



#### ADDRESS

Ghana Airways Avenue  
Airport Residential Area  
(behind Alliance Francaise)

Private Mail Bag  
Ministries Post Office  
Accra – Ghana

#### POST CODE

GA-037-3212

#### CONTACT

PHONE:  
0302-813-756/7

FAX:  
0302813764

#### WEBSITE:

[www.energycom.gov.gh](http://www.energycom.gov.gh)

#### EMAIL:

[info@energycom.gov.gh](mailto:info@energycom.gov.gh)

#### FOLLOW US:

 [EnergyCommissionGhana](https://www.facebook.com/EnergyCommissionGhana)

 [EnergyCommissionGhana](https://www.youtube.com/EnergyCommissionGhana)

 [EnergyCommissionGhana](https://www.linkedin.com/EnergyCommissionGhana)

---

## REGULATED APPLIANCES MARKET PERFORMANCE REPORT - 2022

---

JANUARY, 2023

---

| Securing Ghana's Future Energy Today

## **Energy Efficiency Market Performance Report Team**

### **Supervisors**

Mr. Kofi Agyarko, Director, Renewable Energy, Energy Efficiency & Climate Change

Mr. Kennedy Amankwa, Dep. Dir., Energy Efficiency Regulation

### **Report Compiled by**

Edwin Kwasi Tamakloe

### **Data Collection Team**

Mr. Edwin Kwasi Tamakloe

Mr. Hubert Nsoh Zan

Mr. Richard Donkor

Mrs. Alice Ayoka

Mr. Emmanuel Baba Anaba

Leslie Vanlare

Henry Caleman

Albert Asare

Justice Blorwodzo

### **Report Review Team**

Mr. Kofi Agyarko

Mr. Kennedy Amankwa

Mr. Edwin Kwasi Tamakloe

Mr. Hubert Nsoh Zan

Mr. Richard Donkor

**JANUARY 2023**

## Table of Contents

<b>1.0 Introduction</b> .....	4
<b>1.1 Objective</b> .....	5
<b>1.2 Methodology</b> .....	5
<b>2.0 Summary of Key Findings</b> .....	5
<b>2.1 Locations of Shops Visited</b> .....	7
Figure 2.1.1 Geographical Location of Appliance Retail Outlets or Shops .....	7
<b>2.2 Characteristics of Shops Visited</b> .....	8
Figure 2.2.1: Shares of Shops visited in the various regions according to shop size .....	8
<b>3.0 Regional Distribution of Appliances on Sale</b> .....	8
Table 3.1: Regional Breakdown of Appliances Surveyed .....	8
Figure 3.2: Regional Shares of Total Appliances Surveyed .....	9
<b>4.0 Compliance Level Analysis</b> .....	9
4.1 Test Report and Labelling Compliance Level for Refrigerating Appliances .....	9
4.2 Labelling Compliance Level for Refrigerating Appliance Models .....	9
Figure 4.2.1: Labelling Compliance Level for Refrigerating Appliances .....	10
4.3 Test Report and Labelling Compliance Level for Air Conditioners .....	10
4.4 Regional Labelling and Test Report Compliance Levels of Refrigerating and Air Conditioning Appliances .....	10
Table 4.4.1 National and Regional Retail Shops Labelling and Test Report Compliance Levels .....	10
<b>5.0 Awareness Creation on Standards and Labelling</b> .....	11
Figure 5.1 Number of Attendants Trained vs. Number of Information Materials Distributed .....	11
<b>6.0 Conclusions</b> .....	12
6.1 Conclusions .....	12

## 1.0 Introduction

The Standards and Labelling (S&L) regime for regulated appliances was introduced in Ghana in 2005 to enable customers to make informed choices when purchasing regulated appliances. Appliances importers are also required to import and sell appliances that meet at least the minimum energy performance standards (MEPS). Also, when customers are well informed, S&L stimulates competition to provide customers with the most efficient appliances. Furthermore, labelling of appliances supports enforcement of the standards by allowing regulators to spot anomalies if the regulated appliances are unlabelled or mislabelled.

The propensity for retailers to buy and sell appliances without technical documentation and to mislabel or in our local circumstance not label the regulated appliances, therefore, requires persistent market surveillance and monitoring to check compliance with the standards. The market surveillance and compliance monitoring exercise form part of regulation and transformation processes of the appliance market in Ghana. Market performance measurements play a key role to gauge energy efficiency improvement and identification of success and failure factors for further action. Results from these exercises might lead to reformation or suspension of programme or policy instrument.

The dynamics of the appliances market continue to vary based on changing circumstances such as technological changes, market innovations and other modalities. Market performance exercises inform regulatory institutions of specific challenges encountered by appliances importers and retailers. Parameters such as price, star rating, volume, appliances types, and frequently asked questions from customers and retailers propel programme implementation strategies to remedy those issues. Also, market dynamics inform policy direction with the introduction of new programs and incentive mechanisms such as rebates schemes.

Another specific facet of the market performance measurement activity is awareness-raising campaign on S&L, certified appliance application (APP), energy efficiency, and conservation among shop owners and their attendants. Retail shop managers and their attendants are encouraged to pass on the information and educate the customers who visit appliance showrooms. The new regulated appliances have better health implications and use less energy. This activity offers continuous education to understand and adopt new energy-efficient appliances among the general public at a relatively low cost.

## 1.1 Objective

The overall objective of this exercise was to formulate existing and current market compliance performance levels of importers and retailers of regulated appliances in the appliances market in the country.

Specific activities undertaken included;

- Collection of data on new appliance retail shops and making them available in the database and related APP.
- Computation of the compliance level of each appliance shop for the subsequent update in the APP.
- Introduction and explanation of the concept of the updated appliance database with the related APP to distribution and retail shops owners to assist them to acquire approved models from importers.
- Educating shop attendants and managers in distribution and retail outlets on S&L.
- Distribution of energy guide and “use electricity wisely” flyers.
- Identifying non-compliant appliance importers and retailers for subsequent enforcement actions.

## 1.2 Methodology

The team visited regulated appliances distribution and retail outlets throughout the country. The team took inventory of all unique models of the air conditioners and refrigerating appliances being sold in the shops by questionnaire administration. The availability of approved technical documentation of each model of regulated appliances was checked. Labelling status according to the approved standards of each unique model available on display was ascertained. The compliance level of a typical retail shop was expressed as the sum of all appliances with approved technical documentation and correct label as a percentage of the total available regulated appliances on display in the showroom. Non-compliant appliances were identified for further enforcement action. Details of all new distribution and retail appliance shops, (name, address, contact number, location, and characteristics) were also captured.

## 2.0 Summary of Key Findings

- The monitoring and surveillance exercise was conducted in 56 cities and towns from 15 regions of the country which involved 273 distributing and retail outlets.
- The compliance level of the Test Report availability of all refrigerating appliances identified on the market was 99.7 %.
- Test Report availability compliance level for all models of Air conditioners identified was 99.8%.

- Refrigerating appliances labelling compliance level in all retail outlets or shops was 98.9% while that for air conditioners was 98.8%.
- The total number of regulated appliances surveyed in all the distribution and retail outlets across the Country was 7,759 comprising 7,098 refrigerating appliances and 661 air conditioners.
- The total number of shop attendants and managers trained in standards and labelling was 140.

A total of 38 new distribution and retail outlets were identified and added to the database.

- A total of 1,214 “use electricity wisely” and “Refrigerating Appliance Standards and Labelling” flyers and 231 energy efficiency and conservation guide booklets were distributed in all the distribution and retail shops across the country.
- 228 shop managers and attendants were assisted in downloading the Certified Appliance APP.
- 78 non-compliant refrigerating appliances and 8 non-compliant air conditioners were identified and were removed from the shops for further enforcement actions.

## 2.1 Locations of Shops Visited

A total of 56 cities and towns involving 273 distributing and retail outlets were visited.

Figure 2.1.1 shows the geographical locations of these retail outlets by plotting their GPS coordinates on google map.

Figure 2.1.1 Geographical Location of Appliance Retail Outlets or Shops

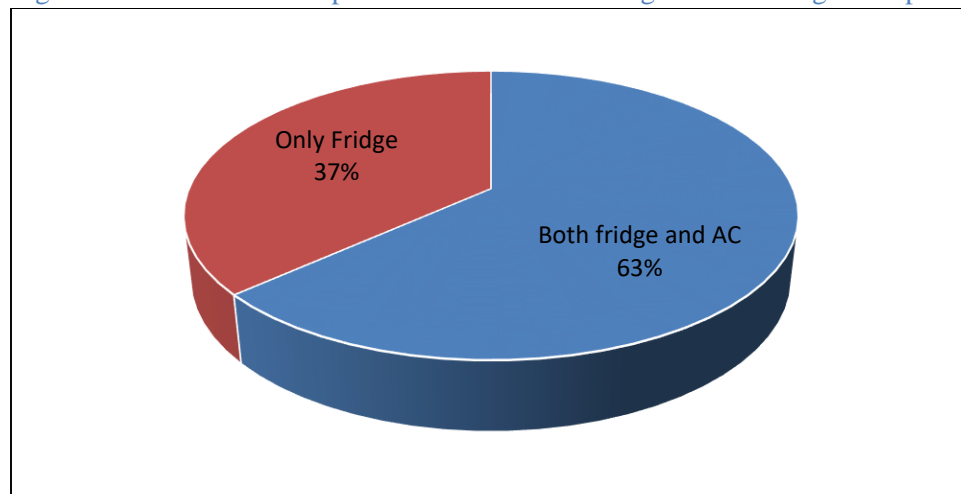


## 2.2 Characteristics of Shops Visited

Appliance shops and retail outlets classifications were done according to availability of regulated appliances. Out of the 273 shops visited, 100 shops representing 36.6% sell only refrigerating appliances and 173 shops, accounting for 63.4% sell both refrigerating appliances and air conditioners. Other un-regulated appliances such as television sets, sounds systems, household kitchen appliances, washing machines, microwaves, rice cookers, standing and ceiling fans were also sold.

Figure 2.2.1 shows the shares of the retail shops in terms of types of regulated appliances available in these shops.

Figure 2.2.1: Shares of Shops visited in the various regions according to shop size



## 3.0 Regional Distribution of Appliances on Sale

A total of 7,759 appliances were captured: comprising 7,098 refrigerating appliances and 661 air conditioners. Brong Ahafo region accounted for 19% of the total appliances captured, followed by Ashanti Region 18.8%.

Table 3.1 and Figure 3.2 show the total number of appliances captured in various regions and their respective regional shares respectively.

**Table 3.1: Regional Breakdown of Appliances Surveyed**

Region	Refrigerating Appliances		Air Conditioners		Total Appliances
	Number of Shops	Number of Refrigerators	Number of Shops	Number of Air Conditioners	
Ashanti	34	1,307	25	150	1,457
Brong Ahafo*	50	1,395	22	80	1,475
Central	32	869	20	83	952
Eastern	43	1,044	26	79	1,123
Northern Zone*	36	806	25	105	911
Volta*	29	693	16	61	754
Western*	49	984	19	103	1,087
<b>Total</b>	<b>273</b>	<b>7,098</b>	<b>153</b>	<b>661</b>	<b>7,759</b>



Note:

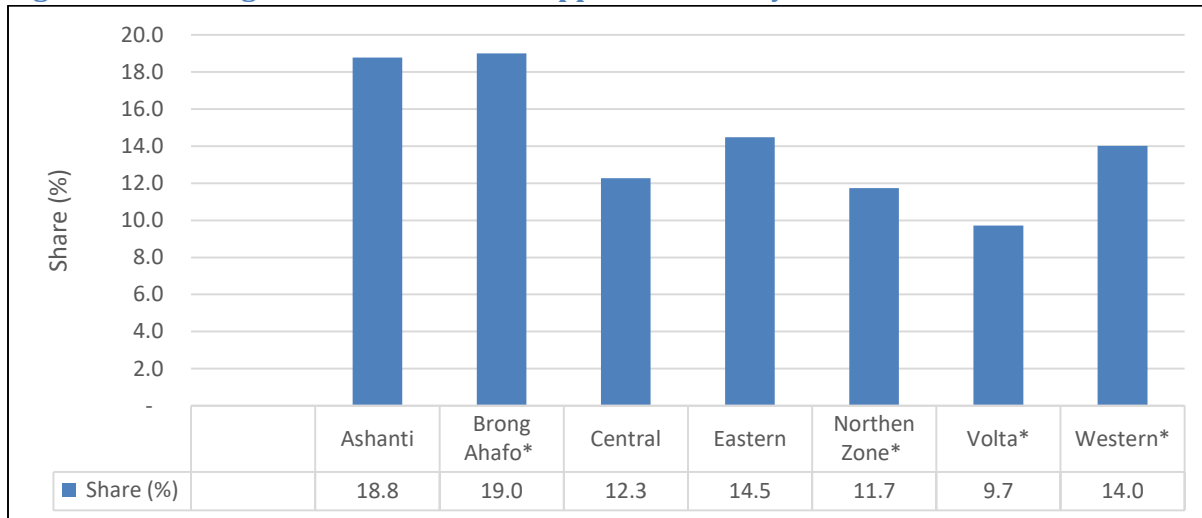
Brong Ahafo\* is made up of Ahafo, Brong Ahafo and Bono East

Northern Zone\* includes Northern, North East Upper East, Upper West and Savanna

Volta\* – Volta and Oti

Western\* includes Western and Western North

**Figure 3.2: Regional Shares of Total Appliances Surveyed.**



## 4.0 Compliance Level Analysis

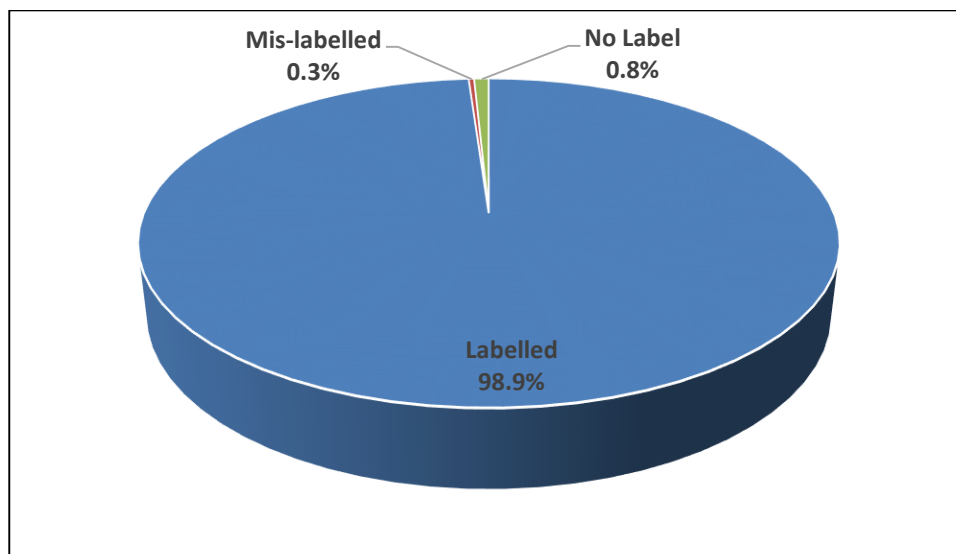
### 4.1 Test Report and Labelling Compliance Level for Refrigerating Appliances

Availability of approved technical documentation of appliance model is a primary requirement for regulated appliance imports. Out of the 7,098 total refrigerating appliances identified, 7,078 accounting for 99.7% had approved technical documentation and 20 constituting 0.3% had no technical documentation hence cannot be verified as to whether they meet minimum standards required of refrigerating appliances on the Ghanaian market. They were therefore requested to submit a performance test report to establish the minimum energy performance.

### 4.2 Labelling Compliance Level for Refrigerating Appliance Models

Labelling compliance plays a key role in the appliance market transformation hence critical attention is required to spot abnormalities in the information available on the labels displayed on each appliance. With a total of 7,098 refrigerating appliances, 7,020 constituting 98.9% were properly labelled, whilst 78 constituting 1.1% were non-compliant (no label and mislabelled). Figure 4.2.1 shows the shares of labelling compliance level of the refrigerating appliances.

Figure 4.2.1: Labelling Compliance Level for Refrigerating Appliances



#### 4.3 Test Report and Labelling Compliance Level for Air Conditioners

Out of the 661 air conditioners surveyed, 654 constituting 98.7% had test reports whilst 7 constituting 1.1% had no test reports hence cannot be verified as to whether they meet minimum standards required of refrigerating appliances on the Ghanaian market.

With respect to labelling, out of the 661 air conditioners surveyed, 653 constituting 98.8% were properly labelled whilst 8 constituting 1.2% were either not labelled or mislabelled.

#### 4.4 Regional Labelling and Test Report Compliance Levels of Refrigerating and Air Conditioning Appliances

Table 4.4 shows the overall regional compliance levels of these regulated appliances

Table 4.4.1 National and Regional Retail Shops Labelling and Test Report Compliance Levels

Region	Refrigerating Appliance Average Compliance Levels (%)			Air Conditioners Average Compliance Levels (%)		
	Test Report	labelling	Overall	Test Report	labelling	Overall
Ashanti	99.8	98.3	99.1	100.0	99.3	99.7
Brong Ahafo*	99.8	99.1	99.5	100.0	100.0	100.0
Central	99.8	99.4	99.6	98.8	100.0	99.4
Eastern	99.7	99.9	99.8	100.0	100.0	100.0
Northern Zone*	99.6	99.0	99.3	100.0	100.0	100.0
Volta*	99.9	98.9	99.4	100.0	100.0	100.0
Western*	98.8	98.6	98.7	99.0	98.1	98.6

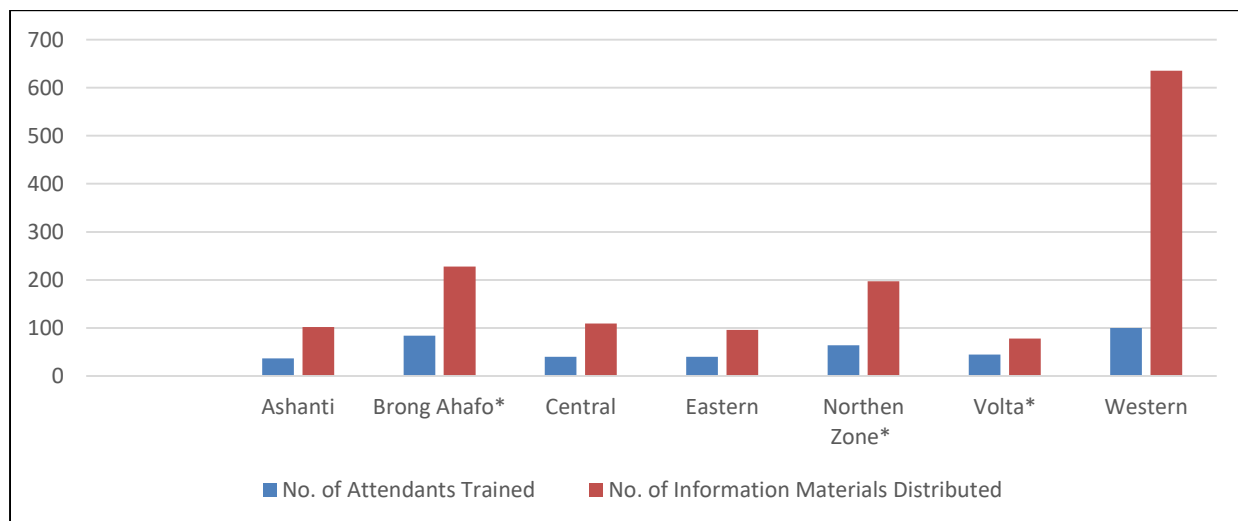
## 5.0 Awareness Creation on Standards and Labelling

Awareness campaigns play a fundamental role in changing habits for the adoption of energy-efficient appliances. Market surveillance activities offer the opportunity for continuous sensitization and education aimed at shop owners, shop attendants, and some available customers. When shop owners and their attendants are properly educated and equipped with special communication assets including flyers and posters, the acquired information is easily transferred to visiting and potential customers of regulated appliances. Hence, training of shop attendants and their managers has been a constant feature of the market performance measurement activities. Over the years, new distribution and retail shops with new staff are identified who require education in the appliances standards and labelling. Existing shops continue to change staff who likewise required to be trained with the relevant information on standards and labelling of regulated appliances. Two key communication tools (“Use Electricity Wisely” and “Refrigerating Appliances Standards and Labelling” flyers) were used to accompany the awareness campaign.

Another facet of the sensitization exercise was assisting shop attendants and most importantly, shop managers to download the certified appliance application from the Google Play Store and Apple Store and educate them in its usage to assist them to verify regulated appliances before acquisition from importers. Positive responses were received from nearly all shop managers on the effectiveness of the appliances database with the related application for regulated appliances verification.

In all, 140 personnel were trained, 1,214 communication tools were distributed and 228 shop managers were assisted to download the “Certified Appliance Application (APP)”. Figure 9.1 shows the number of personnel educated and communication tools distributed in various cities and towns visited during the exercise.

Figure 5.1 Number of Attendants Trained vs. Number of Information Materials Distributed.



## **6.0 Conclusions**

### **6.1 Conclusions**

The appliances market performance measurement exercise has provided the overall outlook of the regulated appliances' compliance to standards and labelling regime being implemented in the country. An average of 99.65% of both refrigerating appliances and air conditioners being sold on the market meet the energy efficiency and performance standards. Data obtained also revealed an average of 99.3% of both refrigerating appliances and air conditioners are properly labelled. The compliance performance of a typical appliance retailer of both refrigerating appliances and air conditioners stands at an average of 99.5%.

Importers of Non-Compliant appliances have been contacted to submit appropriate documentation and duly properly label mislabelled ones as part of the enforcement actions taken so far. Internal investigations are ongoing to establish how about 3% of non-compliant regulated appliances found their way onto the market.

In 2023, the team is expected to enforce the new revised standards and labelling regulation of refrigerators and air conditioners. The revision became necessary because of new technological change and also change in the matrix of calculating energy efficiency performance.