

# GHANA SEforALL NEWS

GHANA SEforALL  
SECRETARIAT

GHANA'S SEforALL ACTION  
AGENDA SEEKS TO:

- > Ensure Universal Access to Modern Energy Services
- > Increase the Share of Renewable Energy in the National Energy Mix
- > Increase the National Rate of Improvement in Energy Efficiency

*In this Issue*

- ◆ Eighteen (18) local manufacturers of cookstoves and liners trained in stove design and testing by experts from CREEC in Uganda.
- ◆ Ghana's First E-mobility Conference and Exhibition Attracts 582 Participants.
- ◆ Compliance Level of Refrigerating and Air Conditioning Appliances on the Ghanaian Market to National Regulations in 2020 Pegged at 97%.
- ◆ 400,000 Households to be Reached with Efficient Charcoal Cookstoves Over a Five-Year Period.

## PROGRESS ON HIGH IMPACT PRIORITY AREAS

### ENSURE UNIVERSAL ACCESS TO MODERN ENERGY SERVICES

- \* **Increase Access to Improved Biomass Cookstove**

Cookstove Design and Testing Workshop

The Energy Commission, collaborated with the Centre for Research in Energy and Energy Conservation (CREEC) at the Makerere University in Uganda, to organize a Cookstove Design and Testing Workshop for improved biomass cookstove and liner producers in Ghana. The workshop was held from 27 September 2021 to 1 October 2021 at the CSIR Institute of Industrial Research in Accra.



Photo above and below: Training Participants, and Session on Stove Design (Photo credit: Paula Edze, Energy Commission)

The training workshop was tailored to address the design and technical performance of the traditional coal pot, Gyapa, Obaa Hema and Cooksafe cookstoves. The topics covered were:

- \* Fundamentals of cookstove design and development;
- \* Materials selection for optimal cookstove performance;
- \* Cookstove testing with ISO 19867:1 Harmonised standard and other basic tests during cookstove development; and



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- \* Regulation and Compliance Monitoring of Labelled Appliances on the Market

**SEforALL Event Held in This Period 4-5**

- \* Man Man Enterprise Engages Stakeholders on New Carbon Programme

\* Metrics used to evaluate biomass cookstove performance and emissions.



Photo above and below: Training on Basic Stove Testing Protocols, and Session on Stove Design (Photo credit: Paula Edze, Energy Commission)



The workshop was attended by 18 cookstove and liner producers from ASA Initiative, Ekem Art Pottery, Gyapa Brand, Morrison Stove, NASAM Brand Enterprise, and Sustainable Energy Technologies (SETECH) Limited. Also participating were representatives of key stakeholder institutions, namely, CSIR Institute of Industrial Research, Ghana Alliance for Clean Cookstoves and Fuels, and Ministry of Energy.

It is part of technical assistance being received from the African Development Bank through the Clean Cooking Alliance, towards the development of a standard and labelling scheme for improved biomass cookstoves.

## INCREASE THE NATIONAL RATE OF IMPROVEMENT IN ENERGY EFFICIENCY

### The Drive Electric Initiative (DEI)

Under the Drive Electric Initiative (DEI) being

In-(Photo credit: G)

implemented by the Energy Commission, the first e-mobility conference and exhibition was held at the Movenpick Ambassador Hotel on 23 September, 2021.

### The Opening Session

Below are highlights of key statements and commitments made by some participating institutions during the opening session:

- \* Electricity Company of Ghana (ECG) committed to partnering with investors to build electric vehicle charging infrastructure nationwide.
- \* Volta River Authority (VRA) plans to build a smart city with electric buses replacing diesel and petrol vehicles.
- \* Ministry of Transport is developing an E-mobility Policy for Ghana.
- \* Ministry of Energy is working with the Ministry of Finance to secure a 100% import duty waiver on electric vehicles.



Dr. Matthew Opoku Prempeh, Minister of Energy, Giving the Keynote Address (Photo credit: Doris Agbevi, Energy Commission)

### Presentations and Panel Discussions

There were two main presentations followed by two panel discussions. The presentations, "E-mobility in Ghana" and "Policy, standards and regulations for e-mobility," were made by representatives of the Energy Commission and Ministry of Transport, respectively.

The first panel discussion was on the subject - opportunities for e-mobility in Ghana. It was discussed by representatives from Ahenkorah and Partners, VRA, ECG, Environmental Protection Agency (EPA), Bui Power Authority (BPA) and Egle Motors. The moderation was

done by the Chief Director of the Ministry of Energy.



First Panel Discussion (Photo credit: Energy Commission)

The second panel discussion was on the subject—challenges for e-mobility in Ghana and proposed solution. It was discussed by representatives from Ghana Revenue Authority (GRA), Driver and Vehicle Licensing Authority (DVLA), National Insurance Commission (NIC), SOMOCO, NODOK Logistics and Ministry of Transport. It was moderated by the project Coordinator of the DEI, Energy Commission.



Second Panel Discussion (Photo credit: Energy Commission)

### Exhibition

The e-mobility event provided a platform for green businesses and automobile companies to exhibit their products. Nine (9) EVs consisting of sedans, mini-buses, three and four wheel vehicles were exhibited by Egle Motors, NODOK Logistics, and Hyundai. ECG also exhibited a prototype of a charging station that was used to test-charge Egle Motor's ORA Car.



A 3-Wheel, E-Mini Van and E-bus on Display, Doris Agbevi, DEI Project Coordinator Taking the Hon. Minister of Energy on Tour (Photo credit: EC)

### Conference Evaluation

A survey was conducted after the conference to assess if the conference delivered on the objective of awareness creation on e-mobility and solicit ideas for future events. In general, the respondents expressed that the conference has enlightened them on the topic. Suggestions made are listed below:

- \* The e-mobility conference should be held annually to increase public awareness on the subject matter. Consider a two or three day event and dedicate more time to panel discussions.
- \* Have a dedicated session on electric vehicles (EV) in Ghana and show documentaries to highlight the real life experiences of EV users in Ghana including their experiences in the importation, clearance and registration of EVs.
- \* Invite EV manufacturers to the next event.
- \* Have detailed discussions on maintenance, battery life and replacement period, and major components or parts of an EV to educate prospective buyers and help them make informed purchase decisions.
- \* Create more awareness on the event through the media to increase stakeholder participation in future events.
- \* Organise quiz competitions on e-mobility.
- \* Train the informal sector on the operation and maintenance of EVs.
- \* Attach urgency to the development and implementation of the e-mobility policy framework.

### Participants, Organisers and Sponsors

The event was attended in-person by 203 persons and virtually by 379 persons via YouTube, Microsoft Teams and Facebook. The participants were from energy sector organisations, automobile industry,

international organisations and the private sector.

It was organised in collaboration with the Ministries of Energy and Transport and supported by ECG, Egle Motors, VRA, BPA, Japan Motors, Hyundai, NODOK Logistics and SOMOCO Ltd.

*For more information about the Drive Electric Initiative, contact the Project Coordinator, Doris Agbevivi via [dagbevivi@energycom.gov.gh](mailto:dagbevivi@energycom.gov.gh). Website: <https://www.energycom.gov.gh/efficiency/drive-electric-initiative>*

### Regulation and Compliance Monitoring of Labelled Appliances on the Market

One of the functions of the Energy Commission is the promotion of energy efficiency through the prescription and enforcement of technical performance standards for electrical appliances and other energy end-use devices. Accordingly, the Commission, has to date, developed and implemented standard and labelling schemes for lighting, air-conditioning, and refrigerating appliances. Regulations are currently being developed for additional seventeen (17) electrical and electronic appliances. A comprehensive appliance database is also being established to keep and maintain an up-to-date information on regulated appliances in the country.

As part of its work programme for 2020, the Commission undertook a nationwide market compliance monitoring exercise to determine the level of compliance to regulations by importers and retailers of regulated appliances in the country.

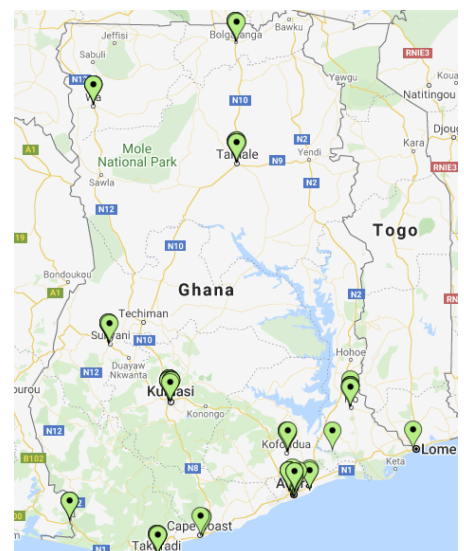
### Activities Undertaken

The activities undertaken include:

- \* Collection of data on new appliance retail shops to populate into the appliance database.

- \* Update of the Certified Appliances APP with the established compliance level of shops surveyed.
  - \* Identification of non-compliant businesses and the application of appropriate enforcement actions.
- a) Sensitisation of owners of electrical appliances distribution and retail shops on the appliance database and APP and the role it could play in the importation of approved models. 25 shop managers and attendants were assisted in downloading the Certified Appliances APP.
- \* Education of shop attendants and managers in distribution and retail outlets on standards and labelling. 162 shop attendants and managers were educated on the standards and labelling schemes.
- a) Distribution of educational materials (flyers) on efficient use of electricity. A total of 543 “Use electricity wisely” and “Refrigerating Appliance Standards and Labelling” flyers were distributed in all the shops visited.

### Scope of the Survey



Geographical Locations of Shops Visited (Map credit: Richard Donkor, Energy Commission)

The market compliance exercise was conducted in eleven (11) cities and two (2) border towns across ten (10) out of sixteen (16) regions in Ghana. A total of 177 distribution and retail outlets were covered.

The total number of refrigerating and air conditioning appliances surveyed were 3,165 and 502, respectively.

### Summary of Key Findings

Below is a summary of the key findings made:

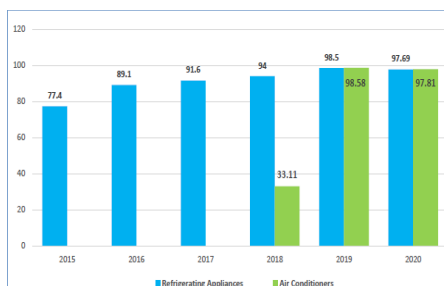
- a) 97.01 % of refrigerating appliances and 97.97% of air conditioners surveyed had test reports readily available for inspection as stipulated in the regulations.
- b) Compliance to labelling requirement was 95.53% for refrigerating appliances and 94.73% for air conditioners.
- c) On compliance to technical documentation and labelling requirements:
  - 71 refrigerating appliances had no approved technical documentation, and 124 had labelling non-compliant issues.
  - 11 air conditioners had no approved technical documentation, and 39 had labelling non-compliant issues.
- d) The average annual power consumption rating of identified refrigerating appliances on the Ghanaian market was 351.28kWh.
- e) Average price of appliances against efficiency ratings:
  - The average price (GHS) of 1-, 2-, 3- and 4-star rated air conditioners were GHS2,553.22, GHS2,934.19, GHS2,669.81, and GHS3,775.00, respectively.
  - The average price (GHS) of 1-to-5-star rated refrigerating appliances are summarised in the Table.

Star Rating	Fridge Type	Average Volume (Litres)	Average Power Consumption (kWh/Year)	Average Price (GHS)
5 Star	Freezer Only	165.00	225.00	1,525.92
	Fridge Only	354.50	142.00	5,168.00
	Fridge+Freezer	600.00	452.50	7,271.00
4 Star	Freezer Only	231.50	272.38	1,706.17
	Fridge Only	166.67	110.74	1,122.03
	Fridge+Freezer	337.73	309.45	3,319.88
3 Star	Freezer Only	227.38	346.43	1,868.30
	Fridge Only	124.42	152.50	988.83
	Fridge+Freezer	276.50	317.77	2,634.69
2 Star	Freezer Only	298.09	343.33	1,858.33
	Fridge Only	96.00	203.07	846.94
	Fridge+Freezer	219.24	341.90	1,814.79
1 Star	Freezer Only	313.80	410.25	1,834.25
	Fridge Only	83.75	219.00	712.81
	Fridge+Freezer	192.22	384.81	1,293.79

f) Twenty one (21) new distribution and retail outlets were identified.

### Trend in Compliance Level of Refrigerating and Air Conditioning Appliances

A trend analysis of the level of compliance for refrigerating and air conditioning appliances since the implementation of regulations for these appliances shows yearly increase in the level of compliance from 2015 to 2019 and a slight decrease in compliance in the year 2020. See graphical representation below for more details.



Graph Showing the Trend in Compliance Level for Refrigerating and Air Conditioning Appliance from 2015 to 2020 (Credit: Richard Donkor, Energy Commission)

### Conclusion

The compliance monitoring exercise showed that an average of 97% of both refrigerating and air conditioning appliances sold on the market in 2020 meet the energy efficiency performance standards. Likewise, an average of 94% of refrigerating and air conditioning appliances were properly labelled.

*For more information about the regulated appliance market or standards and labelling schemes in place, contact Richard Donkor, Senior Programme Officer for*

*Energy Efficiency and Climate Change via [dankor-r@energycom.gov.gh](mailto:dankor-r@energycom.gov.gh). The full 2020 Regulated Appliances Market Performance Report for Ghana can be found at: <https://www.energycom.gov.gh/files/Regulated%20Appliances%20Market%20Performance%20Report%20for%20Ghana%20-%202020.pdf>*

## SEforALL RELATED EVENT HELD IN THIS REPORTING PERIOD

### MAN AND MAN ENTERPRISE ENGAGES STAKEHOLDERS ON NEW CARBON PROGRAMME



Stakeholders at the Engagement Meeting (Photo credit: Man and Man Enterprise)

Man and Man Enterprise, one of the largest manufacturers of improved biomass cookstove in Ghana, organised a local stakeholder consultation meeting on 9 December 2021 at Tarkwa in the Western Region of Ghana. The meeting is part of requirements for phase two of a Voluntary Programme Activity (VPA) it is implementing under the Gold Standard scheme in partnership with Aera Group. Aera is the largest originator and trader of African carbon credits.

The "Man and Man Enterprise Improved Cooking Stove Programme in Ghana" was registered in 2013. The programme aims at significantly reducing wood fuel consumption in low-income Ghanaian households by replacing low-efficiency three-stone fires



and charcoal stoves with affordable improved charcoal cookstoves. The first VPA successfully distributed over 380,000 efficient cookstoves in the Ashanti Region of Ghana, completing seven (7) annual issuances worth more than one million carbon credits.

The new VPA2 is being implemented in the Western Region and it has a target of 80,000 efficient cookstoves per year over a five (5) year period. The estimated Greenhouse Gas (GHG) emission reduction potential is 400,000 tCO<sub>2</sub>/year. The thermal efficiency of Man and Man's "Holy Cook Stove" is estimated to be about 30%. The carbon credit generated supports the sale of the stove at the price of GHS30, making it affordable and accessible to low income households.



This VPA contributes to the achievement of six of the Sustainable Development Goals (SDGs), namely:

- a) **SDG 1 No Poverty:** 95 % of end-users of the Holy Cook stove experience savings on their fuel budget which could be used to address other needs.
- b) **SDG 3 Good Health and Well-Being:** 95 % of end-users experience less exposure to harmful emissions from the biomass combustion process.
- c) **SDG 7 Affordable and Clean Energy:** 400,000 improved cookstoves distributed
- d) **SDG 8 Decent Work and Economic Growth:** 150 Jobs created thanks to the project
- e) **SDG 13 Climate Action:** Two million tCO<sub>2</sub>e avoided during the first crediting period
- f) **SDG 15 Life on Land:** more than 2 million tonnes of woody biomass saved (equivalent to 28,750 hectares of forest protected)

The stakeholders' consultation meeting was

attended by twenty four (24) persons from public sector institutions, coalitions, financial sector, and retailers of cookstoves.

*For more information about Man and Man Enterprise and the VPA, contact the CEO and Founder, Mr. Michael Yaw Agyei via [manandman.ent@gmail.com](mailto:manandman.ent@gmail.com). Website: [www.manandmanenterpriselimited.com](http://www.manandmanenterpriselimited.com)*

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Link to the Ghana SEforALL Action Plan:  
<http://energycom.gov.gh/renewables/se4all>

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