
-	-	-	-	Write off	(6,724)	(2,324)	(1,226)	**(10,274)**
(114,039)	-	(330)	(114,369)	Transfers during the year	(16,417)	(4,283)	(3,116)	**(23,816)**
55,355	188,811	9,218	253,384	**Balance as at Dec. 31**	**75,677**	**296,137**	**19,597**	**391,411**

GROUP

2011					2012			
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**
150,593	123,039	4,869	278,501	Balance as at Jan. 1	55,355	188,811	9,218	**253,384**
18,801	65,772	4,679	89,252	Additions during the year	43,463	113,933	14,721	**172,117**
-	-	-	-	Write off	(6,724)	(2,324)	(1,226)	**(10,274)**
(114,039)	-	(330)	(114,369)	Transfers during the year	(16,417)	(4,283)	(3,116)	**(23,816)**
55,355	188,811	9,218	253,384	**Balance as at Dec. 31**	**75,677**	**296,137**	**19,597**	**391,411**

8b. Property, Plant and Equipment

GROUP 2012	Dam Power-house and Civil Works	Generating Plant & Machinery	Power Distribution Network	Townships	Buildings	Floating Craft	Motor Vehicles	Equipments & 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, 2012	2,548,138	1,145,106	1,076,095	186,719	148,823	200,355	92,480	14,970	**5,412,686**
Disposals	-	-	-	-	-	(241)	(5,271)	(92)	**(5,604)**
Transfers	436	15,981	4,283	208	463	-	551	1,894	**23,816**
Revaluation surplus	520,013	453,163	223,751	67,941	55,919	(5,260)	(10,969)	(1,589)	**1,302,969**
Additions during the year	-	-	814	59	390	-	5,229	1,096	**7,588**
Balance as at Dec 31, 2012	3,068,587	1,614,250	1,304,943	254,927	205,595	194,854	82,020	16,279	**6,741,455**
B. DEPRECIATION									
Balance as at Jan. 1, 2012	1,253,514	571,946	646,612	29,391	16,365	129,351	53,559	8,520	**2,709,258**
Disposal/Transfers	-	-	-	-	-	(241)	(5,266)	(44)	**(5,551)**
Charge for the period	29,179	33,140	47,900	4,398	1,693	5,430	6,435	1,410	**129,585**
Revaluation surplus	287,055	360,336	116,606	124,498	21,461	(499)	4,608	(596)	**913,469**
Balance as at Dec 31, 2012	1,569,748	965,422	811,118	158,287	39,519	134,041	59,336	9,290	**3,746,761**
C. CARRYING AMOUNT									
Balance as at Dec 31, 2012	**1,498,839**	**648,828**	**493,825**	**96,640**	**166,076**	**60,813**	**22,684**	**6,989**	**2,994,694**
Capital Work-in-Progress as at Dec 31,2012 (Note 8a)									**391,411**
									3,386,105

8b. Property, Plant and Equipment

GROUP 2011	Dam Power-house and Civil Works	Generating Plant & Machinery	Power Distribution Network	Townships	Buildings	Floating Craft	Motor Vehicles	Equipments & 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, 2011	2,201,104	930,514	722,222	162,092	72,020	70,286	39,112	7,656	**4,205,006**
Disposal/Transfers	-	-	-	-	-	(4,008)	(5,133)	(420)	**(9,561)**
Revaluation surplus	347,034	100,553	350,186	24,627	76,493	134,024	49,654	6,127	**1,088,698**
Additions during the year	-	114,039	3,686	-	314	53	8,847	1,606	**128,545**
Balance as at Dec 31, 2011	2,548,138	1,145,106	1,076,094	186,719	148,827	200,355	92,480	14,969	**5,412,688**
B. DEPRECIATION									
Balance as at Jan. 1, 2011	1,084,605	494,341	449,300	74,928	24,634	63,858	33,380	5,842	**2,230,888**
Disposal/Transfers	-	-	-	-	-	(2,004)	(4,911)	(424)	**(7,339)**
Charge for the period	19,600	43,062	38,728	3,891	1,299	1,701	2,308	1,009	**111,598**
Revaluation surplus	149,309	34,543	158,584	(49,428)	(9,568)	65,796	22,782	2,089	**374,107**
Balance as at Dec 31, 2011	1,253,514	571,946	646,612	29,391	16,365	129,351	53,559	8,516	**2,709,254**
C. CARRYING AMOUNT									
Balance as at Dec 31, 2011	**1,294,624**	**573,160**	**429,482**	**157,328**	**132,462**	**71,004**	**38,921**	**6,453**	2,703,434
Capital Work-in-Progress as at Dec 31,2011 (Note 8a)									**253,384**
									2,956,818

8b. Property, Plant and Equipment

VRA 2012	Dam Power-house and Civil Works GH¢'000	Generating Plant & Machinery GH¢'000	Power Distribution Network GH¢'000	Townships GH¢'000	Buildings GH¢'000	Floating Craft GH¢'000	Motor Vehicles GH¢'000	Equipments & Furniture GH¢'000	Total GH¢'000
A. VALUATION									
Balance as at Jan. 1, 2012	2,548,138	1,145,106	1,076,095	186,719	118,365	48,044	89,618	11,245	**5,223,330**
Disposal	-	-	-	-	-	-	(5,265)	-	**(5,265)**
Transfers	436	15,981	4,283	208	463	-	551	1,894	**23,816**
Revaluation surplus	520,013	453,163	223,751	67,941	56,197	(4,654)	(10,861)	(1,327)	**1,304,223**
Additions during the year	-	-	814	59	356	-	4,632	181	**6,042**
Balance as at Dec 31, 2012	3,068,587	1,614,250	1,304,943	254,927	175,381	43,390	78,675	11,993	**6,552,146**
B. DEPRECIATION									
Balance as at Jan. 1, 2012	1,253,514	571,946	646,612	29,391	11,159	37,401	51,386	5,858	**2,607,267**
Disposal/Transfers	-	-	-	-	-	-	(5,265)	-	**(5,265)**
Charge for the period	29,179	33,140	47,900	4,398	1,124	1,542	6,174	1,089	**124,546**
Revaluation surplus	287,055	360,336	116,606	124,498	21,740	68	4,716	(352)	**914,667**
Balance as at Dec 31, 2012	1,569,748	965,422	811,118	158,287	34,023	39,011	57,011	6,595	**3,641,215**
C. CARRYING AMOUNT									
Balance as at Dec 31, 2012	**1,498,839**	**648,828**	**493,825**	**96,640**	**141,358**	**4,379**	**21,664**	**5,398**	**2,910,931**
Capital Work-in-Progress as at Dec 31, 2012 (Note 8a)									**391,411**

	3,302,342

8b. Property, Plant and Equipment

VRA 2011	Dam Power-house and Civil Works GH¢'000	Generating Plant & Machinery GH¢'000	Power Distribution Network GH¢'000	Townships GH¢'000	Buildings GH¢'000	Floating Craft GH¢'000	Motor Vehicles GH¢'000	Equipments & Furniture GH¢'000	Total GH¢'000
A. VALUATION									
Balance as at Jan. 1, 2011	2,201,104	930,514	722,223	162,092	65,575	47,769	38,345	4,364	**4,171,986**
Disposal/Transfers	-	-	-	-	-	(4,008)	(5,133)	(420)	**(9,557)**
Revaluation surplus	347,034	100,553	350,186	24,627	52,493	4,283	47,877	5,934	**932,987**
Additions during the year	-	114,039	3,686	-	293	-	8,529	1,367	**127,914**
Balance as at Dec 31, 2011	2,548,138	1,145,106	1,076,095	186,719	118,365	48,044	89,618	11,245	**5,223,330**
B. DEPRECIATION									
Balance as at Jan. 1, 2011	1,084,605	494,341	449,300	74,928	22,760	41,855	32,653	3,147	**2,203,589**
Disposal/Transfers	-	-	-	-	-	(2,004)	(4,911)	(420)	**(7,335)**
Charge for the period	19,600	43,062	38,728	3,891	1,148	1,633	2,288	855	**111,205**
Revaluation surplus	149,309	34,543	158,584	(49,428)	(12,749)	(4,083)	21,356	2,276	**299,808**
Balance as at Dec 31, 2011	1,253,514	571,946	646,612	29,391	11,159	37,401	51,386	5,858	**2,607,267**
C. CARRYING AMOUNT									
Balance as at Dec 31, 2011	**1,294,624**	**573,160**	**429,483**	**157,328**	**107,206**	**10,643**	**38,232**	**5,387**	2,616,063
Capital Work-in-Progress as at Dec 31, 2012 (Note 8a)									**253,384**

2,869,447

2011			2012	
VRA	Group		**VRA**	**Group**
GH¢'000	GH¢'000		**GH¢'000**	**GH¢'000**
		8c. Disposal of Property, plant and equipment		
5,549	5,549	Cost	**5,265**	**5,604**
(5,331)	(5,331)	Accumulated depreciation	**(5,265)**	**(5,551)**
218	218	Carrying amount	**-**	**53**
3,701	3,701	Proceeds from Disposal	**305**	**324**
3,483	3,483	Profit / (Loss) on disposal	**305**	**271**
		9. Long term investments		
28,772	28,772	Debt Contingency Fund Investment	**34,351**	**34,351**
169,113	-	TAPCO (100% owned)	**169,113**	**-**
-	-	VLTC (100% owned)	**1,123**	**-**
542	-	AHL (100% owned)	**542**	**-**
345	345	Kpong farms (100% owned)	**-**	**-**
-	4,516	TICO (10% owned)	-	**4,516**
-	245,597	WAGP (16.38%)	-	**332,600**
46	46	Other investment (Marathon)	**-**	**-**
198,818	279,276		**205,129**	**371,467**
		10. Inventories		
21,823	22,581	Inventory and spare parts	**9,899**	**10,931**
(86)	(86)	Write down for obsolescence	**(86)**	**(86)**
21,737	22,495		**9,813**	**10,845**
216,814	216,814	Fuel for Thermal Plant	**125,467**	**125,467**
238,551	239,309		**135,280**	**136,312**
		11. Trade and Other Receivables		
471,402	473,401	Trade receivables	**918,027**	**921,788**
(35,712)	(35,831)	Impairment loss allowance	**(35,034)**	**(35,831)**
435,690	437,570		**882,993**	**885,957**
59,718	59,718	Prepayments	**75,643**	**75,648**
4,636	1,157	Amount due from related parties	**8,941**	**3,314**
156,239	156,504	Other Receivables	**233,178**	**234,687**
16,579	16,665	Staff Advances	**21,767**	**21,998**
672,862	671,614		**1,222,522**	**1,221,604**
662,667	661,419	Current	**1,207,648**	**1,206,730**
10,195	10,195	Non-current	**14,874**	**14,874**
672,862	671,614		**1,222,522**	**1,221,604**

2011			2012	
		12. Short term investments		
VRA	Group		**VRA**	**Group**
GH¢'000	GH¢'000		**GH¢'000**	**GH¢'000**
16,215	16,215	Foreign currency	**20,593**	**20,593**
8,859	9,098	Local currency	**4,785**	**5,740**
25,074	25,313		**25,378**	**26,333**
		13. Cash and bank		
76,942	85,991	Foreign currency	**127,268**	**138,034**
74,008	74,939	Local currency	**71,053**	**72,777**
43	67	Cash on Hand	**69**	**80**
150,993	160,997		**198,390**	**210,891**
		14. Payables		
		Current Portion		
288,026	289,598	Trade Payables	**317,188**	**318,691**
28,587	19,628	Amounts due to related parties	**9,369**	**5,441**
19,890	22,853	Sundry Payables	**27,986**	**30,876**
1,223	1,363	Accruals expenses	**11,137**	**11,386**
337,726	333,442		**365,680**	**366,394**
		Non-Current Portion		
24,837	25,013	Other Payables	**81,635**	**81,811**
24,837	25,013		**81,635**	**81,811**
362,563	358,455		**447,315**	**448,205**
		15. Borrowings		
		Current Portion		
21,315	21,315	Long Term loans payable within one year	**29,103**	**29,103**
21,648	21,648	Bank overdrafts	**38,160**	**38,160**
16,259	16,937	Loan Interest and commitment charges	**13,318**	**14,027**
37,787	38,389	Short-term borrowings	**373,581**	**373,949**
97,009	98,289		**454,162**	**455,239**
		Non-Current Portion		
-	-	Amount due after one year but before five years	**188,460**	**188,460**
104,025	104,179	Amount due after five years but before ten years	**95,165**	**95,319**
155,757	155,757	Over ten years	**200,524**	**200,524**
259,782	259,936		**484,149**	**484,303**
356,791	358,225		**938,311**	**939,542**

15. Borrowings-continued (Group)

	Balance as at 01.01.2012	Drawings	Repayments	HIPC Loan Adjustment.	Exchange Variation	Balance as at 31.12.2012
	GH¢ '000	GH¢ '000	GH¢ '000	GH¢ '000	GH¢ '000	GH¢ '000
Long Term Loans						
Kpong Hydro Project						
European Dev Fund (EDF)	3,213	-	-	(807)	647	**3,053**
Rural Electrification						
Kuwait Fund - 339	4,483	-	-	-	793	**5,276**
Akosombo Retrofit						
EIB-3	8,795	-	(10,107)	-	1,312	**-**
IDA -2109 GH	5,504	-	-	(869)	614	**5,249**
Takoradi Thermal Power						
IDA 2682 GH	94,037	-	-	(22,585)	17,897	**89,349**
Kuwait Fund	30,521	-	-	-	(7,439)	**23,082**
Badea	635	-	(751)	-	116	**-**
Other Loans						
Kuwait Fund 657-330kV	16,000	1,591	(1,349)	-	2,505	**18,747**
IDA-4213- 330kV	40,785	9,393	-	-	8,566	**58,744**
IDA-4092- 330kV	51,380	6,470	-	-	10,400	**68,250**
IDA-4356-GEDAP	12,731	-	-	-	2,444	**15,175**
AfDB (GEDAP)	13,013	5,965	-	-	3,691	**22,669**
AfDB (WAPP)	-	15,198	-	-	-	**15,198**
Ghana Government	154	-	-	-	-	**154**
Subtotal: Long Term Loans	**281,251**	**38,617**	**(12,207)**	**(24,261)**	**41,546**	**324,946**

15. Borrowings – continued (Group)

	Balance as at 01.01.2012	Drawings	Repayments	HIPC Loan Adjustment.	Exchange Variation	Balance as at 31.12.2012
	GH¢ '000	GH¢ '000	GH¢ '000	GH¢ '000	GH¢ '000	GH¢ '000
Medium Term Loan						
Ecobank	**-**	282,765	-	-	(75)	**282,690**
Subtotal: Medium Term Loans	**-**	**282,765**	**-**	**-**	**(75)**	**282,690**
Total: Long and Medium Term Loans	**281,251**	**321,382**	**(12,207)**	**(24,261)**	**41,471**	**607,636**
Loan Interest and Commitment Charges	16,259	51,636	(53,868)	-	-	**14,027**
Short Term Loans						
Stanbic Bank	18,634	62,582	(81,216)	-	-	**-**
Ecobank	-	285,492	(283,511)	-	(1,981)	**-**
Standard Chartered Bank	-	217,765	(110,521)	-	5,600	**112,844**
Zenith Bank	-	99,323	(91,543)	-	3,368	**11,148**
Fidelity Bank	-	59,520	(67,687)	-	8,167	**-**
Intercontinental Bank	19,153	77,373	(96,526)	-	-	**-**
Ghana International Bank	-	23,489	(7,565)	-	(418)	**15,506**
GT Bank	-	109,266	(84,929)	-	2,427	**26,764**
UniBank	-	41,431	(511)	-	-	**40,920**
Sahara Energy Resources	-	71,813	-	-	356	**72,169**
Ghana Government	92	-	-	-	-	**92**
DANIDA	276	-	-	-	-	**276**
BOST	233	-	(233)	-	-	**-**
Subtotal: Short Term Loans	**38,388**	**1,048,054**	**(824,242)**	**-**	**17,519**	**279,719**
Bank Overdraft	21,648	43,654	(27,142)	-	-	**38,160**
Grand Total	**357,546**	**1,464,726**	**(917,459)**	**(24,261)**	**58,990**	**939,542**

15. Borrowings-continued (VRA)

	Balance as at 01.01.2012	Drawings	Repayments	HIPC Loan Adjustment.	Exchange Variation	Balance as at 31.12.2012
	GH¢ '000	GH¢ '000	GH¢ '000	GH¢ '000	GH¢ '000	GH¢ '000
Long Term Loans						
Kpong Hydro Project						
European Dev Fund (EDF)	3,213	-	-	(807)	647	**3,053**
Rural Electrification						
Kuwait Fund - 339	4,483	-	-	-	793	**5,276**
Akosombo Retrofit						
EIB-3	8,795	-	(10,107)	-	1,312	**-**
IDA -2109 GH	5,504	-	-	(869)	614	**5,249**
Takoradi Thermal Power						
IDA 2682 GH	94,037	-	-	(22,585)	17,897	**89,349**
Kuwait Fund	30,521	-	-	-	(7,439)	**23,082**
Badea	635	-	(751)	-	116	**-**
Other Loans						
Kuwait Fund 657-330kV	16,000	1,591	(1,349)	-	2,505	**18,747**
IDA-4213- 330kV	40,785	9,393	-	-	8,566	**58,744**
IDA-4092- 330kV	51,380	6,470	-	-	10,400	**68,250**
IDA-4356-GEDAP	12,731	-	-	-	2,444	**15,175**
AfDB (GEDAP)	13,013	5,965	-	-	3,691	**22,669**
AfDB (WAPP)	-	15,198	-	-	-	**15,198**
Subtotal: Long Term Loans	**281,097**	**38,617**	**(12,207)**	**(24,261)**	**41,546**	**324,792**

15. Borrowings – continued (VRA)

	Balance as at 01.01.2012	Drawings	Repayments	HIPC Loan Adjustment.	Exchange Variation	Balance as at 31.12.2012
	GH¢ '000	GH¢ '000	GH¢ '000	GH¢ '000	GH¢ '000	GH¢ '000
Medium Term Loan						
Ecobank	**-**	282,765	-	-	(75)	**282,690**
Subtotal: Medium Term Loans	**-**	**282,765**	**-**	**-**	**(75)**	**282,690**
Loan Interest and Commitment Charges	16,259	50,927	(53,868)	-	-	**13,318**
Short Term Loans						
Stanbic Bank	18,634	62,582	(81,216)	-	-	**-**
Ecobank	-	285,492	(283,511)	-	(1,981)	**-**
Standard Chartered Bank	-	217,765	(110,521)	-	5,600	**112,844**
Zenith Bank	-	99,323	(91,543)	-	3,368	**11,148**
Fidelity Bank	-	59,520	(67,687)	-	8,167	**-**
Intercontinental Bank	19,153	77,373	(96,526)	-	-	**-**
Ghana International Bank	-	23,489	(7,565)	-	(418)	**15,506**
GT Bank	-	109,266	(84,929)	-	2,427	**26,764**
UniBank	-	41,431	(511)	-	-	**40,920**
Sahara Energy Resources	-	71,813	-	-	356	**72,169**
Subtotal: Short Term Loans	**37,787**	**1,048,054**	**(824,009)**	**-**	**17,519**	**279,351**
Bank Overdraft	21,648	43,654	(27,142)	-	-	**38,160**
Grand Total	**356,791**	**1,464,017**	**(917,226)**	**(24,261)**	**58,990**	**938,311**

15. Borrowings – continued

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

LOAN	CURRENCY	CONTRACT AMOUNT	INTEREST RATE (%)	MATURITY DATE
KUWAIT-339	KD	3,500,000.00	4.00	2013
GHANA GOVT	GHS	1,281.00	0.00	-
EDF	EUR	8,980,000.00	1.00	2016
KUWAIT TTPP	KD	6,660,000.00	4.00	2013
KUWAIT 657	KD	5,000,000.00	3.50	2025
IDA 4092	SDR	26,500,000.00	3.50	2025
IDA 4213	SDR	30,800,000.00	4.50	2046
IDA 4356	SDR	3,280,000.00	5.30	2047
IDA 2109	SDR	15,200,000.00	7.75	2009
IDA 2682TTPP	SDR	120,560,000.00	8.00	2016
AfDB (GEDAP)	USD	20,000,000.00	0.75	2028
AfDB (WAPP)	UA	14,870,000	1.25	2028

16. Investment by the Republic of Ghana

2011			**2012**	
VRA GH¢'000	Group GH¢'000		**VRA GH¢'000**	**Group GH¢'000**
495,449	495,449	Balance at the beginning of the year	**495,449**	**495,449**
495,449	495,449	Balance at the end of the year	**495,449**	**495,449**

17. Capital 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:

2011			2012	
VRA	Group		**VRA**	**Group**
GH¢'000	GH¢'000		**GH¢'000**	**GH¢'000**
2,059,524	2,063,819	Balance at beginning of year	**2,617,578**	**2,703,284**
633,179	714,590	Surplus for the Year	**389,557**	**389,500**
(75,125)	(75,125)	Transfer to Retained Earnings Account	**(112,443)**	**(116,891)**
2,617,578	2,703,284	Balance at close of year	**2,894,692**	**2,975,893**

18. Debt Contingency Fund Reserve

The amount of GH¢ 34.35 million (2011: GH¢ 28.77 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

19. 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.

20. Reconciliation of operating profit to operating cash flows

2011			2012	
VRA	Group		**VRA**	**Group**
GH¢'000	GH¢'000		**GH¢'000**	**GH¢'000**
138,659	140,448	Operating (Loss)/Profit	**(77,176)**	**(82,217)**
		Adjustments for :		
111,209	111,603	Depreciation	**124,546**	**129,585**
(23,135)	(22,387)	Exchange (Gain)/Loss	**2,472**	**6,843**
(1,479)	(1,473)	(Loss)/Profit on disposal of property plant and equipment	**(305)**	**(271)**
-	208	Prior year adjustments	**-**	**-**
		Capital Work-in-progress written off	**10,274**	**10,274**
-	(57)	Amortisation	**-**	**-**
225,254	228,342	Operating Profit before working capital changes	**59,811**	**64,214**
(84,147)	(84,336)	Changes in inventories	**103,271**	**102,997**
(72,956)	(76,187)	Changes in receivables	**(549,659)**	**(549,990)**
161,719	162,871	Changes in payables	**84,752**	**89,750**
229,870	230,690	Cash outflow from operating activities	**(301,825)**	**(293,029)**
-	(18)	Tax Paid	**-**	**(378)**
229,870	230,672	Net cash outflow from operating activities	**(301,825)**	**(293,407)**

21. Cash and cash equivalents

2011			2012	
VRA	Group		**VRA**	**Group**
GH¢'000	GH¢'000		**GH¢'000**	**GH¢'000**
150,993	160,997	Cash and Bank Balances	**198,390**	**210,891**
25,074	25,313	Short Term Investments	**25,378**	**26,333**
(21,648)	(21,648)	Bank Overdraft	**(38,160)**	**(38,160)**
154,419	164,662	**Cash and cash equivalents**	**185,608**	**199,064**