ANNUAL REPORT FOR 2010

AND AUDITED

FINANCIAL STATEMENTS

FOR 2010

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CHAIRMAN'S REMARKS

1.0 THE COMMISSION

1.1 Introduction

Mandate

The Energy Commission Act, 1997 (Act 541), establishes the Energy Commission as a body corporate and provides for its functions relating to the regulation, management, development and utilization of energy resources in Ghana. The Act 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 Energy 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.

Members of the Governing Board

The members of the Commission's Board are as follows:

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

1.2 Object and Functions of the Commission

1. The object of the Commission is to regulate and manage the utilization of energy resources in Ghana and co-ordinate policies in relation to them.

2. Without prejudice to point 1 above, the Commission is also to do the following:

a. Recommend national policies for the development and utilization of indigenous energy resources;

b. Advise the Minister on national policies for the efficient, economical, and safe supply of electricity and natural gas, having due regard to the national economy;

c. Prepare, review and update periodically indicative national plans to ensure that all reasonable demands for energy are met;

d. Secure a comprehensive database for national decision making to the extent of development and utilization of energy resources available to the nation;

e. Receive and assess applications, and grant licenses under the Act to public utilities for the transmission, wholesale supply, distribution, and sale of electricity and natural gas;

f. 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. Promote and ensure uniform rules of practice for the transmission, wholesale supply, distribution and sale of electricity and natural gas;

h. Maintain a register of public utilities licensed under Act 541 in the country;

i. Pursue and ensure strict compliance with the Act and regulations made under this Act; and

j. Perform any other function assigned to it under this Act or any other enactment.

1.3 Structure

The Commission comprises three (3) Directorates as shown below. These are as follows:-

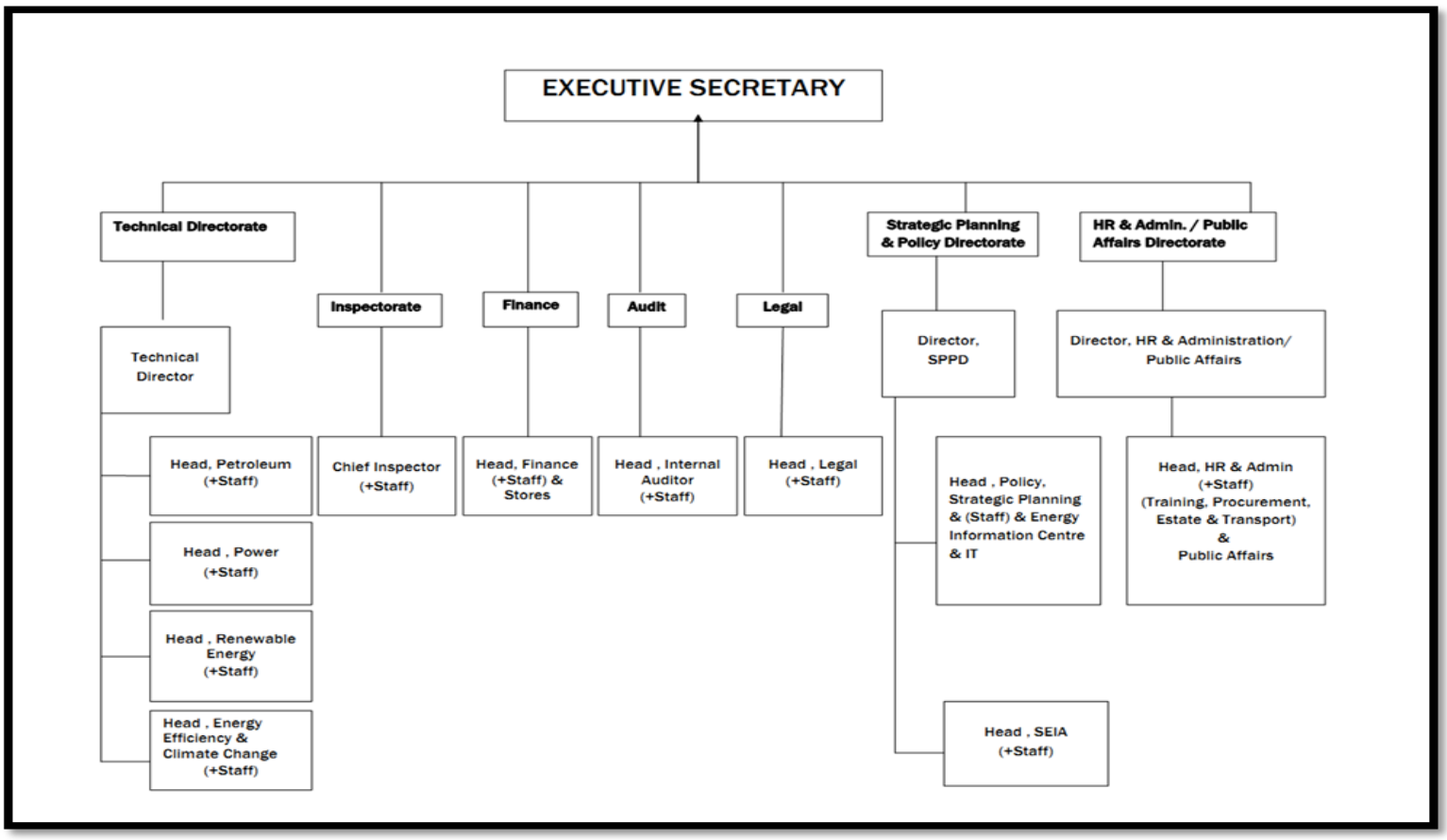
i The Technical Directorate, made up of the following divisions:

(a) Power;

(b) Natural Gas;

(c) Energy Efficiency and Climate Change; and

(d) Renewable Energy;



ii The Human Resources Development, Public Affairs and Administration Directorate; and

iii The Planning and Policy Directorate, made up of the following divisions:

(a) Strategic Planning and Policy; and

(b) Social and Environmental Impact Assessment;

There also exist the following four (4) Units:

(a) Inspectorate;

(b) Revenue & Accounts;

(c) Internal Audit; and

(d) Legal.

1.4 Mission and Vision

Our mission is to provide leadership and collaborate with our clients, the leading energy providers and suppliers such as the Volta River Authority (VRA), Tema Oil Refinery (TOR), Bulk Oil Storage and Transportation Company (BOST), Electricity Company of Ghana (ECG), the Ghana Grid Company (GRIDCO), and Independent Power Producers (IPPs) to create an enabling environment for excellent and fair competition in service delivery in order to achieve a vibrant, efficient and sustainable energy sector in Ghana.

The Energy Commission is fully committed to serving effectively and efficiently the national interest in the discharge of its mandates and functions. The Commission is equally committed to accepting and dealing with the challenges that Ghana must meet head-on in its quest for a truly functioning competitive energy industry that creates affordable energy supplies, improves energy reliability, efficiency, security and above all protects and enhances public safety, economic well-being and environmental quality.

1.5 Main Achievements

The main achievements during the years under review are as listed below:

1) The Annual Energy Statistical Bulletin was updated to include energy data for 2009;

2) Survey of energy use in residential, commercial/service, industrial (formal and informal) sectors of the economy was undertaken;

3) The IAEA TCP GHA/0/008 National Project Team, made up of staff of the Commission and other stakeholder institutions (i.e. Ghana Atomic Energy Commission (GAEC), Volta River Authority (VRA) and Ghana Grid Company Ltd. (GRIDCO)), under the auspices of the Energy Commission was assisted by the IAEA Expert Mission to complete drafting the "Planning for Sustainable Energy Development – Ghana Country Study" report;

4) Siting Guidelines for the siting of major energy infrastructure projects were developed and a Siting Committee to implement the Guidelines was established;

5) The Commission in 2009 granted Takoradi International Company Ltd. (TICo) a wholesale supply license for thermal power generation;

6) In 2009 two electricity distribution and sale licenses were granted to Electricity Company of Ghana (ECG, a public electricity distribution company) and Enclave Power Company (EPC, a private electricity distribution company in the Tema Free Zone);

7) The Commission in 2010 granted an electricity transmission license to GRIDCo;

8) Eleven bulk customer permits for bulk electricity consumers (defined as consumers with a minimum demand of 3 MVA for three consecutive months and an annual energy consumption of 6.0 GWh) were issued by the Commission;

9) Cenpower Generation Company Ltd. (CGC) was issued with a Construction Work Permit for the construction of a 330 MW power plant at Kpone;

10) The National Electricity Grid Code to govern the operations of the National Interconnected Transmission System (i.e. NITS) was developed and launched in January 2010;

11) The Commission facilitated the enactment of the following regulations in 2009 and 2010:

i. **LI-1958**: Energy Efficiency Standards and Labeling (Household Refrigerating Appliances) Regulations, 2009;

ii. **LI-1970**: Energy Efficiency Standards and Labeling (Household Refrigerating Appliances) Regulations, 2010 (an amendment to LI 1958);

12) The following Draft Regulations were prepared for submission to the Attorney-General's Department at the close of 2010:

i. Natural Gas Pipeline Safety (Construction, Operational and Maintenance) Regulations;

ii. Natural Gas Occupational Health and Safety (Standards and Procedure for Construction, Operation and Maintenance of Facilities and Installations) Regulations;

iii. Electrical Wiring Regulations; and

iv. Renewable Energy Bill;

13) The penetration of CFLs in the country increased from 20% in 2007 to 79% in 2009 as a result of the Commission spearheading the free distribution of six (6) million CFLs to replace incandescent bulbs in 2007. This load reduction strategy to minimize the impact of the shortfall in hydropower generation won for the country in 2010 the EE Global Visionary Award as the first African country to undertake such an action;

14) The Commission in collaboration with the Ministry of Energy installed Automatic Capacitor Banks (ACB) at some selected public facilities;

15) In 2010, the Commission assisted in funding five pilot projects on Grid-Connected Solar Systems with about GH¢100,000.00 from the Energy Fund; and

16) The Commission organized Consultative Forum of Stakeholders at Wa, Tamale, Kumasi and Takoradi to solicit inputs in the finalization of the bio-energy policy for the country.

2.0 PROJECT ACTIVITIES

2.1 POWER

2.1.1 Licensing of Electricity Industry Operators

Five (5) Bulk Customer Permits for bulk consumers of electricity, one (1) Electricity Transmission License and one (1) Construction Work Permit for the construction of a 330 MW thermal power plant at Kpone were issued in 2010.

The list of approved permits and licenses in 2010 is as shown in **Table 1** below.

Table 1: List of Companies issued with Licenses/Permits in 2010

#	NAME OF COMPANY	LICENCE /PERMIT TYPE
1	Ghana Grid Company Limited	Electricity Transmission License
2	Cenpower Generation Company	Construction Work Permit
3	Special Steel Limited	Bulk Customer Permit
4	Diamond Cement, Ghana	Bulk Customer Permit
5	Scancom Limited (MTN Ghana)	Bulk Customer Permit
6	Western Steel and Forgings	Bulk Customer Permit
7	Aluworks Limited	Bulk Customer Permit

2.1.2 Engagement with Stakeholders

The following meetings were held with power sector stakeholders including licensees, bulk customers and regulators to discuss challenges affecting the efficient operation of the sector.

1. A meeting with utility companies to discuss the implementation of the regulation 21(2) of LI 1935: Electricity Supply and Distribution (Standards of Performance) Regulations, 2008 regarding the payment of penalties by utility companies for the

contravention of the provisions of the regulation. The implementation this regulation was supposed to have taken effect from November 1, 2010.

2. A meeting with Bulk Customers and the utility companies to discuss and harmonize the framework for Power Purchase Agreements (PPAs) between them;

3. A meeting with ECG and PURC to discuss and find solutions to problems associated with the acquisition of Prepaid Meters; and

4. A round table meeting with stakeholders including CEOs of energy sector companies to discuss the Power Sector Policy Review Paper prepared by the Energy Commission.

2.1.3 Development of Market Rules for the Wholesale Electricity Market

The final draft of the Electricity Market Rules to govern the operations of the Wholesale Electricity Market was prepared by the Energy Commission. This was passed on to the Ghana Grid Company Limited (GRIDCo) for finalization and submission to the Energy Commission Board for approval.

2.1.4 Development and Implementation of the National Electricity Grid Code

The National Electricity Grid Code, which establishes the requirements, procedures, practices and standards that govern the development, operation, maintenance and use of the high voltage transmission system in Ghana was prepared and launched in January 2010.

The implementation of some provisions of the National Grid Code such as non-compliance listing of equipment connected to NITS and submission of daily reliability reports by GRIDCO to the Energy Commission commenced in 2010.

2.1.5 Development of Electrical Wiring Regulations

The final draft of the Electrical Wiring Regulations (EWR) was developed by the Commission in collaboration with the Ghana Standards Authority (GSA). This draft Electrical Wiring Regulations was forwarded to the Attorney General's Office for review and drafting and subsequent submission to Parliament for ratification. The Regulations seek to:

(a) establish the requirements, procedures and practices to ensure the enforcement of minimum standards of electrical wiring on premises; and

(b) ensure the safety of persons and property from hazards that arise from the presence, distribution and use of electrical energy.

2.2 PETROLEUM

2.2.1 Issuing of Permits for Construction of Natural Gas Transmission and Distribution facilities

A Construction Permit was issued in January 2010, to the Bulk Oil Storage and Transportation Company (BOST) to install an interconnection header in the yard of the West African Gas Pipeline Company (WAGPCo) Limited's Regulating and Metering Station (RMS). This was to enable VRA's Tema Thermal 1 Power Plant (TT1PP) and the Sunon Asogli Power Plant to receive natural gas from WAGP company's transmission line.

2.2.2 Development of Natural Gas Infrastructure Masterplan and Utilization Plan for Ghana

The Energy Commission prepared a Natural Gas Infrastructure Master-plan for the transmission and distribution of natural gas in the country. A Natural Gas Utilization Plan to promote natural gas use in the country was also developed.

2.2.3 Development of Natural Gas Safety Regulations

The Energy Commission developed the following Draft Regulations:

i. Natural Gas Occupational Health and Safety (Standards and Procedures for the Construction, Operation and Maintenance of Facilities and Installations) Regulations, and

ii. Natural Gas Pipeline Safety (Construction, Operation and Maintenance) Regulations,

The essence of these two Draft Regulations is to ensure the safety of natural gas infrastructure and operations. The regulations were discussed at a forum of stakeholders to seek inputs for their finalization.

2.2.4 Development and Implementation of Liquefied Petroleum Promotion (LPG) Promotion Strategy

The Energy Commission prepared a draft LPG Promotion Strategy to promote the use of LPG and increase its access to households from about 10% of total households in 2010 to 50% by 2015. Copies of the Strategy document were sent to stakeholders including political parties for their comments.

2.3 RENEWABLE ENERGY

2.3.1 Development of Renewable Energy Bill and Regulations

The Energy Commission developed a Renewable Energy Bill to provide the necessary legal backing for renewable energy purchase obligations for utilities, feed-in tariff scheme and the establishment of the Ghana Renewable Energy Fund (Green Fund). The Bill also seeks to establish the regulatory framework for the promotion, development and integration of renewable energy resources into the national energy mix. The Draft Bill was submitted to the Office of the Attorney-General for review and subsequent submission to Cabinet for approval.

2.3.2 Development of Standards for Solar Lanterns and Balance of System Components

The Energy Commission in collaboration with the Ghana Standards Authority (GSA) in 2009 prepared a set of Standards for Solar Lanterns and Balance of System Components. These have been gazetted by the GSA as national standards. The essence of the Standards is to prevent the importation and use of sub-standard solar appliances and System Components in the country.

2.3.3 Financing of Pilot Grid Connected Solar Photovoltaic and Wind System Projects

The Energy Commission initiated a partnership with private and public institutions for the financing of Renewable Energy Technologies. Under this partnership, monies from the Energy Fund are used to leverage investments of both individuals and institutions in grid-connected solar systems.

In 2009 and 2010, 25kWp of grid-connected solar Photovoltaic systems were installed in three institutions and two residential houses. The names of the beneficiaries and their locations are provided in Table 2 below. An example of the installation is shown in Figure1.

Table 2: Grid Connected Solar PV Installations

	Beneficiaries	**Location**	**Capacity**
1	Valley View University	Oyibi, Greater Accra	8.36 kW_p
2	Presbyterian Women Training Center	Abokobi, Greater Accra	4.18 kW_p
3	Pure Company Limited	Benkron, near Buipe, Kintampo North District, Brong Ahafo	4.18 kW_p
4	Residential Facility 1	East Airport, Greater Accra	4.18 kW_p
5	Residential Facility 2	Dzorwulu-South, Greater Accra	4.18 kW_p

The Energy Commission contributed 30% of the total hardware cost which amounted to GH¢ 60,000 whilst the beneficiaries contributed 70% of the hardware cost.

The beneficiaries of the project have indicated that savings of about 40% had been made in their electricity consumption over the five-month period that the systems were deployed on their premises.

Figure 1: The 4.18 kWp Grid Connected Solar PV System at Pure Company, Benkrom, near Buipe

2.3.4 Bioenergy Programme

The following activities were pursued:

(i) Development of a Bioenergy Strategy; and

(ii) Sponsorship of two academic research studies on (a) Waste vegetable oil as a feedstock for biodiesel production; and (b) Evaluation of the genetic diversity of jatropha curcas;

2.3.4.1 Development of Bioenergy Strategy

A draft Bioenergy strategy document was prepared as part of the measures to develop and regulate the Bioenergy Industry in Ghana. The broad framework of the document consist a bio-fuel policy to promote the production of bio-fuels; a biomass waste to energy policy to harness the country's biomass wastes for electricity production; and a wood-fuel policy to ensure sustainable exploitation of wood resources for wood-fuel. The Bioenergy strategy developed will be subjected to Strategic Environment Assessment (SEA) by the Energy Commission prior to submission to the Ministry of Energy.

2.3.4.2 Biofuel Research and Development - Study on Waste Vegetable Oil and Jatropha Curcas

As part of the Bioenergy programme, the Commission sponsored two academic research studies on *Waste Vegetable Oil Potential as Biodiesel Substitution for Fossil Fuels in Ghana* by the Agricultural Engineering Department of KNUST and an MPhil Thesis on the *Evaluation of the Genetic Diversity of Jatropha Curcas (L.) - Accessions from 10 Regions of Ghana* by the Faculty of Renewable Natural Resources of KNUST.

The study on the potential of waste vegetable oil as a feedstock for the production of biodiesel estimated that about 34,000 litres (i.e. 7,500 gallons) of waste vegetable oil (WVO) was generated monthly in 340 hotels surveyed in Accra, Kumasi, Sunyani, Takoradi and Tamale. It was found out that about 15,000 litres of the total waste oil generated from these sources is re-used by households, soap makers, commercial shito producers and food vendors whilst the remaining 19,000 litres is discarded. It can therefore be inferred from the study that if waste vegetable oil from other sources such as restaurants, street-selling, households and some industries are included the national annual generation and availability of WVO could suffice for a sustainable production of bio-diesel.

The second study concluded, from 40 accessions investigated that the germplasm of the Jatropha curcas in the country has a divergence value of 45% compared to the statistically significant value of 70%. The result indicates a very low genetic diversity and hence, for a viable bio-diesel promotion programme, genetic resources of the Jatropha curcas plant from countries such as India, Mexico and other Central American countries should be introduced through hybridization techniques to improve the germplasm of the Jatropha curcas plant in the country.

2.3.5 Wind Energy Resource Measurements

As part of the continued assessment of wind potential and in an effort to map out high wind energy regimes in the country, the Energy Commission under the Ghana Energy Development and Access Project (GEDAP) initiated a project to measure wind speeds at five (5) locations in the country. The Energy Commission engaged NEK Ghana Ltd., an affiliate of NEK Umwelttechnik AG, a Swiss engineering company active in several application fields related to renewable energy, to undertake the wind energy resource assessment.

The Commission also in November 2010, signed a Memorandum of Understanding (MoU) with Vestas Eolica, S.A.U. of Spain to undertake wind measurements and

develop potential wind energy projects in Ghana. According to the terms of the MoU, Vestas shall supervise the installation of two (2) wind measurement equipment and provide advice on the installation of the met mast, including the foundations, the poles and the GSM connections at 80 meters height in accordance with Vestas specifications to collect one year wind speeds data along the coastlines of the Volta and Greater Accra Regions.

2.3.6 Renewable Energy Policy for Climate Change Mitigation in Ghana

The Energy Commission in collaboration with the Renewable Energy and Energy Efficiency Partnership (REEEP), Austria supported the development of a Geospatial Information System-based toolkit in 2009. The toolkit, which is used for techno-economic analysis of renewable energy projects for climate change mitigation is to assist decision making and to stimulate policy initiatives to attract public and private investments in the renewable energy sector. The toolkit was developed by Nhance Development Partners Limited under the "Renewable Energy Policy for Climate Change Mitigation in Ghana" project.

2.3.7 Licensing of Renewable Energy Service Providers

The Commission issued charcoal export permits to:

i Antonio and Sons Ltd; and

ii Oskan Industries Ltd.

to export charcoal from wood waste generated by sawmills. This brings to five (5) the total number of companies exporting charcoal in 2010. The others are Beetel Company Ltd., Greencoal Ghana Ltd and Abua Farming and Industries Ltd.

2.4 ENERGY EFFICIENCY AND CLIMATE CHANGE

2.4.1 Refrigerator Energy Efficiency Programme

The Energy Commission initiated a programme to promote the use of energy efficient refrigerators manufactured and marketed in the country. The strategy for the implementation of the programme was combination of regulatory tools such as

Minimum Energy Performance Standards and Information Labels (S & L); the enactment of legislations; awareness creation and training of refrigerator shop assistants. The project was co-funded by the Global Environmental Facility (GEF).

2.4.1.1 Energy Efficiency Standards and Labelling (Household Refrigerating Appliances) Regulations, 2009, LI 1958

The Energy Efficiency Standards and Labelling (Household Refrigerating Appliances) Regulations, 2009, LI 1958 was passed in November 2009 to set minimum energy efficiency standards and enforce the use of appliance labels in the country. Under the new regime, only appliances that meet minimum energy performance standards and belong to the Sub Tropical (ST) or Tropical (T) climate specifications can be placed on the Ghanaian market. Importers and manufactures of refrigerators, freezers and fridge-freezers will also be required to label household refrigerating appliances, in such a way that the purchaser would know in advance the annual consumption of the appliance prior to the first retail purchase.

2.4.1.2 Stakeholder Consultation and Training

The Energy Commission held stakeholder consultations with importers of used refrigerators to discuss the implication of the full implementation of the provisions of LI 1958. Among the important decisions arrived at were:

i. a twenty-four-month moratorium for the implementation of the ban on importation of used refrigerators;

ii. registration of all importers and dealers in the used refrigerator business; and

iii. the need for intensive public education on the health and environmental hazards of used refrigerators.

A one-day training workshop was organized by the Energy Commission for refrigerator and air conditioner retail shop assistants as part of its public sensitization programme on appliance standards and labelling. The main objective of the training was to provide the shop attendants in targeted retail shops with a basic understanding of energy efficiency and appliance standards and labelling requirements.

A day's training workshop was also organized by the Commission for members of the National Air-conditioners and Refrigerators Workshop

Owners Association (NARWOA). The objective was to update the technical knowledge of members of the Association with respect to the new refrigeration technology. The training was intended to equip the mechanics with the skill to repair new refrigerators expected in the country.

2.4.2 Installation of Capacitors

The Energy Commission in collaboration with the Ministry of Energy in 2010 initiated a programme to install capacitor banks in public institutions in an effort to reduce electricity consumption and Government's expenditure on electricity bills. The institutions that benefited from the project were the following:

i. The Office of the President;
ii. Parliament House;
iii. Foods & Drugs Board;
iv. Accra Sports Stadium;
v. State House;
vi. Ministry of Defense; and
vii. Korle-Bu Teaching Hospital.

An assessment of the project indicated a savings of about $27,000 (Twenty-seven Thousand US Dollars) a month on electricity bills for Government.

2.4.3 Permitting of Importers of Incandescent and Filament Lamps

In 2010 the Energy Commission granted a permit to TH Electricals to import special purpose incandescent filament lamps, which enjoyed exemption from prohibition under LI 1932.

2.5 INSPECTION AND MONITORING

2.5.1 Electricity Industry Operations

(i) Wholesale Suppliers of Electricity

In fulfillment of the mandate of the Energy Commission and to ensure compliance with standards of performance, regulations, licensing terms and conditions, the Commission paid inspection visits to the generation plants of the following power companies:

1. Takoradi International Company Limited (TICo)
2. Takoradi Thermal Power Station (TAPCO)
3. Tema Thermal 1 Power Plant (TT1PP)
4. Tema Thermal 2 Power Plant (TT2PP)
5. Mines Reserve Plant (MRP), and
6. Balkan Energy's Osagyefo Power Barge

(ii) Bulk Customers of Electricity

In order to ensure compliance to permitting conditions the Commission paid inspection visits to the following bulk customers:

1. Anglo Gold Ashanti Mines (Iduaprim);
2. Goldfields Ghana Limited (Tarkwa);
3. Goldfields Ghana Limited (Damang);
4. Golden Star Resources (Bogoso/Prestea);
5. Golden Star Resources (Wassa); and
6. New Century Mines.

These companies were found to be complying with the conditions of their Bulk Customer Permits.

(iii) Electricity Distribution – Prepaid Meters

The Commission monitored a meter verification exercise undertaken by the Electricity Company of Ghana (ECG) in Accra and Kumasi. This was in compliance to the requirements on metering as specified in the Electricity Supply and Distribution (Technical and Operational) Rules, 2005: LI 1816,

2.5.2 Renewable Energy Industry Operations

Inspection visits were paid to charcoal production facilities of the following licensed charcoal exporters:

i. Greencoal Company Ltd. at Manso Amenfi in the Western Region; and

ii. Beetel Company Ltd. at Akim Oda in the Eastern Region

to ensure compliance with the terms and conditions of their charcoal export permits.

The tracking of charcoal export through the GCNet indicated that 2,616 tonnes of charcoal was exported in 2010, representing a decrease of 39% over the previous year. This was attributed a decrease in export of three companies whose permits expired in the early part of 2010.

Figure 2 shows the charcoal export trend from 2000 to 2010.

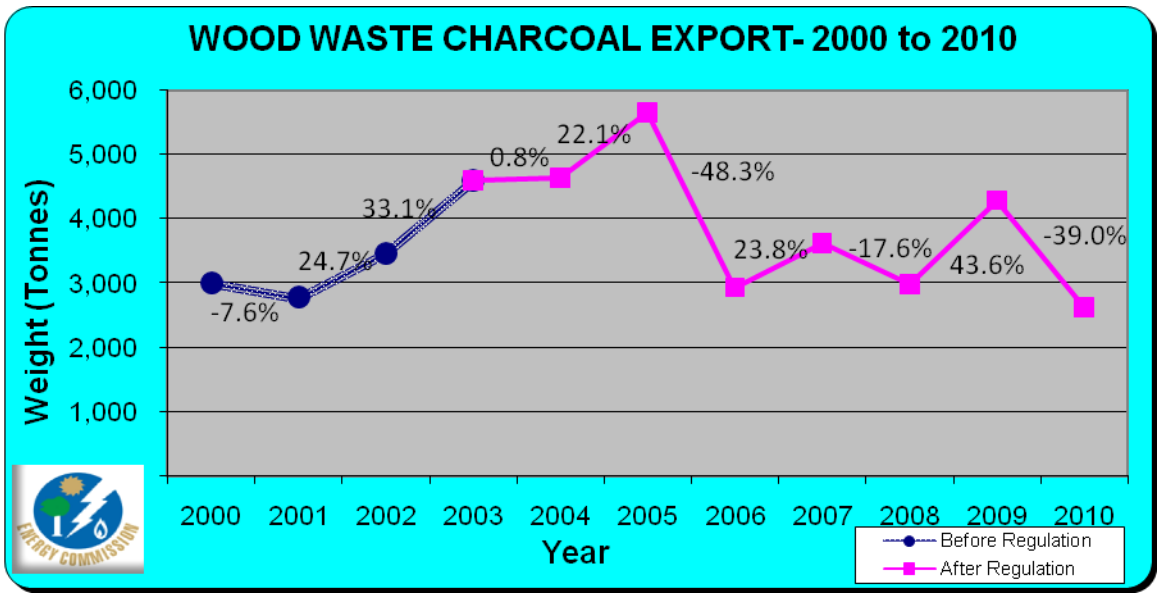


Figure 2: Charcoal Export from 2000 to 2010: Courtesy, GCNet

2.5.3 Natural Gas Operations

Inspection visits were paid to the West African Gas Pipeline Company's Regulating and Metering Station (RMS) in Tema and Takoradi to assess their readiness to deliver free flow gas to thermal plants in Tema and Takoradi. The RMS was expected to

The VRA/Sunon Asogli Metering station with Single Interconnection access to the WAGPCO RMS was also visited to assess progress of construction works. The metering station came into operation in October 2010 when the Sunon Asogli Power Plant was commissioned.

2.5.4 Monitoring of Importers of Electrical Appliances

Inspection visits were paid to premises of importers, wholesalers and retailers of electrical appliances in the Accra and Tema metropolis to ensure compliance with the following regulations:

(i) LI 1815: Energy Efficiency Standards and Labeling (Non-Ducted Air-conditioners and Self-Ballasted fluorescent Lamps) Regulations, 2005,

(ii) LI 1932: Energy Efficiency (Prohibition of Manufacture, Sale or Importation of Incandescent Filament Lamps and Used Air-conditioners) Regulations, 2008,

(iii) LI 1958: Energy Efficiency Standards and Labeling (Household Refrigerating Appliances) Regulations, 2010,

(iv) LI 1970: Energy Efficiency Standards and Labeling (Household Refrigerating Appliances) Regulations, 2010

Although importers were found to be complying with labeling requirements under LI 1815, the Commission's inspection team was unable to verify compliance of the appliances with minimum energy efficiency standards due to the absence of a test facility.

2.6 STRATEGIC PLANNING AND POLICY

2.6.1 Implementation of National Energy Data Processing and Information Centre (NEDPIC)

The NEDPIC project, which is to secure a comprehensive national energy information database management system, was initiated in 2007. The first phase involved the development of a framework for its implementation. In 2010, the Department of Mechanical Engineering of the Kwame Nkrumah University of Science and Technology was engaged as the Consultant to undertake the implementation of the second phase of project. A dummy of the structure of the database was developed with the Oracle software.

The library component of the project was fined tuned by experts from the Council for Scientific and Industrial Research (CSIR) and incorporated into the main project.

2.6.2 Update of National Energy Statistics

The scope of the National Energy Statistics was updated to include data for 2009. The statistical handbook, which contains tables of energy supply and use, and carbon dioxide grid emission factor, can be found on the Energy Commission website.

2.6.3 Survey of Energy use in the Residential, Industrial (formal and informal), Commercial/Services Sectors of the Economy

The Commission undertook a national survey of energy use in the residential, industrial (formal and informal industries) and commercial/service sectors of the economy. This was to collect baseline field data to update the Strategic National Energy Plan (2006 – 2020). Out of a total of about 9678 questionnaires which were administered in the various sectors of the economy, a total number of 8047 questionnaires were accepted after vetting and entered into a database for subsequent analysis and reporting.

2.6.4 IAEA-Ghana Capacity-Building Project for Sustainable Energy Development

The National Project Team of the IAEA Technical Co-operation Project GHA/0/008: "Planning for Sustainable Energy Development – Ghana Country Study" comprising staff of Energy Commission and other stakeholder institutions like the Ghana Atomic Energy Commission, Volta River Authority and Ghana Grid Company under the auspices of the Energy Commission was assisted by IAEA Expert Mission to complete the final draft study report. The final draft report was submitted to the Ministry of Energy and the IAEA for their comments.

As part of the study, members of the National Project Team were trained to strengthen their energy planning capabilities and develop the skills in the use of IAEA energy planning modeling tools like MESSAGE and FINPLAN models.

2.6.5 Energy Outlook for 2010

The Commission prepared an Energy Outlook for 2010 to highlight the anticipated energy supply and demand situation. According to projections in the Outlook, the gross electricity generation requirement for 2010 was expected to be between 8, 500

and 12, 500 Gigawatt-hours (GWh) with a corresponding system peak demand of between 1,610 and 1,720 MW. The projection assumed that VALCO will come online and operate with not more than one pot-line.

In the case of petroleum products demand, the Outlook projected the demand in 2010 for LPG to be between 220 and 250 ktonnes; gasoline (750 – 800 ktonnes); diesel (1600 – 1700 ktonnes) and Kerosene/ATK (250 – 300 ktonnes).

2.7 SOCIAL AND ENVIRONMENTAL IMPACT ASSESSMENT

2.7.1 Regulatory Impact Assessment of Charcoal Export in Ghana

The Energy Commission in 2010 conducted an assessment of its regulatory regime for charcoal exporters to ensure that exported charcoal production was from sustainable feedstock using improved charcoal production technologies as shown in Figures 3 and 4 below:

Figure 3: A Carbonization Plant

Figure 4: A Steel Kiln

In order to maintain effective controls over charcoal export, the report of the assessment made the following recommendations that:

- Charcoal exporters provide a proof of the sources of their feedstock e.g. sales receipts from suppliers and a certification from Forestry Commission in the case of planted stock.

- Charcoal exporters also provide records of all charcoal produced to match their approved export quotas.

- Two compliance monitoring checks at production sites of the exporters be undertaken every year by the Energy Commission.

2.7.2 Social and Environmental Impact Assessment of the Bui Hydroelectric Project

The Commission in collaboration with the Forestry Commission (FC) and the Environmental Protection Agency (EPA) conducted a social and environmental impact assessment of the Bui Hydropower project to ensure that the project is undertaken in a socially acceptable and environmentally sound manner. The assessment made the following recommendations:

i. Bui Power Authority (BPA) to ensure early start of the Livelihood Enhancement Package (LEP) programme to minimize social and economic hardship of the displaced communities;

ii. Resettlement Action Plan, Environmental Management Plan and Tree and Hippopotamus Salvaging Plans should be completed by BPA and submitted to the relevant agencies;

Through the Bui Hydropower project monitoring activity, a collaborative regulatory monitoring team made up of the Energy Commission, Forestry Commission and Environmental Protection Agency was established;

The engagement activities of the monitoring team are shown in figures 5, 6 and 7 below.

Fig 5: Community engagement at Bator

Fig 6: Bui Dam

Figure 7: A new resettlement site

2.8 HUMAN RESOURCES DEVELOPMENT AND ADMINISTRATION

2.8.1 Staff Training and Development

The Commission in collaboration with relevant institutions trained a total of 22 members of staff in the following fields:

i. Regulation and Strategy;

ii. Project Identification, Development & Management (PDM);

iii. Business Continuity & Disaster Recovery and Procurement Management Practice;

iv. Organization of Electric Power Market Structure Model;

v. Project Management;

vi. Effective People Management;

vii. Treasury Management with Emphasis on Procurement;

viii. Work Procurement Management;

ix. Defensive Driving & Vehicle Maintenance; and

x. Certificate in Public Administration.

Five (5) members of staff of the Commission undertook the following Degree programmes:

i. Bachelor of Arts in Public Administration Management

ii. Bachelor of Business Administration

iii. Master of Science in Environmental and Energy Management ; and

iv. Management with Computing

2.8.2 Internal Communications - Monthly Seminars

Monthly seminars were organized to enhance a sense of corporate belongingness and provide a platform for knowledge sharing in the activities of the various divisions and units of the Commission. This gave opportunity to staff to keep abreast with developments in the energy sector in order to serve as knowledgeable ambassadors of the Commission to the general public.

2.9 PUBLIC AFFAIRS

2.9.1 Meet the Press

The Energy Commission organized a "Meet the Press" in April 2010 to showcase the Commission to the general public through the media. This event dubbed "Telling Our Story So Far," touched on who we are, what we do and what we have done as a Commission.

2.9.2 Publicity of Legislative Instruments on Electricity

The Commission also organized a press soiree with stakeholders including VRA, ECG, GRIDCo, the media and representatives of the Public Service Workers Union (PSWU). The meeting focused on the mandate of the Energy Commission vis-à-vis the following Electricity Legislative Instruments:

(i) L.I. 1816, - Electricity Supply and Distribution (Technical and Operational) Rules 2005;

(ii) L.I. 1935- Electricity Supply and Distribution (Standards of Performance) Regulations 2008; and

(iii) L.I. 1937 – Electricity Regulations, 2008.

2.9.3 Energy Efficiency and Conservation Month

The Energy Commission launched the first ever Energy Efficiency Month in September, 2010. This was to sensitize the general public on the efficient use electricity. As part of the activities of the Energy Efficiency Month, radio talk shows in 10 FM radio stations countrywide were organized. Information vans of the Information Services Department (ISD) were also used in Accra to promote public awareness.

2.9.4 Solar Month

The Commission launched a Solar Month in October, 2010 based on the theme "Solar, a Viable Option for Socio-Economic Development". Other activities undertaken as part of the Solar Month included:

(i) Commissioning of Grid Connected Solar Systems at the Presbyterian Women's Centre at Abokobi and the Pure Company at Benkrom in Kintampo North District near Buipe;

(ii) Meetings with the Association of Ghana Solar Industries and Ghana Institution of Architects; and

(iii) Radio talk-show programmes in Tamale and Kumasi to promote the use of solar energy;

2.9.5 Stakeholder Consultative Forum Bio-energy Policy

A draft Bio-energy policy document prepared by the Energy Commission was subjected to consultative stakeholders' fora held in Kumasi, Tamale, Wa, Accra and Takoradi to solicit for views from a broader segment of the general public. Participants at these fora were drawn from the Ministry of Food and Agriculture, Forestry Commission, District Assemblies, Waste Management Companies, Traditional Authorities, Non-Governmental Organisations, Farmer-Based Organisations and other relevant entities.

2.9.6 Stakeholder Consultations for Importers of used Fridges

The Commission organized a stakeholder consultation and training workshop for dealers in used refrigerating appliances in Accra. The workshop was used as a platform to discuss the possible effects of the implementation of the regulations LI 1932, LI 1958 and LI 1970 on their businesses.