



ENERGY COMMISSION
securing Ghana's Energy Future Today

THE ENERGY GAZETTE

ISSUE 2, JUNE 2024



IN THIS ISSUE

- EMOP Intensifies Monitoring of the Wholesale Electricity Market
- Technical Audit Conducted on Cenpower, Sunon Asogli and TAPCO
- Key Stakeholders Sensitised on the Local Content and Local Participation Law
- Highlights of the Ghana Energy Outlook 2024
- Green Climate Fund Approves USD31.6 Million to Accelerate Solar Adoption
- EC, PURC, NEDCo, GWCL and TAMFIT Walk to Discourage Illegal Connection
- ECG and NEDCO Staff Trained on Grid-Connected Solar PV Systems
- AFD Supports Gender Audit of EC

EDITORIAL »



We appreciate the positive response and high interests shown by our stakeholders in the maiden edition of The Energy Gazette published last September 2023. We bring to you the second issue which highlights the activities of the Commission from, mainly, the last quarter of 2023 up to the first quarter of this year. 2023 ended on a high note for the Commission with a team led by the Executive Secretary, Ing. Oscar Amonoo-Neizer, contributing to climate discussions at COP 28. Worth mentioning is the effort being made by the Commission to promote gender equality and equity among its staff and subsequently the mainstreaming of gender issues in the operations and activities of the Commission.

2024 was met with enthusiasm with the Commission publishing the Ghana Energy Outlook for 2024 and continuing with its regulatory, policy and planning, and promotional functions. The Commission, after more than five years of leading in the development of the "Accelerating Solar Action Programme (ASAP)", the proposal has been approved for USD31.6 million under the Green Climate Fund. Capacity building and training activities conducted in the first quarter of this year include training of staff of the Electricity Company of Ghana (ECG) and Northern Electricity Distribution Company (NEDCo) in grid-connected solar PV systems and net-metering, among others.

We trust you would enjoy reading this issue as you did the previous. You can download an e-copy of this newsletter from the Commission's webpage. We look forward to hearing from you via our email:
theenergygazette@energy.com.gov.gh

Best regards, Paula Edze, Editor
 Manager, Renewable Energy Regulation



**REMARKS BY THE
EXECUTIVE SECRETARY
ING. OSCAR
AMONOO-NEIZER,
ENERGY COMMISSION**



The past half-year has been packed with activities in and outside the borders of Ghana for the Commission. As the technical regulator for the energy sector, the highest contributor to Greenhouse Gase (GHG) emissions in Ghana, the Commission participated and contributed to discussions at last year's Conference of Parties event. Aside participating in exhibitions held at the Ghana Pavilion, senior officers of the Commission served as discussants on several panels including the "First movers country spotlight: cooling and climate leadership showcase". Representing Ghana, as an active member of the Montreal Protocol, the Commission continues to push for a ban on environmental dumping of inefficient cooling appliances on developing countries like Ghana.

This year began on a high note for us. A staff retreat was organised to firm up our plans for the year, set performance targets and enhance

teamwork among staff through some social activities. We have hit the ground running in the performance of our core mandates and functions in technical regulation, policy planning, and promotion. This issue of the Energy Gazette gives highlights of some of our activities in this first quarter of 2024.

The Commission received commendable recognitions at this year's Africa Public Sector Leadership and Innovation Awards 2024 held in March, including being adjudged eighth among top 50 employers for gender equality and "Excellence in Energy Policy Development and Regulatory Oversight (West Africa)". Similarly, I was adjudged the top influential public sector governance icon in Africa in 2023. We would not have achieved such feat without the support of you our partners, and stakeholders. We appreciate your commitment to seeing us excel in our role. We look forward to attaining greater heights with you in this year. Thank you.

Table of Contents

Editorial	01
Remarks by the Executive Secretary	02
REGULATION	02
EMOP Intensifies Monitoring of the Wholesale Electricity Market	02
Development of the National Electricity Distribution Code	05
Development of Natural Gas Distribution Franchise in Tema	06
Publication of Natural Gas Distribution Code	07
Natural Gas Regulation and Enforcement	08
Energy Commission's Institutional Visit to Sensitise Local Content and Local Participation Stakeholders on the Provisions of L.I. 2354 and Registration via the Online Portal	09
Compliance Monitoring of the Activities of the Distribution Utilities and Certified Practitioners	11
Examination and Certification of Electrical Wiring Professionals and Contractors	12
Technical Audit of Thermal Generation Power Plants	14
GIZ Collaborates with the Energy Commission to Strengthen Regulation of Electrical Appliances	16
POLICY AND PLANNING	18
Ghana Energy Outlook 2024	18
PROMOTION	21
2024 Energy Commission Senior High Schools	21
Renewable Energy Challenge Green Climate Fund (GCF) Approves USD31.6 Million for Solar Project in Ghana	21
Energy Efficiency Promotion in the Prisons Service	22
Net-Metered Solar PV (NMPV) Project under the Scaling-Up Renewable Energy Programme	23
Establishment of Data Collection and Monitoring System (GHSolarMonitor) for Solar PV Installations in Ghana	24
The Energy Walk	25
CAPACITY BUILDING AND TRAININGS	26
Training of ECG and NEDCO Staff on Grid-Connected Solar PV Systems and Net Metering Conference	26
Energy Commission's Commitment to Road Safety: Twelve (12) Drivers Trained in Driver Mechanic Course	27
Empowering Energy Commission Staff in Strategic Communication	28
Energy Commission Trains Inspectors and Engages Manufacturers of Appliances as Part of their Stakeholder Engagement to Ensure Compliance of New Regulations	29
CONFERENCE	32
Meeting of Parties of the Montreal Protocol (MOP-35) in Nairobi, Kenya	32
Participation in the 2023 United Nations Climate Change Conference (COP 28) in Dubai, United Arab Emirates	33
INSTITUTIONAL TRANSFORMATION	35
AFD Supports the Energy Commission to Conduct an Institutional Gender Audit	35
Energy Commission Celebrates International Women's Day	37
PHOTO GALLEY	40
Staff Retreat	40
Graduation Ceremony for Certified Electricians	42

Regulation



EMOP INTENSIFIES MONITORING OF THE WHOLESALE ELECTRICITY MARKET

— By Sandra Nyaaba, Senior Officers, EMOP

Introduction

According to the revised National Energy Policy (2021), one of the goals of the power sector is to “develop transmission and distribution systems that facilitate efficient and cost-competitive power evacuation and transportation.” Pursuant to the above, the Electricity Regulations, 2008 (LI 1937) provided for the establishment of a competitive electricity market. In 2017, the Energy Commission established the Electricity Market Oversight Panel (EMOP) to supervise among others, the administration, and operations of the Ghana Wholesale Electricity market (WEM). It is made up of eleven (11) members:

- The Chairperson,
- The Executive Secretary of the Energy Commission,
- The Executive Secretary of the Public Utilities Regulatory Commission (PURC),
- The Chief Executive Officer of Ghana Grid Company Limited (GRIDCo),
- The Head of System Operations and Control of GRIDCo,
- A representative each of the
 - Distribution Licensees, and
 - Bulk Customers,
- Two representatives of the Wholesale Suppliers,
- The administrator of the EMOP, and
A person with knowledge and experience in matters relevant to the WEM.

Market Monitoring

The EMOP monitors the performance of the WEM by engaging market participants in the regulated and deregulated markets to ensure market efficiency, reliability, integrity, and government policy compliance. In furtherance of its mandate, the EMOP intensified its agenda to monitor the general performance of the WEM

by paying a working visit to the Northern Electricity Distribution Company (NEDCo), Kumasi 1 Power Plant (formerly known as AMERI Energy), and GRIDCo and ECG substations in the Kumasi enclave.

Visit to NEDCo

In December 2023, the Panel visited the Northern Electricity Company (NEDCo) to ascertain the challenges faced by the company in its operations and in the wholesale electricity market. The monitoring visit highlighted the need for knowledge transfer and sharing of experiences between the Electricity Company of Ghana (ECG) and NEDCo on how to improve revenue collection, customer retention and best practices in the distribution industry. Unlike ECG, NEDCo has a sparsely populated customer base and a relatively large lifeline customer base (about 40%) making it imperative for the distribution company to procure cheap power to mitigate its losses. NEDCo seized the opportunity of the Panel's visit to request for an increase in the share of VRA's hydro power allocated to them. EMOP increased the share of generation from the legacy hydro allocated to NEDCo from the allocated amount of 796GWh in 2023 to 945.22GWh in 2024. Some challenges shared by the Managing Director of NEDCo include high distribution losses due to the sparse nature of the settlements, increased adoption of solar PV systems and other power sources by customers, and non-payments of bills by residential customers.

Visit to the Kumasi 1 Power Plant

The government of Ghana, on February 15, 2015, entered into an agreement with the Africa and Middle East Resource Investment (AMERI) Power Plant to build, own and operate the 250MW power plant for five years, after which the asset

would be transferred to the Government of Ghana. Accordingly, full ownership of the plant was transferred to the government (specifically, the Volta River Authority, VRA) in January 2022. Subsequently, a strategic decision was made to relocate the AMERI Power Plant from Takoradi to Kumasi, on the recommendation of GRIDCo premised on a study they conducted. The study showed that electricity generation in the middle belt of Ghana (Kumasi) would improve the stability of the grid, minimise transmission losses and enhance electricity export.

The EMOP, as mandated by the L.I.1937 to ensure the smooth operations of the Ghana WEM, paid a working visit to the Kumasi 1 Power Plant, last February, to ascertain the extent of work done on the relocation of the power plant by the Volta

River Authority (VRA). The team was received by Ing. Daniel Y. D. Onny, Director of Strategic Projects and New Business, VRA. He recounted that the decommissioning and transportation of the Ameri Power Plant began in July 2023 and the reinstallation works in Anwomaso, Kumasi, begun in September 2023. At the time of the visit, the installation of the six units transported from Takoradi (total capacity of 150MW) had been completed and the switchyard duly commissioned. The transformers were energised by a team from VRA and GRIDCo on 5 February 2024. Currently, the turbines are being connected to the various transformers which in turn would be connected to the switch gears of the various units. The outstanding activity of the Kumasi 1 Power Plant is its connection to natural gas supply from Genser Energy.



Some EMOP Members and Staff of the EMOP Secretariate at the Kumasi 1 Power Plant



Discussion with VRA Staff

The first six units of the power plant installed are expected to be online by the end of March 2024. The remaining four units are expected in Kumasi by the end of the second quarter of 2024. It is commendable to note that the decommissioning, reinstallation, and commissioning of the Kumasi 1 Power Plant was done by staff of VRA. The operation of the power plant would also be done by VRA.

Assessment of GRIDCo and ECG Substations

The team also assessed the readiness of GRIDCo's substation to wheel the electricity generated and ECG's substation to receive the wheeled power. The electricity generated by the Kumasi 1 Power Plant would be evacuated on the 161kV transmission line. The Panel identified no bottlenecks to the transmission of the electricity to be generated by the Kumasi 1 Power Plant. GRIDCo has over 1,000MVA capacity on the 330kV line which is enough capacity to evacuate the forecasted increase in power plants at the Aboadze power enclave including AKSA, CENIT

“develop transmission and distribution systems that facilitate efficient and cost-competitive power evacuation and transportation” - Power Sector Goals

and Karpowership. The ECG Bulk Supply Point (BSP) at Anwomaso has a 2x20MVA primary substation that receives power from GRIDCo at 33kV and distributes it to other ECG primary substations, bulk customers, and other communities. It was identified that though the BSP can receive power wheeled by GRIDCo from the Kumasi 1 Power Plant, it needs to be upgraded to receive supply from other power plants coming into Kumasi.

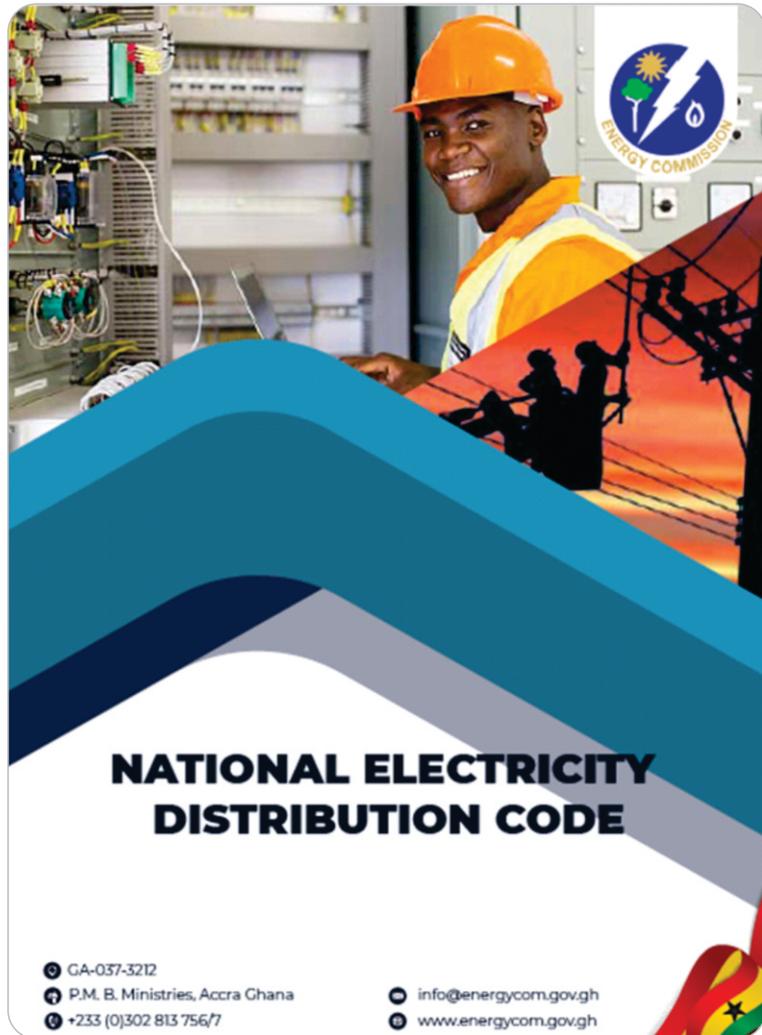
DEVELOPMENT OF THE NATIONAL ELECTRICITY DISTRIBUTION CODE

— By Naa Sackley Dodoo,
Senior Officer, Electricity Regulation

The National Electricity Distribution Code is a document issued by the Commission in accordance with the regulations on Electricity Supply and Distribution (Technical and Operational) Rules, 2005, sections 56(1)(a)(iii) and 56(1)(c)(ii) of The Energy Commission Act, 1997 (Act 541) and section 49(a) of the Renewable Energy Act, 2011 (Act 832).

The Code establishes the requirements, procedures, practices, and standards that govern the development, operation, maintenance and use of the distribution network. It also provides for the responsibilities of electricity retailers, bulk customers, generators, embedded generators and variable renewable power plants.

The Code not only sets forth rules, obligations and standards but also establishes robust mechanisms for resolving disputes, thereby fostering trust and confidence among consumers. By ensuring fair treatment and accessibility to the distribution network, the Code promotes a level playing field for all stakeholders in the power sector. Furthermore, the effective implementation of the Code is expected to lead to a reduction in energy losses, optimize the utilisation of the distribution network, and enhance overall service quality.



This will benefit consumers by improving their access to reliable electricity and contribute to the sustainable development of the energy sector in Ghana.

The Commission recognises the importance of timely publication and dissemination of the Code to stakeholders across the country. Therefore, efforts are underway to finalise the Code and make it publicly available on the Commission's website by June 2024. This would be a significant milestone in advancing energy regulation and governance in Ghana.

DEVELOPMENT OF NATURAL GAS DISTRIBUTION FRANCHISE IN TEMA

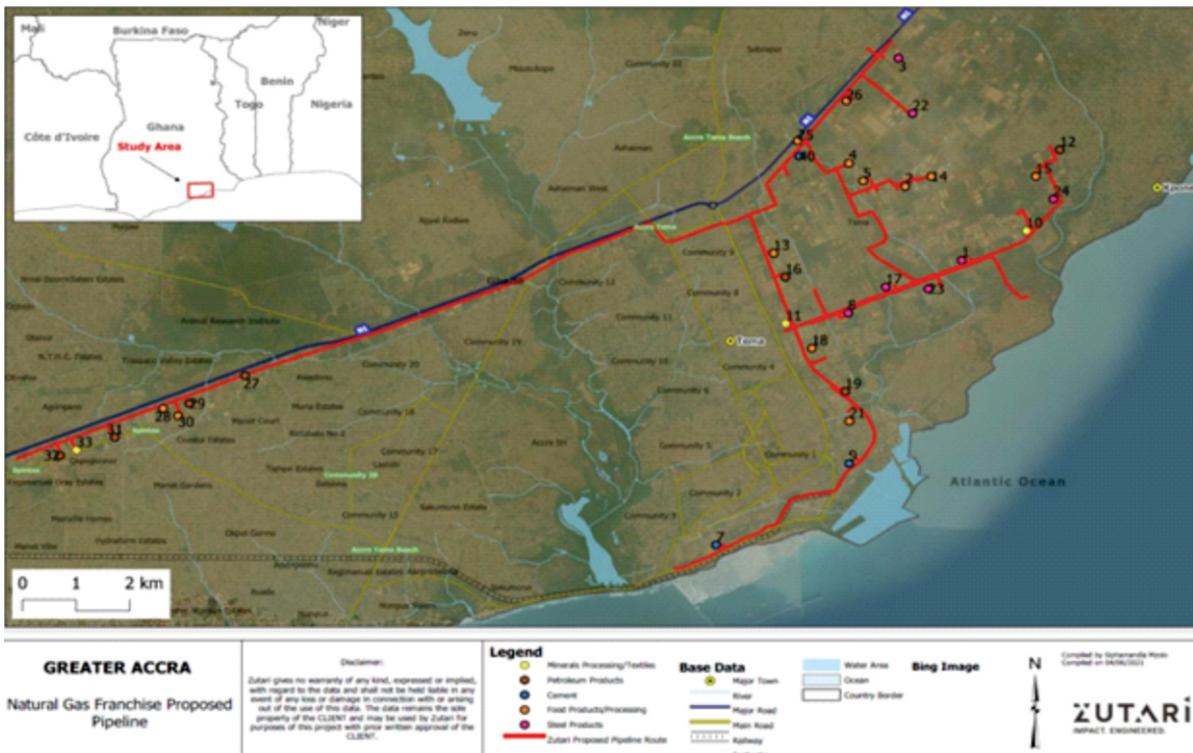
— By Robert Yeboah, Senior Manager, Natural Gas Regulation

The Energy Commission is the technical regulator of downstream activities in the natural gas supply industry. The Energy Commission Act, 1997 (Act541) mandates it to grant licenses for the transmission, wholesale supply, distribution, and sale of natural gas in Ghana. Most Ghanaian industries rely on residual fuel oil (RFO), liquefied petroleum gas (LPG), gasoline, products of imported crude oil, etc., to meet their energy needs.

The use of natural gas as an alternative fuel source for heating in industries has been increasing in the country over the past years. Natural gas is

expected to provide a more competitive clean fuel alternative for industries.

The Commission, upon receipt of several interest from companies to develop a natural gas distribution network in Tema, engaged a consultant to undertake a feasibility study and recommend a concessionaire to develop a natural gas distribution network in Tema. The feasibility study report which was finalised in August 2021 showed that it is possible to develop natural gas distribution infrastructure using either High Density Polyethylene (HDPE) or cast iron steel pipes at a competitive cost.



Map Showing the Proposed Network Layout in Tema

Gas distribution is normally performed by local distribution companies (LDCs) who take custody of the gas at the city gate and transport it to the battery limits for the end-users. The involvement of a LDC in the distribution of gas is to encourage participation of the private sector in the gas industry and to expand the domestic market for natural gas utilisation for various end-users.

The study identified the following benefits of developing the natural gas distribution network and related impact:

- **Environmental Benefits:** Natural gas is considered a cleaner-burning fossil fuel compared to coal and oil. When used for power generation or other applications, it produces lower emissions of pollutants and greenhouse gases, resulting in reduced air pollution and a smaller carbon footprint. Enhancing natural gas distribution helps Ghana mitigate its environmental impact and supports efforts to combat climate change.

- **Economic Growth and Development:**

Natural gas distribution plays a crucial role in driving economic growth and development. It provides a reliable and cost-effective source of energy for various sectors, including power generation, industry, and residential use. Access to natural gas fuels industrial production, stimulates business activities, and attracts investment, thus fostering economic development, job creation, and increased revenue generation.

- **Expanding natural gas distribution**

requires the development of a robust infrastructure network, including pipelines, storage facilities, and distribution systems. This infrastructure development leads to the creation of jobs in construction, engineering, and maintenance.

This activity was supported by the World Bank under the Ghana Energy Sector Transformation Initiative Project (GESTIP) implemented by the Ministry of Energy.

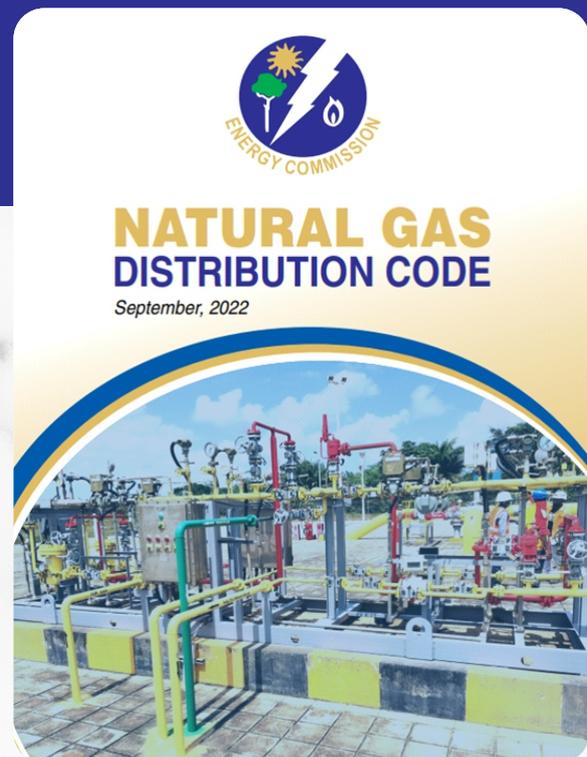
PUBLICATION OF NATURAL GAS DISTRIBUTION CODE

— By **Robert Yeboah**, *Senior Manager, Natural Gas Regulation*

The Commission, as part of its regulatory function in the natural gas industry, in 2022 published the Natural Gas Distribution Code to guide the activities of natural gas service providers and customers.

The Code sets out the conditions and requirements that utilities must meet to distribute and sell natural gas in Ghana. It ensures that the distribution network provides fair, transparent, non-discriminatory, reliable and cost-efficient delivery of natural gas in Ghana.

A copy of the document can be downloaded from the Commission's website.



NATURAL GAS REGULATION AND ENFORCEMENT

— By Joseph Adams, *Manager, Natural Gas Regulation*

As part of its natural gas regulation and enforcement activities in 2023, officers of the Commission inspected and monitored progress of work at various natural gas construction sites to ensure adherence of contractors to construction procedures as outlined in L.I. 2189 – Natural Gas Pipeline Safety (Construction, Operations and Maintenance) Regulation. The activities of Ghana National Gas Company Limited (GNGC), a licensed natural gas transmission utility, was also monitored.

GNGC is responsible for the operation and maintenance of the Gas Processing Plant located at Atuabo in the Western Region. Recommendations from the inspection visits have been communicated to the companies visited.



Section of EC Inspection Team and Some Operating Staff of the Ghana National Gas Company



Inspection at Gas Processing Plant (GPP)

ENERGY COMMISSION'S INSTITUTIONAL VISIT TO SENSITISE LOCAL CONTENT AND LOCAL PARTICIPATION STAKEHOLDERS ON THE PROVISIONS OF L.I. 2354 AND REGISTRATION VIA THE ONLINE PORTAL

— By **Ing. Maame Yaa Akowuah Tamakloe**, Senior Officer, Local Content Secretariat

The Parliament of Ghana in November 2017, passed into law the Energy Commission (Local Content and Local Participation) (Electricity Supply Industry) Regulation L.I. 2354. The Regulation stipulates that entities involved in any activity within the Electricity Supply Industry (ESI) must undergo registration by the Local Content and Local Participation Committee. Furthermore, these entities are obligated to comply with the minimum provisions set forth in L.I. 2354 which includes a provision that first consideration be given to goods and services produced or delivered in-country. Full implementation of this law began in December 2023.

The Local Content Secretariat of the Energy Commission has been raising awareness on the provisions of the law among electricity suppliers in the country. Institutions visited include Bui Power Authority, Electricity Company of Ghana, Northern Electricity Distribution Company, Strategic Securities Systems, Takoradi International Company, and Twin City Energy. The visits were also used to showcase the functionality of the online registration portal designed for receiving applications related to the issuance of a Certificate of Authorisation and Certificate of Registration, stipulated in the Regulation. Feedback received highlighted challenges related to the

unavailability and lack of awareness regarding the sources of certain products and services essential for patronage within the country.

A market analysis is therefore being conducted to identify all existing local capacities. A service forum would also be organised to facilitate engagement between electricity supply entities, manufacturers, and suppliers of the required products or services; fostering collaboration; and strengthen the enforcement of L.I. 2354. The Local Content and Local Participation Committee established under the law is committed to devising initiatives and strategies that address the difficulties associated with complying with the Regulations.



EC Officials and Officers from Strategic Security System in a Group Photograph after the Engagement



EC and ECG Officials in a Group Photograph after a Successful Engagement



EC Officials in a Group Photograph with the CEO and Management Members of Takoradi International Company, TICO



Group Photo of Officials from BUI Power Authority and Energy Commission after the Meeting



A Group Photograph of EC and Officials from Twin City Energy



Group Photo of Management and Staff of the Northern Electricity Distribution Company Officers and EC Officials

COMPLIANCE MONITORING OF THE ACTIVITIES OF THE DISTRIBUTION UTILITIES AND CERTIFIED PRACTITIONERS

— By Emmanuel Teye Addo, Officer, Electrical Wiring Unit

Officers of the Electrical Wiring Unit of the Electricity and Natural Gas Directorate of the Energy Commission, head office in Accra, embarked on a compliance monitoring exercise during the last quarter of 2023 to ensure compliance with the Electrical Wiring Regulations, 2011 (L.I. 2008). The objective of this exercise was to check the level of compliances of practitioners certified to conduct electrical wiring in Ghana.

Certified Electrical Wiring Professionals and Certified Inspectors are expected to comply with all aspects of the electrical wiring standard to guarantee safety of life and property. The activity was also to check the distribution utility companies to ensure that facilities that have been wired by certified practitioners are the only ones connected to the national grid or being processed to be connected to the national grid.

The team visited thirty-eight (38) ECG Districts within the Greater Accra, Eastern and Volta Regions and inspected one hundred and ninety-four (194) facilities within these regions.

The facilities visited were sampled from service application forms submitted by customers. Radio appearances and interviews were given to sensitize the public on the Electrical Wiring Regulations. Meetings were also held with the local Certified Electrical Wiring Professionals Association of Ghana (CEWPAG) chapters within the regions visited to sensitize them on the current implementation stage of the Electrical Wiring Programme, the Ghana Wiring Standard as well as addressing issues of concerns to their members.



Officers Inspecting and Testing a Facility Owners Consumer Unit at Kpeve during Compliance Monitoring



Officers Granting an Interview on the Wiring Programme At Beyond Radio (90.7 FM) – Nkwanta, during Compliance Monitoring



Assistant Manager, Making a Presentation to Members of the Agbogba Electoral Area during a Public Sensitisation Exercise



Officers Sensitising Members of the Denu CEWPAG Chapter during Compliance Monitoring

EXAMINATION AND CERTIFICATION OF ELECTRICAL WIRING PROFESSIONALS AND CONTRACTORS

— By Kwaku Appiah Kwabia, *Officer, Electrical Wiring Unit*

The Electrical Wiring Certification Examination is conducted twice every year: May/June, and November/December. The examination is in three parts: written, oral and practical examination. A total of 938 candidates registered for the November/December 2023 examination, out of which 752 were certified.



A Section of some of the Candidates during the Practical Session of the November/December 2023 Examination

The Table below gives detailed statistics for the November/December 2023 certification programme and the total number of Certified Electrical Wiring Professionals and Inspectors as of March 2024.

November/December 2023 Examination				
Class	Registered Candidates	Certified Candidates	% Pass	Number Certified to Date
Domestic	522	419	80.08	9679
Commercial	306	262	85.95	4867
Industrial	50	39	78.00	675
Inspectors	60	32	53.33	323
Total	938	752	80.17	15544

Register of Electrical Wiring Contractors

So far, ten (10) electrical wiring contractors have been registered with the Commission in fulfilment of L.I. 2008 which mandates the Energy Commission to keep and maintain a register of electrical contractors. Below is the contact details of the current registered electrical wiring contractors.

ENERGY COMMISSION REGISTERED ELECTRICAL CONTRACTORS						
#	COMPANY NAME	CERTIFICATE NUMBER	COMPANY TYPE	EXTENT OF WORK COVERED BY COMPANY	PHONE NUMBER	GPS/ OFFICE LOCATION
1	YALLTECH ENGINEERING LIMITED	EC/REC 3/10/22/0001	LIMITED LIABILITY	• INDUSTRIAL WIRING • INSPECTION & TESTING	0241748173 0277322493	WS - 280 - 3344 TAKORADI - WESTERN REGION GT - 030 - 1343
2	KISSART GROUP LIMITED	EC/REC 3/08/23/0001	LIMITED LIABILITY	COMMERCIAL WIRING	0302817322 0530744491 0530744491	SPINTEX - GT. ACCRA GA - 131 - 7329 NORTH INDUSTRIAL AREA - GT. ACCRA
3	GENEC ELECTRIX LIMITED	EC/REC 3/08/23/0002	LIMITED LIABILITY	COMMERCIAL WIRING	0242930510 0274754240	GD-189-2107 NMAI DZORN - GT. ACCRA
4	S.M. ENGINEERING COMPANY LIMITED	EC/REC 3/08/23/0003	LIMITED LIABILITY	COMMERCIAL WIRING	0207300104 0550814814	WE - 2043 - 3533 EIKWE - WESTERN REGION
5	HILLSFORD HILL ELECTRICAL LIMITED COMPANY	EC/REC 3/08/23/0004	LIMITED LIABILITY	COMMERCIAL WIRING	0243864726 0277708601	GD - 071 - 5999 ADENTA - GT. ACCRA
6	MS-PLUS LTD	EC/REC 3/12/23/0005	LIMITED LIABILITY	• COMMERCIAL WIRING • INSPECTION AND TESTING	0204596767 0244596767	GS - 0358 - 7626 WEIJA - GT. ACCRA
7	TA AVO ELECTRICALS	EC/REC 1/04/24/0006	SOLE PROPRIETOR	• COMMERCIAL WIRING • INSPECTION AND TESTING	0243917328 0208383109 0303305766 0303311119	Plot No. 9 / MKT /A71 TEMA - GT. ACCRA GC-021-3808
8	SINE-THETA ENGINEERING GROUP LTD	ECREC 3/04/24/0007	LIMITED LIABILITY	COMMERCIAL WIRING	0549549509 0243210295	SOWUTUOM - GT. ACCRA GT-329-4488
9	2SK ELECTRICAL SERVICES	EC/REC 1/04/24/0008	SOLE PROPRIETOR	COMMERCIAL WIRING	0261510993	SPINTEX - GT. ACCRA
10	AKBY LIMITED	EC/REC 3/04/24/0009	LIMITED LIABILITY	COMMERCIAL WIRING		

Registration of Pre-Certification Training Institutions

The Commission keeps a register of educational institutions and organisations who have the requisite resources to offer pre-examination training for prospective applicants of the electrical wiring certification examination. Twenty (20) institutions have been registered to date, namely:

1. Accra Technical University
2. Akwatia Technical Institute
3. Anointed Practical Engineering Training Centre
4. Bolgatanga Technical University
5. British College of Technology and Commerce
6. Council For Scientific and Industrial
7. Research-Institute of Industrial Research
8. Dabokpa Technical Institute
9. DB Build Engineering Limited
10. Electricity Company of Ghana (E.C.G) Training Centre
11. Genec Electrix Company Limited
12. Genius Link Technology
13. Ho Technical University
14. Kikam Technical Institute
15. Prefos Limited
16. Royal Ikere Company Ltd.
17. St. Vitus Technical Institute
18. Suntreso Technical Institute
19. Takoradi Technical Institute
20. Zakclin Centre For Practical Training of Electrical Wiring



Officers of the Commission Inspecting Tools and Instruments at Akwatia Technical Institute

TECHNICAL AUDIT OF THERMAL GENERATION POWER PLANTS

— **By: Ing. Ampadu Acheampong**, *Senior Manager, Electricity Regulation*
George Kwose Luuse, *Officer, Electricity Regulation*
Stephen Offei, *Officer, Electricity Regulation*

Technical audits of selected thermal power plants were conducted in September and November 2023. The plants audited were Cenpower Generation Limited, Sunon Asogli Power Limited, and Takoradi (TAPCO) Thermal Power Plant. During the audit, independent measurements were taken to assess the reliability and quality of the electricity supplied to the national grid. The audit showed:

- No visible signs of corrosion on the gas turbine housing as at the time of the visual inspection;
- The compressors were in good conditions;
- The boiler system was in good condition;
- The pipelines to the power plants were in good condition; and
- The plants had an adequate number of circuit breakers for protection.

The following recommendations were made to the affected utilities:

- Continue to adapt best maintenance practices and Original Equipment Manufacturer (OEM) recommendations to ensure smooth operations and life span of the plant;
- Power Plant should continue to comply with Commission's relevant rules and regulations and standard benchmarks to ensure the best power plant parameters are maintained.
- The power plants should include the following in their technical and operational report; standard test codes, equipment used for carrying out the test and methodologies used for carrying out the test;
- Power plants should continue to take the necessary measures to ensure and maintain compliance with all relevant legislations on environmental protection and safety, health and welfare of all employees;
- Continue to adhere to best practices in corrosion and leakage management;
- Power plants should continue to adapt to good housekeeping practices to ensure safe, conducive and efficient operations of the plant;
- Continue to adhere to the approved safety management plan; and
- Continue to ensure that emission and noise levels are checked to reduce environmental pollution.

The Commission has sent out a number of proposals to solicit support to enhance the performance of its regulatory role. Areas where support is needed include equipment and software for remote monitoring of electricity end users. The Commission also intends to deploy twenty (20) power quality analysers in the operational regions of the distribution companies to create a large open-source data on electricity quality and reliability based on data received from the regulated entities.

We look forward to working with interested investors and stakeholders to implement the remote monitoring intervention.



TAPCO Maintenance Manager Explaining to EC Inspection Officers Works to be done on the Gas Turbine Combustors



Engineers Working on the Gas Turbine Nozzle Diaphragm at TAPCO

GIZ COLLABORATES WITH THE ENERGY COMMISSION TO STRENGTHEN REGULATION OF ELECTRICAL APPLIANCES

— By **Richard Donkor**, *Manager, Energy Efficiency Regulation*

Ghana, being a signatory to the Paris Agreement on Climate Change, is steadfast in its commitment to curbing global warming to 1.5 degrees Celsius by mid-century. In tandem, the country is actively executing its Nationally Determined Contributions (NDCs) to align with global targets for mitigating carbon emissions and their associated environmental impacts.

The country is also signatory to several key multilateral environmental agreements (MEAs), such as the Basel Convention, the Convention on International Trade in Endangered Species of Wild Fauna and Flora, the Montreal Protocol, and the Rotterdam Convention. These agreements underscore the country's dedication to responsible environmental practices and the regulation of hazardous substances.

In a significant development in 2022, the Ghanaian Parliament approved and enacted 17 new regulations while updating three existing ones pertaining to electrical appliances. This legislative action significantly broadened the scope of the national standard and labelling (S&L regime), reinforcing the enforcement mechanisms for regulated appliances.

The Regulations encompass a diverse range of appliances, including refrigerators, air conditioners, microwaves, rice cookers, fans, televisions, electric motors, transformers, washing machines, lighting, water heaters, solar panels, and renewable energy batteries. Recognizing the importance of garnering support and collaboration from all stakeholders, the Commission, in partnership with GIZ, embarked on a comprehensive stakeholder engagement initiative. The stakeholder engagement aimed to dispel

This legislative action significantly broadened the scope of the national standard and labelling (S&L regime), reinforcing the enforcement mechanisms for regulated appliances.

any misconceptions, clarify the content of the Legislative Instruments (LIs), outline compliance requirements, and elucidate the benefits accruing to both consumers and the nation at large. Through proactive education and outreach, the Commission aimed to ensure widespread understanding, cooperation, and alignment with the regulatory framework for enhanced energy efficiency and environmental sustainability. The engagements were held in Accra, Aflao, Elubo, Takoradi, Kumasi, Sunyani, Tamale, Bolgatanga, and Paga.

The stakeholder groups engaged comprised of importers of appliances, second-hand appliance dealers, enforcement agencies and consumers. In all, 186 new appliance importers, 76 second-hand appliance dealers, 287 personnel from various enforcement agencies, and an estimated 500,000 individuals from the general public were reached via training workshops, conferences, and radio shows.



Stakeholder Engagement with Appliances Importers and Enforcement Agencies at Various Locations

Policy And Planning



GHANA ENERGY OUTLOOK 2024

— By Erica Aboagye, Assistant Manager, Planning, Policy, and Research

Energy Dynamics in Ghana: 'A Complex Interplay'

Ghana's energy landscape is shaped by various factors including weather patterns, economic trends, inflation rates, and energy conservation efforts. Historical data analysis reveals that residential electricity usage is significantly influenced by weather conditions. During colder months, June to September, households typically consume less electricity while warmer periods, January to May, see increased usage.

Also, economic growth amplifies energy demand, particularly in the commercial and industrial sectors. With a projected overall real Gross Domestic Product (GDP) growth of 2.8% (non-oil real GDP at 2.1%) in 2024, the country anticipates a surge in energy demand. Additionally, governmental initiatives to enhance electricity accessibility will impact both demand and supply dynamics. Despite these trends, the government's endeavors to promote energy efficiency and utility companies' ongoing efforts to mitigate losses, particularly commercial losses, are expected to balance some of the increases in energy demand.

The 2024 Annual Energy Outlook aims to assess the nation's capacity to sustainably meet its energy needs amidst these multifaceted dynamics.

Empowering Energy Future: "The Role of Energy Outlooks in Decision-Making, Planning, and Policy"

- **Informed Decision-Making:** they help policymakers and investors make smart choices.

- **Resource Planning:** governments and energy companies decide where to invest money for projects like power plants and renewable energy projects, to maintain a healthy energy balance.

- **Mitigating Risks:** Energy outlooks facilitate risk management by forecasting potential challenges, such as depletion of specific energy resources or excessive price escalation.

- **Understanding Markets:** they help companies and investors know what's happening in the energy market, so they can decide where to invest money and how to make good business decisions.

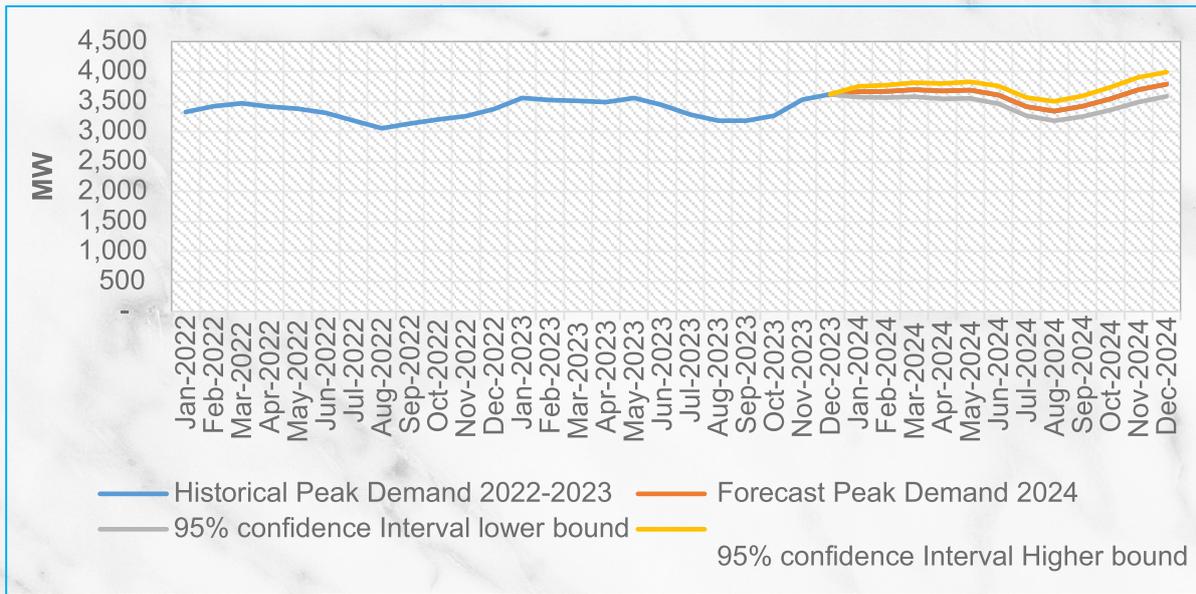
- **Creating Better Policies:** Energy outlooks help governments make rules and laws about energy that help us use energy in a smart and safe way.

- **Global Cooperation:** By sharing energy outlooks, countries can work together to solve energy problems and create a better future for everyone.

Key Energy Statistics

"Unveiling the Power Surge: 2024's Peak Demand"

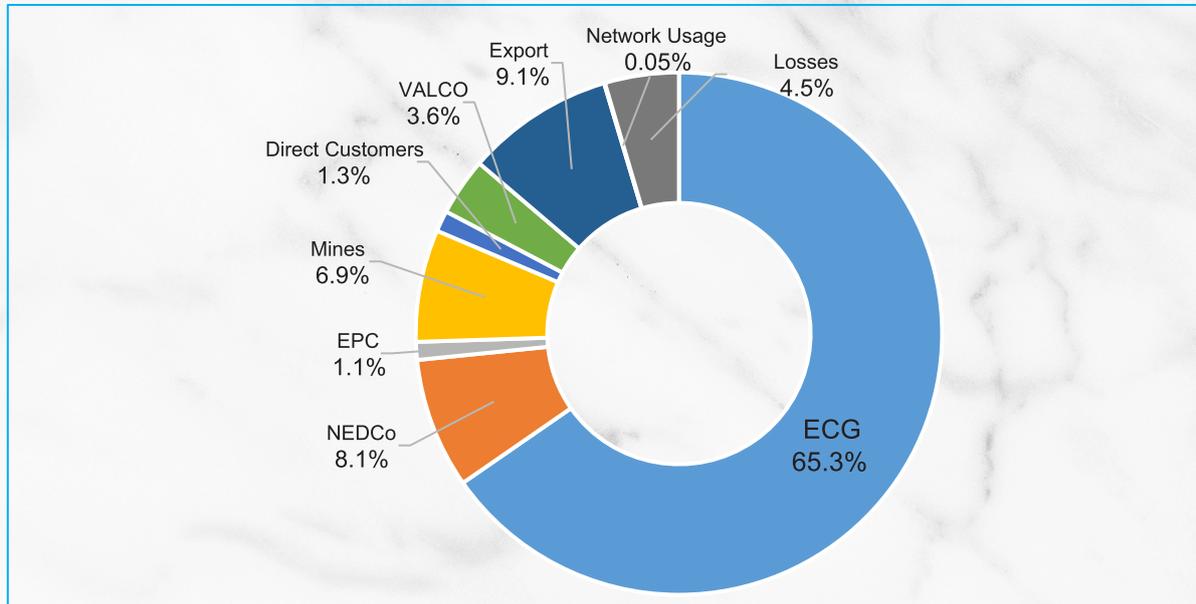
Looking forward to 2024, the country's system peak load is estimated to reach 3,788 MW, reflecting a 4.7% increase from the peak demand observed on December 11, 2023.



Monthly Projected Peak Demand for 2024 with 95% Confidence Interval

Projected Influences on 2024 Peak Demand

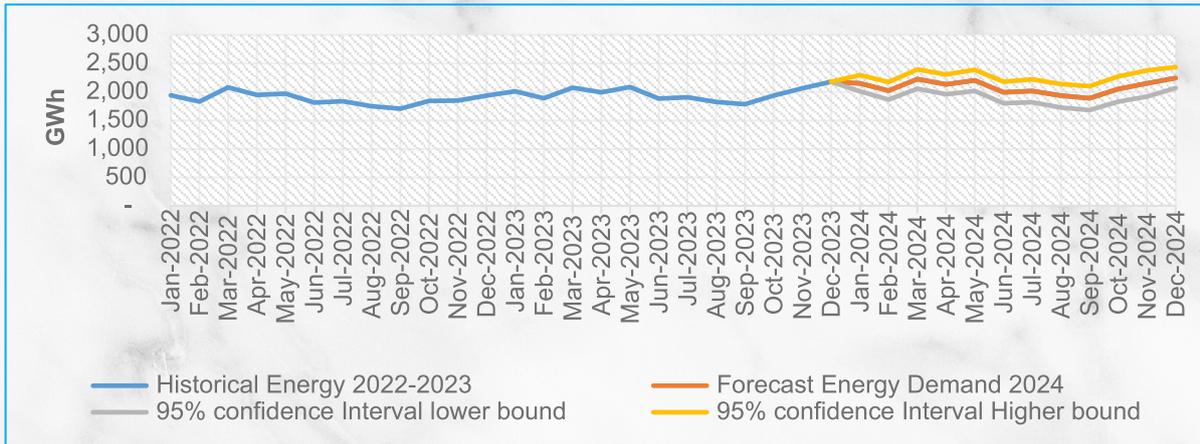
The expected rise in peak demand for 2024 will be shaped by several significant factors. Firstly, the expansion of ECG and NEDCo networks is predicted to lead to increased loads. Additionally, ongoing rural electrification initiatives within ECG and NEDCo distribution zones align with the national aim of achieving universal electrification by the end of 2024.



Share of Projected Peak Demand by Customer Class in 2024

2024 Electricity Consumption Trend

In 2024, ECG consumption is estimated to reach 16,314 GWh, representing a 5.5% increase from 2023 consumption.



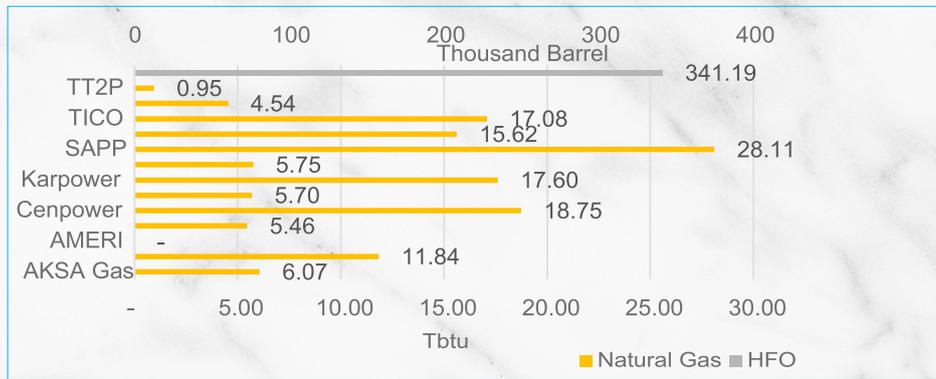
Projected Monthly Energy for 2024 with 95% Confidence Interval.

ECG share of electricity consumption will be 65.3% of the total projected electricity consumption for 2024. Export (to Togo/Benin, Côte d'Ivoire and Burkina Faso) is expected to constitute 10.7% of total consumption. NEDCo and Mines are projected to consume 8.4% and 5.9% of the total electricity consumed.

thermal electricity generation in 2024. It is expected to come from indigenous gas fields (Jubilee, TEN and ENI Sankofa) and import through WAGP. Based on the projected electricity supply from thermal sources, the total natural gas requirement for power generation for 2024 is projected to be 137.5 Tbtu. The total fuel requirement for each thermal plant is shown in the Figure below.

Fuel Requirements

Natural gas will continue to be the dominant fuel for



2024 Fuel Requirements for Existing Thermal Power Plants

Units of the AKSA plant that run on HFO are expected to operate on standby in this year. The quantity of HFO required for the whole year is estimated to be about 341,190 barrels. Light crude oil (LCO) and diesel would be required as backup fuels for some plants because of anticipated gas supply outages.

of the hydro plants to ensure that the reservoirs are not drawn down below their minimum operating levels.

Fuel Challenges

The following fuel challenges are anticipated:

- **Hydro Risk:** Even though there are high prospects for rainfall in 2024, it would still be essential to continue the conservative dispatch

- **Fossil Fuel Risk:** Ensuring a consistent gas supply for thermal power plants is challenging. A gas shortage could lead to some plants being unable to operate, affecting the reliability of electricity supply.

As we move forward, let us remain committed to collaborative efforts, innovation, and strategic planning to ensure that our energy systems meet the needs of today while safeguarding the resources for future generations. Together, we can shape a brighter and more sustainable energy landscape for

Promotion





ENERGY COMMISSION SENIOR HIGH SCHOOLS RENEWABLE ENERGY CHALLENGE

Theme

APPLICATION OF RENEWABLE ENERGY TECHNOLOGIES IN SOLVING LAND DEGRADATION AND WATER POLLUTION



5 Edition



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EC SHS Renewable Energy Challenge



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GREEN CLIMATE FUND (GCF) APPROVES USD31.6 MILLION FOR SOLAR PROJECT IN GHANA

— By Ebenezer Ashie, Programme Coordinator, SUNREF

The “Accelerating Solar Action Programme (ASAP)” has finally been approved by the Green Climate Fund (GCF) at its 38th Board meeting held in Kigali, Rwanda from 4-7 March 2024. ASAP leverages concessional finance to promote the adoption of distributed solar PV systems among Micro, Small, and Medium Enterprises (MSMEs) and households.

Under ASAP, the technical capacity of stakeholders such as Ecobank Ghana, distributed solar PV vendors and the Energy Commission would be built in Solar Rooftop Investment Appraisal and technical issues in relation to solar PV system design, installation and maintenance to ensure the sustainability of the Programme.

The target of the project is to reach about 2,382 households and MSMEs (including farmer cooperatives under public irrigation schemes). About 417.5ktonnes of greenhouse gas (GHG) emissions are expected to be avoided over the lifetime of the solar PV systems installed, lowering Ghana's GHG emissions from the energy sector. It is also estimated to create 1,794 jobs in the clean

energy sector. ASAP supports Ghana's renewable energy transition agenda and the renewable energy actions under the Nationally Determined Contributions (NDCs).

The total project cost is USD31.6 million. GCF is providing USD16,197,530 (comprising a loan of USD15 million and grant). In addition, Ecobank Ghana, the Accredited Entity of the GCF, is providing co-financing of USD15,380,000 (of which USD380,000 is in-kind contribution). The development of the ASAP was led by Ebenezer Ashie and supported by Frederick Ken. Appiah, Kennedy Amankwa, Paula Edze, John Adjei and Michael Abrokwa under the leadership of Mr. Kofi Agyarko, Director in charge of Renewable, Energy Efficiency & Climate Change. The team from the Energy Commission were supported by a team from Ecobank Ghana to facilitate the development of the funding proposal. The project would be implemented over a period of four years, from 2024 to 2028.



ENERGY EFFICIENCY PROMOTION IN THE PRISONS SERVICE

—By Ing. John Adjei, Senior Manager, Renewable and Energy Efficiency Regulation

Promotion of Energy efficiency and conservation is a key mandate of the Energy Commission. Energy efficiency and conservation is often regarded as 'low hanging fruits' due to the direct benefits derived in relation to the effort expended. Efficient use of energy reduces the negative environmental impact of energy production from unsustainable sources,

transmission and consumption. To promote energy efficiency and conservation, the Commission organises energy efficiency and conservation training workshops for identifiable consumers groups and employs the use of TV adverts, jingles, radio interviews and discussions, and dissemination of posters and flyers to sensitise the public. The training workshops are held to educate consumers on energy efficiency Standards and Regulations, the benefits of energy efficiency and conservation as well as measures they can adopt to improve their energy use efficiency.

In 2018, the Commission commenced the training for the security agencies, namely, the Military, Police, Prisons Service, Fire Service and Immigration. The Commission started the exercise with the Military and has trained over 1,500 military officers in the Armed Forces Garrisons nationwide (Tamale, Sunyani, Kumasi, Ho, Takoradi, Accra and Tema). The exercise was extended to the Police Regional Commands, in 2019, reaching over 2,000. Police Officers and their families were educated in the first quarter of

2020. The exercise was put on hold in 2021 due to the covid-19 pandemic. In 2022, the Commission extended the training to the Ghana National Fire Service nationwide and over 2,637 Officers were trained.

Last year, the Ghana Prisons Service was reached. The training programme was divided into four phases spanning June to July 2023. The Greater Accra Region was covered in Phase one. About 150 Officers in the Prisons headquarters and the Prison Officers' training school were trained. Phase two constituted the Northern, Upper West and Upper East Regions, and Phase three, Volta, Central and Western Regions covering a total of 819 officers across the six regions. Some 761 officers were trained in Phase four across the Ashanti, Ahafo and Eastern Regions.

Altogether, 1,730 officers were trained nationwide in the 16 regional commands by the energy efficiency team comprising of Mr. Kennedy Amankwa (Deputy Director), Ing. John Adjey (Senior Manager) and Mr. Samuel Frimpong (Public Relations Officer).

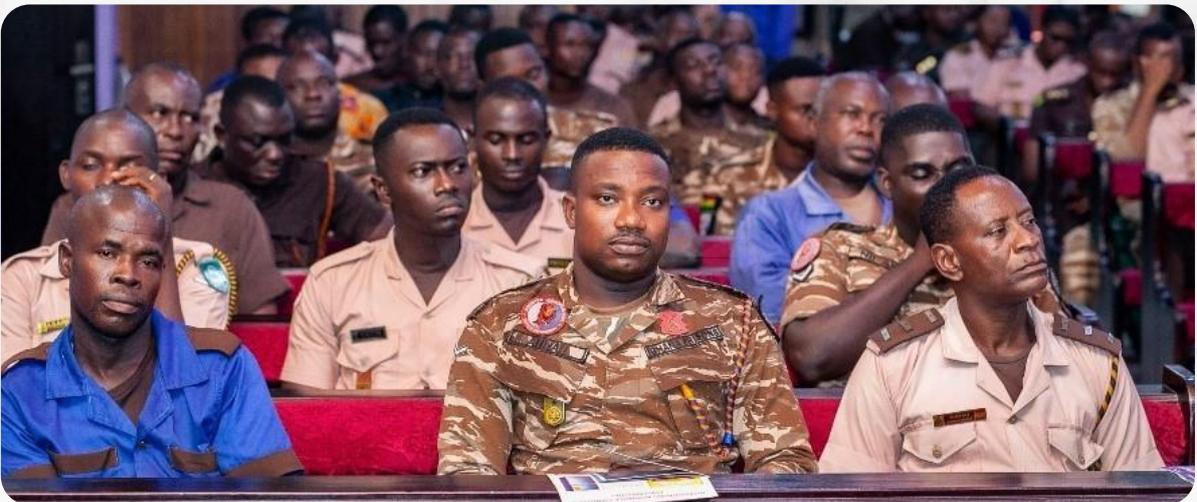
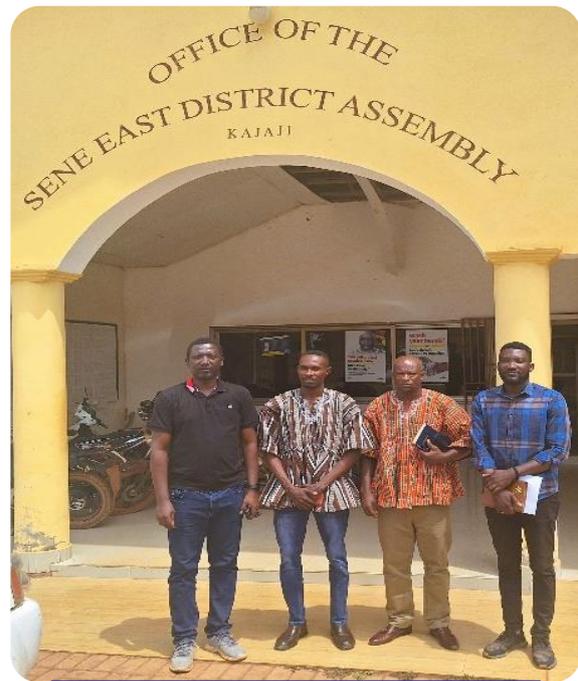


Photo Credit: Prisons Service

NET-METERED SOLAR PV (NMPV) PROJECT UNDER THE SCALING-UP RENEWABLE ENERGY PROGRAMME

— By Kwasi Ohene Akuffo,
Senior Officer, Renewable Energy Regulation

As part of preparatory activities towards the implementation of the net-metered solar PV (NMPV) project under SREP, a consultant was engaged by the Ministry of Energy in 2021 to conduct a prefeasibility study on some of the pre-selected facilities. A total of 575 facilities out of 1,089 were visited, assessed and the necessary data collated by the Consultant. The remaining 514 facilities were assessed for suitable locations to install the solar PV systems, gather data on the monthly electricity bills of the facilities and details of contact persons by a team from the Energy Commission and the SREP Project Implementation Unit at the Ministry of Energy. The assessment was conducted from 18 February to 7 March 2024, and it covered all 16 regions of Ghana. The information gathered from the assessment would be incorporated into the tender documents to procure the solar PV systems for the selected public facilities.



Team 1 Conducting Field Assessments in the Bono & Bono East Regions

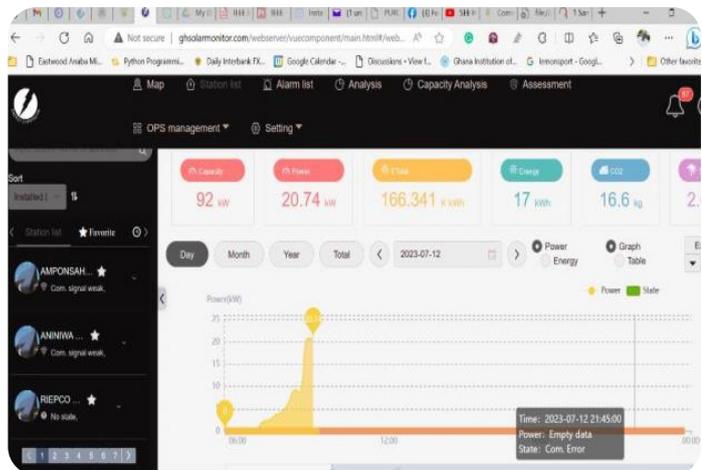
ESTABLISHMENT OF DATA COLLECTION AND MONITORING SYSTEM (GHSOLARMONITOR) FOR SOLAR PV INSTALLATIONS IN GHANA

— By: Kwasi Akuffo, Senior Officer, Renewable Energy Regulation

— Frederick Ken. Appiah, Deputy Director, Renewable Energy Regulation

The Energy Commission received funding support from the German Development Cooperation (GIZ) in 2020 to pilot a data collection and monitoring system for solar PV systems in Ghana. The project is in line with the Commission's mandate under the Renewable Energy Act, 2011 (Act 832) to promote the development and utilisation of the country's renewable energy (RE) resources, and to secure a comprehensive database for national decision-making on the extent of development and utilisation of energy resources in the country. Under this pilot project, 200 data logging and monitoring devices would be installed on selected solar PV installations with capacities 5kW and above. The project is expected to result in access to accurate, high-quality data on solar PV systems installed in the country for planning purposes as well as efficient monitoring of these systems.

The real-time remote data collection and monitoring devices are connected to the communication ports of inverters or data logging devices connected to solar PV systems. The data collected by the devices include installed capacity daily, weekly, and annual energy generation. The data collected would be sent to an online database accessible to the public when the pilot project is successfully concluded. Next, the system would be scaled up to capture all solar PV systems in the country to establish a central database for accurate information on the installed capacity of solar PV systems in Ghana.



Dashboard of the GHSolarMonitor Platform & the Team Undertaking an Installation of the Device

The Energy Walk

— By Samuel Owusu, Officer, Electrical Wiring Unit

Officers of the Commission at the northern regional office in Tamale joined officers of the Public Utility Regulatory Commission (PURC), Ghana Water Company, Northern Electricity Distribution Company (NEDCo) and residents and local authorities of Tamale and its environs to embark on a walk dubbed "Energy Walk". The theme for the walk was "Strengthening Utility Protection: A Collaborative Effort Towards Legal Electrical Connections".

The primary aim of the walk was to raise awareness and foster a culture of compliance to Regulations on connecting to the national electricity and water system. The slogan "Say No to Illegal Connection," was adopted to engage the public in a dialogue about the importance of protecting public utilities and the repercussions of illegal connections. The Commission, as part of implementing the Electrical Wiring Regulations, 2011 (L.I. 2008), has been promoting the use of Certified Electrical Wiring Professionals (CEWPs) and Certified Inspectors (CE) to control the phenomenon of illegal connections. The participation of officers of the Commission in the Energy Walk further enhanced the visibility of the institution in supporting the fight against illegal connections.

The Walk commenced at 6am in the morning of November 25, 2023, from the Aliu Mahama Stadium in Tamale and traversed through key locations including Ghana Water quarters at Gumbihini and Aboabu. During the Walk, awareness was raised among community persons about the hazards and consequences of illegal electricity and water connections, and sensitisation materials distributed. The platform was also used to increase public awareness on the importance of engaging CEWPs for electrical works and the use of the GH Certified Electricians App.



Periodic Stretch Sessions, Halfway Through the #Say No to Illegal Connection Walk

The activity generated significant public interest and garnered attention from local media outlets, amplifying the message of utility protection and legal electrical connections. Building upon the momentum generated by this collaborative effort, the Commission, in partnership with PURC, Ghana Water Company, and NEDCo, plans to continue advocacy and awareness campaigns targeting both urban and rural communities across Ghana. This includes further dissemination of educational materials, organising workshops, and leveraging digital platforms to promote the use of certified professionals for electrical installations. Additionally, ongoing collaboration with relevant stakeholders will be pursued to strengthen enforcement mechanisms and enhance compliance with utility regulations. This collaborative activity exemplifies Commission's commitment to safeguarding the interests of consumers, promoting safety, and ensuring the sustainability of utility services in Ghana. By working together, we can effectively combat the menace of illegal connections and create a safer and more reliable environment for all.



Energy Commission, PURC, NEDCo, GWCL and TAMFIT Preparing Grounds to begin the "Say No to Illegal Connection" Walk



Lead Representatives from the Energy Commission, PURC, NEDCo and GWCL Leading the Charge

Capacity Building And Trainings



TRAINING OF ECG AND NEDCO STAFF ON GRID-CONNECTED SOLAR PV SYSTEMS AND NET METERING

— By Kwasi Ohene Akuffo,
Senior Officer, Renewable Energy Regulation

The Government of Ghana in 2022, received funding from the Climate Investment Fund of the World Bank, the African Development Bank, and the State Secretariat of Economic Affairs (SECO) of the Swiss Confederation, to implement the Scaling-up Renewable Energy Programme (SREP). The Commission is spearheading the net-metering aspect of the programme. The target is to deploy 12,000 net-metered solar PV systems in urban and peri-urban communities. This is estimated to contribute 62.5MW of solar electricity into the national electricity generation mix, contributing to the achievement of the national target to increase the percentage of renewable energy in the national generation mix by 10% by 2030.

The Net Metering Code published by the Commission in June 2023, identifies the licensed distribution utilities, the Electricity Company of Ghana (ECG) and Northern Electricity Distribution Company (NEDCo), as the utilities responsible for the installation of net meters. Accordingly, a capacity building programme in the installation and commissioning of grid-connected solar PV systems and net-metering is being organised to

train ECG and NEDCo staff who would be working on the net metering programme. A series of one-week training programme covering up to 175 participants is being organised in collaboration with the Don Bosco Solar Training Centre, Ashaiman from 5 February to 31 May 2024.

The capacity building programme was launched on 12 February 2024 at the Don Bosco Solar Training Centre by a delegation from the Ministry of Energy, the Energy Commission and the Embassy of Switzerland. Keynote addresses were given by the Director for Renewable Energy and Energy Efficiency, Energy Commission, Mr. Kofi Agyarko; the Deputy Director for Renewable Energy (and Deputy Project Coordinator for SREP), Ministry of Energy, Ing. Seth Mahu; and the Deputy Head of Mission and Head of Cooperation, Embassy of Switzerland in Ghana, Dr. Haeberli Simone.

Mr. Kofi Agyarko, in his address, indicated that over 100 international standards on solar PV and wind systems have been adopted by the Ghana Standards Authority and Regulations to enforce minimum efficiency performance standards and



Closing Ceremony for the First Group of Participants from NEDCo



labelling for solar panels, batteries and inverters have been passed by the government under the facilitation of the Commission and the Ministry of Energy. This, he highlighted, would ensure that the right solar PV products are used for key projects such as the solar net-metering scheme.

Dr. Haeberli Simone stated that Ghana's solar PV net-metering project has real potential to

positively impact the economy and citizens. She explained that the support from the Swiss government is aimed to encourage small and medium enterprises (SMEs) and households to invest in solar installations and support the Ministry of Energy and the power distribution utilities to develop strategies and action plans for renewable energy-based distributed power generation in Ghana.

ENERGY COMMISSION'S COMMITMENT TO ROAD SAFETY: TWELVE (12) DRIVERS TRAINED IN DRIVER MECHANIC COURSE

— By Reiss Niih Boafo,
Senior Officer, HR & Administration

Recognising the critical role that drivers play in maintaining safe transport operations, the Commission took a proactive step to invest in the skill development of its driving workforce. It enrolled twelve (12) of its drivers in the Driver Mechanic (Road Safety Management) course run by the renowned Intercity STC Driving School, Kaneshie, from 5-9 February, 2024. During the five-day intensive training programme, the drivers were equipped with essential knowledge and skills in road safety, adherence to road traffic regulations, defensive driving techniques,

emergency response procedures, vehicle inspection and maintenance, and other essential practices. The training programme emphasises the importance of promoting a culture of safety within the transportation sector, with a focus on reducing road accidents and minimising risks on the road.

The training sessions were conducted by experienced instructors and industry experts who used interactive methods and simulations of real-world scenarios to deliver the topics covered,



Group Photograph of the Trainees and their Instructor

ensuring that the trainees received high-quality instruction and hands-on experience. To ensure that the knowledge imparted is sustained, regular evaluations and refresher courses would be organised to enhance the skills acquired by the drivers.

The training marks a significant milestone in Commission's efforts to promote road safety as well as enhance the skills of



Practical Training Sessions

its driver workforce. The Commission remains committed to fostering a culture of responsible driving and ensuring the well-being of all road users.

EMPOWERING ENERGY COMMISSION STAFF IN STRATEGIC COMMUNICATION

— By Stella Agusah, *Senior Officer, Public Affairs*

As part of the Commission's human resource development activities for this year, sixteen (16) staff were equipped with essential skills and insights related to effective communication strategies. The training was held on 20-21 March 2024. It was conducted by 1PR Communication, a distinguished firm renowned for its expertise in fostering connections between brands and their target audiences.

The training delved deep into the critical concepts of communication and public relations strategy as well as how to communicate strategically and effectively. Staff were actively involved in discussions, case studies, and practical exercises, ensuring a comprehensive understanding of the subject matter. Central to the training was the recognition of the pivotal role



EC Officials and 1PR Communication Facilitator in a Group Photograph after the Training Session

strategic communication plays within the Energy Commission. From fostering internal cohesion to

enhancing external engagement, strategic communication serves as the cornerstone of the Commission's success. Staff gained valuable insights into leveraging communication strategies to effectively convey organisational messages, cultivate brand reputation, and navigate complex stakeholder landscapes.

The training is another milestone in the journey of the Energy Commission towards organisational excellence. Empowered with enhanced communication skills, staff members are poised to navigate the complexities of the modern business landscape with confidence and proficiency, driving the Commission towards its strategic goals with clarity and purpose.



1PR Communication Facilitator Engaging EC Officials in a Presentation

ENERGY COMMISSION TRAINS INSPECTORS AND ENGAGES MANUFACTURERS OF APPLIANCES AS PART OF THEIR STAKEHOLDER ENGAGEMENT TO ENSURE COMPLIANCE OF NEW REGULATIONS

— By **Hubert Nsoh Zan**, *Assistant Manager, Energy Efficiency Regulation*

A team made up of Hubert Nsoh Zan, Energy Commission and Francis Mensah Akpaloo, Ghana Standards Authority (GSA) were nominated by the Joint Management Committee of the refrigerator and air conditioning testing laboratory at GSA to visit Bureau Veritas in China, a global leader in Testing, Inspection and Certification ("TIC") services. The purpose of the study visit is for the officers to be trained in the verification and testing of new refrigerators and air conditioning appliances to strengthen their capacity in verification and compliance monitoring to effectively implement the new Regulations.

The expectations of the Commission and GSA for the study visit were shared with the host testing laboratories to put the training in perspective. The scope of the training was to understand some International Organisation for Standardisation (ISO) and International Electrotechnical Commission (IEC) standards which have been

adopted by the GSA and were used as the required testing protocols to assess the technical performance of specific electrical appliances included in the new Regulations. The training covered the following Standards:

- **ISO 5151:** Non-ducted air conditioners and heat pumps - Testing and rating for performance
- **ISO 13253:** Ducted air conditioners and air-air heat pumps - Testing and rating for performance
- **ISO 15042:** Multiple-split system air conditioners and air-air heat pumps - Testing and rating for performance
- **ISO 16358-1:** Air-cooled air conditioners and air-air heat pumps - Testing methods for seasonal performance factor part 1
- **ISO 5801:** Fans- Performance testing using standardise airways
- **IEC 62552-1-2-3:** Household refrigeration appliances and its amendment

- **IEC 60705:** Household microwave ovens - Methods for measuring performance
- **IEC 61591:** Household Rangehood – Methods for measuring performance
- **IEC 60530:** Methods for measuring the performance of electric kettles and jugs for household and similar use
- **EN 50440:** Efficiency of domestic electrical storage water heaters and testing method
- **IEC 60379:** Methods for measuring the performance of electric storage water-heaters for household purposes
- **IEC 62301:** Household electrical appliances – Measurement of standby power
- **IEC 60335:** Household and similar electrical appliances – Safety
- **IEC 60879:** Performance and construction of electric circulating fans and regulators
- **IEC 60665:** Ventilating fans and regulators for household and similar purposes – Methods for measuring performance
- **CLC/TS 50677:** Clothes washing machines and washer-dryers for household and similar use - Method for the determination of rinsing effectiveness by measurement of the surfactant content at textile materials (with all test list)
- **CLC/TS 50707:** Clothes washing machines and washer-dryers for household and similar use - Method for the determination of the maximum temperature inside the load (with all test list)
- **GS 1291:** Electrical Appliances – Specifications for induction heating electric rice cooker
- **GS 1292:** Electrical Appliances – Minimum allowable values of energy efficiency and energy efficiency grades for electric rice cookers
- **GS1298:** Electrical Appliances – Electric cooker and similar appliances

Bureau Veritas was established in 1828 with the mission to reduce risk, improve clients' performance and help them innovate to meet society's demands with confidence. The training was conducted by senior engineers and testing laboratory officers from Bureau Veritas from 11-21 September 2023 in Guangzhou, China. The training consisted of theory, laboratory testing sessions and factory visits to clients of Bureau Veritas. who happen to be. Some of the manufacturers visited were Guangzhou Wanbao Refrigeration Co Ltd, Gree Electric Appliances Inc of Zhuohai, Changhong Air Conditioner Company, Foshan Nanhai TCL Household Electric Appliances Co Ltd, HOMA Appliances Co Ltd, Hisense Ronshen (Guangdong) Refrigerator Co Ltd, Midea Home Appliances, Haier Appliances, Qingdao, and Qingdao Hisense Electric Co Ltd. These manufacturers are among the top 10 manufacturers and exporters of cooling appliances in China.



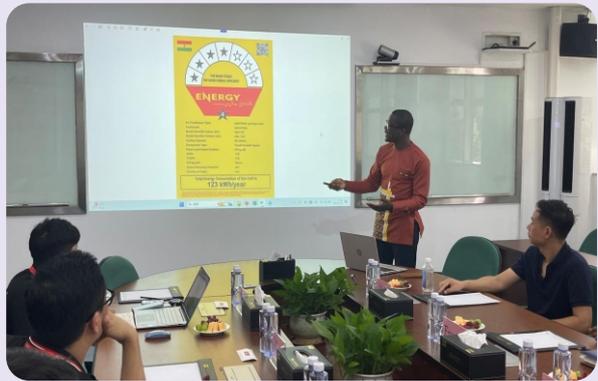
The Team being taken through some Laboratory Test Results

Visit to Manufacturers of Cooling Appliances

The manufacturers visited supply over 90% of cooling appliances manufactured in China under Original Equipment Manufacturer (OEM) arrangement. Most cooling appliance importers contract these manufacturers to reproduce factory models for them under an agreed brand name. A Product Identification Declaration (PID) is usually added to indicate the equivalence of the factory model to the new brand and model. The team met with engineers, research and development (R&D), and sales officers of the various manufacturers visited and sensitised them on the key provisions of the new Regulations and what is required of manufacturers.

One such key requirements is the submission of technical documentation including a performance test report from an accredited third-party laboratory. The factory visit revealed that most of the top manufacturers have invested in their own testing laboratories and acquired the necessary ISO/IEC 17025 testing and laboratory calibration certification. They were, however, informed that the Commission requires a witness testing by an accredited laboratory representative like Bureau Veritas, SGS, Intertek, SGS, CVC, TUV, etc., to ensure compliance with the appropriate testing protocols.

The study visit enlightened the Commission and GSA officers on what goes into the manufacturing process of cooling appliances and aspects of the Regulations that can be complied with.



Conference



MEETING OF PARTIES OF THE MONTREAL PROTOCOL (MOP-35) IN NAIROBI, KENYA

— By **Hubert Nsoh Zan**, Assistant Manager, Energy Efficiency Regulation

The Montreal Protocol is seen as the most successful multilateral environmental agreement in operation today. Ghana on behalf of the African Group submitted a Conference Room Paper (CRP) to make a strong case on environmental dumping. From the recent studies conducted by CLASP, dumping of inefficient cooling appliances running on refrigerants that have high global warming potential is prevalent in Africa and Southeast Asia.



Kofi Agyarko Explaining to the Audience the Price Myth of Acquiring Energy Efficient Appliances

Environmental dumping prevents the market uptake of efficient cooling appliances that use refrigerants with no or less Global Warming Potential (GWP). The Meeting of Parties (MOP) 35 was held from 23-27 October 2023 in Nairobi, Kenya. Mr.

Kofi Agyarko, Director, Renewable and Energy Efficiency at the Energy Commission submitted the CRP which received the needed support and led to decision XXXV/13 to stop the obnoxious trading practice that militates against the ability of developing countries to use next-generation cooling equipment.



Hubert Zan in a Discussion with a Selected African Group ahead of the CRP Submission at the MOP35

During the pre-meeting workshop on energy efficiency, delegates shared best practices and assessed how to operationalise energy-efficient technologies in the refrigeration, air conditioning and heat pump sector. They shared challenges and opportunities, including the high cost of energy efficient equipment, and innovations in refrigeration with significant co-benefits for climate, respectively.

PARTICIPATION IN THE 2023 UNITED NATIONS CLIMATE CHANGE CONFERENCE (COP 28) IN DUBAI, UNITED ARAB EMIRATES

— By Hubert Nsoh Zan, Assistant Manager, Energy Efficiency Regulation

The 28th Conference of Parties (COP) of the United Nations Framework Convention on Climate Change (UNFCCC) witnessed the gathering of global champions in Dubai, United Arab Emirates (UAE), from 30 November 2023 to 13 December 2023. The themes for the conference were Technology & Innovation, Inclusion, Frontline Communities and Finance. The Executive Secretary, Ing. Oscar Amonoo-Neizer, led a team of experts from the Commission to the conference. The Commission participated in several side events to share the Ghana story and what has been done so far in the Energy Sector, including:

- **First Movers Country Spotlight:** Cooling and Climate Leadership Showcase
- **SEAD:** Large Scale Deployment of Super-Efficient Appliances for Cooling and Doubling of Efficiency Progress
- **Launch of the Global Cooling Pledge**
- **Reflecting Product Energy Efficiency** in Sub-Saharan African Countries' NDCs
- **Mission Efficiency:** Rethinking an Energy Efficient Life

Access to sustainable cooling is essential to guarantee health, nutrition and food security in a warming world with hundreds of million people facing cooling access risk. Cooling has also been identified as the blind spot for the energy transition and efforts to combat climate change and a business-as-usual approach threatens our energy systems and planet. The session provided a platform for leading governments from the Global South to showcase their commitments to the Global Cooling Pledge at COP 28. It also framed key needs to implement commitments to the pledge, including financing and technical support.

The objectives of the “First Movers Country Spotlight” were to:

- **Provide a platform** for the UAE to showcase the Global Cooling Pledge outcomes including new



Executive Secretary, Ing Oscar Amonoo-Neizer (second left) and the Team of Experts from the Energy Commission



Hubert Zan (third left) Sharing the Ghana Experience during a Panel Discussion

policy and financial commitments to enhance access to cooling.

- **Showcase the ambition** demonstrated by the Governments of Kenya and Ghana on sustainable cooling.
- **Demonstrate** examples of policy ambition for sustainable cooling and highlight the growing need for flexible financing to move from innovation to commercial scale markets.

The event “*Reflecting Product Energy Efficiency in Sub-Saharan African Countries’ NDCs*” was used to raise awareness on and discuss the opportunities Sub-Saharan African countries get from including product energy efficiency targets and policies in their Nationally Determined Contributions (NDCs). The platform was used to showcase achievements made in building vibrant markets for efficient products in the region, including the adoption of regionally harmonised and ambitious Minimum Energy Performance Standards (MEPS).

Global Cooling Pledge: The COP28 Presidency and UNEP announced this collaboration and the development of a **Global Cooling Pledge** at the Abu Dhabi Sustainability Week 2023. The COP28 UAE President, US Special Presidential Envoy for Climate and UNEP’s Executive Director officially launched the Pledge on December 5 at COP28 in Dubai, alongside 67 signatory governments. The Minister for Energy Hon Dr. Mathew Opoku Prempeh endorsed the pledge during his panel discussion and shared some of the activities Ghana, led by the Energy Commission, has initiated that is in line with the pledge. The Global Cooling Pledge is one of nine non-negotiated declarations, pledges, and charters that constitute key outcomes for the

COP28 Presidential Action Agenda. The Pledge targets were underpinned by the science and modeling in UNEP Cool Coalition’s new **“Global Cooling Watch Report: Keeping it Chill: how to meet cooling demands while cutting emissions”**. The report – also launched on December 5 at COP28 - marks the first assessment to measure total global cooling emissions and development of a policy baseline to track progress and provides recommendations on how to get on a pathway to cut over 60% of emissions from cooling. The report recommends that to deliver the benefits from sustainable cooling, governments must introduce policies that support integrated and faster action across three areas: passive cooling, energy efficiency, and refrigerant phase-out. To date, only 53 countries (27 per cent) have established Regulations or regulatory frameworks to enable action across the three key areas to get on a pathway to cut emissions by over 60% (UNEP Global Cooling Watch, 2023).



Hon Dr. Mathew Opoku Prempeh in a Panel Discussion during the Launch of the Global Cooling Pledge

Institutional Transformation



AFD SUPPORTS THE ENERGY COMMISSION TO CONDUCT AN INSTITUTIONAL GENDER AUDIT

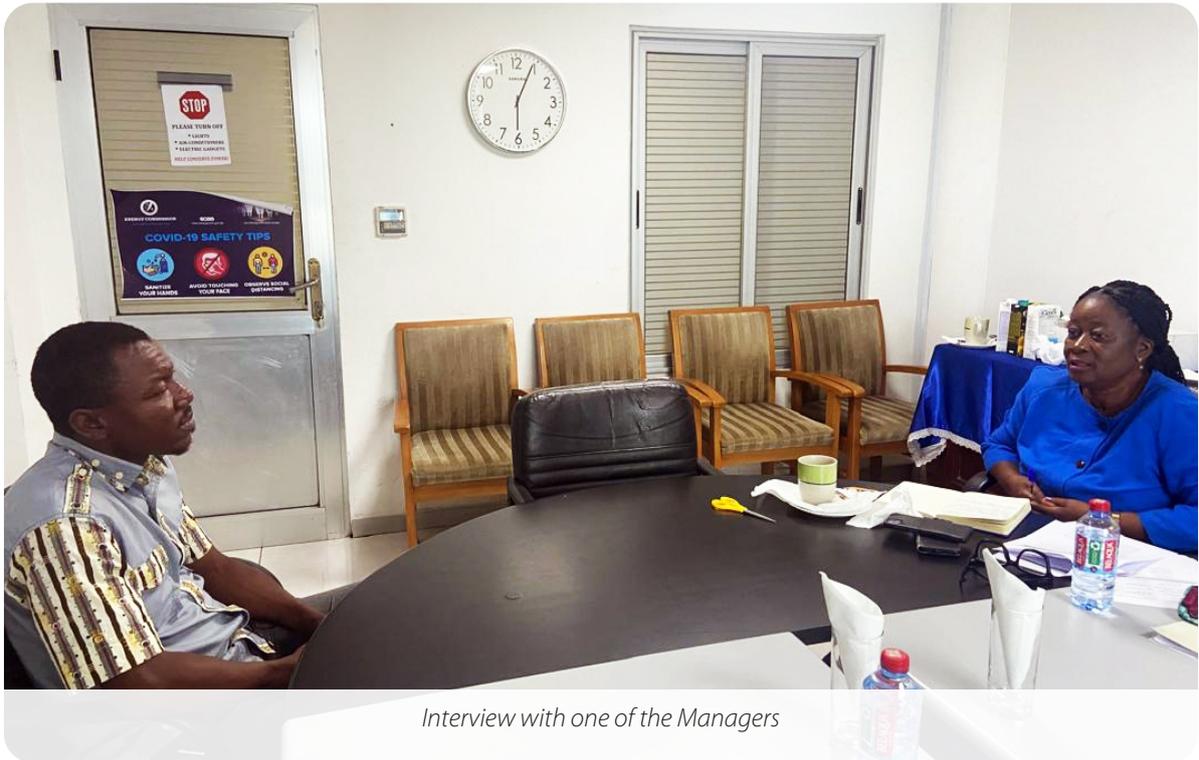
— By Catherine Achuliwor, *Officer, SEITA and Gender Focal Point*

The Energy Commission was supported under the Agence Française de Développement's (AFD) Sustainable Use of Natural Resources and Energy Finance (SUNREF) Programme to carry out institutional gender audit to identify areas where gender disparities exist and recommend actions to implement to promote gender equality and equity. The audit, which employed a participatory approach evaluated the capacities, attitudes and beliefs of staff toward gender issues and its impact on the organisational culture, human resource development and operations of the Commission.

The gender audit was conducted by SUNREF and the Energy Commission in July 2023. Key Persons Interviews were conducted for selected members of the Board, management team, senior and junior staff of the Commission using semi-structured questionnaires. Organisational documents and relevant human resource policies were also audited. The audit revealed that the Collective Agreement (CA) signed in 2021 by the staff promotes fairness and equity in the decision-making processes of staff, irrespective of one's social and economic status and sex.



Inception Meeting with Executive Secretary and Senior Management



Interview with one of the Managers

The CBA provides for equal conditions of service including salary remuneration, benefits, and training opportunities for all staff. A few gaps were also identified. The recommendations made include the establishment of a gender working group to collaboratively work to create awareness

and promote a gender responsive Commission.

As a follow-up to the audit, the Commission is working on developing a Gender Action Plan, Gender Policy as well as conducting gender equality awareness training for staff.



Members of the Gender Equality Working Group Working on the Gender Action Plan

ENERGY COMMISSION CELEBRATES INTERNATIONAL WOMEN'S DAY

— By Catherine Achuliwor, *Officer, SEITA and Gender Focal Point*



To honor the hard work, contributions and achievements of women at the workplace, the Energy commission joined the world to celebrate this year's International Women's Day on 8 March 2024. The theme for the celebrations was "*Inspire Inclusion*". A panel discussion on how to create an all-inclusive work environment was held. Participating in the discussion were Mrs. Shirley Tsikata, Deputy Director, Procurement; Mrs. Akosua Konadu Asamoah, Deputy Director, Human Resources and Administration; Mr. Frederick Kenneth Appiah, Deputy Director, Renewable Energy Regulation; and Ms. Joyce Ocansey, Senior Officer, Environment.

The celebrations ended with two ladies being adjudged the best dressed. The programme was moderated by Ms. Sheila Andan, Assistant Manager, Public Affairs.



A Panelist Sharing His Experience



Staff in their Traditional Regalia

The Panelists shared their thoughts on the Commission's commitment to fostering gender equality, and how they dealt with the feeling of exclusion and isolation in the workplace.

Opportunity was given to staff to ask questions and contribute to the discussion. There were also traditional dance performances by staff to showcase the various ethnic groups represented.



Adowa and Agbadza Dance Performed by Staff

The celebrations ended with two ladies being adjudged the best dressed. The programme was moderated by Ms. Sheila Andan, Assistant Manager, Public Affairs.



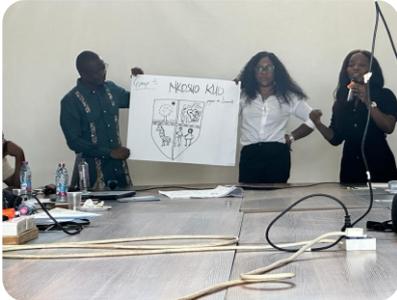
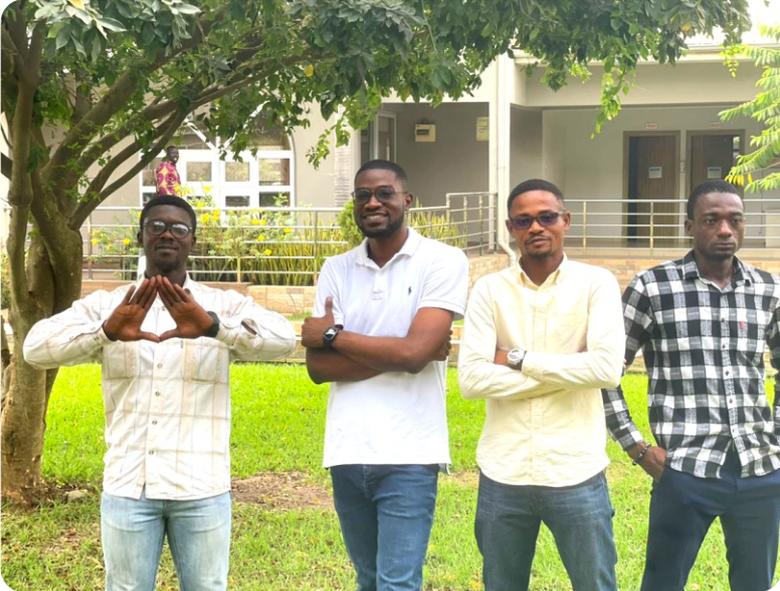
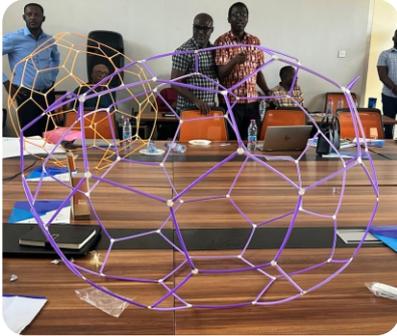
Best Dressed Traditional Attire

PHOTO GALLERY »

Staff Retreat »



Staff Retreat





Awards Ceremony for Certified Electricians »



» Awards Ceremony for Certified Electricians



» Awards Ceremony for Certified Electricians



» **Awards Ceremony** for Certified Electricians



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