ANNUAL REPORT

AND

AUDITED FINANCIAL STATEMENTS FOR 2012

ENERGY COMMISSION

Annual Report 2012

and

Audited Financial Statements for the Year ended 31 December, 2012

Republic of Ghana

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TABLE OF CONTENTS

CHAIRMAN'S REMARKS

In conformity with the provisions of section 50 of the Energy Commission Act, 1997 (Act 541), the Energy Commission submits the Annual Report and Audited Financial Statements for the period ending 31st December 2012.

As far as the energy industry in Ghana is concerned, the year 2012 was a very challenging one. The country's electricity industry was confronted with generation shortfalls resulting in a nationwide load shedding exercise due to damage caused to the West African Gas Pipeline.

Ghana was also rocked by rampant fire outbreaks. These fires which caused serious damage to markets, shops and residential properties were attributed mostly to poor electrical wiring. While electricity distribution losses over this period stood at 23.4%, managers of the energy sector continued to demand tariff increases to cover their ever-increasing production costs. World prices of Light Crude Oil and inconsistent supplies of natural gas were cited mostly as the reasons for the high production costs.

In part to tackling these challenges and in line with its mandate, the Energy Commission put together a number of regulations which were passed by the Parliament of Ghana. The Electrical Wiring Regulations, 2012 (L.I. 2008) among other things, sought to sanitize the electrical wiring trade through the certification and enforcement of wiring laws. Efforts to establish and operate a Wholesale Electricity Market (WEM) in Ghana were also intensified. In furtherance of the objective of the WEM, the Commission developed the Electricity Distribution Code. The Code is to enhance electricity supply to consumers by wholesale suppliers using third party networks and thereby offering a range of power supply options to electricity consumers.

In preparation ahead of the commencement of operations of the Ghana National Gas Company, the Commission also developed the Draft Natural Gas Transmission Access Code and a Draft Health and Safety Regulations. The Commission further facilitated the passage of the Natural Gas Pipeline Safety (Construction, Operation and Maintenance) Regulations, 2012 (L.I. 2189) to ensure safe construction and operation of natural gas pipelines in the country.

The Energy Commission also engaged widely in creating awareness in energy usage and conservation to ensure sustainable energy supply. In line with this drive, the Commission educated consumers on the need and methods to conserve the available energy resources through print and radio media, and stakeholder consultations. The Commission consequently partnered with the media and the private sector to intensify its flagship Efficient Refrigerating Appliance Rebate Scheme. This Scheme was used as a platform to promote compliance with energy efficiency regulations for refrigerating appliances and to support consumers financially to purchase new efficient appliances.

On the renewable energy front, the Commission pursued its wind measurement activities and a Grid-connected Solar System Pilot Project with impressive results. Various energy research and development projects were provided with funding support in the areas of waste-to-energy, solar-to-grid installations and woodlot cultivation. With regard to the implementation of the Renewable Energy Act 2011, (Act 832), the Draft Renewable Energy (Fees and Charges) Regulations were also developed, while modalities for the establishment and operationalisation of the Renewable Energy Fund were completed.

In spite of the challenges of the year, the Energy Commission made important strides in the fulfillment of its mandates under Act 541. I hope that the pages of this Report, which also give account of our inspection and enforcement activities, social, and environmental impact assessments, as well as information on historical and projected national energy statistics, will be useful for policy makers and all who will need information on the energy sector.

The Energy Commission remains resolute in serving the public interest through the effective regulation of the energy sector and in making policy recommendations that would bring sustainable solutions to the daunting energy challenges confronting the country.

Dr. Francis Dakura
Ag. Chairman

THE COMMISSION

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.

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:

1. Prof. Abeeku Brew-Hammond	Chairman
2. Dr. Francis Bawaana Dakura	Member
3. Dr. Seth Ohemeng-Dapaah	Member
4. Dr. Rudith King	Member
5. Mr. Charles Kofi Wayo	Member
6. Mr. Winfred Nelson	Member
7. Dr. A.K. Ofosu Ahenkorah	Executive Secretary

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.

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) Electricity and Natural Gas Technical Committee

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

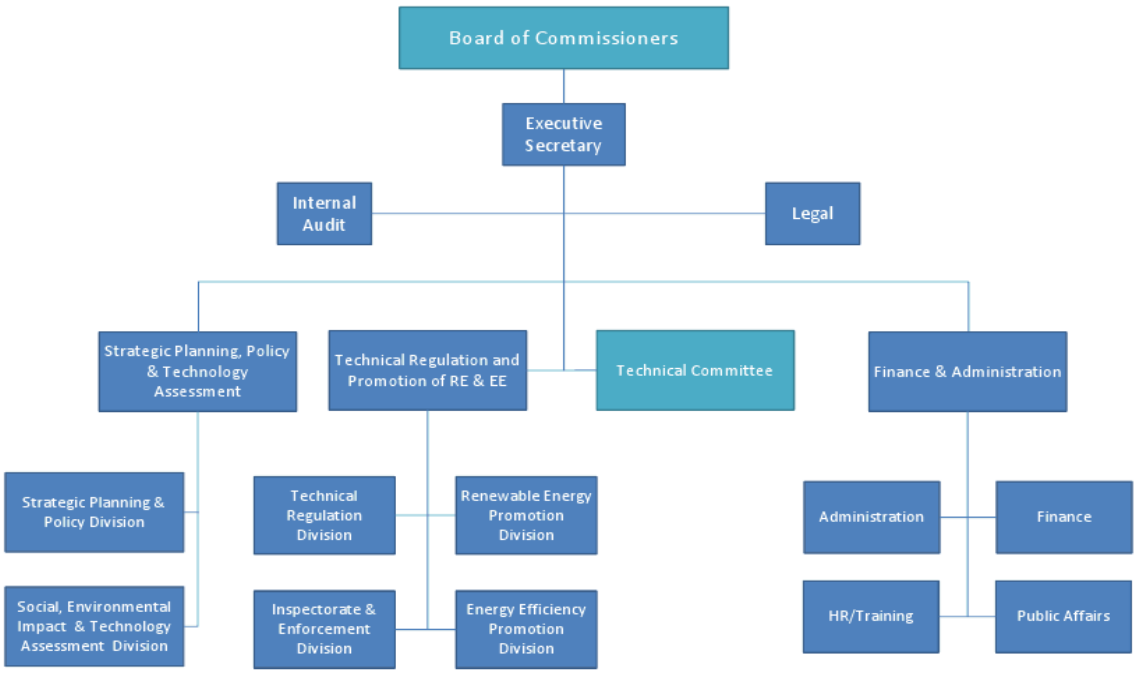
As a State institution established by an Act of Parliament, the entire mandate of the Energy Commission is founded on legal provisions and regulatory boundaries which have to be followed to the letter. The Commission's Legal Unit is required to make appropriate recommendations relating to the efficiency 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) Internal Audit Unit

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.

ORGANOGRAM OF THE ENERGY COMMISSION



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.

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.

ACTIVITIES

1.0 TECHNICAL REGULATION

Pursuant to the afore-mentioned mandates of the Energy Commission in the area of technical regulation, the following projects were outlined for implementation in 2012:

1. Facilitating the implementation of the Ghana Wholesale Electricity Market;
2. Implementation of the Electrical Wiring Regulations;
3. Implementation of a Toll-Free Short Code Service for monitoring reliability of service delivery by Electricity Distribution Utilities in Ghana;
4. Completion of Review of Electricity Distribution Policy and Electricity Distribution Code; and
5. Development of Natural Gas Transmission Access Code and Occupational, Health and Safety Regulations.

1.1 ELECTRICITY AND NATURAL GAS

1.1.1 Facilitating the Implementation of the Ghana Wholesale Electricity Market

The power sector reforms adopted by the Government of Ghana require the establishment of a Wholesale Electricity Market (WEM) to allow for choices and competition in the wholesale supply of electricity. The regulations establishing the WEM, Electricity Regulations, 2008 (L.I. 1937) were passed by Parliament and became effective in October 2008. The LI requires a set of rules and regulations that reflect Government's broad policy objectives regarding the structure and administrative management of the Market. Subsequent to the passage of LI 1937, a National Electricity Grid Code was developed and launched in January 2010. The Grid Code specifies in detail the technical operational rules, codes and procedures as well as obligations and liabilities of all players in the wholesale electricity market.

In furtherance to the implementation of the WEM, a number of permits and licenses were granted to suppliers and bulk consumers to participate in the WEM. The licenses and the permits which were granted in 2012 are as follows:

i. A provisional Embedded Electricity Generation License to Trojan Power Limited.

ii. Provisional Wholesale Electricity Supply Licenses to Amandi Power Limited, Rotan Power Limited, Marinus Energy Limited, Gokay Group Ghana Limited and Jacobsen Jelco Ghana Limited.

iii. Construction Work Permits to Takoradi International Company Limited (TICO) for its 110 MW expansion project at Aboadze, and to the Kpone Thermal Power Plant (KTPP) to commence the construction of a 220 MW generation plant at Kpone in the Greater Accra Region.

iv. A Bulk Customer Permit was renewed for Ghana Water Company.

1.1.2 Implementation of the Electrical Wiring Regulations

In fulfilment of its mandate under section 56 of the Energy Commission Act, 1997 (Act 541), the Commission in collaboration with the Ghana Standards Authority (GSA) developed the Electrical Wiring Regulations (EWR) and Standards to regulate all issues pertaining to electrical wiring in the country. The objective of these Regulations is to ensure the safety of persons, property and livestock in the use of electrical energy.

The final draft document was forwarded to the Attorney-General's Office through the Ministry of Energy in 2011 for legislative drafting and onward submission to Parliament for approval. The Ghana Electrical Wiring Regulations, 2011, L.I. 2008 passed by Parliament into law in 2011 became effective on 24 February, 2012.

In accordance with LI 2008, the Commission sought to ensure the certification of electrical wiring professionals to undertake safe electrical wiring of premises and installations as well as the inspection of such facilities in accordance with the Regulations.

A curriculum for the certification of electricians under LI 2008 was developed by the Technical Educational Unit of the Ghana Education Service (GES) and validated by stakeholders for implementation by the Commission.

A Draft Certification Guidelines was developed and subjected to review by stakeholders which included the National Vocational Training Institute (NVTI), the examiners for technical institutions; the Ghana Institution of Engineers (GhIE); and the Ghana Electrical Contractors Association (GECA).

1.1.3 Implementation of a Toll-free Short Code Service for Monitoring the Quality of Electricity Supply

As per the conditions stipulated in the Distribution and Sale License issued by the Energy Commission, licensed distribution utilities are to compile and submit performance statistics covering quality of service, technical and operational performance, as well as quarterly reports to the Commission. These requirements are in conformity with the provisions of the Electricity Supply and Distribution (Technical and Operational) Rules, 2005 (L.I. 1816) and the Electricity Supply and Distribution (Standards of Performance) Regulations, 2008 (L.I. 1935).

To assist in monitoring the operational performance of distribution utilities, the Regulations provide for benchmarks for electricity supply and distribution. One of such benchmarks is the duration and frequency of outages which is calculated from the time a customer reports the outage.

Over the years a credible means of verifying quality of service reports submitted to the Commission by the distribution utilities has been lacking. Furthermore, the fact that a large proportion of customers are not aware of the provisions of the LIs which mandates them to report or hold the distribution utilities accountable for poor service has made it difficult to effectively monitor and ensure compliance with provisions of the Regulations.

The Energy Commission in pursuit of its mandate of ensuring quality and reliable electricity supply to customers by the Distribution Utilities in Ghana signed a Memorandum of Understanding with GSM Airtime to operate a Toll Free Short Code. The service would allow the general public to report on outages and voltage levels by SMS sent from mobile phones. This data when analysed will be used to verify the reports on quality of service submitted by the licensed distribution utilities.

To enhance the Toll-free Short Code Service, the Commission developed a database of electricity customer geocodes for the Accra East District of ECG and tested them on the Vodafone mobile network. A national roll-out is expected within a year.

1.1.4. Review of Electricity Distribution Policy and Electricity Distribution Code

The Energy Commission Act mandates the Commission to create Distribution Zones to ensure the efficient, reliable and non- discriminatory electricity distribution to all consumers.

Electricity Distribution Utilities particularly the ECG, are implementing on a pilot basis, the Strategic Business Unit concept under which a region will be given autonomy in the management of the distribution network within its concession, but within the framework of a larger Holding Distribution Company.

Under the Renewable Energy Act, it is expected that renewable energy based electricity resources would be developed and supplied over local distribution grids.

Within the reformed market, licensed power traders would be eligible to supply power to customers over transmission and distribution networks, paying the appropriate fees for the use of those systems to transport electricity to clients/consumers.
Whilst the Electricity Supply and Distribution Rules, 2005 (LI 1816) and the Electricity Supply and Distribution Regulations, 2008 (LI 1935) establish the legal framework for the supply and distribution of electricity, Licences issued so far enjoin the utilities to combine distribution and sales of electricity. The ultimate goal is to ensure that electricity is supplied to consumers by wholesale suppliers, using third party networks, thus giving real choice to consumers.

With the coming into effect of the operation of the Wholesale Electricity Market (WEM) in January 2012, the distinction between the distribution and sale functions needed to be emphasised to give meaning to the market and encourage the development of alternative sources of supply especially in view of the passage of the RE Act.

The Electricity Distribution Code was completed and approved by the Energy Commission Board in the first Quarter of 2012.

1.1.5 Development of Natural Gas Licensing Regulations

Section 28 of Act 541 requires the Energy Commission to develop rules for the natural gas market in Ghana in order to ensure fair competition. The law provides for the establishment of a Natural Gas Interconnected Transmission System (NGITS) in the country and a Natural Gas Transmission Utility (NGTU) duly set up.
In 2008 a Licensing Manual for the Natural Gas Supply Industry was developed by the Commission to serve as a guide for prospective natural gas service providers with regard to licensing requirements as well as assisting in ensuring compliance with codes and standards governing quality, health and safety in the industry as stipulated by the Act.

As part of this process, the License Application Manual for service providers in the Natural Gas Industry in Ghana was updated to include Gas Processing License, Liquefied Natural Gas Facility License and Bulk Customer Permit.

In line with this development, a provisional Natural Gas Transmission Utility (NGTU) license was issued to Bulk Oil Storage and Transportation Company Limited (BOST) to operate the Natural Gas Interconnected Transmission System (NGITS) in Ghana.

Having satisfied the above conditions as stipulated under Act 541, the Commission commenced the development of the Natural Gas Transmission Access Code which establishes the requirements, procedures, practices and standards that govern how shippers interconnect to the Natural Gas Interconnected Transmission System (NGITS), as well as the general terms and conditions for the provision of transportation services by the Natural Gas Transmission Utility (NGTU).

Given that the natural gas industry in Ghana is an infant one, it is critical that before the construction of any facility, developers are made to satisfy some basic requirements which would ensure that the necessary conditions meriting the relevant permits had been met. These include:

- An environmental impact assessment report;
- A land ownership title; and
- A Front End Engineering Design (FEED) drawings and specifications.

The Energy Commission developed a Draft Occupational Health and Safety Regulations for the natural gas industry in 2012. The Ghana Standards Authority is developing standards which will be adopted and incorporated into the Regulations.
The Natural Gas Pipeline Safety (Construction, Operation and Maintenance) Regulations, 2012, L.I. 2189 were also passed to ensure safety in the transmission and distribution of natural gas in the country.

1.2 ENERGY EFFICIENCY PROMOTION

The Energy Commission Act 1997, (541) mandates the Energy Commission to promote the efficient use of energy resources which also have implication on climate change mitigation and adaptation. Consequently, the Commission outlined the following programmes for implementation in 2012:

1. Promotion of Appliance Energy Efficiency and Transformation of the Refrigerating Appliance Market in Ghana.

2. Installation of capacitors in public institutions;

3. Development of National Energy Efficiency and Conservation Promotion Strategy Document.

4. Development of Strategy and Legislative Framework for the prohibition of the importation of over-aged vehicles.

1.2.1 Promotion of Appliance Energy Efficiency and Transformation of the Refrigerating Appliance Market in Ghana

The project seeks to transform the electrical appliance market in Ghana from one of inefficient appliances to that of highly efficient ones through a combination of energy performance standards and labeling, and consumer incentives. The programme seeks to ensure that:

a. The public is well sensitized with knowledge in energy efficiency and the purchase of efficient refrigerators has increased;

b. Adequate training workshops are provided to energy efficiency stakeholders

c. New refrigerators imported into the country are compliant with the requirements of the laws (LI 1958 and LI 1970);

d. A Rebate Programme and financing mechanism to encourage the purchase of efficient refrigerators has been designed and established;

In line with these targets, various strategic activities were undertaken as follows:

1.2.1.1. An intensive public education and sensitization programme was launched (see sections 4.1.1 and 4.1.2 of this Report for details).

1.2.1.2 Training Workshops on Energy Efficiency

The Commission continued with the regional training workshops for refrigerator and air conditioner Retail Shop Assistants and members of the National Air Condition and Refrigerators Workshop Owners Association (NARWOA). Four regional training workshops were held in Sunyani, Brong Ahafo Region, Wa, Upper West Region, Bolgatanga, Upper East Region and Tema in the Greater Accra Region. These training workshops completed the first phase of training programmes planned for refrigerator and air conditioner Retail Shop Assistants and members of NARWOA in all ten regions of the country.

Figure1: Training of Refrigerator Retail Shops Attendants

The main objective of the training workshops was to provide shop attendants and mechanics in targeted retail shops with a basic but solid understanding of refrigeration/air condition technology, appliance energy efficiency standards and labeling.

1.2.1.3 Used Refrigerator Importation Quota System

As part of preparations towards full implementation and enforcement of the Energy Efficiency (Prohibition of Manufacture, Sale or Importation of Incandescent Filament Lamp, Used Refrigerator, Used Refrigerator-freezer, used Freezer and Used Air Conditioner) Regulations LI 1932 (2008) by the end of 2012, the Commission together with EPA successfully introduced the Used Refrigerator Importation Quota System. The quotas were allocated for the importers based on their average importations for the last three years.

The quota allocations helped to reduce the total number of containers imported with used refrigerators from 1000 containers per annum (a three-year average) to about 717 containers in 2012.

Table 1: Volumes of Imported Domestic Refrigerators and Freezers from 2005 - 2008

Table A1: Summary of Importation of New And Used Refrigerators to Ghana for the Four-Year Period 2005-2008

Year	Number of refrigeration units imported				Cost CIF (GH ¢) of imported units			(Average) Unit Cost CIF (GH ¢)		
	New	Used	Total	% New	New	Used	Total	New	Used	% New
2005	4,317	172,541	176,858	2	696,897	4,726,497	5,423,394	161.43	27.45	17
2006	10,944	97,240	108,184	10	2,256,527	2,751,055	5,007,582	206.19	28.29	14
2007	6,607	30,277	36,884	18	983,102	887,898	1,871,000	148.80	29.33	20
2008	2,401	81,854	84,255	3	557,992	2,886,685	3,444,677	232.40	35.27	15
Total	**24,269**	**381,912**	**406,181**	**6**	**4,494,518**	**11,252,135**	**15,746,653**	**185.20**	**29.46**	
Average	**6,067**	**95,478**	**101,545**	**6**	**1,123,630**	**2,813,034**	**3,936,663**	**183.56**	**29.46**	**16**

Sources of Importation of Domestic Refrigerators and Freezers

Figure 2: Graph showing levels of imports of Refrigerators and Freezers between 2005 - 2008

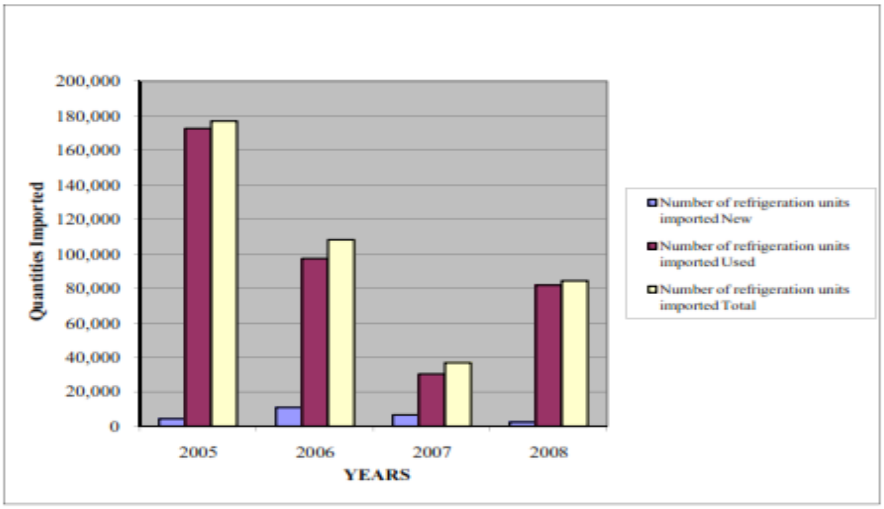


Fig. A2: Import of New and Used Refrigerators and Freezers 2005-2008

1.2.1.4. Launch of the Refrigerator Rebate Scheme

The Commission together with the UNDP project team launched the first Ghana refrigerator rebate scheme on 19th of September, 2012. The main aim of the scheme is to assist consumers to acquire new and efficient refrigerators by offering them rebates on new energy efficient refrigerators purchased.

The rebate scheme, which is to be implemented nationwide, is being undertaken in phases. The first phase, which took place within the Accra/Tema Metropolis from September to December, 2012 was used as a pilot for the scheme.

The following institutions were selected through competitive bidding as the key participants in the rebate scheme:

1. ECOBANK Ghana Limited as the participating bank to manage the funds for the scheme.

2. Somovision and Tradeworks Ghana Limited as the participating retail shops in the rebate scheme where consumers could turn-in old, and purchase new energy efficient refrigerators.

3. City Waste Management Company as the scrap yard operator to be responsible for the collection and scrapping of the turned-in inefficient refrigerators, and collection of the refrigerants /Ozone-Depleting Substances (ODS) for appropriate disposal.

The pilot phase of the scheme offered the Energy Commission the opportunity to easily identify the challenges, learn lessons and be in a better position to roll out the second phase of the Scheme nationwide.

As at the end of 2012, over one thousand used refrigerators had been turned-in by consumers and an equal number of new and efficient ones purchased.

Figure 3: Commissioning of the Refrigerator Degassing Plant

1.2.1.5 *Enforcement of Refrigerator Energy Efficiency Regulations*

The Commission organized a meeting with importers of new refrigerators and air conditioners to discuss among other issues compliance with the Energy Efficiency Standards and Labelling Regulations, 2005 (LI 1815) and the Energy Efficiency Standards and Labelling (Household Refrigerating Appliances) Regulations, 2009 (LI 1958) .

In addition, the Commission undertook intensive monitoring and inspection of the retail shops of all the major appliance dealers. The exercise was used to determine the level of compliance with the regulations and to identify effective ways of enforcing the regulations.

A private consultant has been contracted for the Association to help them develop a business plan that can be used to attract private participation in the establishment of a new refrigerator assembly manufacturing plant in Ghana.

The level of compliance with the refrigerator standards and labels of retailers dealing in refrigerators and air conditioners are over 70% and 88% respectively.

Figure 4: Energy consumption of Refrigerators in Ghana compared to the USA and Europe

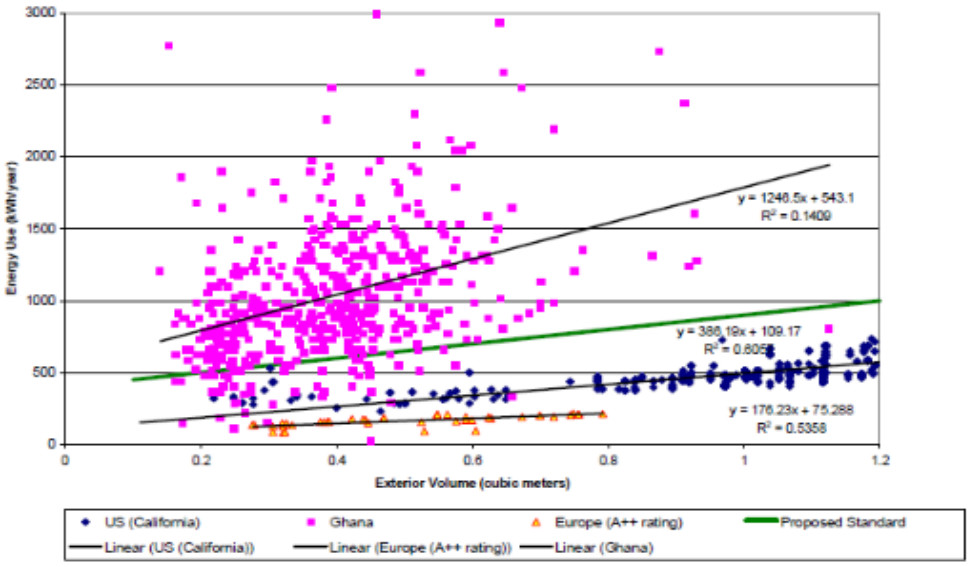


Figure A1: Energy Consumption of Refrigerators in Ghana, compared with USA and Europe

1.2.2 Installation of Capacitors in Public Institutions

The Commission sought to improve energy efficiency of public buildings and facilities with the aim of reducing electricity consumption and expenditure on electricity through the installation of automatic power factor correction capacitors at selected facilities.

The first phase of the programme which covered selected public buildings in Accra included Korle-Bu Teaching Hospital, Foods & Drugs Boards & Parliament House. The results from monitoring of the capacitors installed in public buildings in Accra showed significant improvements in their power factors and saved the government about GHC39,000 ($27,000) a month. The importation of capacitors for installation for the third phase of the programme to begin in 2013 was initiated.

1.2.3 National Energy Efficiency and Conservation Promotion Strategy Document

This document outlines energy efficiency strategies and programmes which Government intends to implement in the medium term (2012-2015). The strategy being developed in this document is to ensure that Ghana achieves at least 10% savings in the consumption of all forms of energy.

The final draft of the document was reviewed at a stakeholder workshop held in October, 2012. The second draft of the document is ready for further review and stakeholders' inputs.

1.3 RENEWABLE ENERGY

The Energy Commission (EC) is responsible for providing policy recommendations to government on matters related to renewable energy and its efficient utilization. The EC also oversees the development of regulations, codes and standards and licensing framework for the renewable energy market. The Commission also monitors compliance and ensures the enforcement of regulations by renewable energy service providers.

The primary objective of the Commission is to ensure the effective development, utilization, management and promotion of the country's renewable energy resources. In this regard, the following activities were undertaken during the period under review:

1. Wind Measurement Activity
2. Grid Connected Solar and Wind System Pilot Project
3. Implementation of the Renewable Energy Law
4. Energy Research and Development and Woodlot cultivation
5. Sustainable Energy for All Accelerated Framework (SEAAF)
6. Licensing of Renewable Energy Service Providers

1.3.1 Wind Measurement Activity

The Commission continued with the implementation of its wind measurement activity at 60 meter height at Ekumfi Edumafa, Gomoa Fete in the Central Region, Sege in the Greater Accra Region, Atiteti and Avata in the Volta Region. The activity is co-funded by the Global Environmental Fund (GEF) through the World Bank.

During the period under review, the cumulative average of the wind speeds recorded at 60m above ground level for 11 months at Ekumfi Edumafa, Gomoa Fetteh, Avata, Atiteti and Sege sites were 4.62m/s, 4.5m/s, 5.09m/s, 6.03m/s and 5.5 respectively.

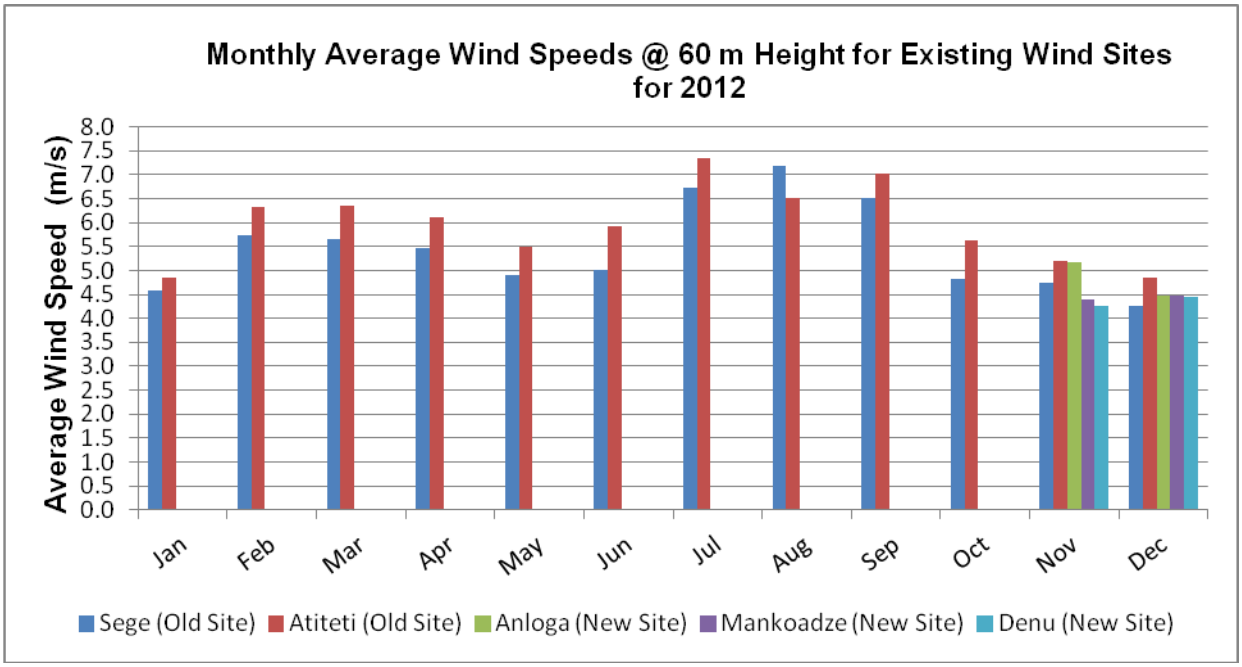
The Consultant to the project advised that the masts at the three locations with lower wind speeds be relocated to other potential sites.

Fig. 5: Installation of wind measuring equipment at Sege in the Greater Accra Region

The masts at these sites were thus relocated to Mankoadze in the Central Region, Denu and Anloga in the Volta Region in October 2012. The wind speed data collected in November for these sites indicated that Anloga recorded an average wind speed of 5.55m/s, Denu – 4.61m/s and Mankoadze – 4.5m/s.

The preliminary analysis of 12 months wind speed data collected at Sege and Atiteti indicated that the annual average wind speeds were 5.44m/s and 5.96m/s respectively.

Fig. 6: Monthly Average Wind Speeds for 2012 at 5 sites in Ghana



1.3.2 Grid Connected Solar System Pilot Project

The Commission commenced this pilot project in 2009 and as at the end of 2011 a total of 16 grid-connected solar PV systems of capacity of 94.578kWp had been installed.

A further 3 solar PV systems of capacity of 16kWp were installed in 3 residential facilities in 2012. Additionally, the Ministry of Energy's 50kWp solar PV system was refurbished with funds from the Commission. This brings the total capacity of grid connected solar systems installed under this pilot project to 160.57kWp.

1.3.3 Implementation of the Renewable Energy Act

The Renewable Energy Act 2011, (Act 832) mandates the Commission to regulate and license commercial activities in the renewable energy sector. In view of this, the

Commission developed a Renewable Energy License Manual in collaboration with all relevant stakeholders. This Manual has been placed on the Commission's website for the information of the public.

The Renewable Energy (Fees and Charges) Regulations were also developed and presented to the Ministry of Energy for onward submission to the Attorney-General's office for processing and passage into law.

A total of four (4) applications were received from Orion Energy Ghana Limited, Volta River Authority (VRA), Signik Energy Limited and Mere Power Nzema Limited for the acquisition of Provisional Licences for wholesale generation and supply of electricity from solar energy.

Mere Power Nzema Limited was granted the Provisional Wholesale License to produce electricity from a solar plant to be built in the Ellembelle District, Western Region.

With technical assistance from the European Union, a consultant was contracted to develop the modalities for the establishment and operationalisation of the Renewable Energy Fund. A draft final report was submitted and subjected to stakeholder review in December 2012.

1.3.4 Energy Research and Development and Woodlot Cultivation

Five organizations namely, Safi Sana Foundation, Pro-Tech Ghana, KITE, KNUST-Electrical Engineering Department and KNUST-Department of Chemistry have since the third quarter of 2011 been awarded funding support to implement various energy research and development projects following their successful bid in a call for proposals.

During the period under review, the 5 projects were monitored and assessed. It was observed that, the projects had reached various stages of implementation.

- Integrated Biomass Project: This project is being implemented by Kumasi Institute of Technology and Environment (KITE) and it is scheduled to be completed by September 2015. A 3 hectare land at Bale in the Bole District was acquired and the tree species 'Cassia-Semea' was cultivated. Stakeholder workshops were organised to create awareness in the community on the negative effects of indiscriminate felling of trees and the use of traditional methods for charcoal production. They were also sensitized on the need for establishing woodlots and the use of improved kilns for charcoal production.

  A micro finance facility was to be established to aid individuals in the community to purchase improved cookstoves to switch from the use of the traditional coalpot.

- Pro-Tech Ghana's woodlot plantation was established in two communities in the Jirapa District to provide sustainable supply of woodfuel for charcoal production. A total of 8 hectares of land has been planted with cassia, teak and mango.

- Safi Sana Foundation conducted and submitted a Technical and Market Viability Study from waste in Urban Slum Ashaiman. The company was able to produce biogas from human excreta and animal waste to power a generator to produce electricity under the project. The slurry which was used as fertilizer was given to the community to use for their agricultural activities. The company intends to up-scale the project to generate 100kW of electricity in 2013.

- The Electrical Engineering Department of KNUST initiated a study to investigate the electrical impacts of grid-connected solar PV systems on the performance of the distribution network of the utility grid and formulate codes and standards for Grid-PV system interconnection. The Department has conducted load flow study to determine power quality data with and without PV installation.

- The Department of Chemistry of KNUST also initiated a study to develop a process for the conversion of biomass materials found in Ghana into bioethanol for blending with petrol for use in the transportation sector. The Department carried out analysis of biomass samples and has obtained preliminary results of pre-treatment, hydrolysis, fermentation and distillation, and analysis of ethanol provided. The results obtained showed that reasonable volume (1-2 litres) of bioethanol was produced from the biomass used and tests on it indicated that this could be blended with gasoline.

1.3.5 Sustainable Energy for All Accelerated Framework (SEAAF) Country Action Plan

The Ghana Sustainable Energy for All Country Action Plan was developed by the Commission, with technical assistance from the UNDP Ghana Office, to respond to the United Nations Secretary General's Sustainable Energy for All (SE4ALL) initiative. The objectives are to ensure universal access to modern energy services, doubling share of renewable energy in global energy mix and doubling rate of improvements in energy efficiency by 2030.

The Ghana Action Plan was presented at the Climate Change Summit (Rio+20) held in Rio De Janeiro, Brazil in June, 2012 to secure donor buy-in. It has since been launched for implementation.

The Ghana Action Plan which aims at achieving SE4ALL goals and targets by 2020 would focus on the following programmes and projects:

1. Productive Use of Energy in agriculture (irrigation), agro-processing and fisheries.
2. Promotion of LPG use.
3. Promotion of improved cookstoves
4. Promotion of biogas use in boarding schools, hospitals and prisons.

It is expected that the successful implementation of these interventions will result in an improved standard of living of Ghanaians.

1.3.6 Licensing of Renewable Energy Service Providers

Two (2) new companies, Beetle Company Limited and Oskan Industries were granted Charcoal Export Licenses in 2012.

A total of 1,385 tonnes of charcoal was exported in 2012 by four companies.

Additionally, Installation and Maintenance Licenses were granted to the following five (5) solar companies: North Lite Limited, Aqua Saline Company Limited, Mascot Energy Savings High Technology, New Vision Solar Development Limited and Novai Energy Ghana Limited.

1.4 INSPECTION AND ENFORCEMENT ACTIVITIES

The following enforcement activities were implemented under four project titles as follows:

1. Enforcement of Regulations in the Electricity Supply Industry;
2. Enforcement of Regulations on Energy Efficiency and Conservation;
3. Enforcement of Regulations on Charcoal Exports; and
4. Enforcement of Regulations in the Natural Gas Industry.

1.4.1 Enforcement of Regulations in the Electricity Supply Industry

To verify compliance with regulatory requirements and conformance to operational objectives, the Commission undertook inspection of operational facilities of two Distribution Utilities in the electricity supply industry.

The facilities inspected were that of two regional outlets of the Electricity Company of Ghana (ECG) and one regional outlet of the Northern Electricity Distribution Company (NEDCO). The objective of the inspection was to determine:

1. if the frequency and duration of outages were in compliance with the Regulations;
2. the reasons for any outages which were not in conformity with the approved standards of performance; and
3. the level of compliance with Regulations on new service connections.

Frequency and duration of outages

Outage records examined in some districts did not meet set benchmarks.

Reasons for outages

District Managers responded to queries from the Commission by providing reasons for outages and corrective actions being put in place to remedy situation.

Level of compliance

Regarding New Service Connection, there were reported shortages of meters for service provision in all the Regions inspected. This affected the connection time for new service applicants in the Districts visited.

1.4.2 Enforcement of Energy Efficiency Regulations

In order to ensure that only appliances that met minimum energy efficiency standards were imported into the country, the Government of Ghana enacted legislative instruments on energy efficiency and conservation. The Commission has since 2010 enforced the regulations on standards and labeling of household refrigerating appliances, air-conditioners and CFLs.

In the year 2012, the Commission conducted a market survey on the different brands of imported CFLs in 4 Regions. The Regions surveyed were:

i. Greater Accra;
ii. Central;
iii. Eastern; and
iv. Volta.

One hundred and thirty seven (137) different brands of CFLs were identified in the survey. The Commission requested importers of these brands to have their lamps tested at the Ghana Standard Authority (GSA) for compliance with the regulations on standards and labeling. Within the year, the Commission received test reports on 44 of these brands from the GSA of which 10 were found to be fully compliant with the regulations on standards and labeling. The remaining 34 brands either did not meet the requirements on standards or were mislabeled.

Two consignments of incandescent filament lamps banned under the L.I. 1932 were seized from importers plying their trade in Accra and Swedru within the year. These consignments together with one seized in December, 2011 were destroyed under the supervision of Accra Metropolitan Assembly. The offending businesses were surcharged with the cost of destruction.

Enforcement of regulations on standards and labeling by the Commission saw compliance by 17 major importers of household refrigerators improved from 40% in January 2012 to 78% by December 2012. Compliance with regulations on standards and labeling by 20 major importers of air-conditioners improved from 70% in January to 88% by December, 2012.

1.4.3 Enforcement of Regulations on Charcoal Exports

The Commission carried out compliance monitoring of the operations of three licensed charcoal exporters - Abua Farms Ltd., Beetel Ltd., and Anthonio and Sons Ltd. in line with charcoal export permit requirements. Our investigations showed that all three exporters were in compliance with licensing requirements.

The Commission intercepted illegal charcoal exports by two unlicensed companies. The two have since put in applications for consideration as licensed charcoal exporters.

1.4.4 Enforcement of Regulations in the Natural Gas Industry

The construction of the Western corridor gas pipeline took off in July, 2012. The commission in exercising of its regulatory enforcement functions in accordance with the Energy Commission Act and the Natural Gas Pipeline Safety (Construction, Operation, and Maintenance) Regulations, 2012 (L.I 2189), undertook inspection visits to the welding sites of the gas pipeline around Atuabo and Takoradi in the

Western Region to inspect their activities in line with written procedures. The Commission also held meetings with the Ghana National Gas Company to examine documents on pipeline design and material specifications to ensure that GNGC had complied with the regulatory requirements.

2.0 POLICY, PLANNING AND TECHNOLOGY ASSESSMENT

2.1 STRATEGIC PLANNING AND POLICY

2.1.1 National Energy Data Processing and Information Centre (NEDPIC)

Section 2 (d) of the Energy Commission Act 1997 (Act 541), requires the Commission to secure a comprehensive energy database on the extent of development and utilization of energy resources available to the nation to facilitate national decision-making. In fulfillment of this requirement, the Commission contracted the services of a database expert to design and develop the energy database component of the National Energy Data Processing and Information Centre (NEDPIC). The development of the energy database was completed, installed on the Commission's server and uploaded with data on crude oil, electricity, petroleum products and woodfuel for the years 2000 to 2011.

2.1.2 Woodfuel Resource Baseline Assessment

The Energy Commission in 2012 signed a technical cooperation facility with the Food and Agriculture Organization (FAO) for the provision of technical assistance to undertake a national woodfuel resource assessment. This was needed to establish a database of the stock and yields of wood species suitable for firewood and charcoal production in fulfillment of Section 2 (d) of the Energy Commission Act, 1997 (Act 541). A local Consultant was also selected through a national competitive bidding process to team up with FAO in undertaking the national woodfuel resource assessment.

In addition, a national survey was undertaken to track the sources and prices (i.e. wholesale and retail) of firewood and charcoal. Information collated from 39 markets in major urban towns across the country was processed to produce a report on charcoal prices for the period June – August 2012.

The output of these activities is to serve as an input for the energy database component of NEDPIC and for updating the Strategic National Energy Plan and for policy analysis.

2.1.3 Strategic National Energy Plan (2010-2030)

The Commission in 2012 finalized the International Atomic Energy Agency Technical Co-operation Project GHA/0/008: Planning for Sustainable Energy Development - Ghana Country Study and submitted it to the Ministry of Energy and the IAEA. This study served as a platform for reviewing and updating the Strategic National Energy Plan (2006 – 2020). Hence, in fulfillment of Section 2 (c) of Act 541, the Commission began the process of reviewing and updating the SNEP to guide the development of the energy sector in a sustainable manner over a planning period of 20 years (2010 to 2030).

A new tree structure for the LEAP (Long range Energy Alternatives Planning system) model comprising the following sectors: household, commerce/services, industry, VALCO, agriculture and transport was developed. These sectors were populated with base year (i.e. 2010) demographic, macroeconomic and energy data. The assumptions, which hitherto guided the previous SNEP study, were also reviewed, taking into account new developments in the economy. New preliminary energy demand projections were evaluated according to the sectors. Preliminary electricity and petroleum products demand projections indicated that their growth rates are expected to be higher than projected economic growth rates.

Alongside SNEP energy demand projections, the Commission also began the process of developing Long-range Regional Energy Plans. In the first phase of the development of these Plans, household energy demand projections for Upper East and Upper West Regions were evaluated.

2.1.4 Annual National Energy Statistics

The Annual National Energy Statistics to cover the period 2000 to 2011 was updated with energy data for 2011 by the Commission in fulfillment of Section 2 (d) of the Energy Commission Act. Data on the production and utilization of all forms of energy commodities (i.e. electricity, petroleum and renewable energy including woodfuels) in the country for 2011 were collected to update the previous year's database. The Annual National Energy Statistics (2000 to 2011) including the energy balance for 2011 was completed and uploaded unto the Commission's Website.

2.1.5 Energy Technology Catalogue

As part of updating the Strategic National Energy Plan, it became necessary to update the Energy Sector Technology Catalogue produced in 2004. The Update is expected to include new qualitative and quantitative data on cost, technical parameters, environmental and social impact of all possible energy demand and supply technologies, which will be deployed in the country over the planning period from 2010 to 2030. A draft report of the updated Energy Technology Catalogue was completed and sent out for review and stakeholder inputs.

2.1.6 Annual and Medium-Term Energy Outlook for Ghana

The Commission prepared Annual Energy Outlook for 2012 and a Mid-Term Energy Outlook for 2012 to 2020. These Outlooks highlighted the possible energy demand projections, supply issues (e.g. capacity requirements and price developments) and policy issues for 2012 and over the medium-term. These reports are to guide energy sector operators, potential investors as well as the wider business community in their operational and business decision-making processes.

2.2. SOCIAL AND ENVIRONMENTAL IMPACT AND TECHNOLOGY ASSESSMENT

It is required of the Energy Commission to provide sustainable energy policies, strategies and technology recommendations for implementation in the energy sector. The Commission achieves this through an assessment of the social and environmental impacts of plans, programmes and projects and the viability of energy technologies proposed or adopted for implementation in the country.

The following projects were targeted for completion in 2012:

1. Communication Strategy for Safe Handling and Disposal of Spent Compact Fluorescent Lamps (CFLs)

2. Social and Environmental Impact Monitoring Study of Takoradi Thermal Power Plants

3. Monitoring of the Impact of the Construction of the Bui Hydroelectric Power (BHEP)

4. Monitoring of Energy Research and Development projects.

2.2.1 Communication Strategy and Guidelines for Safe Handling of CFLs

In July 2010, the Environmental Protection Agency (EPA) informed the Energy Commission of the hazardous nature and negative environmental consequences of CFLs following the deliberations of the Hazardous Chemical Committee. The EPA therefore requested the Commission to provide guidelines on safe handling and disposal of spent CFLs in the country. It was also requested of the Energy Commission to provide recommendations for the development of a communication strategy to create awareness on safe handling and disposal of CFLs.

The final report on the communication strategy and guidelines for safe handling and disposal of CFLs was completed and submitted to the Environmental Protection Agency (EPA). The Commission has since recommended to the EPA to impose a levy on the importation and production of CFLs to provide funds for public awareness creation on safe handling and disposal of CFLs.

2.2.2 Social and Environmental Impact Monitoring Study of the Takoradi Thermal Power Plants

Electricity generation from the Takoradi Thermal Power Enclave contributed about 16**%** of the total electricity generation in the country in 2011. To ensure effective and sustainable management of thermal power generation in the country, there was the need to conduct periodic impact monitoring studies to inform energy policy decisions[1] on future oil fired thermal power plants expansion projects in the country.

The key objective of the study was to assess the social and environmental impacts of the Takoradi thermal power plants. The specific objectives stated are as follows:

- To establish the social and economic changes related to the Power Plants;
- Assess the environmental impacts of the plants on surrounding communities;
- Evaluate the corporate social responsibilities of the companies operating the power plants.

The findings revealed an increase in population, increase in community facilities such as schools, pipe borne water and employment gain for unskilled labour.

No significant change in noise levels was found. Air pollution related diseases such as asthma; bronchitis were found in the medical reports at the VRA Hospital in Aboadze. However this could not be associated with the operations of the Thermal Plants for the following reasons: absence of the health baseline information specifically for the

[1] Ghana Energy Policy Objectives: Improve the overall management, regulatory environment and expansion of energy sector.

project affected communities and absence of data from the ambient air quality monitoring equipment which had broken down. Water quality change could not be determined since baseline information on pH, turbidity, conductivity, oil and grease levels were not provided in the Environmental Assessment Report.

Ten out of twelve community facilities promised as part of corporate social responsibility have been provided. Table 3 below shows details of facilities that have been provided as pledged and those yet to be provided.

Table 2: Appraisal of the CSR obligations

Provided Facilities		**Facilities yet to be Provided**	
1.	Four Units Six Classroom Blocks	1.	Public Place of convenience(KVIP)
2.	One cold store		
3.	Pipe borne water		
4.	Health Facility		
5.	Asphalted Road from Inchaban to Aboadze		
6.	A first Class Road from Inchaban to Dwomoh	2.	Lay out of the Aboadze Community
7.	Employment (when requisite skills are obtained in the communities)		
8.	Support for Education (Donation of Exercise books)		
9.	Support for festivals and other community activities with the aim of helping communities to preserve their cultural values		
10.	Health Outreach Programmes in the communities (on-going)		

The District Chief Executive of the Shama District and officials of VRA made complaints of entries and activities of unauthorised persons close to the restricted areas of the thermal facility which pose a security threat.

In view of the challenges encountered being the inadequacy of health baseline information and breakdown of ambient air quality monitoring equipment, the report could not ascertain technically whether the TTPP is operating in an environmentally viable manner or not. The project-affected communities however approved of a positive social certification for TICO in respect of fulfilment of corporate social responsibility and environmental management compliance.

Below are pictures taken during the monitoring visit?

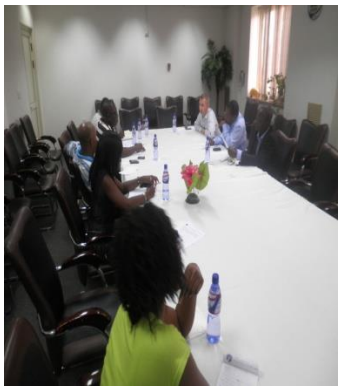


Fig. 7 Meeting with TICO

Fig.8 Skyline of TTPP

Fig 9. Engagement with Aboadze Community

Recommendations

- The Environmental Protection Agency (EPA) should require the provision of a quality baseline data for the conduct of Social and Environmental Impact Assessment activities for all Thermal Power Plants projects in the country.

- Takoradi Power Company and Takoradi International Company (TAPCO & TICO) should guarantee regular maintenance and replacement of malfunctioning environmental monitoring equipment for consistent data provision.

- TAPCO and TICO should do well to provide the remaining communal facility benefits promised as part of the corporate social responsibility. The facilities include; a KVIP and community road network for the Aboadze Township.

- Concerns about security and safety of the Thermal Power enclave as noted from the complaints of the DCE and VRA should be further investigated by appropriate Authorities for redress.

2.2.3 Monitoring Report on Energy Research and Development Projects

The Energy Commission signed implementation agreements with five organizations to conduct energy research and development projects.

Monitoring of progress of work of the projects (phase I) is completed. Overall assessment of the projects indicates that four out of the five projects are on course. The only major challenge is with the electrical impact analysis of grid connected solar Photovoltaic (PV) systems project. The challenge being that the software component was not budgeted for in the initial proposal. However, arrangements are being made for the purchase of the software. (See section 1.3.4 of this Report for further details on the projects).

3.0 HUMAN RESOURCES DEVELOPMENT AND ADMINISTRATION

The Energy Commission considers its human resources as valuable assets and is therefore committed to recruiting and selecting highly qualified personnel. Equally important to the Commission is the training, development, motivation and retention of these men and women who work hard to achieve the Commission's legal mandates.

3.1 RECRUITMENT AND SELECTION

In 2012, nine professionals were recruited to support the Energy Commission's core business. The spread of newly recruited personnel across the various Divisions was as follows:

- Technical Regulation Division - 1 Programmes Officer
- Energy Efficiency & Promotion Division - 1 Programmes Officer
- Strategic Planning & Policy Division - 1 Programmes Officer
- Inspectorate and Enforcement - 2 Programmes Officers
- SEITA Division - 1 Programmes Officer and 1 Associate Programmes Officer
- Finance Division - 1 Associate Programmes Officer
- Information Technology Unit - 1 Associate Programmes Officer

3.2 TRAINING AND DEVELOPMENT

In accordance with one of the objectives of the Energy Fund, which is the development of human resources in the energy sector in Ghana, the Commission sponsored Edward Awafo, (a PhD student from the Kwame Nkrumah University of Science and Technology) for training in Biogas technology in China.

During the period under review, one officer obtained a scholarship from the Get Fund to pursue a one-year Master's degree in Energy Management at the University of Twente, in the Netherlands.

Two officers, one from the Technical Regulations Division and another from the Strategic Planning & Policy Division are pursuing a Master's programme in Energy Economics and Policy at the University of Surrey, UK under the sponsorship of the Ministry of Energy.

The Commission's Internal Auditor was awarded an M.Phil./PhD (Energy Studies) scholarship by the University of Ibadan, Nigeria.

In 2012, the Manager at the Energy Information Centre was also awarded a scholarship by the African Capacity Building Fund (ACBF) to pursue a Master's Degree in Public Sector Management at the Ghana Institute of Management and Public Administration (GIMPA).

An in-house Performance Management training was conducted for nine managers to enhance their skills in measuring staff performance.

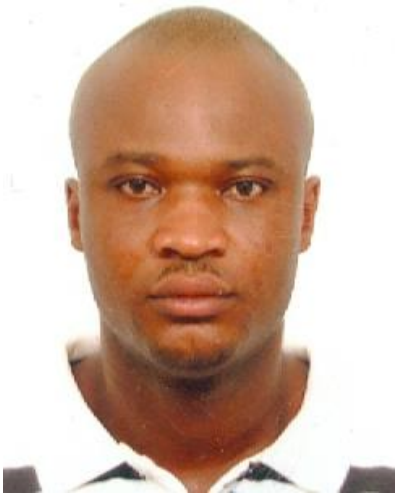
Five members of staff also benefited from the following fully or partly-funded training programmes:

- Two officers trained in MYSOL for Database Administration, UK;
- Wind Energy Technologies for Developing Countries in China;
- Biogas Technology, Facilities and Hygiene for Developing Countries in China.

3.3 BEST WORKER AWARDS

The 2012 Best Senior Staff Award was awarded to Mr. Frederick Ken Appiah of the Renewable Energy and Promotion Division while Mr. William Asah-Ayeh of the Transport Unit was adjudged the Best Junior Worker.

Mr. Frederick Appiah, Best Worker, 2012
(Senior Staff Category)



Mr. William Asah-Ayeh, Best Worker, 2012
(Junior Staff Category)

A special award for dedication to duty was also presented to Mrs. Clara Komla of the Estates Unit.

Mrs. Clara Komla, Most Dedicated Worker, 2012
(Special Award)

4.0 PUBLIC AFFAIRS

The Energy Commission is committed to transparent governance and therefore takes practical steps to engage stakeholders and the general public in areas of its work as required. The Commission undertook a number of public awareness campaigns and information dissemination activities during the year 2012 as outlined below.

4.1 PUBLIC EDUCATION

4.1.1 Ghana Energy Efficiency Standards and Appliance Labelling Programme

The Commission continued with the public education on LI 1815- Energy Efficiency Standards and Labelling (Non-Ducted Air Conditioners and Self-Ballasted Fluorescent Lamps) Regulations, 2005, LI 1932- 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, LI 1958 - Energy Efficiency Standards and Labelling (Household Refrigerating Appliances) Regulations, 2009 and LI 1970 – Energy Efficiency Standards and Labelling (Household Refrigerating Appliances) (Amendment) Regulations, 2012 considering the fact that Ghana is operating a mandatory Appliance Standards and Labelling regime.

As part of its awareness-creation efforts to ensure a smooth implementation of LIs which were caused to be passed by the Commission, personnel of the Ghana Revenue Authority, Customs Division of the Northern Sector, specifically Tamale and Bolga Divisions were engaged with during several meetings. The objective of these encounters was to enhance the level of understanding of the Ghana energy efficiency standards and labelling requirements of the customs personnel.

4.1.2 Public Education on Promoting Appliance Energy Efficiency and Transformation of Refrigerating Appliances Market in Ghana

A pilot rebate refrigerator exchange scheme, to be used as a tool to transform the refrigerating appliance market in Ghana was launched on 19th September, 2012 by the Commission in Accra. The purpose was to support consumers to purchase efficient refrigerators when they turned in their inefficient refrigerators in working condition to the scheme. Consumers who turn in their old refrigerating appliances will be supported financially to pay part of the cost of a new efficient refrigerator. The primary objective of the project is to improve the energy efficiency of refrigerating appliances marketed and used in Ghana.

After the launch, the Commission continued with its Public Education on L.I. 1958 – Energy Efficiency Standards and Labelling (Household Refrigerating Appliances) Regulation, 2009 and L.I. 1970 (Amendment) Regulation, 2012.

Educational materials such as banners informing importers, customs official and the general public about the Ghana energy efficiency standards and labels were produced and distributed.

Announcements and jingles on the refrigerator standards and labels were produced and aired on the major radio stations.

A TV documentary about refrigerator energy efficiency tips, labels and the negative economic and environmental impacts of used refrigerators was produced and aired on major TV networks. TV and radio discussions and interviews in selected key media houses were undertaken. Giant billboards on the refrigerator labels were erected at the following locations:

1. On the premises of the Ghana Standards Authority (GSA) on the Legon - Tetteh Quashie Road, Accra;

2. In front of the State Transport Company (STC) Yard, Ring Road West, Accra;

3. At Mallam Junction on the Mallam Highway, Accra;

4. At the Back Gate, Kwame Nkrumah University of Science and Technology (KNUST), Kumasi; and

5. At the Efia Kuma Traffic Light, Takoradi.

A website (www.energyguide.org.gh) for the refrigerator project and the rebate scheme was created. The objective was to create a platform that would be a one-stop shop for information on the refrigerator project and the rebate scheme. The website will also serve public education and awareness creation purposes with regard to the project and the scheme.

Stakeholder consultations and interactions were held with the leadership of the Used Refrigerator Dealers Association to identify ways of assisting them to successfully transform themselves into dealers in new refrigerators.

4.1.3 Ashanti Regional Stakeholder Consultation on Electrical Wiring Certification Guidelines

The Commission organized a one-day workshop at the Kumasi Technical Institute to guide professionals engaged in electrical wiring to ensure safety of lives and property as a result of the operation of uncertified electricians. Over one hundred and fifty (150) electricians attended the workshop.

Radio talk shows were used in Kumasi to educate the public on the Electrical Wiring Regulations and the draft certification guidelines.

4.2 POLICY FAIRS

The Third National Policy Fair took place at the Accra International Conference Centre from Monday, 16th to Saturday, 21st April 2012.

In addition, Regional Policy Fairs were held as follows:

1. Brong-Ahafo Regional Policy Fair was held at the Sunyani Polytechnic from Wednesday, 2nd to Saturday, 5th May 2012.

2. Western Regional Policy Fair was held at the Essipong Stadium from Wednesday 13th to Saturday, 16th June 2012.

3. Eastern Regional Policy Fair was held at the Koforidua Centre for National Culture from Wednesday, 25th to Saturday 28th July 2012.

The Commission was represented at these fairs which provided a platform to educate the public on the Commission's activities. In addition, the fairs afforded the opportunity for the Commission to bond with other energy industry organisations in particular and government organisations in general.

4.3 STAKEHOLDER WORKSHOP ON SAFE HANDLING AND DISPOSAL OF SPENT CFLS

In an effort to develop an effective Communication Strategy to educate the public on the safe handling and disposal of spent and broken CFL's, the Commission organized a stakeholder workshop on 7th June 2012 for importers and utilities who have stake in CFLs to provide inputs for the development of a communication strategy. It further educated stakeholders about manufacturer's who have made efforts to reduce the amount of mercury present in standard CFLs from 4mg. to 2.5mg. It was against the background of studies which have revealed that although mercury is a toxic pollutant, which can be injurious to human health, the amount in CFLs is very

minuscule hence unlikely to cause harm to human health unless over a long period of exposure in confined areas which lack proper ventilation.