

ANNUAL REPORT

AND

AUDITED FINANCIAL STATEMENTS FOR 2011



ENERGY COMMISSION

Annual Report

and

Audited Financial Statements for the Year ended 31 December, 2011

Republic of Ghana

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CHAIRMAN'S REMARKS

In accordance with section 50 of the Energy Commission Act, 1997 (Act 541), this Report, covers activities of the Energy Commission over the period 1 January to 31 December, 2011. In addition to the activity report, the Audited Statement of Accounts for the period ended 31 December, 2011 is also submitted.

The Energy Commission achieved a momentous feat by facilitating the passage of the Renewable Energy Act, 2011 (Act 832) in November, 2011 by Parliament. The Act is intended to establish the enabling environment for renewable energy to contribute an estimated 10% of the country's energy requirements by the year 2020. Act 832 received Presidential assent in December, 2011.

The Commission also prepared the final draft of the Bioenergy Policy and Strategy Document. The document is to be subjected to Strategic Environmental Assessment and presented to Cabinet for approval.

Various Rules, Regulations, Licenses, Codes and Standards were issued to regulate activities within the electricity and natural gas sub-sectors. These included:

- (i) Issuance of a Wholesale Electricity Supply License to Takoradi Thermal Power Company (TAPCO);
- (ii) Development and operationalisation of Market Rules for the Wholesale Electricity Market:
- (iii) Development of an Electricity Distribution Code;
- (iv) Development of Draft Electrical Wiring Regulations;
- (v) Issuance of a Construction Permit to the Ghana National Gas Company (GNGC) for the construction of the Gas Processing Plant at Atuabo and the gas transmission pipeline from Atuabo to Takoradi and Prestea;
- (vi) Development of Natural Gas Pipeline Safety and Natural Gas Occupational Health and Safety Regulations; and
- (vii) Development of an Access Code for the National Interconnected Gas Transmission System (NIGTS).

The Commission published the 2011 *Energy Outlook*, which outlines energy demand projections to inform industry players and businesses in planning their operations in country's energy sector for that year. In addition to the 2011 *Energy Outlook*, the Commission also published the National Energy Statistical Bulletin for 2000-2010.

The Energy Commission also conducted an analysis of LPG penetration in the country to develop strategies which when implemented could promote the penetration of LPG in households from 18% in 2010 to 50% by 2015. The analysis indicated that by implementing the following strategies, the 50% LPG penetration in households in 2015 is achievable:

- i. A change in the current business model for LPG in Ghana by shifting from the cylinder ownership model to a cylinder re-circulation model for the distribution of LPG. Under this model consumers would simply have to return their empty cylinders to retail points and pick-up already filled LPG cylinders to take back to their homes. LPG distribution companies would also deliver filled LPG cylinders to homes of consumers.
- ii. The National Petroleum Authority (NPA) should establish attractive transportation and distribution margins and redirect the current subsidy on the consumption of LPG towards facilitating the implementation of the "cylinder recirculation model".

Engaging the public in the regulatory process is crucial to fostering ownership of the rules, regulations and policy recommendations the Commission makes in fulfillment of its mandates. In view of this, the Energy Commission was highly interactive with its stakeholders, including the media and the general public during the period under review. Activities, including a public education campaign on the Ghana Energy Efficiency Standards and Appliance Labelling Programme, a National Energy Efficiency Month, a Power Month, as well as a Stakeholders and Consumers Parliament were organized to keep Ghanaians abreast with the programmes and achievements of the Commission and to engage their minds in finding solutions on issues confronting the energy sector.

From the beginning of 2011, the country had to undertake electrical load shedding due to disruptions in gas supply from the West African Gas Pipeline.

Hence, in an attempt to forestall such unreliable electricity supply in the future, the

Government initiated moves to exploit its indigenous gas resources from the Jubilee

and other fields and establish a re-gasification plant for imported LNG for electricity

generation. It is expected that with the exploitation of such gas resources, a quick and

lasting solution would be found to the shortage of power which stemmed from the lack

of fuel to run the thermal plants.

Meanwhile, the Government continues to pursue its policy of achieving an installed

generation capacity of 5,000 MW in 2016. As at 2011, total installed capacity stood at

2169.5 MW. By the end of the year, the Energy Commission had granted provisional

licenses for the development of a further 300 MW of thermal power plants and 155

MW of solar power plants. The Commission anticipates that when these power plants

come online on completion, the country would be on course to achieving the set target

of 5000 MW by 2016.

I am glad to report that the Commission carried out its activities diligently in

conformity with Act 541 and looks forward earnestly to securing Ghana's future

energy needs.

Dr. Francis Bawaana Dakura

Ag. Chairman

1.0 THE COMMISSION

1.1 INTRODUCTION

The Energy Commission, established by the Energy Commission Act, 1997 (Act 541) is a statutory body corporate with perpetual succession and a common seal. The Commission may sue and be sued in its corporate name.

The Act provides for the Commission's functions relating to the regulation, management, development and utilization of energy resources in Ghana. It also provides for the granting of licenses for the transmission, wholesale supply, distribution and sale of electricity and natural gas.

1.2 GOVERNING BOARD

The Governing Board of the Energy Commission consists of seven members appointed by the President of Ghana acting in consultation with the Council of State of the Republic. In making the appointments, the President takes into consideration the knowledge, expertise and experience of the persons so appointed and in particular, their knowledge in matters relevant to the functions of the Commission.

The Executive Secretary is responsible for the day-to-day administration of the Energy Commission and is required to ensure the implementation of the decisions of the Board.

The current composition of the Commission is as follows:

Prof. Abeeku Brew-Hammond Chairman
 Dr. Francis Bawaana Dakura Member
 Dr. Seth Ohemeng-Dapaah Member
 Dr. Rudith King Member
 Mr. Charles Kofi Wayo Member
 Mr. Winfred Nelson Member

7. Dr. A.K. Ofosu Ahenkorah Executive Secretary

1.3 OBJECT AND FUNCTIONS

The Commission is required by law to regulate, manage the utilization of energy resources in Ghana, to provide the legal, regulatory and supervisory framework for all providers of energy services in the country: specifically by the granting of licenses for the transmission, wholesale, supply, distribution and sale of electricity and natural gas and related matters.

The critical statutory mandates of the Energy Commission include the following:

- (a) To recommend national policies for the development and utilization of indigenous energy resources;
- (b) To advise the Minister on national policies for the efficient, economical, and safe supply of electricity, natural gas, and petroleum products having due regard to the national economy;
- (c) To prepare, review and update periodically indicative national plans to ensure that all reasonable demands for energy are met;
- (d) To secure a comprehensive data base for national decision making on the extent of development and utilization of energy resources available to the nation;
- (e) To receive and assess applications, and grant licences under Act 541 to public utilities for the transmission, wholesale supply, distribution, and sale of electricity and natural gas;
- (f) To establish and enforce, in consultation with the Public Utilities Regulatory Commission, standards of performance for public utilities engaged in the transmission, wholesale supply, distribution and sale of electricity and natural gas;
- (g) To promote and ensure uniform rules of practice for the transmission, wholesale supply, distribution and sale of electricity and natural gas;
- (h) To pursue and ensure strict compliance with Act 541 and regulations made under it; and
- (i) To perform any other function assigned to it under the Act or any other enactment.

1.4 STRUCTURE

The Commission's operations are structured under three (3) Directorates as follows:-

- 1. Office of Technical Regulation and Promotion of Renewable Energy and Energy Efficiency. The following Divisions make up the Directorate:
 - (a) Technical Regulations Division;
 - (b) Renewable Energy Division;
 - (c) Energy Efficiency and Climate Change Division; and
 - (c) Inspectorate and Enforcement Division;

The Technical Regulation Division is responsible for matters relating to generation and supply of electric power; licensing of electricity service providers, elaboration of regulations, codes of practice, guidelines and procedures for the electricity supply and distribution industry; and inspection and monitoring of compliance with licensing terms and conditions, regulations, rules and codes of practice by service providers in the power sector. For the natural gas sector, the Office handles all midstream and downstream operations including gas processing, LNG re-gasification, gas imports, gas pipeline transportation and gas distribution and consumption.

- 2. Office of Strategic Planning, Policy and Social Impact and Technology Assessment, comprising the following divisions:
 - (a) Strategic Planning and Policy Division; and
 - (b) Social, Environmental Impact and Technology Assessment Division;

The overarching responsibility of the Policy and Planning Office is to prepare indicative plans and make policy recommendations which would ensure that all demands for energy are met in an efficient and sustainable manner towards promoting steady socio-economic growth. Specifically, the Office is required per the provisions of Act 541 to among other things, advise the Energy Commission Board and Minister for Energy on national policies for the development and utilization of indigenous energy resources; to review energy policies and prepare

Energy Policy, review Papers for the Board regularly; to prepare Annual and Medium-term Energy Outlooks for Ghana; to prepare National Energy Statistics annually; and to manage a National Energy Information Centre at the Commission. The Directorate is also charged with conducting environmental impact assessment of all national energy plans and projects; preparing and monitoring guidelines for the incorporation of environmental and social issues in the development and implementation of energy projects; conducting and reporting on the assessment of energy technologies and making recommendations regarding their use in Ghana; and preparing Environmental and Technology Policy Review Papers for the Commission's Board.

3. Office of Finance and Administration, made up of the following Units:

- (a) Human Resource and Training Unit;
- (b) General Administration Unit;
- (c) Finance Unit; and
- (d) Public Affairs Unit

The Finance and Administration Directorate is charged with ensuring that the Commission continuously possesses the needed capacity and the financial, human and technological resources required to effectively and efficiently play its role as Technical Regulator within the energy sector. The specific tasks of this Office include developing and implementing systems and procedures for the efficient and effective delivery of general administrative services of the Commission; coordinating the preparation of annual budgets of the Commission; developing a human resource plan to provide the requisite skill levels to meet the Energy Commission's mission and objectives; co-coordinating the procurement of contracted general services for the Commission; developing and implementing staff performance appraisal and incentive systems; and ensuring that the Energy Commission is constantly in touch with the public by maintaining healthy relations with the Ghanaian Media.

4. In addition to the above Directorates, there exist two (2) supporting Units and the Electricity and Natural Gas Technical Committee:

(a) <u>Electricity and Natural Gas Technical Committee</u>

Section 29 of the Energy Commission Act, 1997 (Act 541) mandates the Energy Commission to establish an Electricity and Natural Gas Technical Committee to oversee the development, implementation and monitoring of Rules of practice for electricity and natural gas public utilities. The Committee is required to assist the Commission to prescribe by legislative instruments, technical and operational rules of practice for electricity and natural gas utilities and to enforce such rules.

(b) Legal Unit

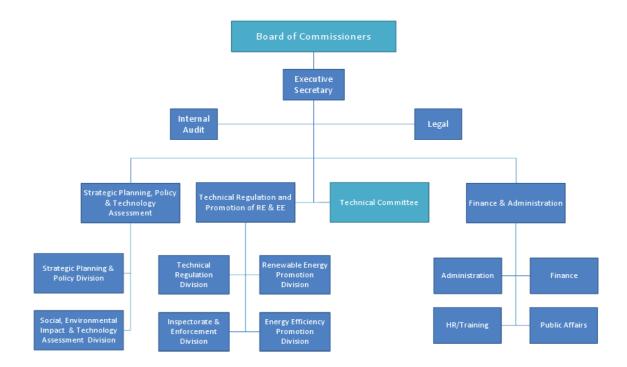
As a State institution established by an Act of Parliament, the entire mandate of the Energy Commission is founded on legal provisions and regulatory boundaries which have to be followed to the letter. Commission's Unit Legal is required to make appropriate recommendations relating to the efficiency and effectiveness of established regulatory frameworks and strategies; to serve as the Board Secretariat and in that regard to advise Members of the Board on all legal matters; to represent the Commission on all legal matters; to maintain an accurate Register of licenses; and to follow up on inspection reports and where necessary take appropriate action against defaulting service providers.

(c) <u>Internal Audit Unit</u>

In keeping with the good governance principles of transparency and accountability, the Commission's Internal Audit Unit is charged with planning, managing, organizing and controlling its audit functions as well as ensuring that proper books of accounts are maintained in line with current trends and international best practice.

The Unit also ensures that standard accounting practices, policies and procedures are adhered to and that adequate procedures have been instituted for the detection of risk and for the prevention or elimination of such risk.

1.5 ORGANOGRAM OF THE ENERGY COMMISSION



1.6 OUR MISSION

Our mission is to advise on reliable and sustainable energy provision to the Minister and effectively regulate the utilization of all energy forms in the country.

1.7 OUR VISION

The Vision of the Energy Commission is to become a leading energy planning and regulatory institution reputed with transparency, excellence and innovation in Africa and beyond.

2.0 TECHNICAL REGULATION

2.1 Electricity Supply Industry

2.1.1 Issuance of Licenses

The Commission issued one Wholesale Supply Licence to Takoradi Thermal Power Company Limited during the course of the year.

Three Bulk Customer permits were also renewed for the following companies:

- a) Golden Star (Bogoso/Prestea) Ltd
- b) Golden Star (Wassa) Ltd and
- c) Tema Steel Company Ltd

2.1.2 Review of Licensing Framework

The first draft of the revised Licensing Manual to Service Providers in the Electricity Supply Industry was reviewed and submitted to service providers for their comments.

2.1.3 <u>Development and Operationalisation of Market Rules for the</u> Wholesale Electricity Market

The Commission reviewed a draft Electricity Market Rules for Phase 1 Market Operations prepared by GRIDCo. It was proposed that all prospective market players should sign and lodge copies of Power Sale and Purchase Agreement (PSPA) with the Commission ahead of the commencement of the Wholesale Electricity Market.

The Commission organised a high level stakeholder meeting on 1st December, 2011 to discuss issues aimed at ensuring reliable supply of electricity in Ghana and also what stakeholders should expect from the market and its impact on the power sector.

It was agreed that a meeting be held on the 12^{th} of January 2012 to resolve outstanding issues meant to facilitate the take-off of the market. These include:

 Power Purchase and Sales Agreement and other relevant issues needed to facilitate their execution;

- Percentages of demand that NEDCo and ECG were to purchase from the Spot market;
- Allocation of the electricity from the Akosombo and Kpong Hydro;
- Issues pertaining to Spinning Reserve, Ancillary Services and Reserve Margins;
- Tariff for Ancillary services.

Proposed actions for management of the hydro will be implemented during a transitional period from January 2012 to December 2015 after which the entire electricity generated from Akosombo and Kpong would be sold on the spot market at the system marginal price in accordance with the Electricity Regulations 2008, LI 1937.

As part of the transitional arrangement, there is the need to agree on the percentage of energy requirement that Bulk Customers were to sign with Licensed Wholesale Suppliers in the respective Power Purchase Agreements (PPAs).

In the light of this, the deadline for the submission of PPAs which was earlier fixed for 31st December, 2011 was suspended.

2.1.4 Development of Electrical Wiring Regulations

In fulfilment of its mandate under section 56 of the Energy Commission Act, the Commission developed the Electrical Wiring Regulations (EWR) to regulate electrical wiring in the country. This is to ensure the safety of persons, property and livestock from the use of electrical energy as mandated by the Act.

The Draft Electrical Wiring Regulations was prepared and submitted for Parliamentary approval. The key objectives of the Regulations are to guide artisans and tradesmen in wiring to ensure safety of lives and property. It specifically provides for related issues of:

- a. Who qualifies to undertake electrical wiring;
- b. How the qualified electrical professional does the wiring; and
- c. The materials required for safe electrical wiring in Ghana.

2.1.5 Development of Electricity Distribution Code

A draft Electricity Distribution Code was developed. The purpose of the Distribution Code is to ensure that the distribution network provides fair, transparent, non-discriminatory, safe, reliable, secure and cost efficient delivery of electrical energy. The electricity Distribution Code also sets out the conditions that a distribution utility must meet in carrying out its obligations to distribute electricity under its licence in accordance with L.I. 1816: Electricity Supply and Distribution (Technical and Operational) Rules, 2005; and L.I. 1935; Electricity Supply and Distribution (Standards of Performance) Regulations, 2008. The draft code has been sent to the stakeholders for their comments.

2.2 NATURAL GAS INDUSTRY

2.2.1 Issuance of Construction Permits

An application was received from the Ghana National Gas Company (GNGC) for a permit to construct the following natural gas facilities:

- Gas Processing Plant at Atuabo;
- 120 km x 20-inch on-shore pipeline from Domunli through Essiama to Aboadze;
 and
- 75 km x 20-inch pipeline lateral from Essiama to Prestea. Review of the permit application is on-going and will be issued when all requirements are fulfilled by the applicant.

2.2.2 <u>Development of Natural Gas Pipeline Safety and Natural Gas</u> <u>Occupational Health & Safety Regulations</u>

The Natural Gas Pipeline Safety and Natural Gas Occupational Health and Safety Regulations were developed to provide consistent, uniform standards and procedures for the safe construction, operation and maintenance of natural gas facilities and installations throughout the country.

The Ghana Standards Authority in April and June, 2011 respectively submitted to the Commission a final report of the gazetted Standards of the Pipeline Safety Regulations and a complimentary copy of the Occupational Health and Safety Regulations.

The gazetted Standards were incorporated into the draft Natural Gas Pipeline Safety Regulations the final Draft of the Natural Gas Pipeline Safety Regulations has been forwarded to the Attorney Generals' Office for onward submission to Parliament for enactment into law.

2.2.3 <u>Development of Access Code for Natural Gas Transmission in Ghana</u>

The first draft of the Natural Gas Transmission Access Code was completed. The code establishes the requirements, procedures, practices and standards to govern the development, operation, maintenance and use of the Natural Gas Transmission System in Ghana. The code further describes the conditions of access to gas transmission services, rules governing the conduct of Natural Gas transmission utility and establish service quality requirements for natural gas transmission utility.

2.3 ENERGY EFFICIENCY PROMOTION

2.3.1 <u>Promoting of Appliance Energy Efficiency and Transformation of the Refrigerating Appliance Market in Ghana</u>

As part of its energy efficiency programme, the Energy Commission is implementing a project named Promoting of Appliance Energy Efficiency and Transformation of the Refrigerating Appliance Market in Ghana. The objective is to transform the electrical appliance market in Ghana from a market of inefficient appliances to that of high efficiency through a combination of energy performance standards and labeling and consumer incentives.

Specifications and modalities for the proposed refrigerator test facility for Ghana were developed in collaboration with the Ghana Standards Authority. The test facility when installed would ensure effective enforcement of regulations (L.I. 1958 and L.I. 1970) on energy efficiency standards and labels for refrigerating appliances.

2.3.2 <u>Capacitor Installation Project</u>

The capacitor installation project seeks to improve energy efficiency of public buildings and facilities with the aim of reducing electricity demand and government expenditure on electricity through the installation of automatic power factor correction capacitors at the selected facilities.

The first phase of the project was completed in selected public buildings in Accra e.g. Korle-Bu Teaching Hospital, Foods & Drugs Boards & Parliament House as shown in Table 1.

Table 1: List of Beneficiaries

	Name of Institution	Capacitor Size Installed, kVAr	Demand Savings (KVA)
1.	Ministry of Defence	3263	818
	Korle-Bu Teaching		
2.	Hospital	2121	467
3.	Office of the President	255	37
4.	Foods and Drugs Board	255	43
5.	Accra Sports Stadium	750	398
6.	Parliament House	630	88
	Total	7274	1851

As a result of the installation of the capacitors at the military installation alone, the power factor improved from 0.86 to 0.98 reducing the maximum demand from 589kVA to 507kVA, and saving 818kVA.

Measurements taken after the installation revealed that the maximum demand of all the six (6) facilities reduced from 11,743kVA to 9,889kVA recording a saving of 1,854kVA.

Translated into monetary terms, the total savings in the six (6) facilities is Thirty-nine Thousand, One Hundred and Forty-five Ghana Cedis (GH¢ 39,145.00 or US \$23,868.90) a month. The total cost of the installations was US\$ 258,200.00 (Two Hundred and Fifty-Eight Thousand, Two Hundred US Dollars).

2.4 RENEWABLE ENERGY PROMOTION

2.4.1 Grid connected solar and wind system project, Phase II

The Energy Commission initiated a "Grid Connected Wind and Solar PV Electricity Supply System Pilot Project" in November 2009. The project was a public-private-partnership arrangement where funds from the Energy Fund were used to leverage both individual and institutional investments in financing grid-connected solar PV and wind projects. The first phase of the project was completed in 2010 and involved the installation of 25kW of grid connected solar PV systems in the Greater Accra Region. The Commission contributed about 30% of the total hardware cost which amounted to about sixty thousand Ghana Cedis (GH¢ 60,000.00)

The initiative was expanded in 2011 to promote greater uptake and integration of renewable energy into the national energy mix and to enhance energy security and improve access to clean energy. It was also to give institutions, companies and individuals in the other regions the opportunity to benefit from the project. Additionally, reversible meters were introduced to enable a study of the modalities for full scale implementation of Feed-In-Tariffs as part of preparations towards the implementation of the Renewable Energy Act.

In 2011 (18) eighteen solar PV systems with a total capacity of 177kWp were to be installed at various locations in Ghana. Out of this total, 68.44kWp of solar PV systems were installed at six locations.

Pictures of some installations are shown in Figure 1.





Figure 1: Installation of 10.6 kWp grid connection at the office of Tradeworks Co. Ltd.

The six locations which benefited from the installations are shown in Table 2.

Table 2: List of completed installations

	Beneficiaries	Location	Capacity
1	Wienco Gh Ltd	Atimpoku, Eastern Region	42.77 kW
2	Trade Works Company Ltd	South Dome, Ga East District, GAR	10.58 KW
3	Residence I	Tema, Greater Accra Region	4.00 kW
5	Residence II	Tema, Greater Accra Region	4.00 kW
4	Residence III	Peduase, Eastern Region	3.80 kW
6	Residence IV	Tesijriganor, Ga East District,	3.29 kW

The Commission has developed a comprehensive monitoring system to monitor the installed capacities.

2.4.2 Wind Measurement Activity

In 2011, the Energy Commission with support from GEDAP conducted Wind Energy Resource Assessments at 5 selected sites.

Five (5) 60 m wind masts with measuring equipment have been installed at Ningo in the Greater Accra Region; Ekumfi Edumafa and Gomoa Fetteh in the Central Region; Avata and Atiteti (near Anyanui) in the Volta Region. The installation in Gomoa Fetteh is shown in Fig. 2. The installation works at the five (5) sites were completed in December 2011. A training report issued after training 15 professionals in wind measurement and data analysis has been submitted to the Commission.



Figure 2: Installation of Wind Measuring Mast at Gomoa Fetteh

2.4.3 <u>Development of Renewable Energy Act, 2011 Act 832 and Regulations</u>

The Energy Commission under the auspices of the Ministry of Energy developed the Renewable Energy Act, 2011 (Act 832) which was passed by Parliament in November, 2011. The Act provides for the development, management, utilization, sustainability and adequate supply of renewable energy for generation of heat and power and for related matters.

2.4.4 <u>Bioenergy Programmes</u>

2.4.4.1 Development of Bioenergy Policy and Strategy

The Commission has submitted the final draft of the Bioenergy Policy and Strategy document for Ghana to the Ministry of Energy for onward submission to the EPA. EPA will conduct the Strategic Environmental Assessment on the document before submitting it to Cabinet for approval.

2.4.4.2 Streamlining Mid-Stream Bulk Charcoal Supply

The Commission organized stakeholder workshops on the mid-stream segment (i.e. bulk storage, loading and transportation) of the charcoal supply chain. The rationale was to collate views from industry players in an effort to educate stakeholders in the mid-stream bulk charcoal supply (e.g. charcoal truck drivers and owners, charcoal dealers, Ghana Police Service etc.) on the best practices of bulk charcoal supply. Further, it was to collate views from stakeholders to develop guidelines for regulating the mid-stream segment of the charcoal supply industry; and to establish a partnership with the District and Municipal Assemblies visited.

The consultative workshops were held at Tamale, Kintampo, Donkorkrom, Mampong, Atebubu, Nkoranza, Ejura-Sekyeredomase and Manso Amenfi.

A report on Stakeholder Consultation for the Streamlining of Mid-Stream Bulk Charcoal Supply activities was prepared. This activity led to the development of a Strategic Action Plan for the Mid-Stream Bulk Charcoal Supply activities.

i. The Action Plan includes a Baseline Study on charcoal loss in mid-stream activities.

- ii. Development of a communication strategy to create awareness for reforming the mid-stream bulk charcoal supply industry.
- iii. Development of regulatory procedures for bulk charcoal storage and transportation.

2.4.4.3 <u>Energy Research and Development and Woodlot Cultivation Project</u>

The Energy Commission is providing funding support for Energy Research and Development. In this direction five projects were selected for funding in the year under review. These are:

- i. Integrated Biomass Project in Bole District implemented by Kumasi Institute of Technology & Environment (KITE);
- ii Development of a Process for the Conversion of Some Biomass Material Found in Ghana into Bioethanol implemented by Johannes A. M. Awuda & Hilary D. Zakpaa, KNUST;
- iii Electrical impact analysis of grid-connected solar PV systems on the performance of distribution networks implemented by Electrical Engineering Department, College of Engineering, KNUST;
- iv. Technical and market viability study of energy from waste in urban slum Ashaiman implemented by Safi Sana Foundation; and
- v. Woodlot cultivation in the Jirapa District of the Upper West Region implemented by PROTECH Ghana.

The Commission signed agreements with the five institutions and NGOs under which the Commission committed a total of Two Hundred and Ninety-Two Thousand, Two hundred and Sixty-Six Ghana Cedis, Seventy-Four Ghana Pesewas (GH¢ 292,266.74) for Energy Research and Development projects of which Eighty Thousand, One Hundred and Ninety-One Ghana Cedis (GH¢ 80,191.00) was disbursed to the beneficiaries in 2011. Implementation of the various projects started in December, 2011.

2.4.5 <u>Licensing of Renewable Energy Service Providers</u>

Four (4) companies (Abua Farms Company Ltd., Anthonio & Sons Ltd., Greencoal Ghana Ltd. and Beetel Company Ltd.) were granted Permits by the Commission to export charcoal from wood waste and off-cuts generated by sawmills in 2011.

A total of 744.77 tonnes of charcoal was exported in 2011 which indicates a decrease of 63.9% compared to charcoal exported in 2010 according to GCnet.

- Abua Farms and Industries Ltd. exported 45,600 kg.
- Antonio and Sons Ltd. exported 75,682 kg.
- Beetel Company Ltd. exported 319,500 kg. and
- Greencoal Ghana Ltd. exported 303,990 kg. of charcoal.

2.5 INSPECTION AND ENFORCEMENT

The following enforcement activities were undertaken in the Year 2011:

2.5.1 Enforcement of Regulations in the Electricity Supply Industry

The Commission undertook regulatory inspection of operational facilities of six licensed service providers in the Electricity Supply Industry to verify compliance with regulatory requirements and conformance to operational and safety objectives. The facilities inspected were that of the following:

- i) Sunon Asogli Power Plant (SAPP)
- ii) Takoradi International Company Ltd. (TICO)
- iii) Takoradi Power Company Ltd (TAPCO)
- iv) Tema Thermal (1) Power Plant (TT1PP)
- (v) Enclave Power Company (EPC) and
- vi) Electricity Company of Ghana (ECG).

In line with compliance monitoring requirements, the Commission received Weekly Reliability Performance Reports from GRIDCO and Quarterly reports covering Performance Statistics on operations from the ECG, EPC and TICO. The ECG has published a Customer Charter in line with the requirements of the license.

The Customer Charter represents the targets which ECG is expected to meet when providing its customers with its range of services. ECG is to compensate its customers if unable to deliver as stated in the Charter.

The Commission monitored a verification exercise conducted by the Electricity Company of Ghana (ECG) to check on meter accuracy in Accra and Kumasi. This is in compliance with the requirements on metering as specified in the Electricity Supply and Distribution (Technical and Operational) Rules, 2005: L.I.1816 which specifies that the distribution utility shall ensure that the accuracy of a meter in a customer's premises is maintained throughout its usage period. The ECG was found to be in compliance with the requirements of L.I. 1816.

2.5.2 Enforcement of Energy Efficiency Regulations

The Regulation on Energy Efficiency Standards and Labeling (Household Refrigerating appliances), L.I 1958 came into force in November, 2010. The Commission has since January, 2011 commenced enforcement of the Regulation. Inspection visits to premises of fifteen identified major importers of household refrigerating appliances was undertaken to monitor compliance with the regulations on standards and labeling. Six of the imported household refrigerating appliances (LG from Somotex, Westpoint from Mandilas and Iceking from Nankani & Hagan, Samsung from Electroland, ICON and some SHARP models) had labels indicating the correct energy efficiency ratings. Written directives were issued to the remaining nine importers to comply with the regulations.

The GCNet was used to monitor importation of incandescent filament lamps (IFL) into the country. The results indicate that importers were complying with the ban on IFL. However, some importers despite the ban still managed to import some quantities of IFLs. Others who had on sale some of the IFLs claimed to have imported them into the country before the ban. The Energy Commission in December, 2011 seized 447 cartons of IFL from an importer and destroyed them. The importer was surcharged with the cost of destruction.

The Ghana Standard Authority (GSA) took delivery of a Test facility for the testing and verification of standards of compact fluorescent lamps in line with the Regulations on Standards and Labeling. The test facility was procured by the GSA. Installation of the facility was completed in September, 2011.

2.5.3 Enforcement of Regulations in the Renewable Energy Sub-Sector

The Commission carried out compliance monitoring of operations of three licensed Charcoal exporters; Greencoal Ltd, Beetel Ltd and Anthonio and Sons Ltd in line with charcoal export permit requirements. Operations of all three exporters were in compliance with licensing requirements.

The Commission rejected an application for permit renewal from an applicant whose license had expired, due to inconsistencies in its submissions.

2.5.4 Enforcement of Regulations in the Natural Gas Industry

The Inspectorate and the Technical Regulation Divisions of the Commission visited the Regulating and Metering Station (RMS) Sites of the West Africa Gas Pipeline Company (WAGPCO) in Takoradi and Tema. The purpose of the visit was to enable the Commission monitor and keep abreast with the developments, operations and challenges at the two RMS, particularly with respect to the level of supply volumes and quality of natural gas from Nigeria through the West Africa Gas Pipeline.

Operational Performance at the Regulating and Metering Stations were satisfactory.

3.0 POLICY, PLANNING AND IMPACT ASSESSMENT

3.1 STRATEGIC PLANNING AND POLICY

The EC undertook the following activities during the course of 2011:

3.1.1 <u>Preparation, Reviewing and Updating of National Indicative Energy</u> <u>Plans and Policies</u>

3.1.1.1 Generation Master Plan Study for Ghana

The EC, Ghana Grid Company and other stakeholder institutions constituted the counterpart staff that assisted Tractebel Engineering as the Consultant to undertake a fifteen-year (2011 – 2026) Generation Master plan study for Ghana to guide both the public and the private sector (i.e. independent power producers) make investment decisions in generation capacity expansion. The results of the study indicated that total installed generation capacity requirement in 2016 is expected to be 3550 MW, 4200 MW in 2020 and 5470 MW in 2026.

3.1.1.2 <u>Planning for Sustainable Energy Development - Ghana Country</u> Study

The draft final report on Planning for Sustainable Energy Development – Ghana Country Study based on analysis of the country's energy sector in the context of sustainable energy using IAEA's energy planning tools: MAED, WASP IV, and MESSAGE models was completed and submitted to the Ministry of Energy and other stakeholders for their comments. The results indicated that total generation capacity requirements in 2015 is expected to be about 3850 MW, which is expected to increase to 8220 MW in 2030. The draft report was also submitted to the International Atomic Energy Agency (IAEA) who sponsored the studies, for their comments. These comments were received and incorporated into the report to be finalized for publication.

3.1.1.3 Energy Outlook for 2011

In order to provide a guide to industry players and businesses of the developments in the country's energy sector, the EC prepared the Energy Outlook for 2011. The Outlook comprised of forecasts for the demand of electricity, crude oil and petroleum products, natural gas and charcoal for 2011. The possible price levels of some of the energy forms were evaluated. Finally, the possible supply situations for 2011 were also critically analyzed. Based on the results of the energy demand and supply balance, a number of recommendations were made to government to forestall any possible supply disruptions during the year 2011. The report was submitted to the Ministry of Energy.

3.1.1.4 <u>Survey on Energy use in the Residential, Industrial, Commercial</u> and Services Sectors of the Economy

In an effort to update the Strategic National Energy Plan, the EC undertook the analysis and reporting of the baseline data collected during the nationwide Survey of Energy Consumption Patterns in households, commercial/services and industries (formal and informal) in 2010. A total of 4,339 questionnaires on households, 1,441 questionnaires on industries (formal and informal) and 2,792 questionnaires on commerce and services were analyzed using CSPro and STATA data processing software.

Some of the findings of the survey show that, a household uses an average of 12.5%, 54.4%, 10.3%, 6.8%, 10.0% and 6.0% of total electricity consumption for lighting, refrigeration, television, fan, electric iron and other appliances respectively. It was also realized that about 50.6% of urban households use LPG as a cooking fuel compared to 23.1% rural households. In the case of restaurants and chop bars, the results also showed that electricity accounted for 36.0%, LPG 54.4%, charcoal 3.1% and firewood 6.5% of total energy consumed in 2010.

The penetration of these fuels and their energy intensities computed for the various energy end uses e.g. cooking, lighting refrigeration etc. will serve as an input for energy demand forecasting in updating SNEP, the Strategic National Energy Plan.

3.1.2 <u>Compilation of Energy and Allied Statistics for Decision-making</u> and Research

3.1.2.1 National Energy Statistical Bulletin 2000 – 2010

Data on energy consumption, supply and prices for the year 2010 was collected from energy service providers and suppliers. Other allied data such as Gross Domestic Product and Population were also collected to compute energy indicators such as energy intensity and per capita energy use. These information and statistics were put together and used to update the previous National Energy Statistical Bulletin 2000 – 2009 to produce National Energy Statistical Bulletin 2000 – 2009. A copy of the document can be found on the Energy Commission website at www.energycom.gov.gh.

3.2 SOCIAL AND ENVIRONMENTAL IMPACT AND TECHNOLOGY ASSESSMENT

The provision of sustainable energy policy implementation strategies and technology recommendations for implementation in the energy sector is one of the requirements of the Energy Commission Act 1997, Act (541).

The EC has as one of its objectives the provision of recommendations on social and environmental impacts and viable energy technologies for promotion in the country.

3.2.1 CFLs Handling and Disposal Study

A report titled 'CFLs handling and Disposal Study' was completed. The document is a monitoring and evaluation report of the CFLs Exchange Programme launched in 2007 which seeks to enhance the implementation of mitigation measures on CFLs use, handling and disposal. The report recommends for the development of Guidelines for the use and disposal of CFLs in the country since CFL is considered a hazardous product because it contains mercury. The report also emphasized the need for nationwide awareness creation on the use and disposal of CFLs.

3.2.2 Review of LPG and Bioenergy Strategies for Strategic Environmental Assessment (SEA)

Advisory notes on the LPG promotion strategy developed by the EC and the Bioenergy strategies were completed. The review ensured that social and environmental issues are adequately addressed in the policy implementation strategies. The reports have been made ready for the conduct of Social and Environmental Assessment (SEA) by the EPA.

3.2.3 Streamlining Mid-Stream Bulk Charcoal Supply Activities

A report on Stakeholder Consultation for Streamlining of Mid-stream Bulk Charcoal Supply Activities was completed at the end of November 2011. The Report recommends among others that a regulatory framework be developed to support the promotion of efficient management of bulk charcoal storage and transportation as well as the development of regulations for bulk charcoal storage and transportation in the country.

3.2.4 <u>Second Monitoring of Bui Hydro Electric Power (BHEP) for Constructional Impacts</u>

In November 2011, three regulatory agencies, the Energy Commission (EC), the Environmental Protection Agency (EPA) and the Forestry Commission (FC) together conducted a second (2nd) social and environmental monitoring assessment of the Bui Hydro Electric Project (BHEP) at the following completion stages: main Roller Compacted Concrete (RCC) dam - 92%; civil works on the power house - 70%. The transmission lines - 35%.

The objective of the assessment was to assist in the management of constructional impacts of the BHEP.

The report presented the following findings:

• For the 7 communities that were affected, a total of **219** households were to be resettled. Out of this, **177** households have been successfully resettled as at December 2011. However, the resettlement of personnel of Bui Game and Wildlife Reserve at the new resettlement site C had not yet been effected.

- The resettlement grant and the monthly income support and farm development grant which were part of the community support programmes had been paid to all affected households.
- The late implementation of the LEAP had affected productivity and yield of farm crops.
- The Crop Compensation to affected households had not been paid as the Land Valuation Division had not yet completed its work.
- Majority of project affected households perceived that the construction of the dam had reduced their income generation from fishing and crop farming activities.
- With regards to the control and management of construction impacts such as dust, vehicle exhaust emission and noise, all permitting levels have been complied with. Although 70% of households admitted that the construction of the dam had not resulted in the outbreak of disease, yet malaria was found to be the most prevalent health problem.
- It was revealed that some of the project documents such as RAP, 2011 Annual Environmental Report and the Bui National Park Management Plan were due but yet to be finalized.

In conclusion, the BPA has provided the benefits due most of the project affected households. However, BPA should continually support awareness creation on project benefits for the affected people and intensify its malaria-health control measures in order to reduce the incidence of malaria cases in the community resettlement site.

4.0 HUMAN RESOURCE DEVELOPMENT AND AMINISTRATION

4.1 HUMAN RESOURCES DEVELOPMENT

4.1.1 Recruitment and Selection

To augment its manpower capacity, the Commission in conjunction with the Public Services Commission recruited one Director for Technical Regulations. An Electrical Engineer was also recruited.

4.1.2 <u>Training and Development</u>

During the period under review, Energy Planning and Regulations Workshops were organized for all professional staff.

Other staff benefited from the following additional fully or partly-funded training programmes and conferences:

- Energy Management & Cleaner Production in Small & Medium-Scale industries
- Oil and Gas Planning & Management
- Wind Energy Technologies for Developing Countries
- Biogas Technology, Facilities and Hygiene for Developing countries
- Energy and Gender
- Masters in Environmental & Energy Management (Msc.)
- International Association of Impact Assessment (AIAI) Conference held in Mexico in May 2011.

A Regional Training in "Developing Regional Electricity power plans using International Atomic Energy Agency's MESSAGE Model" was held in Dakar, Senegal, in October, 2011.

Nine members of staff participated in the following online courses:

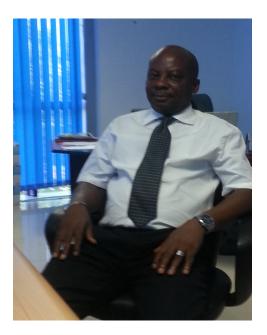
- Developing Regional Electricity Power Plans using MESSAGE model (online) (7 staff members of the Energy Commission and 2 staff members from Ghana Atomic Energy Commission participated).
- Standardization Capacity Building Workshop & Meetings of Technical Committee under the auspices of the African Electro Technical Standardization Commission (AFSEC).
- Financial Reporting, Controls and Audit of Projects in South Africa.

4.1.3 Benefits and Compensation/Awards

The 2011 Best Senior and Junior Staff awards were presented to Mr. Solomon Sarpong of the Office of Technical Regulation and Mr. William Opare of the Office of Finance and Administration respectively. Presentations were also made at an end of year ceremony to thirty-eight (38) long-serving employees.



Mr. Solomon Sarpong, Best Worker, 2011 (Senior Staff Category)



Mr. William Opare, Best Worker, 2011 (Junior Staff Category)

4.2 PUBLIC AFFAIRS

The EC undertook a number of Public Awareness Campaigns and information dissemination activities during the year 2011.

4.2.1 <u>Continuing Public Education on Ghana Energy Efficiency Standards</u> <u>and Appliance Labelling Programme</u>

The Commission continued with its public education on Energy Efficiency Standards and Labelling (Non-Ducted Air Conditioners and Self-Ballasted Fluorescent Lamps) Regulations, 2005, L.I. 1815; Energy Efficiency (Prohibition of Manufacture, Sale or Importation of Incandescent Filament Lamp, Used Refrigerator, Used Refrigerator-Freezer, Used Freezer and Used Air Conditioner) Regulations, 2008, L.I. 1932; Energy Efficiency Standards and Labelling (Household Refrigerating Appliances) Regulations, 2009, L.I. 1958; and Energy Efficiency Standards and Labelling (Household Refrigerating Appliances) (Amendment) Regulation 2012, L.I. 1970. The awareness campaigns were based on the fact that Ghana is operating a mandatory Appliance Standards and Labelling regime. The Commission applied itself to creating the needed awareness for the smooth implementation of the Legislative Instruments passed thereto.

The Commission engaged personnel of the Customs, Excise and Preventive Service (CEPS) at the Kotoka International Airport, Tema Port, Takoradi Port, Aflao, Ho and Elubo. The objective of these encounters was to enhance the level of understanding of the Ghana Energy Efficiency Standards and Labelling requirements of the CEPS personnel.

4.2.2 2nd National Energy Efficiency Month

The Energy Efficiency and Conservation Month has been institutionalized as one of the activities of the Commission to be observed in September of every year. The theme for the Energy Efficiency and Conservation month was "Awareness Creation on the Importance of Purchasing Higher Energy Efficiency Appliances."

As a follow-up to the launch, there were radio Talk Shows on Energy Efficiency and Conservation in Accra, Central, Western, Ashanti, Brong-Ahafo, Eastern and Volta Regions.

As part of the Public Education Campaign jingles on Energy Efficiency Tips and Conservation were aired thrice daily on community radio networks at the 31st December Makola Market in Accra and the Central Market in Kumasi, Volta Star Radio at Ho and Angel F.M. in Kumasi.

A poster plastering campaign was also undertaken in Accra and Kumasi.

- Educational materials such as banners informing importers, customs officials and the general public about the Ghana energy efficiency standards and labels were produced and deployed at the major CEPS posts at Accra, Aflao, Ho, Takoradi and Elubo.
- ➤ Public announcements and jingles on the refrigerator standards and labels were produced and aired on major radio stations throughout the country.

Promotional Materials (leaflets) on refrigerating appliance standards and labeling were developed and circulated nationwide to educate the public about the refrigerator standards.

A brochure on "Energy Efficiency" tips was produced and distributed as part of the public education campaigns.

4.2.3 <u>Electricity Month</u>

The Commission launched the Electricity Month on 11th October, 2011 to focus attention on the electricity sub-sector.

Consequently, the power month was initiated to create the platform for the Commission to come to the bar of the Ghanaian public to inform them of the extent to which the Commission has delivered on this mandate.

As part of the planned activities for the Electricity month, there was a meeting with Electrical Contractors in Accra, Kumasi and Takoradi to provide them with information on the pending regulations on electrical wiring.

Three (3) regional interactive meetings were held in Accra, Kumasi and Takoradi as part of activities marking the Electricity Month.

Another important aspect of the Public Education activities was a novelty programme dubbed "Stakeholders and Consumers Parliament."

It was a platform where all the major Electricity stakeholders – VRA, ECG, PURC, GRIDCo and Energy Commission shared one platform with consumers who were offered an opportunity to speak about the reliability and quality of service of the utilities.

This "Stakeholders and Consumers Parliament" was organized in Kumasi, Takoradi and Accra. In addition, there were radio Talk Shows where the Electricity Supply and Distribution (Technical and Operational) Rules, 2005, L.I. 1816; Electricity Supply and Distribution (Standards of Performance) Regulations, 2008, L.I. 1935; and Electricity Regulations, 2008, L.I. 1937 were explained to listeners. Through subsequent phone-in segments the concerns of consumers were addressed.

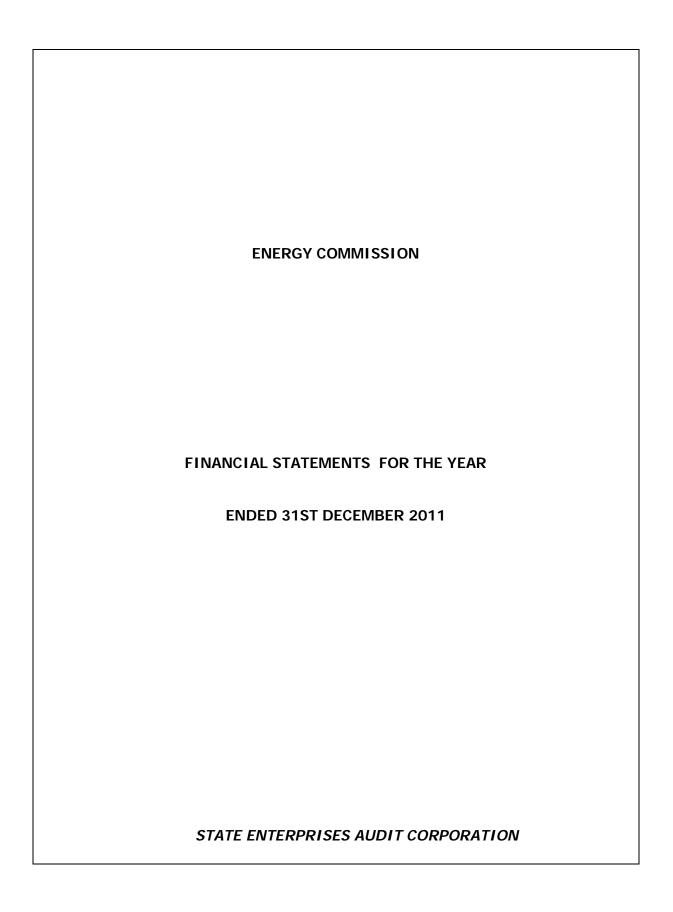


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ENERGY COMMISSION GENERAL INFORMATION

Board Members

Prof. Abeeku Brew-Hammond	Chairman	Appointed	26-06-2009
Mr. Charles Kofi Wayo	Member	Appointed	26-06-2009
Mr. Winfred Nelson	Member	Appointed	26-06-2009
Dr. S. Ohemeng Dapaah	Member	Appointed	26-06-2009
Dr. Rudith King	Member	Appointed	26-06-2009
Dr. Francis Bawaana Dakura	Member	Appointed	26-06-2009
Dr. A.K. Ofosu-Ahenkorah	Member	Appointed	04-05-2005
Ms. Cecilia Agbenyegah	Board Secretary	Appointed	01-12-2010

Head Office Frema House

Plot No. 40 Spintex Road

Accra

Bankers Bank of Ghana

Ecobank Ghana Limited

Ghana Commercial Bank Limited Ghana International Bank plc

Auditors State Enterprises Audit Corporation

4th Floor Republic House

P. O. Box M.198

Accra

REPORT OF THE BOARD

This report covers the operations of the Energy Commission (EC) for the period from 1st January to 31st

December 2011. It is being submitted to the Minister for Energy in compliance with the provisions of Section 50 of the Energy Commission Act (Act 541).

Principal Activities

The Energy Commission is mandated under Act 541, 1997 to plan, regulate, manage the development and utilization of energy in Ghana. The EC has the mandate to advise the Minister for Energy on National policies for the efficient, economical and safe supply of electricity, natural gas and petroleum products having due regard to the national economy.

The Commission is the technical regulator of the electricity and natural gas utilities. Specifically the Commission is mandated to receive and assess applications, and grant licences to public utilities for the transmission, wholesale supply, distribution and sale of electricity and natural gas, establish and enforce standards of performance for public utilities engaged in the transmission, wholesale supply, distribution and sale of electricity and natural gas; promote and ensure uniform rules of practice for the transmission, wholesale supply, distribution and sale of electricity and natural gas.

The Board is also responsible for the management and administration of the Energy Fund which for this purpose includes the Controller and Accountant General or his representative.

Significant Achievement in the year

I. Strategic Planning and Policy

The Annual Energy Statistics was updated to include

- a) energy data for 2010;
 - The EC, Ghana Grid Company (GRIDco) and other stakeholder institutions assisted by
- b) Tractebel Engineering, a consultant, prepared
 - a fifteen year (2011 2026) **Generation Master Plan** for Ghana.
 - The Master Plan is to guide both the public and the private sector (i.e. independent power producers) make investment decisions in
 - generation capacity expansion;
 - The draft final report on Planning for Sustainable Energy Development Ghana Country
- c) Study, based
 - on analysis of the country's energy sector in the context of sustainable energy using IAEA's energy
 - planning tools: MAED, WASP IV, and MESSAGE models was completed and submitted to the Ministry of Energy and other stakeholders for their comments;

The Energy Outlook for 2011 which catalogued forecasts for the demand of electricity, d) crude oil and

petroleum products, natural gas and wood fuel for 2011 was completed and submitted to the Minister for Energy.

To update the Strategic National Energy Plan, the Commission undertook the analysis and reporting of the baseline data collected during the nationwide Survey of Energy Consumption Patterns in households, commercial/services and industries (formal and informal); and Data on energy consumption, supply and prices for the year 2010 was collected from

energy service providers and suppliers. Other allied data such as Gross Domestic Product

and Population were also collected to compute energy indicators such as energy intensity

and per capita energy use. These information and statistics were put together and used to

update the previous National Energy Statistical Bulletin 2000 - 2009 to produce National Energy Statistical Bulletin for 2000 - 2010.

REPORT OF THE BOARD (continued)

II. Technical Regulations

- a) The Commission in 2011 issued one wholesale supply licence to Takoradi Thermal Power Company Limited.
- b) Three Bulk Customer permit were also renewed for the following companies:

Golden Star (Bogoso/Prestea) Limited;

Golden Star (Wassa) Limited and

Tema Steel Company Limited.

- c) The first edition of the Licensing Manual to Service Providers in the Electricity Supply Industry was reviewed and submitted to service providers for their comments.
- d) A draft Electricity Market Rules for Phase 1 Market Operations was submitted by GRIDco to the Energy Commission for approval. It was proposed that all prospective market players should sign and lodge copies of Power Sale and Purchase Agreement (PSPA) with the Commission ahead of the commencement of the Wholesale Electricity Market.
- e) A draft Electrical Wiring Regulations was prepared and submitted for Parliamentary approval. The key objectives of the Regulations are to guide artisans and tradesmen in wiring and to ensure safety of lives and property.
- f) A draft Electricity Distribution Code was developed and sent to the stakeholders for their comments. The purpose of the Distribution Code is to ensure that the distribution network provides fair, transparent, non-discriminatory, safe, reliable, secure and cost efficient delivery of electrical energy.
- g) Application was received from the Ghana National Gas Company (GNGC) for a permit to construct the following natural gas facilities:
 - i. Gas Processing Plant aat Domunli in the Western Region of Ghana;
 - ii. 120 km x 20-inch onshore pipeline from Domunli thorugh Essiama to Aboadze; and
 - iii. 75 km x 20-inch pipeline lateral from Essiama to Prestea.

The applications are currently being reviewed.

- h) The final draft of the Natural Gas Pipeline Safety Regulations was forwarded to the Attorney General's Office for onward submission to Parliament for enactment into law.
- i) The first draft of the Natural Gas Transmission Access Code was completed.
- j) Specifications and modalities for the proposed refrigerator test facility for Ghana were developed in collaboration with the Ghana Standards Authority. The test facility when installed would ensure effective enforcement of regulations (L.I. 1958 and L.I. 1970) on energy efficiency standards and labels for refrigerating appliances.
- k) Automatic power factor correction capacitors were installed at six selected government facilities to reduce electricity demand and consequently government expenditure on electricity.

REPORT OF THE BOARD (continued)

- I) The Commission contributed about 30% of the total hardware cost which amounted to about sixty thousand Ghana Cedis (GH¢60,000) to support the installation of Grid Connected Wind and Solar PV Electricity Supply Systems for institutions and individuals.
- m) Five (5) 60m wind masts with measuring equipment were installed at Ningo in the Greater Accra Region; Ekumfi Edumafa and Gomoa Fetteh in the Central Region; Avata and Atiteti (near Anyanui) in the Volta Region to measure wind parameters as part of the EC's programme to develop the country's renewable energy resources.
- n) The Renewable Energy Act 2011 (Act 832) was passed by Parliament in November 2011.
- o) The final draft of Bioenergy Policy and Strategy document for Ghana was submitted to the Ministry of Energy for onward submission to the EPA for Strategy Environmental Assessment to be conducted on it and subsequently submitted to Cabinet for approval.
- p) The Energy Commission is providing funding support for Energy Research and Development. Under this funding five projects were selected for funding.
- q) The Commission monitored a verification exercise conducted by the Electricity Company of Ghana (ECG) to check on meter accuracy in Accra and Kumasi. This is in compliance with the requirements on metering as specified in the Electricity Supply and Distribution (Technical and Operational) Rules, 2005: (L.I. 1816).
- r) The Commission engaged personnel of the Customs Division of ghana Revenue Authority at the Kotoka International Airport, Tema Port, Takoradi Port, Aflao, Ho and Elubo, to enahance the level of understanding of the Ghana Energy Efficiency Standards and Labelling requirements of the Customs Division Personnel. A public education campaign was also underaken nationwide.

Financial Results	GH¢
The Commission made an excess expenditure over income of	(33,304)
To which is added the balance on Accumulated Fund Account brought forward of	1,522,941
To arrive at balance on Accumulated Fund Account carried forward of	1,489,637

BY ORDER OF THE COMMISSION

BOARD CHAIRMAN	EXECUTIVE SECRETARY

REPORT OF THE INDEPENDENT AUDITORS FOR THE YEAR ENDED 31ST DECEMBER 2011

We have audited the financial statements of the Commission set out on pages 5 to 7 which have been prepared under the historical cost convention and on the basis of the accounting policies set out on page 8.

Respective responsibilities of the Commissioners and Auditors

The Commissioners are responsible for the preparation of the financial statements. It is our responsibility to form an independent opinion, based on our audit, on those statements and to report our opinion thereon.

Basis of opinion

We conducted our audit in accordance with International Standards on Auditing. An audit includes examination, on test basis, of evidence relevant to the accounts and disclosures in the financial statements. It also includes an assessment of the significant estimates and judgements made by the Commissioners in the preparation of the financial statements, and of whether the accounting policies set out on page 8 are appropriate to the Commission's circumstances, consistently applied and adequately disclosed.

We planned and performed our audit so as to obtain all the information and explanations which we considered necessary in order to provide us with sufficient evidence to give reasonable assurance that the financial statements are free from material misstatement, whether caused by fraud or other irregularity or error.

In forming our opinion we also evaluated the overall adequacy of the presentation of information in the financial statements.

Opinion

In our opinion, proper records of account have been kept and the financial statements, which are in agreement therewith, give a true and fair view of the financial position of the Commission as at 31st December, 2011 and of its results and cash flows for the year then ended and comply, in all material respects, with the Energy Commission Act, 1997 (Act 541).

STATE ENTERPRISES AUDIT CORPORATION

SAMUEL KUATSRO AG. MANAGING DIRECTOR 4TH FLOOR REPUBLIC HOUSE KWAME NKRUMAH AVENUE

DATE:

Statement of Financial Performance for the year ended 31st December 2011

	Note	2011	2010
Income		GH¢	GH¢
Revenue Grants	2	6,493,897	5,881,182
Other Income	3	80,137	109,788
		6,574,034	5,990,970
Deduct Expenditure			
Personnel Emoluments	4	2,313,461	1,482,381
Administrative and General expenses	5	2,315,779	1,816,869
Service Activity expenses	6	1,978,098	1,393,432
		6,607,338	4,692,682
(Excess of expenditure over income)/ Excess of income over expenditure transferred to Accumulated Fund Account		(33,304)	1,298,288
Accumulated Fund Account for the year ended 31st December 20	011	2011 GH¢	2010 GH¢
Balance as at 1st January		1,522,941	224,653
(Excess of of expenditure over income)/ Excess of income over expenditure transferred to Accumulated Fund Account	:	(33,304)	1,298,288
Balance as at 31st December		1,489,637	1,522,941

The notes on pages 9 to 14 form an integral part of these financial statements.

Statement of Financial Position as at 31st December 2011

	Note	2011 GH¢	2010 GH¢
Non-Current Assets			
Property, Plant and Equipment	7	578,374	288,373
Work-in-Progress (Office Building)		179,357	-
Fixed Deposit Investment			608,333
		757,731	896,706
Current Assets			
Accounts Receivable	8	196,136	364,672
Prepayments	9	298,577	280,564
Fixed Deposit Investment		687,324	-
Cash and Bank balances	10	927,831	841,055
		2,109,868	1,486,291
Current Liabilities			171007271
Accounts Payable	11	(265,049)	(270,909)
•			(270,707)
Bank Overdraft		<u>(44,504)</u> (309,553)	(270,909)
Net Current Assets		1,800,315	1,215,382
Total Net Assets Employed		2,558,046	2,112,088
Financed by:	12	580,079	100 017
Capital Grant Special Fund Account	13		100,917
Special Fund Account	13	488,330	488,330
Accumulated Fund Account		1,489,637	1,522,941
		2,558,046	2,112,188

BOARD CHAIRMAN EXECUTIVE SECRETARY

The notes on pages 9 to 14 form an integral part of these financial statements.

Cash Flow Statement for the year ended 31st December 2011

	Note	2011 GH¢	2010 GH¢
Net cash inflow from operating activities	15	42,272	790,240
Investing Activities			
Interest received on fixed deposit		78,991	108,333
Payments towards purchase of property, plant and equipment		(597,605)	(207,784)
Capital Work-in-progress - Office Building		(179,357)	-
Increase in fixed deposit investment			(108,333)
		(697,971)	(207,784)
Financing activities			
Capital grants received from Energy Fund		776,962	134,698
Capital grants received from Government of Ghana		-	40,324
Fixed Deposit Investment		608,333	-
Not each inflow in the year from enerating		1,385,295	175,022
Net cash inflow in the year from operating, investing and financing activities		729,596	757,478
Analysis of changes in Cash and Cash Equival during the year	ents		
Balance at 1st January		841,055	88,494
Net Cash Inflow		729,596	752,561
Balance at 31st December		1,570,651	841,055
Analysis of Cash and Cash Equivalents as shown in the Statement of Financial Position			
Cash and Bank Balances		927,831	841,055
Bank Overdraft		(44,504)	-
Fixed Deposit Investment		687,324 1,570,651	841,055
		1,070,001	0+1,000

The notes on pages 9 to 14 form an integral part of these financial statements.

Notes to the Financial Statements for the year ended 31st December 2011

1: Accounting Policies

The following are the significant accounting policies adopted by the Commission in the preparation of the financial statements.

a) Basis of Accounting

The financial statements have been prepared under the historical cost convention.

b) Property, Plant and Equipment

Fixed assets are stated at the cost of purchase together with any incidental costs of acquisition.

Depreciation is charged on property, plant and equipment on a straightline basis over the expected useful lives of the assets concerned.

The principal annual rates used for this purpose are:

Office furniture and fittings - 12½%

Motor vehicles - 25%

Plant, machinery and equipment - 20%

Computers and accessories - 33 ⅓%

c) Grants

(i) Deferred Credit

Grants received in the form of property, plant and equipment or for the purchase of property, plant and equipment are credited to a deferred credit account and amortised by equal instalments over the expected useful

lives of the related property, plant and equipment.

(ii) Revenue Grant

Revenue based grants are credited to the income and expenditure account as and when received and utilised.

d) Foreign Currency transactions

Transactions involving foreign currencies are translated into cedis at the exchange rates prevailing at the date of transaction. Monetary assets and liabilities are translated at the ruling rate at the balance sheet date. Exchange differences arising are dealt with in the income and expenditure account.

e) Debtors

Debtors are stated at book value. Specific provisions are made for debts considered doubtful.

Notes to the Financial Statements for the year ended 31st December 2011 (continued)

		2011 GH¢	2010 GH¢
2:	Revenue Grants		
	Subvention from Government of Ghana	1,373,865	2,083,089
	Transfers from Energy Fund Account	2,226,638	2,544,001
	Transfers from Regulatory Levy Account	2,595,594	1,065,779
	Capital Grant amortised (Note 12)	297,800	188,313
		6,493,897	5,881,182
3:	Other Income		
	Interest on fixed deposit	78,991	108,333
	Interest on Staff Car Loan	733	-
	Gains on Exchange	413	278
	Miscellanous Income		1,177
		80,137	109,788
4:	Personnel Emoluments		
	Gross pay	1,094,737	1,384,168
	Employer's SSNIT Contribution	167,702	98,213
	Employer's Provident Fund Contribution	51,022	
		2,313,461	1,482,381
5:	Administrative and General Expenses		
	Commissioners' Allowances	324,805	220,768
	Stationery and Printing	111,601	63,776
	Insurance	39,864	30,477
	Travelling and Transport	203,308	186,647
	Overtime, Honorarium and Staff Award	211,066	79,739
	Office Accommodation	95,380	306,299
	Audit Fees	34,500	20,125
	Telephone, Postage and Network services	22,338	21,160
	Training, Seminars and Conferences	301,163	267,072
	Sanitation and Security Services	44,137	44,890

Notes to the Financial Statements for the year ended 31st December 2011 (continued)

		2011	2010
		GH¢	GH¢
5:	(continued)		
	Repairs and Maintenance	206,453	106,149
	Medical	96,353	78,592
	Office Consumables	70,370	67,191
	Motor Vehicle Running expenses	110,958	56,014
	Advertising	72,388	22,825
	Depreciation charge	307,604	197,717
	Bank charges	7,482	785
	Water and Electricity	47,315	45,577
	Legal charges/Penalty and Fines	8,694	1,065
		2,315,779	1,816,869
6:	Service Activity Expenses		
	Renewable Energy Division	326,619	206,859
	Power Division	345,102	307,948
	Strategic Policy Planning Division	267,424	219,342
	Public Affairs Division	162,636	102,649
	Natural Gas Division	321,111	289,474
	Social & Environmental Assessment	101,137	55,897
	Inspectorate Division	56,454	40,394
	Energy Efficiency & Climate Change	222,615	170,869
	International Co-operation	175,000	
		1,978,098	1,393,432

Notes to the Financial Statements for the year ended 31st December 2011 (continued)

7: Property, Plant and Equipment

	Motor	Fittings Furniture	Computers	Plant and	
	Vehicles	&	and	Equipment	Total
	GH¢	Equipment GH¢	Accessories GH¢	GH¢	GH¢
Cost					
Balance at 1/1/2011	972,228	325,017	221,947	46,388	1,565,580
Additions in the year	476,755	25,208	95,642		597,605
Balance at 31/12/2011	1,448,983	350,225	317,589	46,388	2,163,185
Depreciation					
Balance at 1/1/2011	756,749	284,345	189,725	46,388	1,277,207
Charge in the year	232,984	21,018	53,602		307,604
Balance at 31/12/2011	989,733	305,363	243,327	46,388	1,584,811
Net Book Values					
At 31/12/2011	459,250	44,862	74,262		578,374
At 31/12/2010	215,479	40,672	32,222	-	288,373
				2011 GH¢	2010 GH¢
8: Accounts Receiv	/able				
Staff Loans				43,055	5,121
Sundry Debtors				18,081	19,731
Deposit Paid (Acq	uisition of land)			135,000	339,820
				10/ 10/	2/4/72
				196,136	364,672

Notes to the Financial Statements for the year ended 31st December 2011 (continued)

		2011 GH¢	2010 GH¢
9:	Prepayments		
	Rent	286,140	269,197
	Insurance	12,437	11,367
		298,577	280,564
10:	Cash and Bank balances		
	Bank Accounts Cash on Hand	927,831	840,348
		927,831	841,055
11:	Accounts Payable		
	Audit fees	34,500	20,125
	National Petroleum Authority	26,152	71,051
	Others	204,397	179,733
		265,049	270,909
12:	Capital Grant This is made up of transfers from the Energy Fund to finance capital expenditure of the Commission		
	Balance at 1st January	100,917	114,207
	Add Grants received in the year Grants received from Government of Ghana	776,962 	134,698 40,325
	Less Amount amortized in the year	877,879 (297,800)	289,230 (188,313)
	Balance at 31st December	580,079	100,917

Notes to the Financial Statements for the year ended 31st December 2011 (continued)

	2011	2010
	GH¢	GH¢
14: Special Fund Account		
At 31st December	488,330	488,330

In accordance with Section 44 (2) of Energy Commission Act, 1997 (Act 541) a special fund has been set up with transfers from the Energy Fund Account to create an investment account to generate additional income to support the operations of the Commission.

15:	Reconciliation of excess of income over expenditure to net cashflow from operating activities	2011 GH¢	2010 GH¢
	(Excess of expenditure over income)/		
	Excess of income over expenditure for the year Adjust for:	(33,304)	1,303,106
	Depreciation charge	307,604	197,717
	Capital grants amortised	(297,800)	(188,313)
	Interest on fixed deposit	(78,991)	(108,333)
	Decrease/(Increase) in Accounts Receivable	168,636	(322,986)
	Increase in prepayments	(18,013)	(58,792)
	(Decrease)/Increase in Accounts Payable	(5,860)	(32,159)
	Net cash inflow from Operating Activities	42,272	790,240

ENERGY FUND

FINANCIAL STATEMENTS FOR THE YEAR ENDED 31ST DECEMBER 2011

STATE ENTERPRISES AUDIT CORPORATION

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CORPORATE INFORMATION

(i) Board Members

Prof. Abeeku Brew-Hammond	Chairman	Appointed	26-06-2009
Mr. Charles Kofi Wayo	Member	Appointed	26-06-2009
Mr. Winfred Nelson	Member	Appointed	26-06-2009
Dr. S. Ohemeng Dapaah	Member	Appointed	26-06-2009
Dr. Rudith King	Member	Appointed	26-06-2009
Dr. Francis Bawaana Dakura	Member	Appointed	26-06-2009
Dr. A.K. Ofosu Ahenkorah	Member/	Appointed	26-06-2009
	Executive Secretary	Appointed	04-05-2005

Mr. Ralph Tuffour

(Controller & Accountant-General Member {per S.43 (i) of the Energy Commission Act, 1997, Act 541}

Board Secretary

Ms. Cecilia Agbenyegah Appointed 01-12-2010

(ii) Obectives of the Fund - Section 42, Act 541, 1997

"Monies of the Fund shall be applied as follows -

- (a) promotion of energy efficiency and productive uses of electricity, natural gas and petroleum products;
 - riaturai gas and petroleum products,
- (b) promotion of projects for the development and utilisation of renewable

energy resources, including solar energy;

- (c) human resource development in the energy sector; and
- (d) such other relevant purposes as may be determined by the Commission".
- (iii) Head Office: Frema House, Plot No. 40, Spintex Road, Accra.
- (iv) Bankers: Bank of Ghana

Ecobank Ghana Limited

(v) Auditors: State Enterprises Audit Corporation, 4th Floor Republic House,

P. O. Box M.198, Accra.

Report of the Board

The Board of Energy Commission has the pleasure of presenting the audited financial statements of the Energy Fund for the year ended 31st December 2011.

and A	ccountant	under review releases by the Controller General's Department from the account into the Energy Fund Account	GH¢		
held a	t the Bank	of Ghana amounted to	1,326,646		
Added	to this we	re the following sources of revenue:			
	(i)	Fees from Permits and Licences	1,817,623		
	(ii)	Proceeds from Sale of Publications	878		
	(iii)	Exchange Gain	15,229		
Total	inflow for	the year amounted to	3,160,376		
Add balance at 1st January 2011 on the Energy Fund Account of 142,967			142,967		
Total	amount a	vailable for disbursement in the year was	3,303,343		
Deduc	Deduct disbursements in the year of(3,003,601)				
Balance carried forward on the Energy Fund Account at					
31st D	31st December 2011 was 299,742				

BY ORDER OF THE COMMISSION

BOARD CHAIRMAN	EXECUTIVE SECRETARY

SEAC STATE ENTERPRISES AUDIT CORPORATION

4th Floor, Republic House, Kwame Nkrumah Avenue, P. O. Box M.198, Accra Ghana Tel: 233 302 680157, Fax: 233 302 680156, E-mail: seacauditgh@yahoo.com

R port of the Independent Auditors on the financial statements of the Energy Fund for the year ended 31st December 2011

We have audited the financial statements of the Energy Fund set out on pages 4 to 6 which have been prepared under the historical cost convention and on the basis of the accounting policies (Note 1) set out on page 7.

Respective responsibilities of the Board and Auditors

The Board is responsible for the preparation of the financial statements. It is our responsibility to form an independent opinion, based on our audit, on those statements and to report our opinion thereon.

Basis of opinion

We conducted our audit in accordance with International Standards on Auditing. An audit includes examination, on test basis, of evidence relevant to the accounts and disclosures in the financial statements. It also includes an assessment of the significant estimates and judgements made by the Board in the preparation of the financial statements, and of whether the accounting policies set out on page 7 are appropriate to the Fund's circumstances, consistently applied and adequately disclosed.

We planned and performed our audit so as to obtain all the information and explanations which we considered necessary in order to provide us with sufficient evidence to give reasonable assurance that the financial statements are free from material misstatement, whether caused by fraud or other irregularity or error.

In forming our opinion we also evaluated the overall adequacy of the presentation of information in the financial statements.

Opinion

In our opinion, proper records of account have been kept and the financial statements, which are in agreement therewith, give a true and fair view of the financial position of the Energy Fund as at 31st December, 2011 and comply, in all material respects, with the Energy Commission Act, 1997 (Act 541).

SAMUEL KUATSRO
AG. MANAGING DIRECTOR

4TH FLOOR REPUBLIC HOUSE KWAME NKRUMAH AVENUE

DATE:

Statement of Financing and Disbursements for the year ended 31st December 2011

	Note	2011 GH¢	2010 GH¢
Resources:		,	·
Bank balance at 1st January		139,106	322,865
Adjust for unspent balance on SWERA Project Account		3,861	 322,865
Add Receipts in the year:		142,967	322,800
i. Releases by Controller and Accountant General's Department from Petroleum Levy Accountii. Fees from permits and licenses		1,326,646 1,817,623	1,142,775 1,333,018
iii. Other Income		16,107	19,215
		3,303,343	2,817,873
Less Disbursements in the year towards:			
i. Promotion of Energy Efficiency and Productive uses of Electricityii. Renewable Energy Resources, including solar	3	888,441	523,623
energy		315,197	216,655
iii. Human Resources Development in the Energy Sector		301,783	176,572
iv. Other relevant expenditures aproved by the the Board of Commissioners of Energy Fund	4	1,498,179	1,761,849
v. Bank charges		1	68
		(3,003,601)	(2,678,767)
Balance on account at 31st December	:	299,742	139,106

The notes on page 7 form an integral part of the financial statements.

Statement of Financial Position as at 31st December 2011			
	Note	2011 GH¢	2010 GH¢
Current Assets			
Bank Balances	5	294,962	142,967
Accounts Receivable - Refund to WRI		4,780	
		299,742	142,967
Less Current Liabilities			
Unspent balance on SWERA Project Accou	nt		(3,861)

Represented by

Net Current Assets

Balance on Energy Fund Account 299	7,742 139	,106

299,742

139,106

BY ORDER OF THE COMMISSION

BOARD CHAIRMAN	EXECUTIVE SECRETARY

The notes on page 7 form an integral part of the financial statements.

Statement of Movements on the Fund Account for the year ended 31st December 2011

		2011 GH¢	2010 GH¢
Balance	e as at 1st January	142,967	322,865
Additional Inflows during the year:			
(i)	Energy Fund Receipts	3,160,376	2,495,008
(ii)	Unspent balance on SWERA Project Account	3,303,343	3,861 2,821,734
Less outflows during the year:			
(i)	Transfers to Energy Commission to meet relevant expenditures approved by the Board of Commissioners of Energy Fund	3,003,600	2,678,699
(ii)	Bank Charges	1	68
(iii)	Refund to World Resources Institute (WRI)	4,780	
		3,008,381	2,678,767
Bank balance at 31st December		294,962	142,967

The notes on page 7 form an integral part of the financial statements.

Notes to the Financial Statements for the year ended 31st December 2011

1: Accounting Policies

The following are the significant accounting policies adopted by the Commission in the preparation of the financial statements.

(a) Basis of accounting

The financial statements have been prepared under the historical cost convention.

(b) Resources

The income of the Energy Fund is derived from:

- i. Transfers from the Petroleum Levy Account into the Energy Fund Account by the Controller and Accountant-General's Department.
- ii. Fees from licences and permits issued to Energy Service Providers by the Energy Commission and receipts from other relevant sources.

The above sources of income are accounted for on cash basis.

(c) Disbursements

These are accounted for on cash basis.

			2011	2010
			GH¢	GH¢
2:	Oth	ner Income		
	Sale	e of Publications	878	19,215
	Exc	hange Gain	15,229	
			16,107	19,215
3:		emotion of Energy Efficiency and eductive uses of Electricity		
	i.	Energy Efficiency, Conservation and Climate change	98,435	97,260
	ii.	Power	378,724	219,991
	iii.	Natural Gas	165,038	136,639
	iv.	Strategic Planning and Policy Development	153,703	36,941
	٧.	Social and Environmental Impact Assessment	81,137	22,466
	vi.	Public Affairs	11,404	10,326
			888,441	523,623

Notes to the Financial Statements for the year ended 31st December 2011

			2011	2010
			GH¢	GH¢
4:		relevant expenditures approved Board of Commissioner of the y Fund		
	i.	International Co-operation	175,000	341,905
	ii.	Review of future directions of Energy Research and Development	50,740	-
	iii.	Capital Work-in-progress - New Office Building	179,358	-
	iv.	Procurement of official vehicles and office equipment	597,605	207,784
	V.	CFL Project	-	20,749
	vi.	Deposit for land acquisition for the construction of office premises	-	339,820
	vii.	Sundries	495,476	851,591
			1,498,179	1,761,849
5:	Bank E	Balances		
	Bank of	f Ghana (Local)	260,654	3,865
	Ecoban	k Limited (Forex)	34,308	139,102
			294,962	142,967