"The most valuable asset of a
20th century company was its production equipment.
The most valuable asset of a 21st century institution will
be its knowledge workers and their productivity"

(Peter Drucker, 1999)

VOLTA RIVER AUTHORITY

FORTY NINTH
ANNUAL REPORT & ACCOUNTS 2010

VISION STATEMENT

Setting the standard for public sector excellence in Africa

VRA MISSION STATEMENT

The VRA exists to power economies and raise the living standards of the people of Ghana and West Africa. We generate reliable electricity in a safe manner to add economic, financial and social value to our operations and assets, customers and individuals.

CONTENTS

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 transmission function has been separated into an entity, designated Ghana Grid Company (GRIDCo). The VRA will continue to operate its distribution agency, the Northern Electricity Department (NED) as a subsidiary company and NED will eventually merge with the Electricity Company of Ghana (ECG) into a single distribution utility after the transition period. The amendment has a key function of creating the requisite environment to attract independent power producers (IPPs) onto the Ghana energy market.

Power Activities

The Authority operates a total installed electricity generation capacity of 1,986MW. 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 would be converted into a 330MW combined cycle plant and commissioned in 2013, and thus bring the installed thermal generation capacity at Takoradi to 660MW.

The VRA has developed a number of plants in Tema. These include a 126MW 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 the development of a 220MW Thermal Power Plant, originally located at Kpone, near

Tema, but is strategically being moved to Domunli in the Western Region on account of the expected gas processing facilities from the Jubilee Oil Fields. Together this will bring the total installed thermal generation capacity to 1,136MW.

The VRA, through the Northern Electricity Department, is the sole distributor of electricity in the Brong-Ahafo, Northern, Upper East, Upper West, and parts of Ashanti and Volta Regions of Ghana. 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. NED has a customer population of over 300,000 and a load demand of about 120MW.

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'lvoire, Compagnie Ivoirienne d'Electricité (CIE), Togo, Communauté Electrique du Benin (CEB), and Burkina Faso (SONABEL). These interconnections now serve as part of the arrangement under the West Africa Power Pool (WAPP).

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 2012.

The VRA is also 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 get natural gas from Nigeria to operate the thermal facilities. This will significantly reduce the cost of thermal generation, and increase electricity availability, accessibility and affordability. Gas is environmentally cleaner than light crude oil (LCO).

The off-shore pipeline has been completed with the remaining on-shore pipeline works and other ancillary installations expected to be completed by the end of 2011.

The United Nations Development Programme (UNDP), acknowledging the VRA's distinctive competencies in power system operations, appointed the VRA as the principal consulting agency that implemented an Emergency Power Programme (EPP) in Liberia after years of conflict. The EPP was in two phases: construction and operation. It provided for 2.65MVA of power to a section of Monrovia through distribution grids in Congo Town and Kru Town and was intended to serve institutional customers such as hospitals, schools, police stations, social and community facilities and for street lighting along the main route of the Grid.

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).

Non Power Activities

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.

It 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. In 2009 the fund was used to support projects for environmental improvement, social welfare, public health, education, electricity, potable water supply and sanitation. In addition, VRA's Community Development Initiative (CDI) programme introduced in 2003, as a framework for overall development of its communities, catered for requests for small projects.

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

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.

A collaborative project with Clark Sustainable Resource Developments Ltd. (CSRD), is aimed, amongst others, at undertaking the harvesting of underwater tropical timber resources in the Volta Lake to alleviate the hazards created by the submerged trees, and thus improve lake transportation safety. This Volta Lake project, financed only with private capital, represents direct foreign investment in Ghana.

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

Relations with some statutory bodies

The VRA has relations with the following statutory bodies:

- Ministry of Energy – Supervisory Ministry providing policy direction for the energy sector.

- Public Utilities Regulatory Commission (PURC) – An independent regulatory commission with oversight responsibility for tariff and rate setting, and provision of the highest quality of electricity to consumers.

- Energy Commission - Provides advice to the Government of Ghana on energy policy, conducts indicative planning/ least cost expansion planning of wholesale supply of electricity, regulates licenses, establishes and monitors standards of performance as well as industry rules of practice for electric utilities.

SUBSIDIARY COMPANIES

In fulfillment of its responsibility to provide facilities and assistance for the socio-economic development of the Volta Basin, the Authority operates currently 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.

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 as a resource centre of excellence for research into modern agricultural practices, has 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 since 1982. Local and expatriates from Egypt, Pakistan and the United States of America have also received attachment training at the Farms.

However, in recent years operations of the Farms have temporarily been halted due to obsolete state of the Farm's equipment and facilities as well as liquidity constraints. The VRA is therefore seeking strategic investors in a joint venture partnership to transform the operations of Kpong Farms Ltd into a profitable agribusiness.

Prof. Akilagpa Sawyerr, *Chairman*
Professor/Lawyer

THE VOLTA RIV

The Members of the Board of the Volta

Kweku Andoh Awotwi, *Member,*
Chief Executive, Volta River Authority

Mr. Johnny E. Essilfi Turkson,
Member, Lawyer

Togbi Gbordzor III,
Member, Traditional Ruler/Civil Engineer

Alhaji A. Nantogmah Mahamadu,
Member, Lawyer

ER AUTHORITY BOARD

River Authority as at 31st Dec. 2010:

Mrs. Marietta Brew Appiah-Opong,
Member, Lawyer

Mr. Ahmed Yakubu Salifu, *Member*
Freight Forwarder, Banker/Accountant

Hon. Rev. Dr. Joses Asare-Akoto,
Member, MP, Asuogyaman

Mr. Danny Anang, *Member*
Managing Director, Daben Cleaning Services

Principal Officers (VRA Management) as at 31st Dec., 2010:

Office of the Chief Executive

Chief Executive	-	Kweku Andoh Awotwi
Director, Audit	-	Ebenezer Tagoe
Director, Business Development & Sales	-	Andrews Addy
Director, Corporate Planning	-	Edwin M. Gbekor
Senior Manager, Public Relations Unit	-	Gertrude Koomson (Mrs.)

Engineering and Operations Branch

Deputy Chief Executive	-	Ing. Isaac Kirk Koffi
Director, Northern Electricity Department	-	Ing. John Nuworklo
Director, Special Engineering Projects	-	Ing. Stephen Doku
Director, Technical Services	-	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
Finance	-	Samuel K. Gyawu

Services Branch

Deputy Chief Executive	-	Maxwell E.Y. Odoom
Director, Legal Services	-	Angelina Mornah Domakyaareh (Mrs.)
Director, Human Resources	-	Isaac K. Aidoo
Staff Director	-	Joseph W. Sutherland
Director, VRA Schools	-	Vacant
Director, Health Services	-	Vacant
Director, Real Estate	-	Seth Asante
Director, General Services	-	Abla Fiadjoe (Ms.)
Director, Management Information Systems	-	Theophilus Nii Okai
Director, Environment & Sustainable Dev't	-	Patrick Okrah Kwakye

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

CHAIRMAN'S STATEMENT

2010 was a record year for the Authority.

First, the Volta Lake recorded a height of 277.54 feet on November 1, 2010, the highest since the Akosombo dam was constructed in 1966. Second, the Authority recorded a net profit of GH¢40.60 million and, for the second successive year, an operating profit of GH¢53.29million, a level of performance unattained since 1997.

Again, the steam turbine at our Takoradi operations was run continuously for over a month, the longest ever since the plant was built. Although a nation-wide system trip took the machine out of service for an extended period, we hope this signals the steady improvement we have begun to see in the Authority's operations.

Gas from the West African Gas Pipeline has been received since March, with volumes ramping up from 30mmscfd to 90mmscfd yearly average. Separately, the Public Utilities and Regulatory Commission (PURC) raised the Bulk Generation Tariff (BGT) by 97.8%, the first time in over two and a half years, from GH¢0.0602 to GH¢0.1191. However, following a public outcry, the PURC and the utilities agreed a 10% reduction, bringing down the BGT to GH¢0.1072.

These two events, continuous supply of gas from Nigeria and a substantial increase in the tariffs set by the PURC, went a long way to halting the Authority's financial slide over the last decade. We hope these landmark events that occurred in 2010 point the way to a financially more viable and operationally more efficient Authority, with consequential improvements in energy generation and provision to the country.

The Authority approved two landmark policies: a hedging policy that will enable the Authority to hedge its purchase of crude oil thereby better managing its large crude oil bills; and a renewable energy policy, which lays the foundation for the Authority's renewable energy development plans in the coming years.

Portfolio Growth

In order to ensure adequate, reliable and stable power supply to meet load growth projections and to be competitive in the global energy market, the Authority is engaged in the development and expansion of generation facilities. Immediately, these include the construction of the 132MW T3 (Magellan) Plant at Aboadze, and the development of the 200MW Kpone Thermal Plant.

Discussions are far advanced to convert the TICO (TAQA) 220MW plant at Aboadze into a 330MW combined cycle plant. In addition to seeking additional sources of gas from Nigeria as well as Ghana, the Authority is looking at the possibilities offered by liquefied natural gas (LNG) for meeting its generation requirements, which already amount to approximately 200mmscfd.

The Authority is also committed to the development of renewable energy, in particular wind and solar, as an increasing portion of the power generation mix over the rest of this century. Initial steps include:

- a 100MW wind power project at locations where these are practicable, and
- a 10MW solar project to be built in four different locations in the northern part of the country

For this purpose, our technical team made two familiarization visits to Spain to study the development, design, operation and regulation of renewable energy.

We are working to identify projects whose carbon emissions could be reduced to qualify the VRA to benefit from emission credits. We held discussions with three 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 and the 50MW Tema Thermal Plant, the fuel switching and expansion of the Takoradi Plant, and the development of the Bonyere Thermal Plant.
Further, the Authority seeks to facilitate and collaborate with private entities in the development of biomass energy. These include a sugarcane/biogas to energy plant, a biomass (bamboo) to energy plant and a municipal waste to energy power plant.

Commercialization initiatives

Operationalization of NEDCo.

The Northern Electricity Department (NED), which is responsible for the distribution of electricity in the northern part of the country, is being operationalized into a fully-fledged, independent distribution company, 100% owned by VRA.

Non-Power Functions

The Authority has also started turning its portfolio of non-power operations into progressively self-financing subsidiaries. These are the Hospital, School and Real Estate departments. The aim is to inject greater efficiency into the operations of these important but non-core activities of the VRA. This will enable the Authority to focus more effectively on power generation, its core activity, and thereby enhance its competitive advantage in the West African sub-region.

In 2010, we completed a business process reengineering exercise at our Takoradi Thermal Operations. Overall, we are beginning to realise the benefits of new measures aimed at improving plant efficiency; better availability of spares; and greater emphasis on preventive and routine maintenance.

For this edition of our Corporate Reporting, we have chosen the theme ***Productivity Through People*** to place emphasis on our employees who remain our greatest resource. We recognize the need to enhance the skill set of our employees in an increasingly competitive market place. We have therefore stepped up our training programmes at all levels, placing particular focus on leadership and management training.

Financial & Operational Viability

We are pleased to report that the Government of Ghana injected GH¢477.12million equity into the Authority this year. The injection was in respect of relief on HIPC loans; promissory notes for crude oil purchase, proceeds of sovereign bonds extended to the Authority in 2007 and 2008 and Government's contribution to the West African Pipeline Project. As this was Government's additional equity in the Authority, it had no effect on the operating results of the Authority for 2010.

The total electricity generated from both VRA hydro and thermal sources increased by 12% (1,070GWh) from 8,959GWh generated in 2009 to 10,029GWh in 2010. Generation from hydro sources increased by 2% (118GWh), from 6,877GWh in 2009 to 6,995GWh in 2010, while thermal generation went up by 46% (952GWh), from 2,0821GWh in 2009 to 3,033GWh in 2010.

To supplement generation from VRA's own plants 244GWh (2009: 194GWh) was purchased from Compagnie Ivoirienne d' Electricité (CIE) of La Cote D' Ivoire and Sunon Asogli of Ghana. Revenue from sale of electricity increased by 42.74% (GH¢322.64million), from GH¢754.82 million in 2009 to GH¢1,077.46 million in 2010. This was mainly due to increase in the volume of electricity sold by 12.05% (1,040GWh), from 8,629GWh in 2009 to 9,669GWh, in 2010 and an increase in the Bulk Generation Tariff from GH¢0.0602/kWh to GH¢0.1191 effective June 1, 2010, later reduced to GH¢0.1072.

Cost of sales

Cost of sales, consisting of fuel usage, power imports , depreciation, salaries, materials, and other operating costs, increased by GH¢214.41 million (31.81%), from GH¢673.92 million in 2009 to GH¢888.33 million in 2010.

Operating Profit

The Group reported an operating profit of GH¢ 53.29 million in 2010, compared to GH¢8.27 million in 2009. This represents an increase of 544.70%. The increase was mainly due to the combined effects of an increase total operating revenue by GH¢336.61 million (43.28%), from GH¢777.71 million in 2009 to GH¢1,114.33 million in 2010, together with an increase of GH¢291.59 million (37.90%) in total operating costs, from GH¢769.45 million in 2009 to GH¢1,061.04 million in 2010. The operating profit represents a return

of 2.40% on average revalued net fixed assets (2009:0.40%).

Net Profit / (Loss)

The Authority ended the year 2010 with a profit after tax of GH¢40.60 million (2009: Net Loss of GH¢78.55 million). The profit for the year is after charging depreciation of fixed assets of GH¢78.15 million (2009: GH¢81.61 million), loss on exchange fluctuation on foreign debt of GH¢8.34 million (2009: loss of GH¢38.70 million), and financial expenses of GH¢36.60 million (2009: GH¢50.15 million). Financial Income of GH¢6.82 million (2009: GH¢5.08 million) and exchange gain of GH¢25.58 million (2009: exchange loss GH¢2.97 million) have also been taken into account.

Corporate Social Responsibility (CSR) Activities

As part of the Authority's mandate under its Act of incorporation (Act 46), we are committed to the welfare and development of the communities in which we operate.
In keeping with the VRA's values and principles, the following social investments were undertaken in 2010:

- Sponsored a number of national priority programmes such as rural electrification projects, health, water resources, education, capacity building, culture, 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;
- 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.

Outlook for the future

In 2011, the World Bank has projected that Ghana will be the fastest growing economy in Sub-Saharan Africa, at the rate of 13.4 per cent. According to the Bank, Ghana is in a position to register strong economic growth even without the oil sector, particularly in construction services, as large infrastructure projects are being undertaken. Electricity demand is, thus, expected to rise, underpinned by strong domestic demand, emanating primarily from domestic consumption and investment.

Next year, 2011, will be the Authority's 50th anniversary. We plan to mark this important milestone of achievements to generate nation-wide interest in the work and objectives of the Authority.

I wish to take this opportunity, on behalf of the Authority, to thank management and staff for their hard work and commitment, and their continuous support for the current wave of transformation and growth. I look forward to a great future, celebrating our achievements together in the years ahead.

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Akilagpa Sawyerr

POWER OPERATIONS

Spilling of Akosombo Reservoir marks a real milestone

The dramatic release of water through the Akosombo Dam's spillway to avoid the Volta Reservoir surpassing the 100 percent capacity mark was a real milestone. The Volta Reservoir recorded the highest ever water level, peaking at 277.54ft. The controlled releases of first, 20,000cfs of water downstream began on November 1, 2010 to ensure that the operational maximum head water level of 278ft. above National Datum Level (NDL) was not exceeded. With more rain forecast and inflows, the discharge was increased to 42,000cfs the second day. There was no impact downstream on account of the releases. There was a brief increase which resulted in some minimal inundation and flooding of some houses and farm lands. In the Ada estuary at the same time the tides came in.

The discharge was maintained at 42,000cfs until November 24, 2010 when it was discontinued following a recession of the inflow at head water elevation of 276.84ft.

These measures were designed to safeguard the integrity of the dam structure.

The Volta Reservoir recorded the highest ever water level, peaking at 277.54ft. The dramatic releases of water through the Dam's spillway to ensure that the operational maximum head water level of 278ft was not exceeded above the National Datum Level was indeed a fascinating experience.

System's Characteristics is subject to variability

An important characteristic of the hydrology of the Volta basin is the variability from year to year. To illustrate this, the highest recorded annual inflow was 53.35 MAF recorded in 1989 while the lowest recorded annual inflow was 6.20 MAF recorded in 1983, that is, the maximum is more than 8 times as large as the minimum. In addition to the variability from year to year, the recorded inflows into the Volta River demonstrate that it is common to have wet and dry periods lasting for a couple of years.

Economic Implications of the Positive Hydrology Situation

The positive hydrology situation enabled the Authority to generate a total hydro generation of 5,960GWh from the Akosombo and Kpong Hydro Generating Stations. As in the preceding year, the favorable inflows helped to reduce significantly the thermal generation component of the supply mix resulting in significant reduction of the operating cost as hydro production is much cheaper than thermal production. Consequently, the peak load demand recorded at the Akosombo and Kpong Generating Stations was 977MW and 155MW at 18.30hrs on November 9 and October 4, 2010 respectively. This is the greatest peak load achieved.

System Disturbances

The first quarter witnessed four severe surges in the power system at various times in February. In particular, the disturbance on February 27, 2010 led to an explosion of IT6A Oil Circuit Breaker at Akosombo at 09:54:35hrs. The third quarter also witnessed one severe system upsurge on August 14, 2010 at 08:20.50hrs. The surge led to frequency swings from 50.1Hz to below 45Hz, resulting in the tripping of all four running units at Akosombo to speed-no-load. All Akosombo – Volta (A-V) lines also tripped at the Akosombo end only. The system was restored by 09.40hrs. Only one upsurge was experienced during the fourth quarter. This occurred on October 4, 2010 at 13:38 hrs. The system was however restored to normalcy at 14:52hrs.

Favorable inflows into the Volta Reservoir helped to reduce significantly the thermal generation component of the supply mix resulting in significant reduction of the operating cost.

Strategic Focus

As in the previous year, the Authority's strategic intent focused on the development and expansion of generating facilities and innovation processes to meet increasing demand. In particular, investment in energy infrastructure development and energy services improvement such as the development of thermal plants, renewable energy resources and system security and improvement initiatives.

Environmental Review

Environmental reviews with regard to stack emission, ambient air quality, liquid waste, solid waste, oil spill, fire preparedness, vehicular traffic and noise vide the operations of our thermal plants were within the EPA safety standards. A frame-work for the development of aquaculture on the Volta Lake was prepared to guide the VRA to ensure the sustainability of aquaculture development on the lake. Reforestation activities aimed at reducing siltation of the Volta Lake through the restoration of permanent vegetative cover bordering the slopes of the lake continued in Akosombo, Kpeve/Tornu, Gbefi and Domeabra in the Volta Gorge Area. A total of 37,000 seedlings were planted under the project. A total of 213,406 meters of sand were dredged covering an area of 1,731.5 meters to reduce the incidence of Bilharzia, and to restore the ecosystem in the area.

The weed harvester was deployed to clear weeds ahead of the dredger to pave way for Dredger 'Cd Ada' and the Discharge Pontoon. Dredging activities were carried out mainly in the Vume/Sogakope area where weeds had isolated several islands from the main land. Frontline water hyacinth infestation was located 50km upstream of the Oti and the Volta confluence as a result of the floods. Estimated water hyacinth visible cover in the Oti river at Nkanchina, Banule Kitare and Dambai was about 15 hectares. Eight hectares were removed under a collaborative project with ***Removing Barriers to Invasive Plants Management in Africa (RBIPMA).*** Four hectares of water hyacinth discovered at the Kpong Head pond were removed by a local community group. About 62.2 acres of water hyacinth infestation was discovered at the Lower Volta area between the Kpong Dam and Volta Estuary. Six community groups were given contracts for manual removal of about 24 acres of infestation.

A total of 10,332 persons from 68 communities in four districts infested with Bilharzia were treated. Prevalence levels have significantly reduced in most of the communities. The most endemic areas were North Tongu District and Dodi Asantekrom in the Asuogyaman district where prevalence was still high (54%). Density and infectivity of Bilharzia snail vector were monitored at human contact sites of 35 communities in four districts of the Lower Volta. It was observed that snail population density and infectivity were generally low.

We maintain a dredging programme at the estuary of the Volta River at Ada to reduce the incidence of Bilharzia and to restore the ecosystem in the sea.

We are taking vigorous steps to remove water hyacinth under a collaborative project with ***Removing Barriers to Invasive Plants Management in Africa (RBIPMA)****.*

Hydrograph Pattern

The cumulative inflow into the Volta Lake during the flood season was 47.4MAF. This was about 64.2% above the long-term average of 30.5MAF for the period under review. The 2010 inflow hydrograph and its corresponding cumulative chart are shown in figures 1 and 2 below:

Figure 1

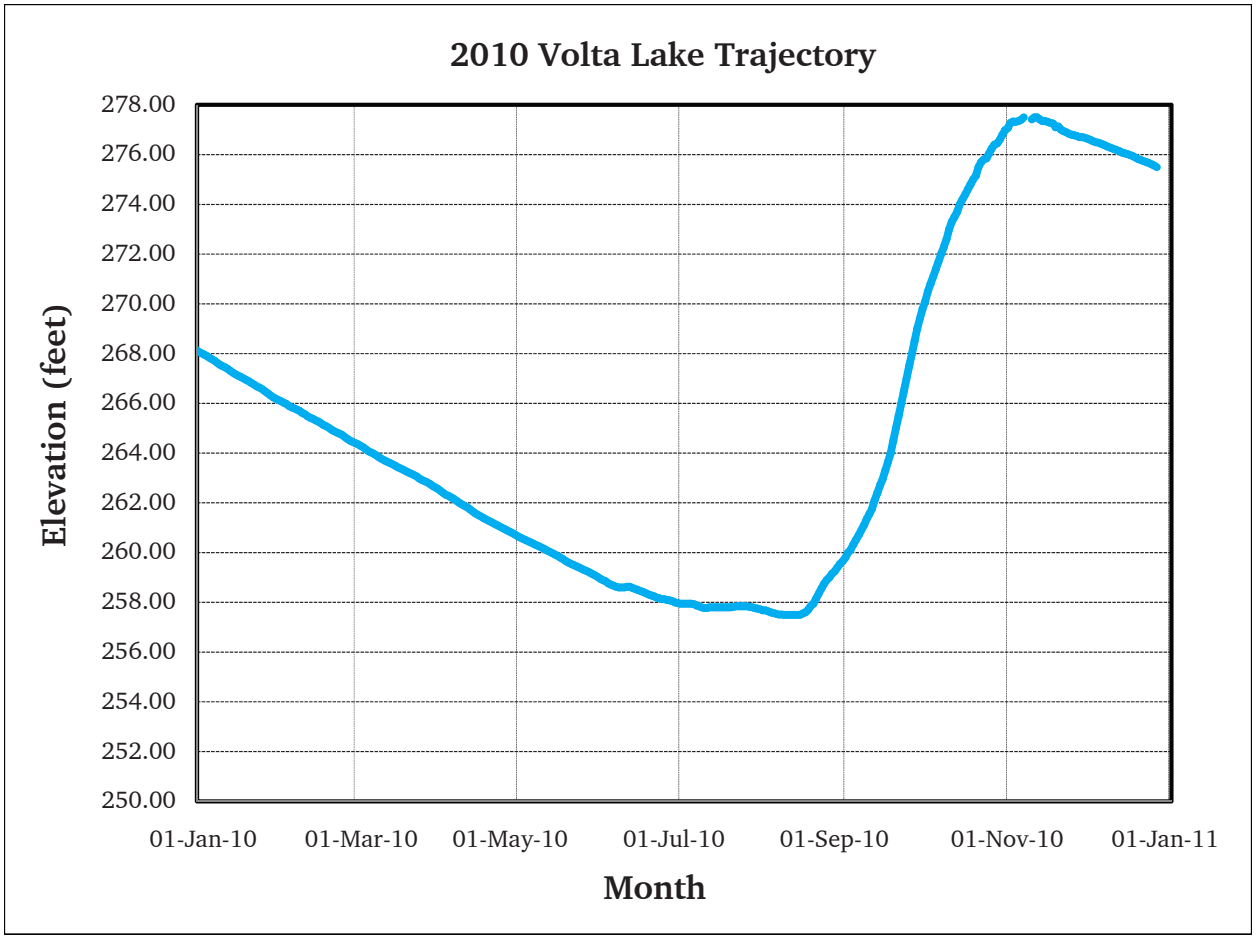
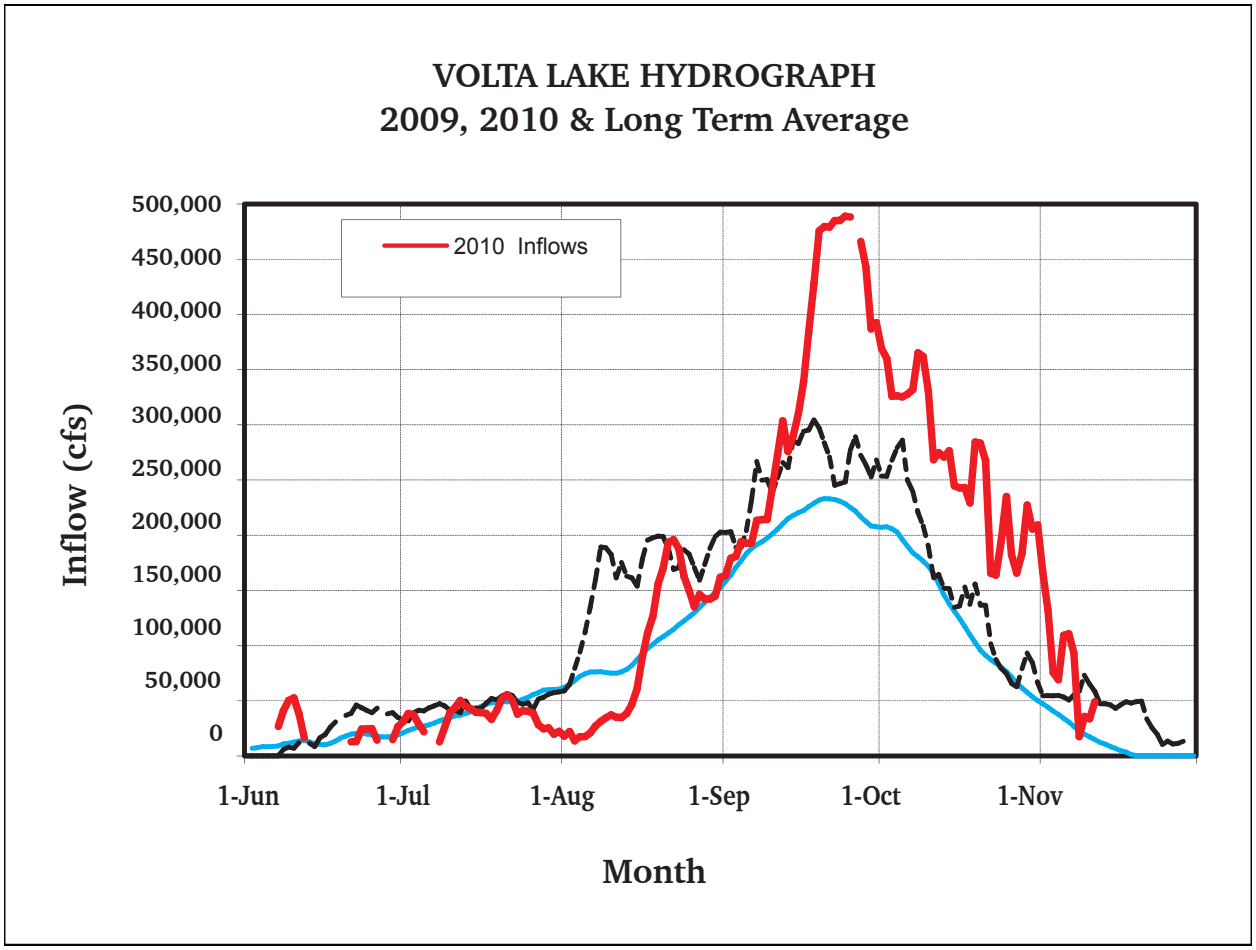


Figure 2



Volta Lake Elevation

The Volta lake elevation at the beginning of the year (January 1, 2010) was 268.08ft. The lowest elevation was 257.50ft, and this peaked at 257.40ft at the end of the year (December 31, 2010). The Volta Lake level after the major inflows was 277.54ft.

Electricity Demand and Supply: Energy Sales Show Strong Positive Trends

Total energy sold in 2010 was 9,650.45 GWh. The Electricity Company of Ghana (ECG) is the largest customer of the VRA. The ECG consumed about 6,771 GWh in 2010, 70% of the total energy sold. This represents an increase of 12% over the previous year's consumption of 6,052GWh. Table1.1 below shows the consumption of the various categories of the VRA customers.

DOMESTIC ENERGY SALES

	2009		2010	
CEDI CUSTOMERS	Quantity (GWh)	Value (Gh¢) million	Quantity (GWh)	Value(Gh¢) million
ECG	6,052	364.34	6,771	590.53
NED	566	34.10	645	56.46
AKOSOMBO TEXTILES	24	2.56	18	3.13
ALUWORKS	7	0.83	5	0.99
DIAMOND CEMENT	45	3.88	45	6.17
OTHERS	35	3.69	36	4.59
MINES	295	26.55	120	11.66
TOTAL	7,023	435.94	7,641	673.53

	2009		2010	
FOREX CUSTOMERS	Quantity (GWh)	Value (US$) million	Quantity (GWh)	Value (US$) million
VALCO	10	0.37	7	0.25
ILDC	32	3.40	39	4.93
MINES	947	82.12	1,147	126.49
TOTAL	989	85.89	1,193	131.67

Export Sales Also Show Strong Positive Trends

The VRA exported 1,002GWh and imported 106GWh of energy. The net balance in favour of VRA was 896.21GWh and the net sales revenue in favour of VRA was US$ 106,626,995.70.

Table 1.2 shows the power export and import sales.

FOREIGN ENERGY SALES

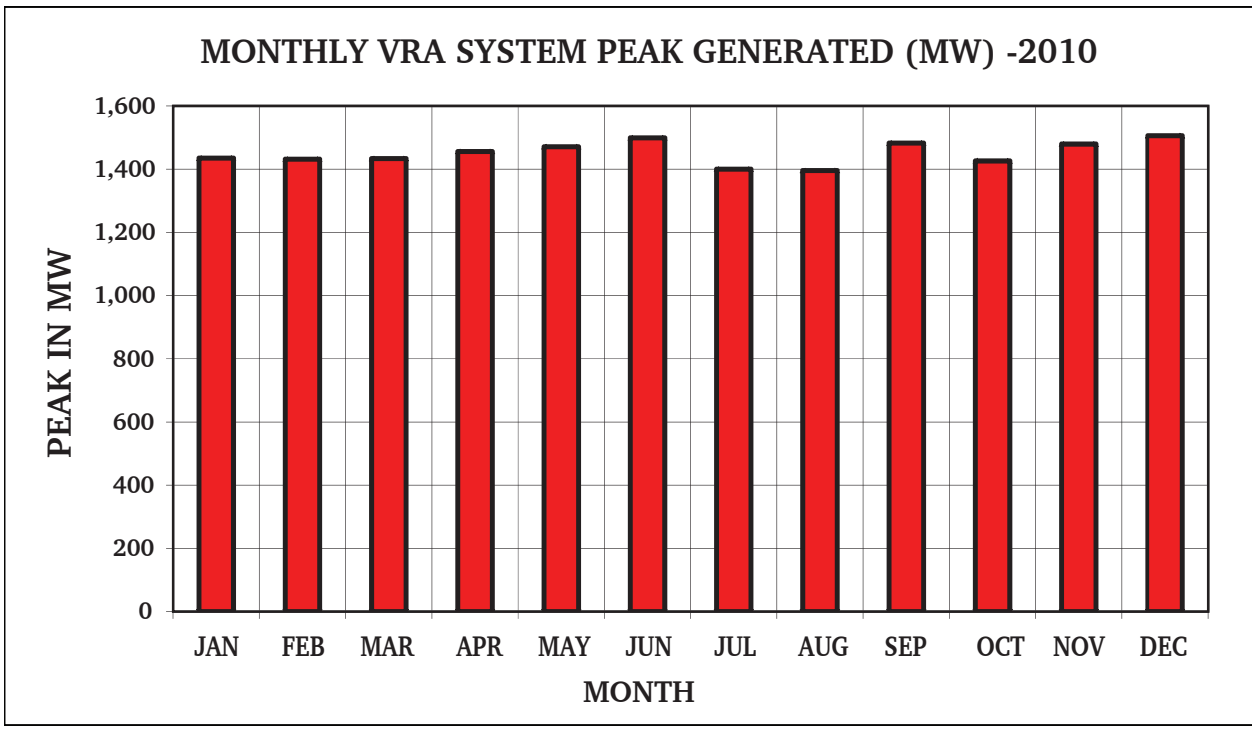
	2009		2010	
EXPORTS	Quantity (GWh)	Value (US$) million	Quantity (GWh)	Value (US$)
CEB	913	88.16	811	85.13
SONABEL	5	0.49	5	0.58
CIE	0	0.00	148	21.33
YOUGA MINES	9	1.02	39	4.50
TOTAL	927	89.67	1,002	111.54

	2009		2010	
IMPORT	Quantity (GWh)	Value (US$)	Quantity (GWh)	Value (US$)
CIE	198	25.74	106	12.75
TOTAL	198	25.74	106	12.75

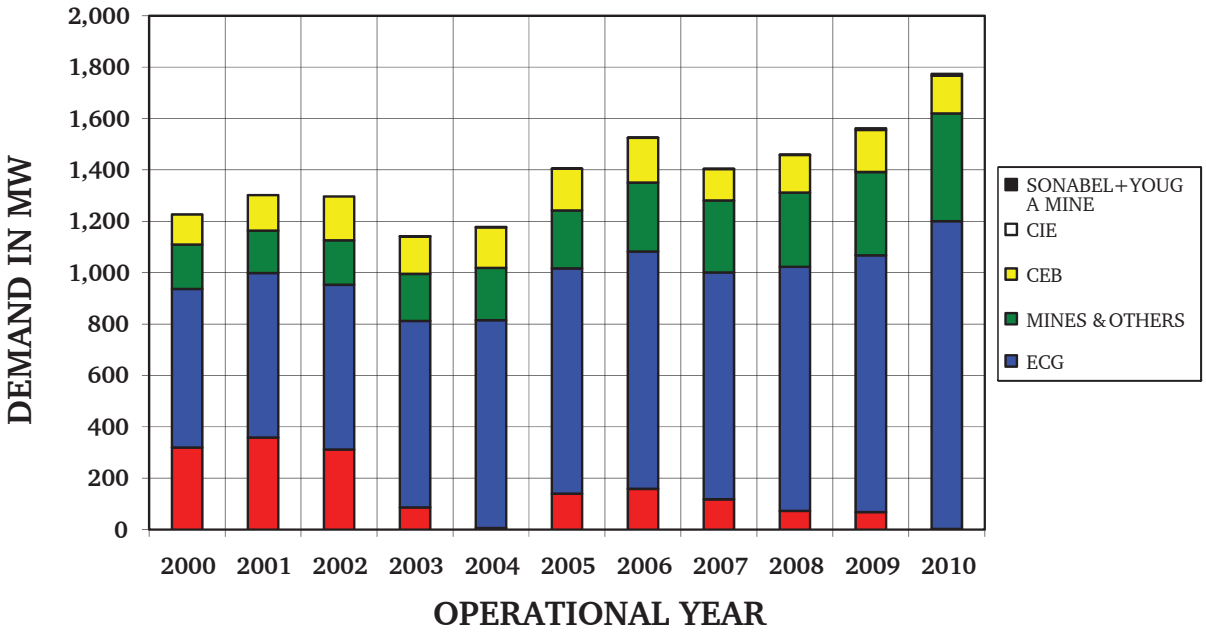
ELECTRICITY PRODUCTION

	2009	2010	Change
Total Energy Generation at Akosombo GS	5,842.166 GWh	5,960.686 GWh	2.0%
Total Energy Generation at Kpong GS	1,035.021 GWh	1,034.723 GWh	-0.03%
Total Energy Generation at Takoradi Thermal GS	452.938 GWh	1,233.611 GWh	172.4%
Total Energy Generation at Takoradi TICO Thermal GS	1,039.810 GWh	1,160.470 GWh	11.6%
** Total Energy Generation at Emergency Diesel Station	.183 GWh	.000 GWh	-100.0%
Total Energy Generation at Mines Reserve Power Station	17.789 GWh	19.735 GWh	10.9%
Total Energy Generation at Tema Thermal 1 Power Station	570.987 GWh	591.127 GWh	3.5%
Total Energy Generation at Tema Thermal 2 Power Station	.000 GWh	28.138 GWh	100.0%
Total Energy Generation at Sunon-Asogli Power Station an IPP	.000 GWh	137.827 GWh	100.0%
Total Energy Generated at all Generating stations (A+B+C+D+E+F+G+H+I)	8,958.894 GWh	10,166.317 GWh	13.5%
Energy imported from CIE for VRA use	193.665 GWh	106.526 GWh	-45.0%
Energy imported from CEB for VRA use	-	-	-
Total Energy Imported From CEB and CIE (K+L)	193.665 GWh	106.526 GWh	-45.0%
Total Energy Generated Plus Imports (J+M)	9,152.558 GWh	10,272.843 GWh	12.2%
Total Energy Used at all Generating Stations	21.726 GWh	40.471 GWh	86.3%
Energy Input to Transmission Systems (M-O-E)	9,130.649	10,232.372 GWh	12.1%
Energy used in the Substations	4.118 GWh	4.986 GWh	21.1%
Energy Exported & Sold to CEB From VRA	747.491 GWh	845.275 GWh	13.1%
*** Energy Exported & Sold to SONABEL From VRA	14.091 GWh	43.968 GWh	212.0%
Energy wheeled to CEB From CIE	149.051 GWh	34.426 GWh	-76.9%
Energy Exported to CIE From VRA	5.029 GWh	147.029 GWh	2823.4%
Total Energy Exported and wheeled (R+S+T+U)	915.663 GWh	1,070.698 GWh	16.9%
Total Consumption within Ghana (incl. VALCO)	8,017.639 GWh	8,811.105 GWh	9.9%

Total External Sales (CEB,CIE & SONABEL)(R+S+U)	766.611 GWh	1,036.272 GWh	35.2%
Total Energy Billed (W+X-E)	8,784.067 GWh	9,847.377 GWh	12.1%
Transmission Losses (P+T-Q-V-W+E)	342.465 GWh	380.009 GWh	11.0%
Percentage of Transmisson Losses Z/(P-Q)*100	3.8%	3.7%	-1.0%
Maximum Peak Generated (MW)	1,423.0 MW	1,505.9 MW	5.8%
Average Demand (N/8.76) (MW)	1,044.8 MW	1,172.7 MW	12.2%
Load Factor (AC/AB)	73.4%	77.9%	6.1%
Average plant discharge at Akosombo GS	1,196.29 cu.m/sec (42,271.75 cfs)	1,201.85 cu.m/sec (42,468.27 cfs)	0.5%

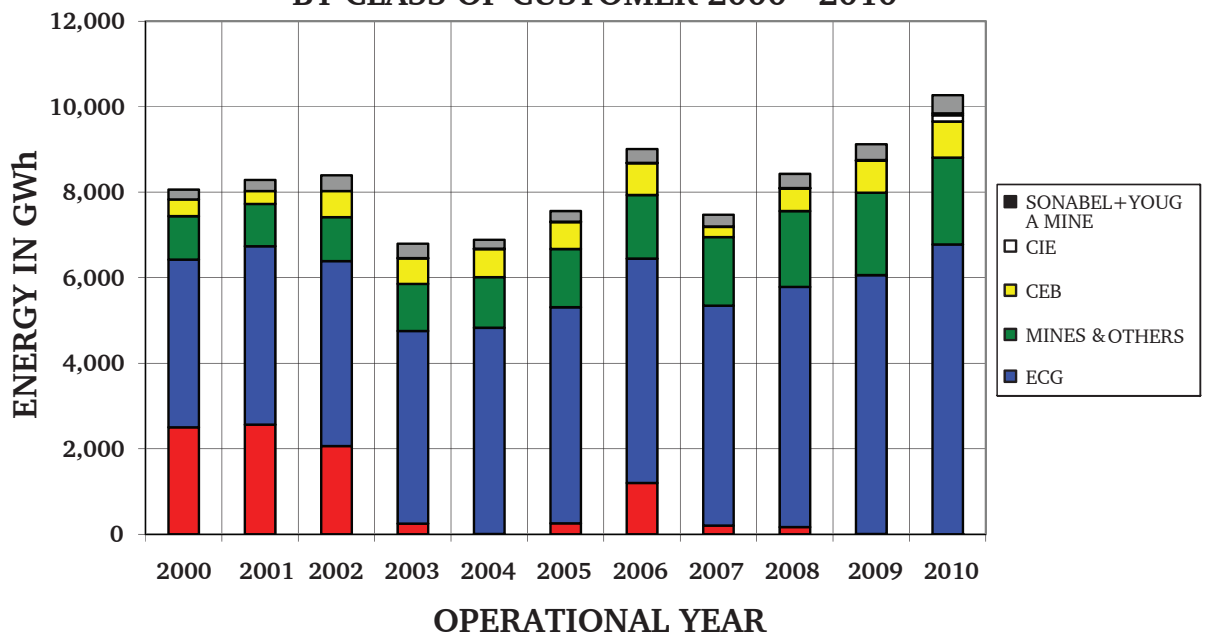


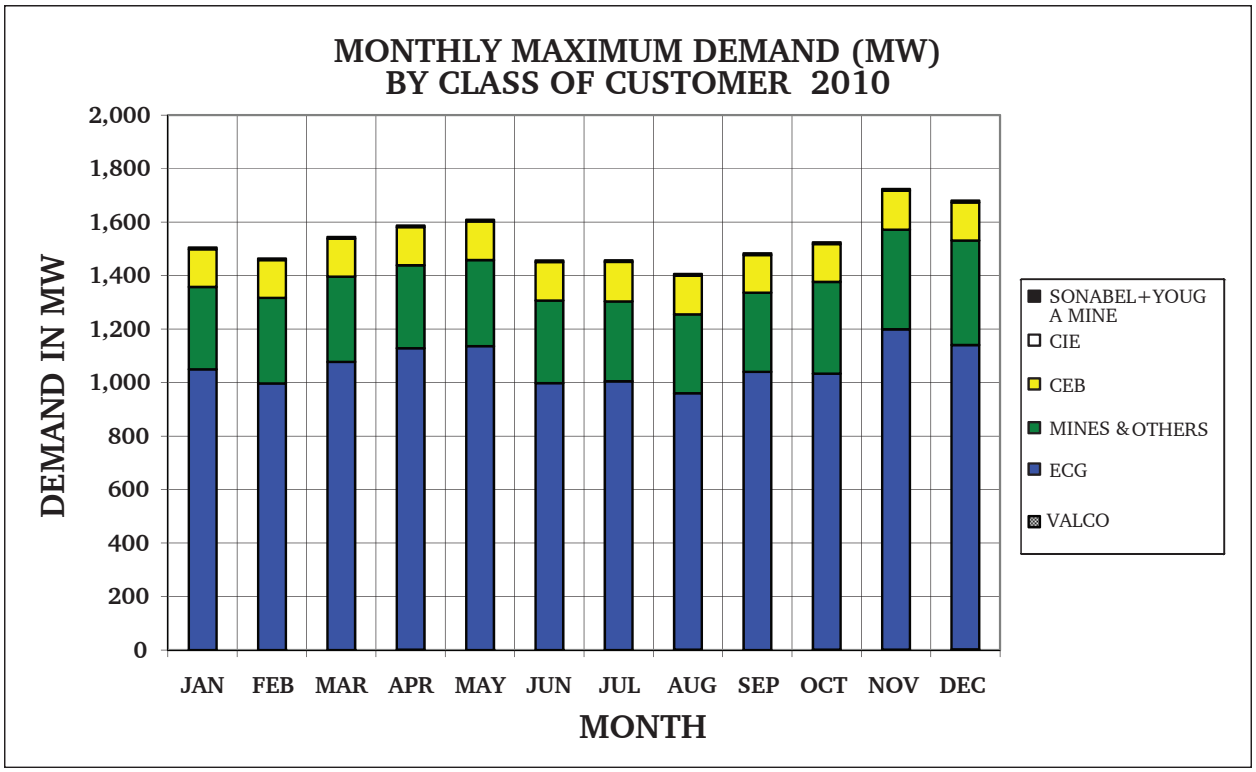
ANNUAL MAXIMUM DEMAND (MW) BY CLASS OF CUSTOMER 2000 - 2010

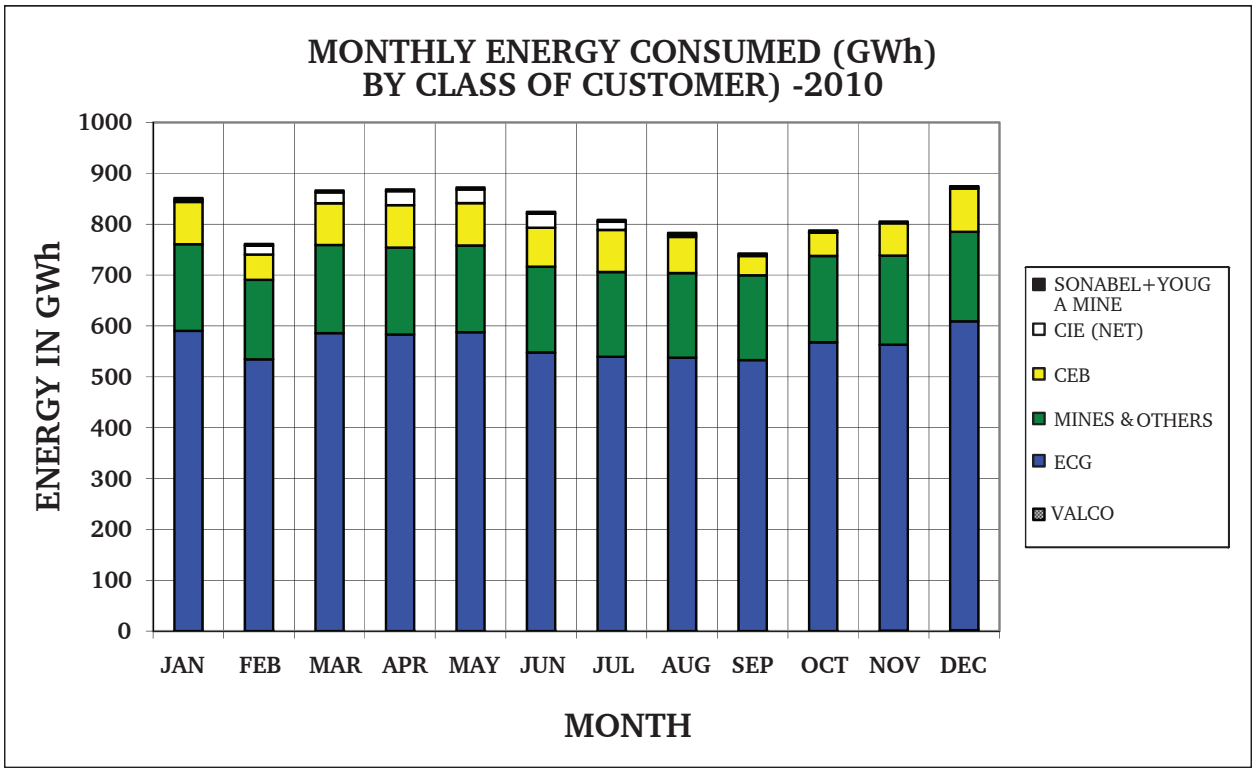


1. The reduction in 1999 demand was due to domestic load curtailement. Also there was load curtailment in 2006 and 2007
2. The maximum demand for 2002 is higher than that of 2003 because valco's load was curtailed.
3. Supply to SONEBEL (border towns Po and Leo) commenced in 2003 but is insignificant and therefore

ANNUAL ENERGY CONSUMED (GWh) BY CLASS OF CUSTOMER 2000 - 2010




MONTHLY MAXIMUM DEMAND (MW)
BY CLASS OF CUSTOMER 2010
DEMAND 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
SONABEL+YOUGA MINE
CIE
CEB
MINES &OTHERS
ECG
VALCO


MONTHLY ENERGY CONSUMED (GWh)
BY CLASS OF CUSTOMER) -2010
ENERGY IN GWh
1000
900
800
700
600
500
400
300
200
100
0
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
OCT
NOV
DEC
MONTH
SONABEL+YOUGA MINE
CIE (NET)
CEB
MINES &OTHERS
ECG
VALCO

PURC Approves Marginal Tariff Increases for 2010

A tariff proposal submitted to the Public Utilities Regulatory Commission (PURC) for upward adjustment in the Bulk Generation Tariff (BGT) to reflect increases in the cost of supply was approved. However, out of a tariff proposal of GHC 0.1536/kWh for the Bulk Generation Tariff (BGT), representing an increase of 155% over the existing tariff, the PURC approved a tariff of GHC 0.1191/kWh.

Review of Power Supply Contract/Agreement Reflects Current Generation Cost

A review of power purchase agreements with various categories of VRA customers initiated during the previous year to reflect current generation cost was completed in 2010. The salient points of the agreements are outlined below:

Anglo Gold Ashanti (AGA)

- All tariff issues have now been resolved and the Term Sheet will be concluded by February 2011.

CEB - Power Supply Arrangement

- Negotiation of the new Power Supply Agreement with CEB is almost complete. The tariff payable by CEB under this Agreement is however still outstanding. It is expected that this will be resolved in January 2011.

CIE

- A tariff of 12.0 US Cent/kWh for the Energy Exchange Contract (EEC) between CIE and VRA for 2009 and 2010 was agreed in November 2009. However, the application of the agreed adjustment formula has led to various interpretations.

- VRA has requested CIE to reconsider its position on the matter for the adjustment formula to be applied to reflect the cost of supply as and when the prices of crude oil rise and fall. The EEC will also have to be re-drafted to take into account the delivery of the transmission functions as VRA and GRIDCo are now separate entities.

Electricity Company of Ghana

- The Power Supply Agreement between ECG and VRA has been reviewed. Outstanding issue is the quantum of energy that VRA intends to supply to ECG, and this is being finalised as part of the 2011 Energy Supply Plan.

Review of Old Power Sales and Purchase Agreement (PSPA)

- The review of PSPA between VRA and the following customers are in progress: Aluworks Ltd, Ghana Consolidated Diamond Ltd, State Gold Mining Corporation (Konongo), Akosombo Textile Ltd. and Prestea Sankofa.

Gold Fields Ghana Limited (GFGL)

- The final review of the Power Sales and Purchase Agreement (PSPA) has been completed except for areas related to transmission functions as a result of the separation between Ghana Grid Company Limited (GRIDCO) and VRA. There are also some clarifications on the computation of adjusted tariff being sought by GFGL.

Newmont Ghana Gold Limited (NGGL)

- The Term Sheet has been executed by NGGL and VRA. VRA is to prepare the Draft PSPA based on the Term Sheet and amend the clauses related to the transmission functions as a result of the separation between GRIDCO and VRA for review by NGGL for further negotiations.

Golden Star Resources

- The Term Sheet for supply of power to the three subsidiaries of the Golden Star Resources (Wassa Gold Mine, Bogoso and Prestea) is being negotiated. Outstanding is the tariffs and areas related to transmission functions resulting from the separation of GRIDCO from VRA.

Free Zones Enclave (Supply to ILDC)

- The Term Sheet for supply of power to the Free Zone Enclave in Tema has been negotiated between International Land Development Company (ILDC) and VRA. Except for tariff matters and the clause amendment to take into account the transmission functions resulting from the separation of GRIDCO from VRA, the Term Sheet is ready for execution.

Diamond Cement Ghana Limited (DCGL)

- The update on the Final Draft Power Sales and Purchase Agreement has been circulated to the DCGL for comments before execution. Except for the amendment of clauses related to the transmission functions, the PSPA is ready for execution.

SONABEL - Interconnection between Bolga and Ouagadougou

- A draft Term Sheet was submitted to SONABEL in October 2010 for review and comments.

New Power Supplies

Various draft Term Sheets were submitted to new customers listed below for their review, and comments. These are:

Asogli Power Plant

- Negotiation of the draft Power Exchange Agreement between VRA and Asogli is almost completed.

Central Ashanti Gold Ltd

- Negotiation of the draft Term Sheet is almost completed except the issue with the tariff which is yet to be resolved.

Adamus Resources Ltd

- Negotiation of the draft Term Sheet is almost completed except the issue with the tariff which is to be resolved.

MTN and Chirano Gold

Separate meetings were held with MTN and Chirano Gold on how power could be supplied to their respective sites. It was agreed at the meeting that MTN and Chirano should consult ECG for distribution services and revert to the VRA.

Regulation and Electricity Market Operations

The Authority engaged a Power Market Rules Consultant (EBIZ Labs Inc.), to assist in the review of the Electricity Market rules to enable the VRA make meaningful input in the drafting of the Electricity Market rules by the Energy Commission. The consultant is expected to complete the task by February 2011.

Natural Gas Supply

Nigeria Gas Delivery Delays

Delivery of compressed gas from Nigeria was delayed and is now expected in the first quarter of 2011 due to unexpected difficulties in the commissioning of the Lagos Beach Compressor Station. In the mean time free flow gas continued to flow at a rate of about 70,000 MBTU/day to Takoradi and Tema to run TTPS, TT1PP, TT2PP and the Asogli Plant. The year 2010 saw a substantial amount of free flow gas supply from Nigeria, and the table below gives the monthly distribution of gas supplied to Takoradi and Tema to operate the Thermal facilities. As at the end of 2010, a total amount of 12,766.36MMBtu of natural gas was delivered to the Takoradi and Tema thermal plants.

	CONSUMPTION (MMBTU)			
	Months	Takoradi	Tema	Total
GAS	Jan	65,282.71		65,282.71
	Feb	16,859.77		16,859.77
	Mar	181,545.62		181,545.62
	Apr	884,395.39		884,395.39
	May	1,089,770.81		1,089,770.81
	Jun	1,204,514.12		1,204,514.12
	Jul	928,832.65		928,832.65
	Aug	1,249,599.20	4,489.96	1,254,089.16
	Sep	1,616,060.63	281,575.93	1,897,636.55
	Oct	1,317,625.22	97,123.50	1,414,748.72
	Nov	754,351.67	428,837.83	1,183,189.50
	Dec	1,400,691.63	1,245,164.72	2,645,856.35
	Total	10,709,529.42	2,057,191.94	12,766,721.36

Supply to Sunon-Asogli Power Limited (SAP)

The VRA is finalizing the commercial arrangements for the delivery of natural gas to the 200 MW SAP plant at Tema. The short term tolling arrangements have been completed and the required Heads of Agreement has been prepared for execution. The procurement arrangements for contracting a legal firm to assist with the preparation of the substantive Gas Sales Agreement is in progress. The arrangements for the required "no objection" from the relevant stakeholders of the West African Gas Pipeline projects as a requisite condition for the on-sale of the gas to SAP is being followed up.

Ghana Gas

Production from the Jubilee oil and gas field started on December 15, 2010 using the Kwame Nkrumah Floating, Production, Storage and Offloading (FPSO) vessel. Initial oil production would reach 55,000 barrels per day by December 2010 and increase to 120,000 barrels per day during the first half of 2011, when additional wells are completed. The FPSO is capable of processing 120,000 b/d and 160 MMscfd of gas and storing up to 1.6 million bbl of crude. It is also capable of treating and injecting 232,000 b/d of water for reservoir pressure maintenance, and it can offload or re-inject 160 MMscfd of gas.

The FPSO requires 20 MMscfd of gas for its domestic power generation and according to the Plan of Development, up to 30% of gas produced could be injected to enhance recovery. The remainder of the gas from the FPSO will be transported to the shore for further processing into quality gas to fire power plants. The Field is expected to be equipped with a second FPSO with similar capacity by 2014 and invariably double the gas production. The gas from the Jubilee Field is a key requirement for the VRA's thermal power plants.

At present, natural gas from the Jubilee Fields is being used to fuel the FPSO and the remainder is being flared, since the remaining quantity is not enough for re-injection. Ultimately, gas produced will be piped to power any available power plant, if only the needed infrastructure to move the gas to these plants have been constructed. VRA is in earnest discussions with GNPC to utilise the gas at Domunli by constructing a power plant capable of using the initial gas from the FPSO. GNPC is working towards building a gas processing facility at Domunli, where commercial quantities of gas will be produced and piped to Aboadze and Tema, through the WAGP.

Liquefied Natural Gas (LNG)

Out of VRA's immediate total gas requirement of 250 MMscf/day, the Authority could count on a supply of 123 Mscf/day from WAGP and an additional 20 Mscf/day from the Jubilee fields, bringing the total supply to 143 MMscf/day. The immediate shortfall is about 100 Mscf/day and this is likely to increase to 220 MMscf/day by end of 2011 when on-going power projects are completed.

In the medium to long term, demand is expected to increase to about 300 MMscf/day. Based on VRA's projections, the demand for gas for power generation outstrips gas available from the WAGP and Western Ghana. Consequently, the VRA is seeking to secure alternative sources of supply both to meet growing demand as well as to reduce risk of supply disruptions. Degasification of Liquefied Natural Gas (LNG) has been considered as a viable option. This involves the transportation of LNG and its conversion into natural gas.

The principle is to build a floating LNG re-gasification plant in Tema for supply of gas to fire up to 400 MW of thermal capacity currently available and any future additions. A number of proposals have been received to supply LNG to the VRA thermal Plants using floating facilities in Ghana. Given the scale of investments involved, a thorough study is being done into the technology and a consultant will be engaged to assist the VRA in pursuing this option for gas supply.

Renewable Energy Development is the Future

We are committed to the development of renewable energy, in particular wind and solar energy. Renewable energy is economically competitive with the fuel fossils. 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 accounted for 75.3%

of the total system supply last year. Ghana needs energy that is secure, reliable, improves public health, protects the environment and addresses climate change, and provides technological leadership.

The development of renewable energy and energy efficiency marks a new era of energy exploration in Ghana. The VRA intensified its effort at renewable energy development projects. Development work is progressing steadily on a number of renewable energy projects including wind and solar power. For this purpose, a VRA technical team made two familiarization visits to Spain to study the development, design, operation and regulation of renewable energy.

Wind power development

The objective of the Authority is to develop up to 150 MW of wind power at locations where these are practicable. We propose to develop the resource through a joint venture arrangement with an internationally reputable partner with expertise in that field.

The procurement of a consultant to advise and assist the VRA with the development and design of its renewable project is in progress. The technical evaluation report for the prequalified consultants has been approved by the Authority's Entity Committee. The next step is to complete the evaluation of the financial proposals

The procurement arrangements for the selection of the joint venture partner are in progress and will be launched by the first quarter of 2011.

Renewable resources would play an increasingly vital role in the power generation mix over the next century.

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 development of the required terms of reference for a feasibility study is in progress. Land for the project has been identified at three locations in the Upper East and West Regions.

The Chief Executive, Mr. Kweku Awotwi and a VRA technical team on a familiarization visit to Spain to study the development of renewable energy.

Emission Credit Development

We are equally planning to identify projects whose carbon emission can be reduced to qualify the VRA to benefit from emission credits. We held discussions with three identified institutions which have 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.

Biomass Energy Development

The Authority seeks to cooperate, facilitate and collaborate with private entities in the development of biomass energy. Though these are purely private projects, the VRA/NED are collaborating with the private sector in order to have economic, social and technical basis for the development of these renewable projects.

The VRA/NED is collaborating with three entities for the development of biomass related energy projects. These include a sugarcane/ biogas to energy plant, a biomass (bamboo) to energy plant and a municipal waste to energy power plant.

Takoradi International Company (TICO) Conversion into a Combined Cycle Plant Expected Soon

The TICO (TAQA) Plant (T2) is expected to be converted from a 220MW simple cycle plant into a 330 MW combined cycle plant, and the VRA is planning to negotiate the best terms for the Authority as the Off-taker in the T2 Expansion project. The Engineering, procurement & construction (EPC) contractor selection process is in progress.

The key issues have been identified and negotiations on these are in progress. The first round of formal negotiations had already been held. The two parties continue to resolve outstanding issues on the various project agreements. The project agreements include:

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

- Site Lease Agreement

The project schedule envisages financial close and the requisite Parliamentary approval by July 31, 2011.

Plant Facilities Hit Peak Performance

The peak performance of the hydro generating facilities was due to our commitment to a maintenance culture which ensures optimum performance of our power equipment. A five-yearly review inspection of the Akosombo and Kpong dams and their appurtenant structures recommended by the International Commission on Large Dams (ICOLD) found the dams to be in good condition. The average unit availability attained at the Akosombo and Kpong Generating Stations were 96.87% and 98.55% respectively, above a set target of 94%. The annual plant combined availability and capacity utilization factors at the Takoradi Thermal Power Station were 52.14% and 45.93% respectively. At Kpong Generating Station, mini-retrofit of Unit 4 had to be postponed, on several occasions, to January 2011 due to power system constraints.

Emergency Preparedness Plan Makes progress

The VRA is developing an Emergency Preparedness Plan (EPP) for the Akosombo and Kpong dams. The EPP specifies the roles and responsibilities of stakeholders when failure becomes eminent and expected operational flow release threatens downstream life, property or economic activities. The consultants for the project, Association of Royal Haskoning from The Netherlands and Norplan from Norway conducted Dam Safety Analysis. All the tests were largely successful.

Power System Development

The Authority's power system development programme involves the direct expansion and upgrade of electric power system.

Ghana Energy Development and Access programme (GEDAP) Expands Power System in NED Areas

The VRA is committed to a programme designed to improve and enhance electricity accessibility and availability. Consequently, the VRA is expanding its power system. This project, which is in two parts, involves the development of the Kumase Second Bulk Supply Point and distribution networks, funded by the African Development Bank. A sub-component of GEDAP, the NED Intensification Project seeks to further improve access to electricity. Financed by the International Development Association (IDA) of the World Bank, the project is expected to improve the network operation by upgrading overloaded and undersized conductors and transformers. Supply and delivery of prepaid meters, which is a significant aspect of the programme has been completed.

Self-Help Electrification Programme (SHEP)

Various preparatory development activities for supply extension were undertaken in the Bole, Asunafo, Tain and Techiman districts.

DISTRIBUTION

Strong Customer Satisfaction Perspective with Strong Emphasis on Economic Efficiency

We are executing a strategy aimed at achieving economic efficiency with strong emphasis on technological efficiency of the Northern Electricity Department (NED). Consequently, NED which is responsible for the distribution of electricity to the northern sector will now operate as a subsidiary of the VRA with a full-fledged status as an independent commercial entity.

Accordingly, the level of intensity of interaction with customers in the NED Areas is expected to be higher in our distribution functions. We have therefore initiated a number of programmes designed to put a great deal of emphasis on customer satisfaction, particularly innovative services, collaboration and partnership with targetable customer communities, and responsiveness and proactive services to the needs of customers. The various stakeholders have different expectations regarding the value they expect from us. The main challenge in the distribution function has been managing the shift from being production driven towards becoming value driven organization.
NED's operations saw significant increases in its customer population and energy sales. However, system distribution losses increased marginally.

NED purchased 643,824,757 kWh of energy for distribution during the year, out of which 516,545,012 kWh was accounted for. This represents 19.8% system loss for the period. Billed Revenue was GH¢97,008,124 whiles total revenue collected was GH¢76,749,473 representing a collection rate of 79%. Accounts Receivable at the end of the period stood at GH¢69,154,192. NED recorded 342,906 customers at the end of December 2010.

About three hundred and thirty-one (331) transformer substations, including those of Self Help Electrification Projects (SHEP) were successfully commissioned while work on others progressed steadily.

A total of ten thousand, eight hundred and six (10,806) SHEP connections were completed

in 2010 while twenty-nine thousand, two hundred and seventy three (29,273) new services, excluding NEP/SHEP, were connected to the existing network.

Two thousand six hundred and twenty-seven (2,627) spans of the low voltage network were upgraded. The HV and LV networks were also extended by one hundred and seventy (170km) kilometres in 2010, excluding SHEP extensions.

A total of seven hundred and sixty-seven (767) interconnections and non-standard Services were removed from the network as part of the ongoing losses reduction programme. Seven hundred and thirty-four (734) illegal connections were detected and removed from the network in the Northern and Sunyani Areas.

A summary of vital statistics of the operations of NED can be found in the table below:

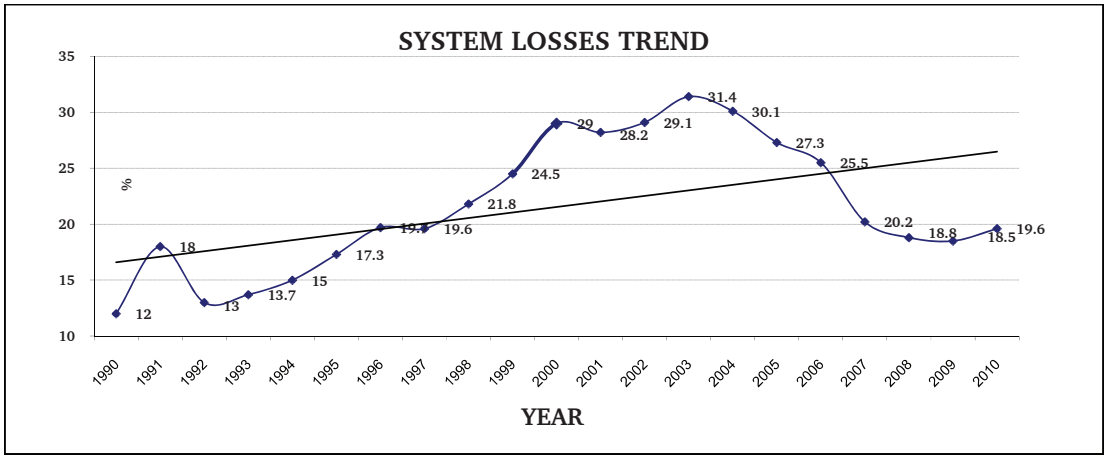
SUMMARY OF VITAL COMMERCIAL STATISTICS

Indicator	2010	2009	2008	2008
Total Energy Supplied (kWh)	643,824,757	564,870,820	528,529,820	496,414,795
Total Energy Billed (kWh)	464,226,317	416,653,321	391,577,415	365,080,573
Total Energy Accounted for (kWh)	516,545,012	460,382,548	428,978,586	396,032,985
System Losses (Y-T-D) (%)	19.8	18.5	18.8	20.2
Billed Revenue (¢)	97,008,124	64,331,801	59,750,650	36,726,604
Collected Revenue (¢)	76,749,473	57,029,423	42,255,941	29,882,420
Collection Rate (%)	79	89	71	81
Accounts Receivable (¢)	69,154,192	50,366,417	45,083,422	35,712,130
Debtors Collection Period (days)	331	331	307	355
Customer Population	342,906	307,871	278,476	248,245
Average Tariff (¢ per KWh)*	0.154	0.154	0.153	0.101

*** Average Tariff (¢) = Billed Revenue (¢)**

System Losses

The distribution system loss rose from a loss of 18.5% 2009 to 19.6% for the year 2010.

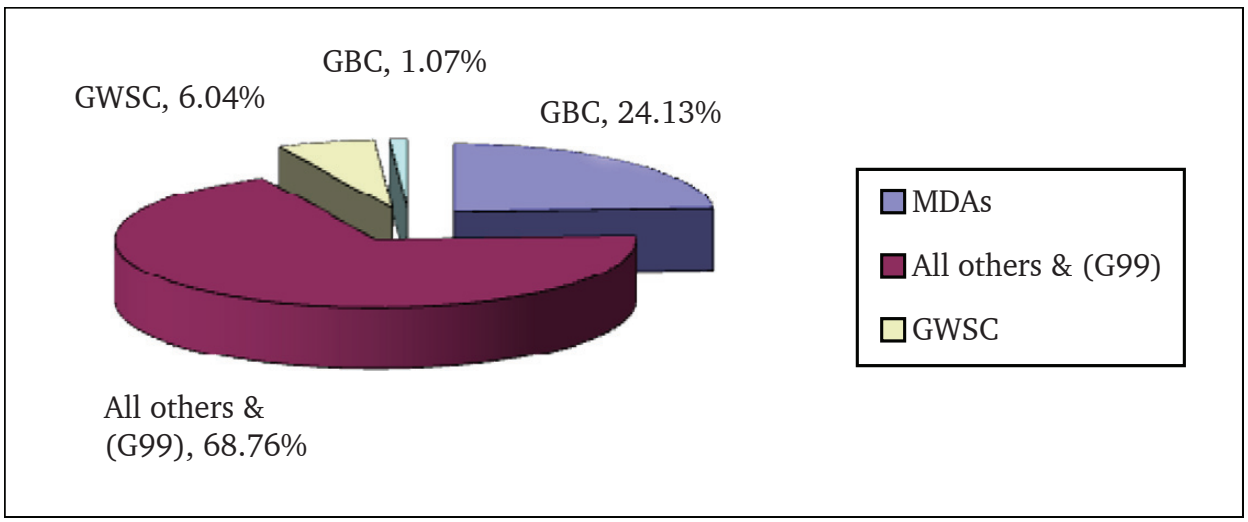


A trend analysis indicates that for the last three years there was consistent reduction, but due to metering problems and lack of logistics, reduction suffered a setback and there is the need to intensify the implementation of the system loss reduction programmes.

Debt Management

The receivables for the year stood at GH¢50,366,417 and the receivable lag was 331 days. Out of the receivables, 24.13% is government (MDAs) debt, 68.76% is attributable to our 'non-sensitive customers' whilst 7.11% is other sensitive customers like GBC and GWCL.

Revenue by customer class

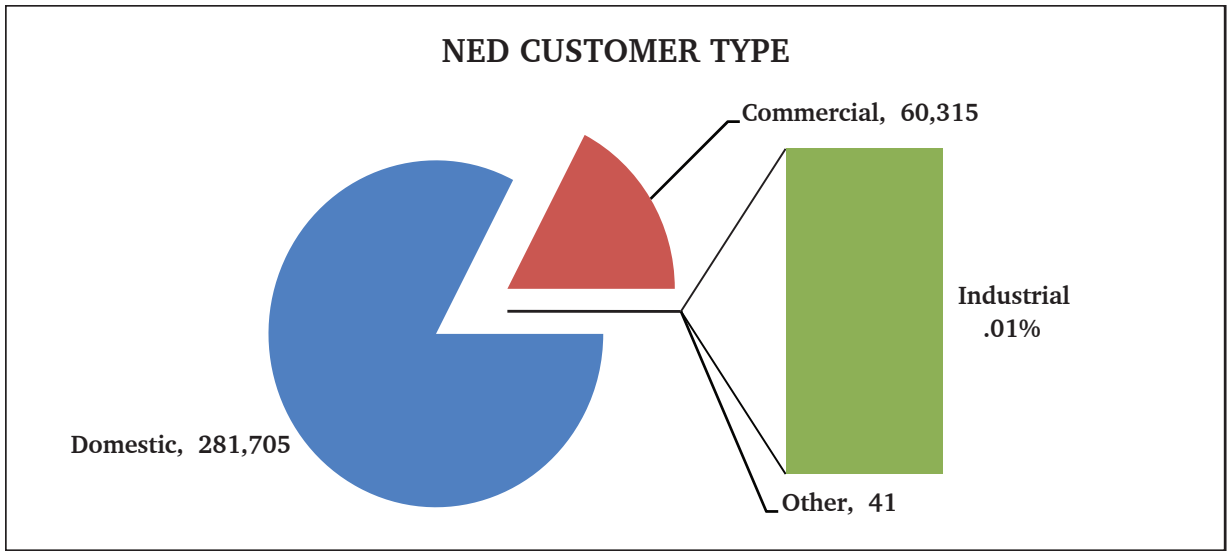


Debt management through disconnections, serving defaulting customers with demand notices and court summons continued to be deployed in the Areas.

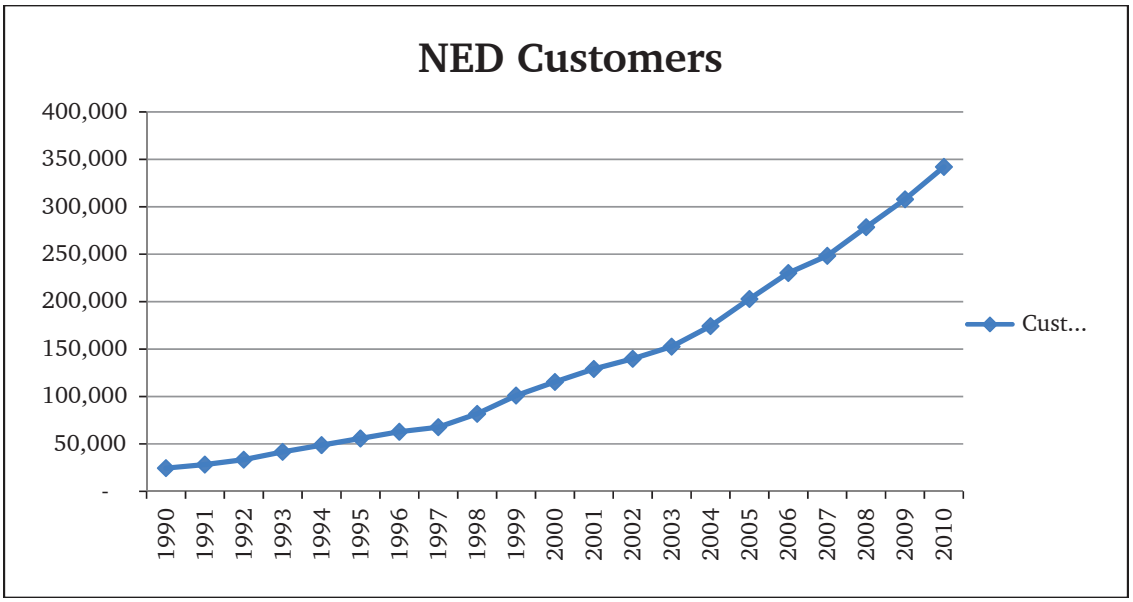
Customers

The number of NED customers as at December 2010 stood at 342,060, an increase of about 10.6% over previous year's figure of 307,871. The residential customers were 281,704, about 83%, Non-residential customers were 60,315, about 17%, and 41 industrial customers who constitute only 0.01% of the customer population.

About 105,572 customers of NED, 42% as at December 2009 enjoyed a subsidy from Government.



The average yearly growth of customers is not improving because of lack of prerequisite logistics (Transformers, meters, poles, cables etc) to connect new customers. This situation continues to raise the level of suppressed demand for electricity and lead to illegal connections. Areas will continue to connect customers on flat rate until the meter situation improves.



Metering Challenges

NED had about 242,136 credit meters, 54,187 prepaid meters and 11,548 flat rate customers at the close of the year. The prepaid meters constitute about 17% of total meters installed in the system.

A significant challenge faced by NED was adequately metering customers dotted all over the operational area with the right type of meters. The credit metering system has left NED burdened with a huge amount of arrears to collect. Provision of prepaid meters for all customers in the regional, district, and large villages could help arrest the build up of receivables.

Billing

Billing accuracy and timely delivery of bills foster good customer relations and increase revenue. NED is therefore committed towards printing adequate stock of bill forms, receipt books, and customer application forms.

Community Relations Improve Stakeholder Relations

The VRA undertook working visits to some communities in NED operational areas including those which were affected by floods in 2009. Public education forums were organized and issues discussed included illegal connections and prompt payment of bills.

NON POWER OPERATIONS

SUPPORT SERVICES

Human Resource Development

"Growth and Learning and Value Creation"

The VRA is pursuing vigorously business development driven change management processes in order to increase productivity and efficiency in a competitive deregulated energy market. 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. In order to achieve success, the VRA's culture, its leadership and its employees are aligned to corporate strategic goals while a congenial professional environment aimed at developing motivated, efficient and experienced human resources through strategic planning encourages employees to share knowledge to create the climate for action.

The Authority recognizes that the responsibility for managing change is with management and the executives who must manage change in a way that employees can cope with. In line with its "Learning and Growth" objectives, the VRA sponsored 5,099 employees who attended 370 courses locally and off-shore. An Interim Leadership Development Program (Module I) was organized for a total of 49 officers comprising the Executive, Directors and Group one (1) of the Managers from February 21-25, 2010. Module 2 of the program was organized from May 17-19, 20-22 and 26-28, 2010 for four Executives, 20 Directors and 65 Managers respectively.

Module 3 of the program was organized for 16 newly appointed Managers of the Authority on September 20, 2010, 21 Directors and three Executives from September 22-25, 2010.

The Authority ran a course on plant safety for 23 engineers of Sun Asogli Power Company

from December 13-16, 2010.
The Authority also conducted selection test for

- 139 technician engineers on behalf of Bui Power Authority.
- 582 technician engineers on behalf of GRIDCO.
- Four candidates on behalf of GRIDCO for the position of secretaries.

Reward Management System Review Project Compensation Policy and Strategy Paper

The VRA organized two separate meetings on Reward Management Project and Performance Management Project to discus a “Compensation Policy and Strategy Paper". The Policy and Strategy Paper was extensively reviewed to reflect 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 were revealed. Wages and Salary Administration would be transformed to take care of the new Performance Management System.

Health and Safety

As a “quality” organization, the VRA places a high premium on health and safety to help keep staff at work and reduce the costs of injuries, illness, property and equipment damage. Consequently, the VRA is committed to the highest health and safety standards. 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.

The VRA is commited to prompt and supportive healthcare delivery system.

Introduced in 1990, the VRA hospital ship (ONIPANUA) offers free medical services to communities along the Volta Lake as part of its social responsibility.

As a principle every employee accepts personal responsibility for his or her safety and health which out lines a frame work for managing health and safety set out in the Authority's Safety Manual. In order to make the health and safety policy effective, and enlist staff involvement and commitment, and build a 'positive health and safety culture,' safety meetings are held every week to afford the employees the opportunity to internalize safety principles and practices so that their observance could become second nature. Indeed, week-long activities are celebrated every year to:

- Assess the skills needed to carry out all task in safety.
- Provide the means to ensure that all employees, including managers, supervisors and temporary staff, are adequately instructed and trained.
- Ensure that people doing especially dangerous work have the necessary training, experience and other qualities to carry out the work in 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.

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 Northern Electricity Department are also catered for by the Authority's designated panel of doctors.

Total outpatient attendance at the four health facilities was 160,213, 13.89% higher than the preceding year's figure of 140,803. Significant Increases were recorded in all the facilities, especially Aboadze due to the implementation of the flexible working hours concept and other short term initiatives in the hospitals.

Total number of admissions was 4,428, an increase of 30% compared to last year's figure of 3,409. The paying public constituted about 65% of the overall out-patient load and 93.2% for the in-patient load in all the medical facilities. Other cases were referred to selected hospitals including Korle Bu Teaching Hospital, 37 Military Hospital, St. Joseph's Hospital at Koforidua. The Operation Ghana Medical Mission Program continued through out the year.

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

the period to GH¢931,771.73. The Local Authority component which was Gh¢77,427.08

MANAGEMENT INFORMATION SYSTEMS (MIS)

Cost Efficiency Perspective

Information capital is another set of intangible assets essential to implement corporate strategy. This entails the information systems, networks and information technology infrastructure of the VRA or strategic technologies. The change processes being carried out in the VRA are to align the objectives and goals of the Authority to its corporate strategy. This will enable the VRA to review its business processes in managing the shift from being production driven towards becoming a value-driven organization, and creating value for its stakeholders. This strategic approach 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.

Consequently, the Management Information System has been decentralized in order to make it very visible in work locations to provide relevant ICT services to all business processes. To enable management communicate from various locations simultaneously and eliminate travel time and reduce cost as well as make timeless decision the Office Communication Server (OCS) was deployed on pilot basis at the Accra Head Office, Takoradi and Tamale. This facility is designed basically for video/ conference. In order to minimize the down time of the western corridor segment of the Wide Area Net (WAN), 2.048Mbps links were implemented between Aboadze and Kumasi to provide an alternative path in case of disruption between Tema and Aboadze. This has significantly improved network reliability between Aboadze and the rest of the VRA.

Internet and E-MAIL Services

Corporate Internet availability was up about 96%, while E-mail Service was also up through out the year except a down time of approximately about 16 hours which was due mainly to challenges from the ISP Vodafone. The memory size of the exchange quail Server was increased tremendously to cope with increased usage as well as resolve the problem of non- delivery and receipt of mails.

Oracle HRMS Upgrade

The Oracle HRMS upgrade (i.e. payroll, core HR and the Learning and Performance Management Modules) and the implementation of HR Self-Service was successfully completed during the year.

Wide Area Networks (WAN) Operations

The WAN link between the southern and NED operational areas was upgraded from 128Kbps to 2048Kbps during the period under review. The upgrade has significantly improved our data communication between the Southern and Northern locations, VRA.

Fire Suppression System

A Fire Suppression System was successfully acquired, installed and tested at the Data Centre at the Head Office in Accra to ensure maximum fire detection to forestall any fire disaster at the centre.

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. All 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¢77,427.08 while non-local Authority activities yielded GH¢854,344.86 bringing the total revenue generated during the period to GH¢931,771.73. The Local Authority component which was Gh¢77,427.08 will be shared equally by the Authority and the Asuogyaman District Assembly.

The Maritime Club, guest houses, mess halls and other trading outlets generated a gross revenue of GH¢452,427.30 during the year.

SUBSIDIARIES

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 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 19.25% higher. Real value for total revenue for 2010 was GH¢2,176,241 compared to GH¢1,824,911 in 2009. Occupancy for 2010 was 59% compared to 49% in 2009. Direct operating result for 2010 was GH¢428,962 compared to GH¢238,362 in 2009. Direct operating cost for 2010 was GH¢1,742,279 compared to GH¢1,586,549 in 2009. Net operating (loss) before depreciation for 2010 was GH¢28,928 compared to a net loss of GH¢184,987 in 2009. Depreciation for the period 2010 was GH¢198,279 compared to GH¢191,779 in 2009. Net operating loss after depreciation for 2010 was GH¢169,290 compared to a net loss of GH¢376,766 in 2009. Property, plant and equipment for 2010 was GH¢3,551,909 compared to GH¢3,481,015 in 2009.

A Sales & Marketing Manager position was created to provide fresh impetus to leverage a business strategy drive to improve the financial performance of the hotel. These and other interventions contributed significantly to the 19.25% rise in turn over recorded for the year.

The VRA is expanding facilities at the 3-Star Volta Hotel to promote the hospitality and tourism industry in the Volta Basin.

Mr. Frederick Bart-Plange was appointed General Manager of the hotel effective August 2, 2010. He took over from Mr. Seth Asante, who is now serving as Director, Real Estate, at the Volta River Authority. Mr. Bart-Plange holds an MBA in Hospitality Management from the Institute of Hospitality Management, Switzerland. He has held senior management positions in world class hotels in Switzerland, United States of America, London, Dubai, and in Ghana he has held top flight management positions at the La Pleasure Beach hotel, La Palm Beach Hotel, Coconut Groove, Royal Fiesta, and Novotel.

Mr. Bart-Plange, General Manager, Volta Hotel, providing leadership to leverage a business strategy to improve the financial performance of the Volta 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.

Total revenue for 2010 was GH¢3,997,701 compared to GH¢2,640,430 the previous year. Gross profit was GH¢300,274 compared to a loss of GH¢1,167,209 in 2009. Operating loss reduced significantly from GH¢2,962,085 to GH¢1,101,114.

As public carriers, VLTC vessels boost economic activities by providing safe, reliable and convenient transportation for passengers and freight on 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" 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, KPF 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 RESPONSIBILITY

The VRA's right to exist depends on 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 image 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.

In consonance with the VRA's values and principles, the following social investments were undertaken:

- Sponsored a number of national priority programmes such as rural electrification projects, health, water resources, education, capacity building, culture, 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 FOR THE YEAR ENDED DECEMBER 31, 2010

FINANCIAL REVIEW FOR THE YEAR ENDED DECEMBER 31, 2010

Power Production

The total electricity generated from both VRA hydro and thermal sources increased by 12% (1,070GWh) from 8,959GWh generated in 2009 to 10,029GWh in 2010; this includes generation and transmission substations use of 45GWh (2009: 26GWh). Generation from hydro sources increased by 2% (118GWh) from 6,877GWh in 2009 to 6,995GWh in 2010. Thermal generation also increased by 46% (952GWh) from 2,081GWh in 2009 to 3,033GWh in 2010.

To supplement generation from VRA's own plants, a gross power quantity of 244GWh (2009: 194GWh) was purchased from Compagnie Ivoirienne d' Electricité (CIE) of La Cote D' Ivoire and Sunon Asogli of Ghana. The Authority however exported 148GWh (2009: 5GWh) to CIE.

Revenue

Revenue from sale of electricity increased by 42.74% (GH¢322.64 million) from GH¢754.82 in 2009 to GH¢1,077.46 million in 2010. This was mainly due to increase in the volume of electricity sold by 12.05% (1,040GWh) from 8,629GWh in 2009 to 9,669GWh in 2010 and an increase in Bulk Generation Tariff from GH¢0.0602/kWh to GH¢0.1072 effective June 1, 2010.

Other operating income

Other operating income of the Group increased by 61.02% (GH¢6.32 million) from GH¢22.89 million in 2009 to GH¢36.86 million in 2010. This is attributable mainly to increases in subsidiaries' income, hospitals' revenue and profit on sale of fixed assets.

Cost of sales

Cost of sales consisting of fuel usage, power imports , depreciation, salaries, materials, and other operating cost, increased by GH¢214.41 million (31.82%) from GH¢673.92 million in 2009 to GH¢888.33 million in 2010.

The main factors that contributed to the increase were;

1. Increase in fuel usage and handling

cost by about 54.68% from GH¢403.63 million in 2009 to GH¢624.33 million in 2010 due to:

- Increase in crude oil price from an average of US$71.89 in 2009 to an average of US$81.00 in 2010.
- Increase in the volume of crude oil used from 420,849.40m^3 in 2009 to 480,069.97m^3 in 2010.
- Increase in the volume of distillate fuel oil used from 1,384,865 litres in 2009 to 1,713,383 litres in 2010.
- Increase in average price of natural gas

2. 3.59% increase in the total of salaries and related expenses, materials and spares, depreciation and other operating costs from GH¢177.95 million in 2009 to GH¢184.33 million in 2010.

Administrative expenses

The Group's administrative expenses increased by 80.79% (GH¢77.18 million) from GH¢95.53 million in 2009 to GH¢172.71 million in 2010. This was mainly due to increase in salaries and related expenses and other administrative costs.

Government Assistance

The Authority received assistance from the Government of Ghana (GoG) to the tune of GH¢477.12 in 2010 compared to no assistance in 2009. The assistance granted in 2010 was in respect of relief on HIPC loans, promissory notes for crude oil purchase, proceeds of sovereign bonds extended to the Authority in 2007 and 2008 and Government contribution to West African Gas Pipeline Project. The total amount of GH¢477.12 million was treated as Government's additional equity in the Authority and therefore did not affect the operating results of the Group for 2010.

Operating Profit

The Group reported an annual operating profit of GH¢53.29 million in 2010 compared to GH¢8.27 million in 2009. This represents an increase of 544.70%. The increase is mainly due to the combined effect of increase in total operating revenue by GH¢336.61 million (43.28%) from GH¢777.71 million in 2009 to GH¢1,114.33 million in 2010 viz-a-viz an increase of GH¢291.59 million (37.90%) in total operating cost from GH¢769.45 million in 2009 to GH¢1,061.04 million in 2010. The operating profit represents a return of 2.40% on average revalued net fixed assets (2009: 0.40%) which is still below the covenanted rate of 8%.

Net Profit / (Loss)

The Group ended the year 2010 with a profit after tax of GH¢40.60 million (2009: Net Loss of GH¢78.55 million). The profit for the year is after charging depreciation of fixed assets of GH¢78.15 million (2009: GH¢81.61 million), loss on exchange fluctuation on foreign debt of GH¢8.34 million (2009: loss of GH¢38.70 million), and financial expenses of GH¢36.60million (2009: GH¢50.15 million). Financial Income of GH¢6.82 million (2009: GH¢5.08 million) and Exchange gain of GH¢25.58 million (2009: Exchange loss GH¢2.97 million) have also been taken into account.

2011 Outlook (VRA)

The estimated total electricity requirement for 2011 of 11,630 GWh comprises total Domestic demand of 9,800 GWh, 640 GWh supply to CEB, 178 GWh to SONABEL, system usage of 40 GWh, 584 GWh supply to VALCO and provision for transmission and distribution losses of 386 GWh and 138 GWh respectively.

The Authority plans to generate a total of 10,432 GWh for 2011 as follows: 7,266 GWh from hydro sources, 1,441 GWh from the Takoradi Thermal Plant (TAPCO), 666 GWh from the 126 MW Tema Plant (TT1PP) and 37 GWh from Mines Reserve Plant (MRP) and Tema Thermal 2 Power Plant (TT2PP). The Takoradi International Company (TICO) is expected to supply 1,022 GWh. The balance of 1,190 GWh, required to meet the total projected demand of 11,630 GWh is to be generated from Sunon Asogli Thermal Power Plant. Imports of 8 GWh from CIE were supplied during the 1st quarter of 2011. No additional power imports are expected for the rest of the year since it is not considered a reliable source.

The expected power revenue for 2011 is GH¢1,275.10 million. This comprises power sales of GH¢1,274.96 million and revenue of GH¢0.14 million from GRIDCO's energy losses, assuming Bulk Generation Tariffs of GH¢0.1072/kWh (Jan, Feb, Jun-Dec'11) and GH¢0.0746/kWh. Other income is expected to be GH¢25.36 million including the SAPP gas sales premium of GH¢3.99 million. The estimated expenditure on supply from TICO is GH¢462.86 million. Total operating expenses for the year is estimated to be GH¢1,104.07 million, including depreciation of about GH¢88.31 million.

Total capital expenditure for the year is estimated at GH¢375.51 million. The breakdown shows that GH¢179.62 million will be expended on generation projects, GH¢88.37million on transmission (West Africa Power Pool-WAPP) projects, GH¢42.60 million on distribution projects. The balance of GH¢64.92 million will be spent on minor asset purchases and other projects.

Consequently, the Authority is expected to end the year 2011 with an operating profit of about GH¢47.21 million compared to the operating profit of GH¢92.00 million for 2010. The corresponding rate of return on average revalued net fixed assets is 1.9% compared to the covenanted rate of 8.0%. The expected yearend cash balance for 2011 is GH¢12.54 million (2010: GH¢76.03 million).

FINANCIAL REVIEW FOR THE YEAR ENDED DECEMBER 31, 2010 - Continued

Five Year Financial Summary

	2006	2007	2008	2009	2010
	GH¢'000	GH¢'000	GH¢'000	GH¢'000	GH¢'000
Income from Sale of Electricity	429,272	382,803	616,591	754,821	1,077,464
Other operating income	11,320	10,848	60,031	22,893	36,862
Government Assistance[1]	41,457	307,383	264,032	-	477,120
Operating and General Expenses	531,462	626,548	763,311	769,448	1,061,035
Depreciation	67,677	66,044	60,937	81,606	78,151
Operating (Loss)/Profit	(160,433)	(304,699)	(86,689)	8,266	53,291
Interest & Commitment Charges	16,341	23,519	23,292	50,147	36,603
Financial Income	387	1,347	3,939	5,079	6,816
Exchange Fluctuation Debt	(16,145)	(20,943)	(34,003)	(38,699)	(8,343)
Net (Loss)/Profit for the year	(151,462)	(41,778)	122,535	(78,552)	40,604
Fixed Assets (Cost/Valuation)	3,044,227	3,275,551	3,312,448	4,031,934	4,205,006
Fixed Assets (Net Book Value)	1,689,541	1,695,733	1,694,438	1,970,866	1,974,119
Capital Work in Progress	35,755	121,019	164,140	208,610	278,501
Current Assets	310,829	328,606	623,626	777,186	877,106
Current Liabilities	212,950	290,323	402,482	437,123	372,722
Investment by the Rep. of Ghana	37	18,329	18,329	18,329	495,449
Capital Surplus	1,594,699	1,646,402	1,715,362	2,056,799	2,063,818
Income Surplus Account	(101,411)	(94,996)	78,614	48,439	158,088
Long Term Loans	298,973	219,188	197,492	218,624	241,588
GH¢ to US$ Exchange Rate	0.9210	0.9599	1.2134	1.4340	1.4532

[1] Government Assistance of GH¢447.12 million received in 2010 has be treated as government's additional equity in the VRA

FINANCIAL REVIEW FOR THE YEAR ENDED DECEMBER 31, 2010 - Continued

Five year summary of financial ratios

		2006	2007	2008	2009	2010
Return on Average Equity[2]	%	(11.55)	(19.68)	(4.64)	0.33	2.10
Return on Average Net Fixed Assets - Plant in operation[3]	%	(10.19)	(17.20)	(4.57)	(0.41)	2.40
Current Assets Ratio	Times	1.46	1.13	1.55	1.45	2.69
Debt Service Ratio	Times	(1.66)	(1.69)	(0.10)	0.30	0.84
Gearing Ratio	%	0.22	0.22	0.11	0.09	0.08
GWh Generated and Purchased less Station Use (X 10)	GWh	9,007	7,092	8,144	9,127	10,227
Total production Expenses including depreciation per MWh	Ghana Cedis	66.52	97.66	93.65	83.39	103.01

[2] This is based on the operating profit or loss before exchange fluctuation, interest and commitment charges
[3] On replacement cost basis

FINANCIAL REVIEW FOR THE YEAR ENDED DECEMBER 31, 2010 - Continued

Five year summary of financial ratios *continued*

		2006	2007	2008	2009	2010
Total cost of production including depreciation and interest but excluding Debt Fluctuation per MWh	Ghana Cedis	68.33	100.97	96.51	88.88	106.58
Average Revenue/MWh Generated and Purchased	Ghana Cedis	48.96	55.70	83.52	85.01	108.71
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]	%	117.27	77.65	117.46	130.49	132.74
System Peak Demand	MW	1,462.00	1,274.00	1,366.50	1,478.00	1,390.90
Ratio of Systems Peak Demand to Installed Capacity	%	84.51	73.64	78.99	85.43	80.40

[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 AUTHORITH

The directors present the audited financial statements of the Authority and its subsidiaries for the year ended 31 December 2010.

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 consolidated financial statements were approved by the board of directors on 17th June, 2011 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 financial statements of Volta River Authority and its subsidiaries, which comprise the consolidated statement of financial position at 31 December 2010, the consolidated statement of comprehensive income, the consolidated statement of changes in equity and the consolidated statement of cash flows for the year then ended, and the notes to the financial statements, which include a summary of significant accounting policies and other explanatory notes, as set out on pages 11 to 46.

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 controls 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 controls. 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.

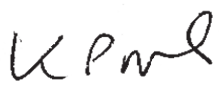
We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the consolidated financial statements give a true and fair view of the financial position of Volta River Authority and its subsidiaries at 31 December 2010, and its 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).

Other Matter

The financial statements of the Authority for the year ended 31 December 2009 were audited by another auditor who expressed an unmodified opinion on those financial statements on 22 June 2010.



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CHARTERED ACCOUNTANTS
13 YIYIWA DRIVE, ABELENKPE
P. O. BOX GP 242
ACCRA

17th June, 2011

CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME FOR THE YEAR ENDED DECEMBER 31, 2010

2009					2010	
VRA	Group				**VRA**	**Group**
GH¢'000	GH¢'000	Note		*Note*	**GH¢'000**	**GH¢'000**
754,821	754,821	2(a)	Revenue	*2(a)*	**1,077,642**	**1,077,464**
(673,916)	(673,916)	3	Cost of Sales	*3*	**(888,327)**	**(888,327)**
80,905	80,905				**189,315**	**189,137**
17,559	22,893	2(b)	Other Operating Income	*2(b)*	**29,208**	**36,862**
(87,174)	(95,532)	4	Administrative Expenses	*4*	**(165,094)**	**(172,708)**
(69,615)	(72,639)				**(135,886)**	**(135,846)**
11,290	8,266		**Operating Profit**		**53,429**	**53,291**
3,507	5,079	5	Financial Income	*5*	**4,906**	**6,816**
(50,091)	(50,147)	6	Financial Expenses	*6*	**(36,567)**	**(36,603)**
(2,965)	(2,965)		Exchange Gain/(Loss)		**16,455**	**25,582**
(38,699)	(38,699)		Exchange Fluctuation Gain/(Loss) on Foreign Debts		**(8,343)**	**(8,343)**
(76,958)	(78,466)		**Profit/(loss) for the year before taxation**		**29,880**	**40,743**
-	(86)	7(a)	Taxation	*7(a)*	**-**	**(139)**
(76,958)	(78,552)		**Profit/(loss) for the year after taxation**		**29,880**	**40,604**
			Other comprehensive Income:			
382,353	382,353	*17*	Capital surplus	17	**76,495**	**76,490**
305,395	303,801		**Total comprehensive income**		**106,375**	**117,094**

CONSOLIDATED INCOME SURPLUS ACCOUNT FOR THE YEAR ENDED DECEMBER 31, 2010

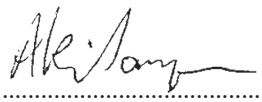
2009					2010	
VRA	Group				**VRA**	**Group**
GH¢'000	GH¢'000	Note		*Note*	**GH¢'000**	**GH¢'000**
78,614	84,534		Balance at beginning of year		**43,191**	**48,439**
45,609	46,531	17	Transfer from Capital Surplus	*17*	**69,077**	**69,470**
124,223	131,065				**112,268**	**117,909**
(76,958)	(78,552)		Profit/(Loss) for the year transferred from statement of comprehensive income		**29,880**	**40,604**
47,265	52,513				**142,148**	**158,513**
(4,074)	(4,074)		Transfer to Debt Contingency Fund Reserve		**(425)**	**(425)**
43,191	48,439		Income Surplus carried forward to statement financial position		**141,723**	**158,088**

CONSOLIDATED FINANCIAL POSITION AS AT DECEMBER 31, 2010

2009					2010	
VRA	Group				**VRA**	**Group**
GH¢'000	GH¢'000	Note		*Note*	**GH¢'000**	**GH¢'000**
			Non Current Assets			
2,173,369	2,179,475	8	Property, Plant and Equipment	*8*	**2,246,899**	**2,252,619**
175,777	191,068	9	Long Term Investments	*9*	**196,361**	**201,317**
3,912	3,912	11	Trade and other Receivables	*11*	**6,242**	**6,242**
2,353,058	2,374,455				**2,449,502**	**2,460,178**
			Current Assets			
93,557	94,204	10	Inventory	*10*	**154,406**	**154,974**
524,269	523,253	11	Trade and other Receivables	*11*	**593,664**	**592,678**
16,169	16,435	12	Short Term Investments	*12*	**30,066**	**31,597**
95,447	143,387	13	Cash and Bank Balances	*13*	**89,276**	**97,857**
729,442	777,279				**867,412**	**877,106**
			Current Liabilities			
245,721	290,898	14	Trade and other Payables	*14*	**200,413**	**198,125**
-	100	7(b)	Taxation	7(b)	**-**	**221**
244,399	245,903	15	Borrowings	15	**172,906**	**174,376**
490,120	536,901				**373,319**	**372,722**
239,322	240,378		**Net Current Assets**		**494,093**	**504,384**
2,592,380	2,614,833		Total Assets less Current liabilities		**2,943,595**	**2,964,562**

CONSOLIDATED FINANCIAL POSITION AS AT DECEMBER 31, 2010 - Continued

			Non-Current Liabilities			
113,573	125,930	*14*	Other Payables	*14*	**431**	**582**
207,244	207,399	*15*	Long term Borrowings	*15*	**220,153**	**220,310**
320,817	333,329				**220,584**	**220,892**
2,271,563	2,300,293		**Net Assets**		**2,723,011**	**2,743,670**
			Financed by:			
18,329	18,329	*16*	Investment by Republic of Ghana	*16*	**495,449**	**495,449**
43,191	48,439		Income Surplus Account		**141,723**	**158,088**
2,052,106	2,056,799	*17*	Capital Surplus	*17*	**2,059,524**	**2,063,818**
132,047	132,047		GoG Contribution to WAPCo		**-**	**-**
25,890	25,890	*18*	Debt Contingency Fund Reserve	*18*	**26,315**	**26,315**
2,271,563	2,300,293				**2,723,011**	**2,743,670**



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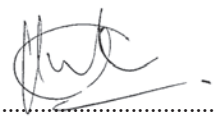
AKILAGPA SAWYERR
BOARD CHAIRMAN



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KWEKU A. AWOTWI
CHIEF EXECUTIVE

CONSOLIDATED STATEMENT OF CHANGES IN EQUITY FOR THE ENDED DECEMBER 31, 2010

VRA	GoG Contribution	Income Surplus	Capital Surplus	Debt Contingency Fund Reserve	GoG Contribution to WAPCo	Total Equity
	GH¢'000	GH¢'000	GH¢'000	GH¢'000	GH¢'000	GH¢'000
Balance as at January 1, 2009	**18,329**	**78,614**	**1,715,362**	**21,816**	**91,763**	**1,925,884**
Changes in equity for 2009:						
Additional Investment by Government of Ghana	-	-	-	-	40,284	**40,284**
(Loss) for the year 2009	-	(76,958)	-	-	**-**	**(76,958)**
Other comprehensive income	-	-	382,353	-	**-**	**382,353**
Transfer to Retained Earnings	-	45,609	(45,609)	-	**-**	**-**
Transfer to Debt Contingency Fund Reserve	-	(4,074)	-	4,074	**-**	**-**
Balance as at December 31, 2009	**18,329**	**43,191**	**2,052,106**	**25,890**	**132,047**	**2,271,563**
Changes in equity for 2010:						
Additional Investment by Government of Ghana	477,120	-	-	-	(132,047)	**345,073**
Profit / for the year 2010	-	29,880	-	-	-	**29,880**
Other comprehensive Income	-	-	76,495	-	**-**	**76,495**
Transfer to Retained Earnings	-	69,077	(69,077)	-	**-**	**-**
Transfer to Debt Contingency Fund Reserve	-	(425)	-	425	**-**	**-**
Balance as at December 31, 2010	**495,449**	**141,723**	**2,059,524**	**26,315**	**-**	**2,723,011**

CONSOLIDATED STATEMENT OF CHANGES IN EQUITY FOR THE ENDED DECEMBER 31, 2010

GROUP	GoG Contribution	Income Surplus	Capital Surplus	Debt Contingency Fund Reserve	GoG Contribution to WAPCo	Total Equity
	GH¢'000	GH¢'000	GH¢'000	GH¢'000	GH¢'000	GH¢'000
Balance as at January 1, 2009	**18,329**	**84,533**	**1,720,977**	**21,816**	**91,763**	**1,937,418**
Changes in equity for 2009:						
Additional Investment by Government of Ghana	-	-	-	-	40,284	**40,284**
(Loss) for the year 2009	-	(78,552)	-	-	**-**	**(78,552)**
Other comprehensive income	-	-	382,353	-	**-**	**382,353**
Transfer to Retained Earnings	-	46,531	(46,531)	-	**-**	**-**
Transfer to Debt Contingency Fund Reserve	-	(4,074)	-	4,074	**-**	**-**
Balance as at December 31, 2009	**18,329**	**48,438**	**2,056,799**	**25,890**	**132,047**	**2,281,503**
Changes in equity for 2010:						
Additional Investment by Government of Ghana	477,120	-	-	-	(132,047)	**345,073**
Profit / for the year 2010	-	40,604	-	-	-	**40,604**
Other comprehensive income	-	-	76,490	-	**-**	**76,490**
Transfer to Retained Earnings	-	69,470	(69,470)	-	**-**	**-**
Transfer to Debt Contingency Fund Reserve	-	(425)	-	425	**-**	**-**
Balance as at December 31, 2010	**495,449**	**158,088**	**2,063,819**	**26,315**	**-**	**2,743,670**

CONSOLIDATED STATEMENT OF CASH FLOW AS AT DECEMBER 31, 2010

2009					2010	
VRA	Group				**VRA**	**Group**
GH¢'000	GH¢'000	Note		**Note**	**GH¢'000**	**GH¢'000**
71,204	125,148	20	**Net Cash flow from operating activities**	20	**(41,368)**	**(91,399)**
			Cash flows from investing activities			
3,507	5,079		Interest Received		**4,906**	**6,816**
(6,099)	(6,444)		Purchase of Property, plant and equipment		**(4,667)**	**(4,974)**
321	321		Proceeds from sale of property, plant and equipment		**2,549**	**2,549**
(44,470)	(44,470)		Payments towards capital work in progress		**(69,891)**	**(69,891)**
(43,978)	(59,213)		Long Term investments		**(20,584)**	**(10,249)**
(90,719)	(104,727)		**Net cash used in investing activities**		**(87,687)**	**(75,749)**
			Cash flows from financing activities			
40,284	40,284		Additional contribution by GOG		**231,931**	**231,931**
16	16		Net Inflows / (Outflows) from long term borrowing		**22,966**	**22,966**
(13,752)	(13,752)		Net Inflows/ (Outflows) from Medium term borrowing		**(14,235)**	**(14,235)**
(35,012)	(35,219)		Net Outflows from short term borrowing		**(65,676)**	**(65,645)**
-	162		Grants Received		**-**	**-**
(30,847)	(30,847)		Interest paid		**(35,846)**	**(35,846)**
(39,311)	(39,356)		**Net cash used in financing activities**		**139,140**	**139,171**
(58,826)	(18,935)		**Decrease in cash and cash equivalents in the year**		**10,085**	**(27,977)**
118,671	126,923		**Cash and cash equivalents at the beginning of the year**		**69,930**	**107,988**
59,845	107,988	21	**Cash and cash equivalents at the end of the year**	21	**69,930**	**80,011**

NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER, 2010

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 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.

1.1 Basis of preparation

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 inter-pretations adopted by the International Accounting Standard Board (IASB).

1.3 Basis of consolidation

The Authority's 2010 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). Kpong Farms Limited (KFL) is a wholly owned subsidiary of the Authority but has not been consolidated as it is no longer in operation.

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

NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER, 2010 - Continued

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 2011, and have not been applied in preparing these consolidated financial statements. None of these is expected to have a significant effect on the consolidated financial statements of the Group, except for IFRS 9 Financial Instruments, which becomes mandatory for the Group's 2013 consolidated financial statements and could change the classification and measurement of financial assets. The Group does not plan to adopt this standard early and the extent of the impact has not been determined.

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.

NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER, 2010 - Continued

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 statement of comprehensive income.

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. At the year end, 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.

NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER, 2010 - Continued

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 statement of comprehensive income 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 statement of financial position 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 reporting date.

1.6.10 Properties, plant and equipment

(i) Recognition and Measurement
Items of property, plant and equipment are measured initially at cost less accumulated depreciation and impairment losses and subsequently at re-valued amounts 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).
Physical revaluation of its property, plant and equipment is conducted every five (5) years to ensure that the assets carrying amounts do not differ materially from their fair values at the reporting date. In between the physical

NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER, 2010 - Continued

revaluations, the a monthly revaluation of property, plant and equipment is done by applying indexation to determine the current cost. The index is based on the United States of America CPI and the GH¢/US$ exchange rate.

(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 statement of comprehensive income as incurred.

(iii) Depreciation

Depreciation is calculated and recognized in statement of comprehensive income 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:

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

NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER, 2010 - Continued

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 Authority is stated at cost less accumulated amortization and accumulated impairment losses.

Subsequent expenditure on software assets is capitalized only when it increases the future economic benefits embodied in the specific asset to which it relates. All other expenditure is expensed as incurred.

Amortization is recognized in the statement of comprehensive income 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 statement of financial position comprise cash at bank and on hand and short-term deposits with an original maturity of three months or less.

1.6.15 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.

NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER, 2010 - Continued

1.7.0 Determination of fair values

A number of the Authority'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 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 Authority's financial statements requires management to make judgments, estimates and assumptions that affect the reported amounts of revenues, expenses, assets and liabilities, and the disclosure of contingent liabilities, at the balance sheet date.

1.8.1 Estimates and assumptions

The key assumptions concerning the future and other key sources of estimation uncertainty at the reporting date, have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year.

1.8.2 Provisions

Provisions are recognized when the Authority has a present obligation (legal or constructive) as a result of a past event, and it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation and a reliable estimate can be made of the amount of the obligation.

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:

NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER, 2010 - Continued

- 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 fiscal 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 Authority'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

NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER, 2010 - Continued

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.

NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER, 2010 - Continued

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	
	2010	2009
	GH¢000	GH¢000
Trade receivables	470,089	351,365
Trade receivables from related companies	6,513	10,150
Other receivables	113,590	159,220
Cash and cash equivalents	80,011	107,988
	670,203	**628,723**

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

	2010	2009
	GH¢000	GH¢000
Whole sale	264,766	212,058
Distribution to end-users	205,323	139,307
	470,089	**351,365**

NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER, 2010 - Continued

Impairment losses

The ageing of trade receivables at the reporting date was:

VRA

	Gross	Impairment allowance	Gross	Impairment allowance
	31-Dec-10	31-Dec-10	31-Dec-09	31-Dec-09
	GH¢'000	GH¢'000	GH¢'000	GH¢'000
Not past due	86,016	-	64,104	-
Past due 30-60 days	114,696	-	85,785	-
Past due 60-90 days	67,776	-	50,692	-
Past due 90-120 days	81,042	-	60,614	-
Past due 120 days and above	120,164	36,895	90,170	28,908
	469,694	**36,895**	**351,365**	**28,908**

GROUP

	Gross	Impairment allowance	Gross	Impairment allowance
	GH¢'000	GH¢'000	GH¢'000	GH¢'000
Not past due	86,411	-	64,104	-
Past due 30-60 days	114,696	-	85,785	-
Past due 60-90 days	67,776	-	50,692	-
Past due 90-120 days	81,042	-	60,614	-
Past due 120 days and above	120,164	36,895	90,170	28,908
	470,089	36,895	351,365	28,908

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

NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER, 2010 - Continued

maturities of financial liabilities, including interest payments and excluding the impact of netting arrangements.

December 31, 2010 - Group

	Total amount	**Total amount**	**Total amount**	**Total amount**	**Total amount**
	GH¢'000	GH¢'000	GH¢'000	GH¢'000	GH¢'000
Trade payables	145,975	97,771	48,204	1-	-
Payables to related parties	32,226	8,533	9,013	14,680	-
Accrued expenses	560	560	-	-	-
Sundry creditors	19,364	9,738	9,626	-	-
Sovereign Bond and HIPC Loans	-	-	-	-	-
Loan Interest and Commitment Charges	21,652	21,652	-	-	-
Short term loan	79,598	78,685	913	-	-
Medium Term Loan	2,404	-	-	2,404	-
Long Term Loan	241,589	-	23,683	47,366	170,540
	543,368	**216,939**	**91,439**	**64,450**	**170,540**

December 31, 2010 - Group

	Total amount	**Total amount**	**Total amount**	**Total amount**	**Total amount**
	GH¢'000	GH¢'000	GH¢'000	GH¢'000	GH¢'000
Trade payables	194,938	186,554	8,156	228	GH¢'000
Payables to related parties	29,519	6,269	9,014	14,236	-
Accrued expenses	563	563	-	-	-
Sundry creditors	65,878	13,567	52,311	-	-
Other Non Current Payables	125,930	-	41,975	83,955	-
Loan Interest and Commitment Charges	20,907	20,907	-	-	
Short term loan	145,300	138,019	7,281	-	-
Medium Term Loan	16,636	-	-	16,636	-
Long Term Loan	218,625	-	28,017	-	-
	818,296	**365,879**	**146,754**	**115,055**	**190,608**

NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER, 2010 - Continued

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

(i) Currency risk

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

Exposure to currency risk

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

2010 – in thousands	**USD**	**EUR**	**SDR**	**KD**	**CHF**	**GBP**	**SKR**	**CAD**
Accounts receivable	82,181	-	-	-	-	-	-	-
Cash and bank balances	19,327	53	-	-	-	**52**	-	-
Accounts payable	(89,721)	(2,446)	-	-	**(62)**	**(6)**	**(6,035)**	**(69)**
Borrowings	(1,408)	(6,458)	**(66,178)**	(7,497)	**(1,281)**	-	-	-
	10,379	**(8,851)**	**(66,178)**	**(7,497)**	**(1,343)**	**46**	**(6,035)**	**(69)**

2009 – in thousands	**USD**	**EUR**	**SDR**	**KD**	**CHF**	**GBP**	**SKR**	**CAD**
Accounts receivable	92,368	-	-	-	-	-	-	-
Cash and bank balances	11,732	62	-	-	-	**93**	-	-
Accounts payable	(78,960)	(3,542)	-	-	**(34)**	-	**(2,415)**	**(45)**
Borrowings	(2,642)	(10,794)	(67,183)	(6,848)	(2,420)	-	-	-
	22,498	**(14,274)**	**(67,183)**	**(6,848)**	**(2,454)**	**93**	**(2,415)**	**(45)**

NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER, 2010 - Continued

The following exchange rates were applied during the year:

December 2010	**USD**	**EUR**	**SDR**	**KD**	**CHF**	**GBP**	**SKR**	**CAD**
Reporting date spot rate	**1.4532**	**1.9405**	**2.2380**	**5.1656**	**1.5493**	**2.2315**	**0.2161**	**1.4414**
Average rate	**1.4340**	**1.9242**	**2.2518**	**5.1758**	**1.5993**	**2.2812**	**0.2203**	**1.4297**
December 2009								
Reporting date spot rate	1.4340	1.4432	2.248	5.3156	1.6143	2.2638	0.2016	1.5235
Average rate	1.4047	1.4309	2.361	5.6239	1.6012	2.2246	0.2118	1.5272

Sensitivity

A 5% strengthening of the GHS, as indicated below, against the currencies above at 31 December 2010 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 2009, 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**
December 2010	**754**	**(859)**	**(7,405)**	**(1,936)**	**(104)**	**5**	**(65)**	**(5)**
December 2009	1,623	(1,406)	(7,551)	(1,829)	(198)	10	(23)	3

A 5% strengthening of the Ghana cedi against the currencies above at 31 December 2010 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:

	2010	2009
	GH¢'000	GH¢'000
Financial assets	**31,597**	16,435
Financial liabilities	**385,920**	453,302

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

NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER, 2010 - Continued

2a. Revenue

2009				2010		
	VRA	Group	**Sale of Electricity**		**VRA**	**Group**
GWh	GH¢'000	GH¢'000		**GWh**	**GH¢'000**	**GH¢'000**
6,052	364,348	364,348	Electricity Company of Ghana	**6,773**	**606,972**	**606,972**
1,251	148,825	148,825	Mines	**1,243**	**193,998**	**193,998**
24	2,551	2,551	Akosombo Textiles	**18**	**3,088**	**3,088**
7	829	829	Aluworks	**5**	**981**	**981**
45	3,868	3,868	Diamond Cement	**45**	**6,076**	**6,076**
10	299	299	Volta Aluminium Co. Ltd	**7**	**337**	**337**
31	2,126	2,126	Others	**37**	**2,776**	**2,598**
-	38,502	38,502	GRIDCo (Transmission Loss Recoveries)	**-**	**15,337**	**15,337**
465	58,737	58,737	Northern Electricity Dept (NED)	**466**	**94,366**	**94,366**
7,875	619,957	620,085	**Local Customers**	**8,594**	**923,753**	**923,753**
			Communauté			
747	27,558	127,558	Electrique Du Benin	**845**	**112,954**	**112,954**
			Compagne Ivoirienne			
-	-	-	d'Electricité Société National	**147**	**26,057**	**26,057**
5	708	708	D' elect Du Burkina	**5**	**816**	**816**
9	1,519	1,519	Sonable Youga Mines	**39**	**6,421**	**6,421**
32	4,951	4,951	Free Zone Companies	**39**	**7,463**	**7,463**
793	134,736	134,736	**Foreign Customers**	**1,075**	**153,711**	**153,711**
8,678	754,821	754,821	**Total**	**9,669**	**1,077,642**	**1,077,464**

NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER, 2010 - Continued

2b. Other Operating Income

2009			2010	
VRA	Group		**VRA**	**Group**
382	382	Real Estates	**872**	**872**
3,000	3,000	Health Services	**4,853**	**4,853**
1,900	1,900	Schools	**2,406**	**2,406**
9,115	9,115	Service Charge	**9,883**	**9,883**
248	248	Profit on Sale of Fixed Assets	**2,493**	**2,483**
2,914	8,248	Other Income	**8,701**	**16,365**
17,559	22,893	**Total**	**29,208**	**36,862**

3. Cost of Sales/Operating costs

2009			2010	
VRA	**Group**	**Analysis by budget centre:**	**VRA**	**Group**
GH¢'000	GH¢'000		**GH¢'000**	**GH¢'000**
10,855	10,855	Generation: Hydro	**10,395**	**10,395**
254,696	254,696	Thermal	**362,736**	**362,736**
29,668	29,668	Distribution (NED)	**54,716**	**54,716**
305,012	305,012	Purchase of Electricity	**389,342**	**389,342**
73,685	73,685	Depreciation	**71,138**	**71,138**
673,916	673,916		**888,327**	**888,327**
		Analysis by cost element:		
41,425	41,425	Salaries and related expenses	**47,279**	**47,279**
1,811	1,811	Materials & spares consumed	**2,751**	**2,751**
190,955	190,955	Fuel, Handling and Usage	**314,594**	**314,594**
305,012	305,012	Purchase of Electricity	**389,342**	**389,342**
73,685	73,685	Depreciation	**71,138**	**71,138**
61,028	61,028	Other operating costs	**63,223**	**63,223**
673,916	673,916		**888,327**	**888,327**

NOTES TO THE FINANCIAL STATEMENTS
FOR THE YEAR ENDED 31 DECEMBER, 2010 - Continued

4. Administrative Expenses

2009			2010	
VRA	Group	**Analysis by budget centre:**	**VRA**	**Group**
GH¢'000	GH¢'000		**GH¢'000**	**GH¢'000**
51,821	59,125	Central Services	**122,459**	**129,390**
4,458	4,458	Schools	**6,386**	**6,386**
16,278	16,278	Real Estate	**20,016**	**20,016**
7,750	7,750	Health Services	**9,903**	**9,903**
6,867	7,921	Depreciation	**6,330**	**7,013**
87,174	95,532		**165,094**	**172,708**
		Analysis by cost element:		
44,956	47,128	Salaries & related expenses	**49,961**	**52,602**
3,514	4,461	Materials & spares consumed	**4,332**	**4,631**
31,837	36,022	Other administrative costs	**104,471**	**108,462**
6,867	7,921	Depreciation	**6,330**	**7,013**
87,174	95,532		**165,094**	**172,708**
761,090	769,448	**Total Operating & Admin Cost**	**1,053,421**	**1,061,035**

5. Financial Income

2009			2010	
VRA	**Group**	**Analysis by budget centre:**	**VRA**	**Group**
GH¢'000	GH¢'000		**GH¢'000**	**GH¢'000**
3,507	5,079	Interest and Investment Income	**4,906**	**6,816**
3,507	5,079		**4,906**	**6,816**

NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER, 2010 - Continued

6. Financial Expenses

2009			2010	
VRA	Group		**VRA**	**Group**
GH¢'000	GH¢'000		**GH¢'000**	**GH¢'000**
12,696	12,752	Interest on Long Term Loans	**8,048**	**8,084**
15,317	15,317	Interest on Medium Term Loans	**5,675**	**5,675**
9,075	9,075	Interest on Short Term Loans	**9,761**	**9,761**
13,003	13,003	Interest on Overdrafts	**13,083**	**13,083**
50,091	50,147		**36,567**	**36,603**

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.

7a. Tax Expense

VRA	**Group**		**VRA**	**Group**
GH¢'000	GH¢'000		**GH¢'000**	**GH¢'000**
-	86	Current income tax for the year	**-**	**139**

7b. Taxation Payable (Group)

	Balance at 01/01/10	**Payments**	**Charge for the year**	**Balance at 31/12/10**
	GH¢'000	GH¢'000	**GH¢'000**	**GH¢'000**
Up to 2009	100	-	**-**	**100**
	-	(18)	**139**	**121**
	100	(18)	**139**	**221**

8a. Capital Work-in-Progress

VRA

2009					2010			
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**
128,232	29,015	6,893	164,140	Balance as at Jan. 1	**142,573**	**63,317**	**2,718**	**208,608**
14,341	34,302	11,827	60,470	Additions during the year	**8,020**	**59,722**	**2,151**	**69,893**
-	-	(16,002)	(16,002)	Transfers during the year	**-**	**-**	**-**	**-**
142,573	63,317	2,718	208,608	**Balance as at Dec. 31**	**150,593**	**123,039**	**4,869**	**278,501**

GROUP

2009					2010			
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**
128,232	29,015	6,893	164,140	Balance as at Jan. 1	**142,573**	**63,317**	**2,718**	**208,608**
14,341	34,302	11,827	60,470	Additions during the year	**8,020**	**59,722**	**2,151**	**69,893**
-	-	(16,002)	(16,002)	Transfers during the year	**-**	**-**	**-**	**-**
142,573	63,317	2,718	208,608	**Balance as at Dec. 31**	**150,593**	**123,039**	**4,869**	**278,501**

NOTES TO THE FINANCIAL STATEMENTS
FOR THE YEAR ENDED 31 DECEMBER, 2010 - Continued

8b. Property, Plant and Equipment

GROUP 2010	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, 2010	2,111,512	891,581	692,267	155,543	69,414	68,169	36,382	7,066	4,031,934
Disposal/Transfers	-	-	-	-	-	-	(2,791)	(99)	(2,890)
Revaluation surplus	89,592	38,933	29,635	6,549	2,606	1,931	1,572	169	170,987
Additions during the year	-	-	320	-	-	186	3,949	520	4,975
Balance as at Dec 31, 2010	2,201,104	930,514	722,222	162,092	72,020	70,286	39,112	7,656	4,205,006
B. DEPRECIATION									
Balance as at Jan. 1, 2010	1,015,346	450,790	404,218	69,297	22,727	60,819	32,690	5,182	2,061,069
Disposal/Transfers	-	-	-	-	-	-	(2,791)	(33)	(2,824)
Charge for the period	23,105	24,040	23,568	2,596	931	1,397	2,025	489	78,151
Revaluation surplus	46,154	19,511	21,514	3,035	976	1,642	1,456	204	94,492
Balance as at Dec 31, 2010	1,084,605	494,341	449,300	74,928	24,634	63,858	33,380	5,842	2,230,888
C. CARRYING AMOUNT									
Balance as at Dec 31, 2010	**1,116,499**	**436,173**	**272,922**	**87,164**	**47,386**	**6,428**	**5,732**	**1,814**	**1,974,118**
Capital Work-in-Progress as at Dec 31,2010 (Note 8a)									**278,501**
									2,252,619

8b. Property, Plant and Equipment

GROUP 2009	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, 2009	1,758,597	726,060	573,084	129,820	59,340	60,588	31,775	5,610	3,344,874
Disposal/Transfers	-	-	-	-	-	-	(1,731)	-	(1,731)
Revaluation surplus	352,915	165,157	115,998	25,723	10,074	7,581	4,361	538	682,347
Additions during the year	-	364	3,185	-	-	-	1,977	918	6,444
Balance as at Dec 31, 2009	2,111,512	891,581	692,267	155,543	69,414	68,169	36,382	7,066	4,031,934
B. DEPRECIATION									
Balance as at Jan. 1, 2009	825,883	348,756	311,178	55,521	18,379	50,221	29,069	4,399	1,643,406
Disposal/Transfers	-	-	-	-	-	-	(1,658)	-	(1,658)
Charge for the period	25,153	23,327	24,785	2,312	918	2,956	1,612	543	81,606
Revaluation surplus	164,310	78,707	68,255	11,464	3,430	7,642	3,67	240	337,715
Balance as at Dec 31, 2009	1,015,346	450,790	404,218	69,297	22,727	60,819	32,690	5,182	2,061,069
C. CARRYING AMOUNT									
Balance as at Dec 31, 2009	**1,096,166**	**440,791**	**288,049**	**86,246**	**46,687**	**7,350**	**3,692**	**1,884**	**1,970,865**
Capital Work-in-Progress as at Dec 31, 2009 (Note 8a)									**208,610**
									2,179,475

NOTES TO THE FINANCIAL STATEMENTS
FOR THE YEAR ENDED 31 DECEMBER, 2010 - Continued

8b. Property, Plant and Equipment

VRA 2010	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, 2010	2,111,512	891,581	692,267	155,543	62,969	45,838	35,580	3,873	**3,999,163**
Disposal/Transfers	-	-	-	-	-	-	(2,755)	(77)	**(2,832)**
Revaluation surplus	89,592	38,933	29,635	6,549	2,606	1,931	1,572	169	**170,987**
Additions during the year	-	-	320	-	-	-	3,949	398	**4,667**
Balance as at Dec 31, 2010	2,201,104	930,514	722,222	162,092	65,575	47,769	38,346	4,363	**4,171,985**
B. DEPRECIATION									
Balance as at Jan. 1, 2010	1,015,346	450,790	404,218	69,297	21,004	39,198	31,963	2,588	**2,034,404**
Disposal/Transfers	-	-	-	-	-	-	(2,755)	(21)	**(2,776)**
Charge for the period	18,428	24,040	23,568	2,596	780	1,015	1,988	376	**72,791**
Revaluation surplus	50,831	19,511	21,514	3,035	976	1,642	1,456	203	**99,168**
Balance as at Dec 31, 2010	1,084,605	494,341	449,300	74,928	22,760	41,855	32,652	3,146	**2,203,587**
C. CARRYING AMOUNT									
Balance as at Dec 31, 2010	**1,116,499**	**436,173**	**272,922**	**87,164**	**42,815**	**5,914**	**5,694**	**1,217**	**1,968,398**
Capital Work-in-Progress as at Dec 31, 2010 (Note 8a)									**278,501**
									2,246,899

8b. Property, Plant and Equipment

VRA 2009	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, 2009	1,758,597	726,060	573,084	129,820	52,895	38,257	30,973	2,762	**3,312,448**
Disposal/Transfers	-	-	-	-	-	-	(1,731)	-	**(1,731)**
Revaluation surplus	352,915	165,157	115,998	25,723	10,074	7,581	4,361	538	**682,347**
Additions during the year	-	364	3,185	-	-	-	1,977	573	**6,099**
Balance as at Dec 31, 2009	2,111,512	891,581	692,267	155,543	62,969	45,838	35,580	3,873	**3,999,163**
B. DEPRECIATION									
Balance as at Jan. 1, 2009	825,883	348,756	311,178	55,521	16,754	29,604	28,460	1,854	**1,618,010**
Disposal/Transfers	-	-	-	-	-	-	(1,658)	-	**(1,658)**
Charge for the period	25,153	23,327	24,785	2,312	820	1,952	1,494	494	**80,337**
Revaluation surplus	164,310	78,707	68,255	11,464	3,430	7,642	3,667	240	**337,715**
Balance as at Dec 31, 2009	1,015,346	450,790	404,218	69,297	21,004	39,198	31,963	2,588	**2,034,404**
C. CARRYING AMOUNT									
Balance as at Dec 31, 2009	**1,096,166**	**440,791**	**288,049**	**86,246**	**41,965**	**6,640**	**3,617**	**1,285**	**1,964,759**
Capital Work-in-Progress as at Dec 31, 2009 (Note 8a)									**208,610**
									2,173,369

NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER, 2010 - Continued

8c. Disposal of Property, plant and equipment

2009			2010	
VRA	Group		**VRA**	**Group**
GH¢'000	GH¢'000		**GH¢'000**	**GH¢'000**
1,731	1,731	Cost	**2,832**	**2,890**
(1,653)	(1,653)	Accumulated depreciation	**(2,776)**	**(2,834)**
73	73	Carrying amount	**56**	**66**
321	321	Proceeds from Disposal	**2,549**	**2,549**
248	248	Profit on disposal	**2,493**	**2,483**

9. Long term investments

2009			2010	
VRA	Group		**VRA**	**Group**
GH¢'000	GH¢'000		**GH¢'000**	**GH¢'000**
25,890	25,890	Debt Contingency Fund Investment	**26,315**	**26,315**
148,954	-	TAPCO (100% owned)	**169,113**	**-**
-	-	VLTC (100% owned)	**-**	**-**
542	-	AHL (100% owned)	**542**	**-**
345	345	Kpong farms (100% owned)	**345**	**345**
-	4,516	TICO (10% owned)	**-**	**4,516**
-	160,171	WAGP (16.38% owned)	**-**	**170,095**
46	46	Other investment (Marathon)	**46**	**46**
175,777	191,068		**196,361**	**201,317**

NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER, 2010 - Continued

10. Inventories

2009			2010	
VRA	Group		**VRA**	**Group**
GH¢'000	GH¢'000		GH¢'000	GH¢'000
19,793	20,440	Inventory and spare parts	20,152	20,720
(256)	(256)	Write down for obsolescence	(86)	(86)
19,537	20,184		20,066	20,634
74,020	74,020	Fuel for Thermal Plant	134,340	134,340
93,557	94,204		**154,406**	**154,974**

11. Trade and Other Receivables

2009			2010	
VRA	Group		**VRA**	**Group**
GH¢'000	GH¢'000		**GH¢'000**	**GH¢'000**
351,300	351,365	Trade receivables	**469,694**	**470,089**
(28,741)	(28,908)	Impairment loss allowance	**(36,895)**	**(37,068)**
322,559	322,457		**432,799**	**433,021**
35,338	35,338	Prepayments	**45,796**	**45,796**
12,178	10,150	Amount due from related parties	**9,702**	**6,513**
151,462	152,365	Other Receivables	**101,440**	**103,249**
6,644	6,855	Staff Advances	**10,169**	**10,341**
528,181	527,165		**599,906**	**598,920**
524,269	523,253	Current	**593,664**	**592,678**
3,912	3,912	Non-current	**6,242**	**6,242**
528,181	527,165		**599,906**	**598,920**

NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER, 2010 - Continued

12. Short term investments

2009			2010	
VRA	Group		**VRA**	**Group**
GH¢'000	GH¢'000		**GH¢'000**	**GH¢'000**
399	399	Foreign currencies	**12,334**	**13,641**
15,770	16,036	Local currency	**17,732**	**17,956**
16,169	16,435		**30,066**	**31,597**

13. Cash and bank

2009			2010	
VRA	Group		**VRA**	**Group**
GH¢'000	GH¢'000		**GH¢'000**	**GH¢'000**
11,664	59,298	Foreign currencies	**9,682**	**17,983**
83,756	84,043	Local currency	**79,555**	**79,823**
27	46	Cash on Hand	**39**	**51**
95,447	143,387		**89,276**	**97,857**

14. Payables

2009			2010	
		Current Portion		
VRA	Group		**VRA**	**Group**
GH¢'000	GH¢'000		**GH¢'000**	**GH¢'000**
193,959	194,938	Trade Payables	**145,654**	**145,975**
35,355	29,519	Amounts due to related parties	**37,612**	**32,226**
15,938	65,878	Sundry Payables	**16,696**	**19,364**
469	563	Accruals expenses	**451**	**560**
245,721	290,898		**200,413**	**198,125**
		Non-Current Portion		
113,573	125,930	Other Payables	**431**	**582**
113,573	125,930		**431**	**582**
359,294	416,828		**200,844**	**198,707**

NOTES TO THE FINANCIAL STATEMENTS
FOR THE YEAR ENDED 31 DECEMBER, 2010 - Continued

15. Borrowings

2009			2010	
		Current Portion		
VRA	Group		**VRA**	**Group**
GH¢'000	GH¢'000		**GH¢'000**	**GH¢'000**
27,862	27,862	Long Term loans payable within one year	**23,683**	**23,683**
51,771	51,834	Bank overdrafts	**49,413**	**49,443**
20,285	20,907	Loan Interest and commitment charges	**21,005**	**21,652**
144,481	145,300	Short-term borrowings	**78,805**	**79,598**
244,399	245,903		**172,906**	**174,376**
		Non-Current Portion		
16,636	16,636	Amount due after one year but before five years	**2,401**	**2,404**
105,212	105,366	Amount due after five years but before ten years	**103,355**	**103,509**
85,396	85,397	Over ten years	**114,397**	**114,397**
207,244	207,399		**220,153**	**220,310**
451,643	453,299		**393,059**	**394,686**

NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER, 2010 - Continued

15. Borrowings - Continued

	Balance as at 01.01.2010	Drawings	Repayments	HIPC Loan Adjustment	Exchange Variation	Balance as at 31.12.2010
	GH¢ '000	GH¢ '000	GH¢ '000	GH¢ '000	GH¢ '000	GH¢ '000
Long Term Loans						
Kpong Hydro Project						
European Dev Fund (EDF)	4,577	-	-	(559)	(337)	**3,681**
Reinforcement Project						
Saudi Fund	266	-	-	-	(226)	**-**
Rural Electrification						
Kuwait Fund - 339	1,968	-	-	-	745	**2,713**
Akosombo Retrofit						
EIB-3	24,755	-	(9,604)	-	2,587	**17,738**
IDA -2109 GH	6,105	-	-	(650)	(53)	**5,402**
Takoradi Thermal Power						
IDA 2682 GH	123,965	-	-	(16,895)	(2,977)	**104,093**
Kuwait Fund	21,082	-	-	-	7,978	**29,060**
Badea	1,505	-	(1,463)	-	(42)	**-**
Other Loans						
Kuwait Fund 657-330kV	11,224	4,089	(1,256)	-	838	**14,895**
IDA-4213- 330kV	3,203	16,134	-	-	(420)	**18,917**
IDA-4092- 330kV	19,861	12,929	-	-	(315)	**32,475**
IDA-4356-GEDAP	-	9131	-	-	26	**9,157**
AfDB (GEDAP)	-	3,304	-	-	-	**3,304**
Ghana Government	154	-	-	-	-	**154**
Subtotal: Long Term Loans	**218,625**	**45,587**	**(12,323)**	**(18,104)**	**7,804**	**241,589**

NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER, 2010 - Continued

15. Borrowings - Continued

	Balance as at 01.01.2010	Drawings	Repayments	HIPC Loan Adjustment.	Exchange Variation	Balance as at 31.12.2010
	GH¢ '000	GH¢ '000	GH¢ '000	GH¢ '000	GH¢ '000	GH¢ '000
Medium Term Loan						
Ghana Commercial Bank	16,636	233	(14,674)	-	209	**2,404**
Subtotal: Medium Term Loans	16,636	233	(14,674)	-	209	**2,404**
Total: Long and Medium Term Loans	**235,261**	**45,820**	**(26,997)**	**(18,104)**	**8,013**	**243,993**
Loan Interest and Commitment Charges	20,907	36,591	(35,846)	-	-	**21,652**
Short Term Loans						
Stanbic Bank	-	76,254	(36,156)	-	-	**40,098**
Ecobank	45,696	184,035	(229,731)	-	-	**-**
Standard Chartered Bank	75,513	-	(74,993)	-	(520)	**-**
Merchant Bank	-	44,140	(44,140)	-	-	**-**
Zenith Bank	15,371	15,371	(30,742)	-	-	**-**
Intercontinental Bank	731	13,412	(731)	-	-	**13,412**
Ghana International Bank	7,170	-	(1,032)	-	90	**6,228**
Ghana Commercial Bank	-	31,181	(17,842)	-	(639)	**12,700**
GT Bank	-	29,334	(23,384)	-	417	**6,367**
Ghana Government	92	-	-	-	-	**92**
DANIDA	276	-	-	-	-	**276**
BOST	451	-	(26)	-	-	**425**
Subtotal: Short Term Loans	**145,300**	**393,727**	**(458,777)**	**-**	**(652)**	**79,598**
Bank Overdraft	51,834	46,558	(48,949))	-	-	**49,443**
Grand Total	**453,302**	**522,696**	**(570,569)**	**(18,104)**	**7,361**	**394,686**

NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER, 2010 - Continued

15. Borrowings - Continued

LOAN	CURRENCY	CONTRACT AMOUNT	INTEREST RATE (%)	MATURITY DATE
KUWAIT-339	KD	3,500,000.00	4.00	2013
GHANA GOVT	GHS	1,281,580.00	0.00	-
EDF	EUR	8,980,000.00	1.00	2016
SAUDI NESRP	SR	17,755,000.00	2.00	2012
BADEA THERMAL	USD	10,000,000.00	4.00	2012
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 2682	SDR	120,560,000.00	8.00	2016
AfDB	USD	20,000,000.00	0.75	2028
EIB-RETROFIT 3	EUR	34,000,000.00	3.00	2012

16. Investment by the Republic of Ghana

2009			2010	
VRA	Group		**VRA**	**Group**
GH¢'000	GH¢'000		**GH¢'000**	**GH¢'000**
18,329	18,329	Balance at the beginning of the year	**18,329**	**18,329**
-	-	Additional contribution during the Year	**477,120**	**477,120**
18,329	18,329	Balance at the end of the year	**495,449**	**495,449**

NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER, 2010 - Continued

17. Capital Surplus

2009			2010	
VRA	Group		**VRA**	**Group**
GH¢'000	GH¢'000		**GH¢'000**	**GH¢'000**
1,715,362	1,720,977	Balance at beginning of year	**2,052,106**	**2,056,799**
382,353	382,353	Surplus for the Year	**76,495**	**76,490**
(45,609)	(46,531)	Transfer to Income Surplus Account	**(69,077)**	**(69,470)**
2,052,106	2,056,799	Balance at close of year	**2,059,524**	**2,063,819**

The Capital Surplus arises as a result of carrying property, plant and equipment in the Balance sheet at current replacement cost.

18. Debt Contingency Fund Reserve

The amount of GH¢ 26.32 million (2009: GH¢ 25.90 million) represents the appropriation out of Income Surplus 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. Contingent Liabilities

There are contingent liabilities in respect of pending lawsuits involving the Authority of approximately GH¢1.247 million (2009: GH¢1.404 million).

Two subsidiaries of the Authority (VLTC and AHL) have financial challenges that cast doubt on their ability to continue as a going concern. VLTC has a net liability position of GH¢2.2million with a deficit retained earnings of GH¢3.3million. AHL has net current liability of GH¢1.6million with a deficit retained earnings of GH¢1.9million.

The Authority has given assurances to continue to support the operations of these subsidiaries until they are able to do so with their own resources.

Kpong Farms Ltd (KFL) also a wholly owned subsidiary of the Authority is no longer operational and its administrative expenses are currently being paid for by the Authority.

NOTES TO THE FINANCIAL STATEMENTS
FOR THE YEAR ENDED 31 DECEMBER, 2010 - Continued

20. Reconciliation of operating profit to operating cash flows

2009			2010	
		Current Portion		
VRA	Group		**VRA**	**Group**
GH¢'000	GH¢'000		**GH¢'000**	**GH¢'000**
11,290	8,266	Operating Profit	**53,429**	**53,291**
		Adjustments for :		
80,337	81,391	Depreciation	**77,468**	**78,151**
(41,664)	(41,664)	Exchange (gain)/loss	**8,112**	**17,239**
(248)	(248)	Profit on disposal of property plant and equipment	**(2,493)**	**(2,483)**
		Operating Profit before working		
49,715	47,745	Capital changes	**136,516**	**146,198**
4,682	4,678	Changes in inventories	**(60,851)**	**(60,771)**
(100,539)	(100,499)	Changes in receivables	**(71,725)**	**(71,755)**
117,346	173,226	Changes in payables	**(45,308)**	**(105,053)**
71,204	125,150	Cash outflow from operating activities	**(41,368)**	**(91,381)**
-	(2)	Tax Paid	**-**	**(18)**
71,204	125,148	Net cash outflow from operating activities	**(41,368)**	**(91,399)**

21. Cash and Equivalents

2009			2010	
VRA	Group		**VRA**	**Group**
GH¢'000	GH¢'000		**GH¢'000**	**GH¢'000**
95,447	143,387	Cash and Bank Balances	**89,276**	**97,857**
16,169	16,435	Short Term Investments	**30,066**	**31,597**
(51,771)	(51,834)	Bank Overdraft	**(49,412)**	**(49,443)**
59,845	107,988	Cash and cash equivalents	**69,930**	**80,011**

NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER, 2010 - Continued

22. Post Balance sheet Event

On 14 June 2010, the Government formally wrote to agree to the conversion of the following outstanding payments due the Government of Ghana into additional equity holding in Volta River Authority:

• HIPC relief on VRA LOANS (2009 – 2010)	-	US$39.19million
• Promissory notes for purchase of 4 cargoes of crude oil	-	US$128.32million
• Sovereign bond proceeds to VRA	-	US$54.59million
• EIB – WAGP loan	-	US$107.82million
Total	**-**	**US$329.92million**

These balances were originally liabilities in the books of the Authority. The conversion of the liability of US$329.92million (GHS477.12million) to equity have been recognised in the financial statements as at 31 December 2010 (note 16) as an adjusting post balance sheet event.

23. 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.

NOTES