



## 10th Annual Meeting and General Assembly



### THEMATIC SESSION

## Access to energy for all in rural areas in Africa

Progress and perspectives within the CLUB-ER:

### The Experience of **Ghana**

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Sheraton Djibouti Hôtel, 26 November 2013



Ministère de l'Énergie, chargé des  
Ressources Naturelles (MERN),  
République de Djibouti

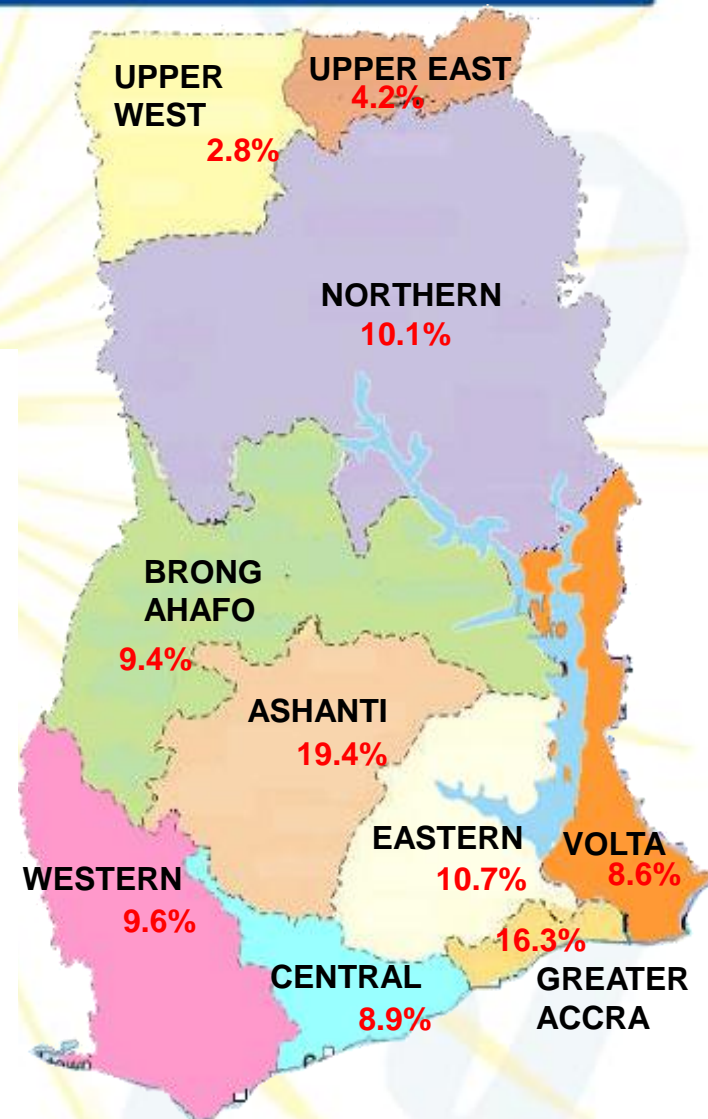
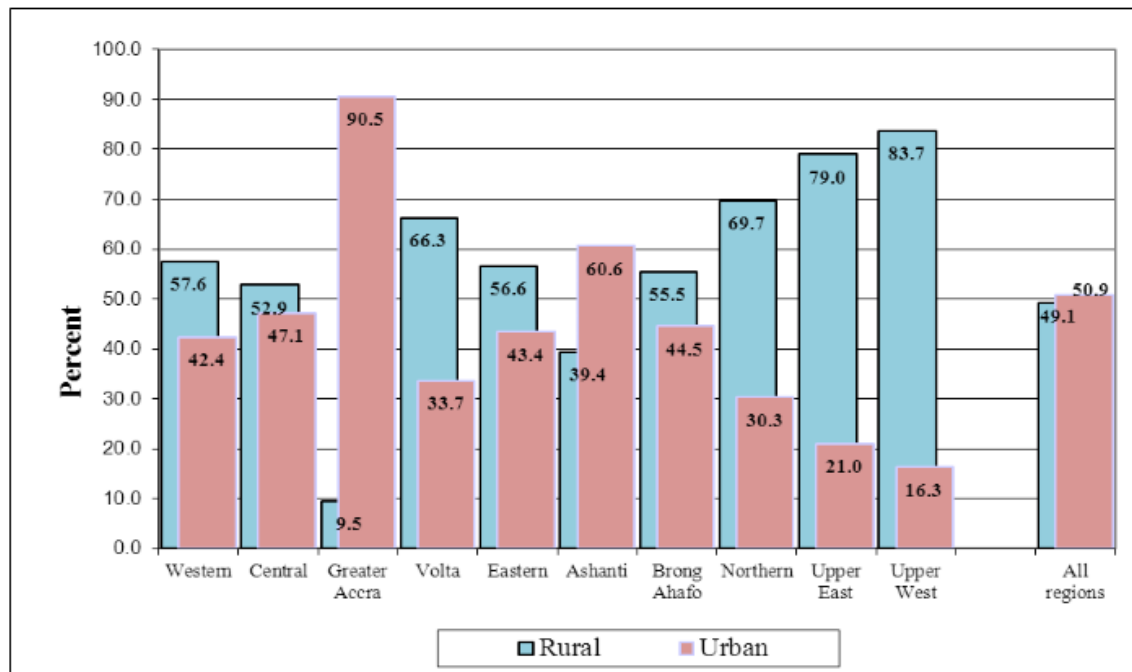




# Population Data – Ghana

- Land Area: 238.5 km<sup>2</sup>
- Population: 24,256,000 (2010)
  - Urban: 50.9%
  - Rural: 49.1%

Figure 4: Population by type of locality (urban and rural)





## WHAT ARE THE RURAL NEEDS?

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### ☐ **Households/commercial/Service**

Food processing - Cooking, Baking, smoking, etc  
Lighting, refrigeration, ICT – TV, radio, phone, etc  
Water supply

### ☐ **Agriculture**

Ploughing, tilling, irrigation, thrashing, etc

### ☐ **Transport**

Human & Goods



# Rural Industry

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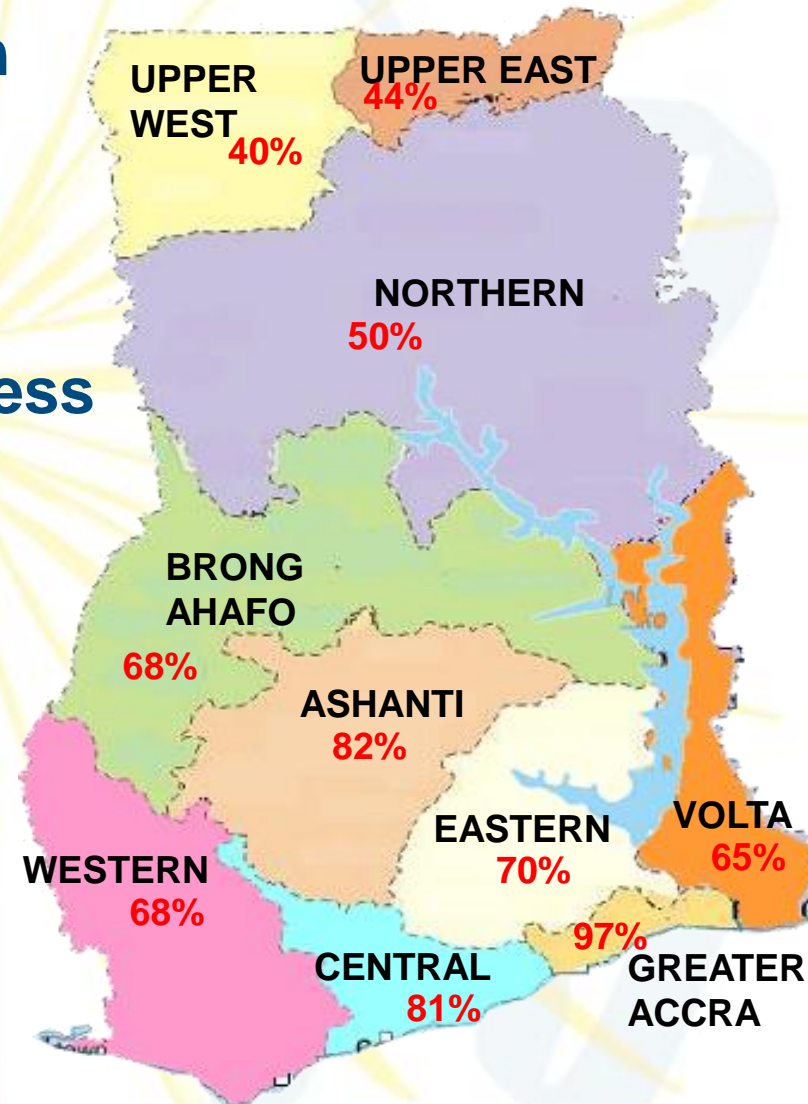
- ❑ **Agric products processing:** Grinding, milling, Palm oil , shea-butter, coconut oil extraction, soap making, Pito brewing, distillation of local gin etc
- ❑ **Storage:** Refrigeration, drying
- ❑ **Wood processing:** Saw milling, carpentry etc,
- ❑ **Garment:** weaving, sewing, tanning, etc





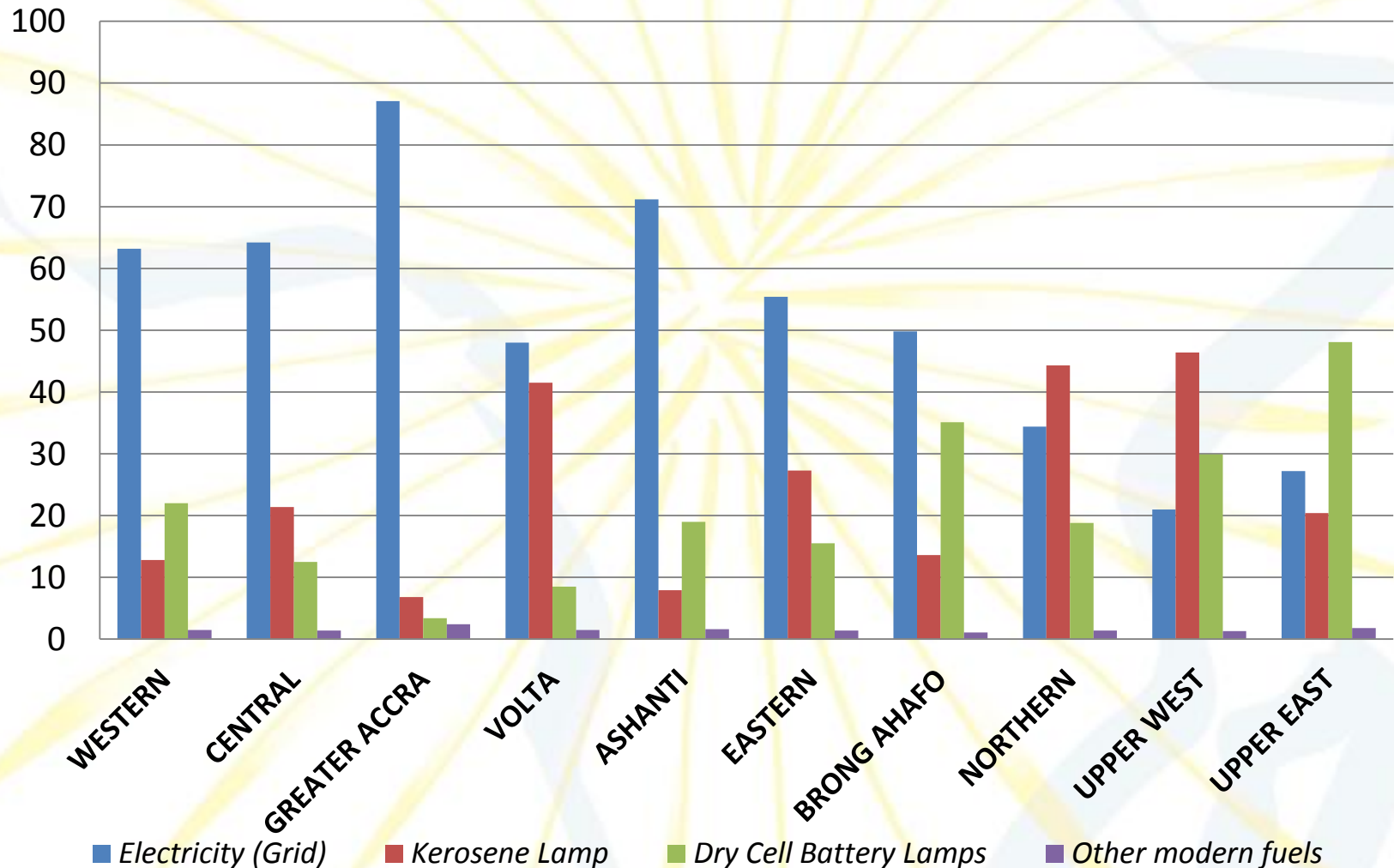
## Electricity Access Trends

- **Baseline for rural Electrification in the 1990s**
  - Communities with populations above **500**
  - Only **478** communities had access
- **Rural electrification in Ghana is driven by two main programmes**
  - NEP (wait for Gov't) and SHELP
- **Currently over **4,000** communities connected**
- **Target: Universal access by **2020****
- ****74%** Access in 2013**





# MAIN SOURCE OF LIGHTING IN GHANA



Data Source: GSSD 2010, Analysed by: Renewables 2013



# THE ROLE OF RE IN INCREASING ELECTRICITY ACCESS IN RURAL AREAS

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## Off-grid Electrification

### – Public Institutions:

- Solar stand-alone power systems for off-grid basic schools and teachers' quarters to facilitate teaching and learning.
- Solar stand-alone power systems and vaccine refrigerators for off-grid health posts and medical staff quarters to facilitate quality health delivery.
- Solar stand-alone power systems for security outposts
- Solar systems for energy service centres and street lights for remote rural communities.



# THE ROLE OF RE IN INCREASING ELECTRICITY ACCESS IN RURAL AREAS

- Solar Home Systems:
  - 15,628 systems and lanterns supplied and installed in 11 Districts through loans and grant facilities (ARB Apex Bank/GEDAP) since project inception in 2010.
  - Almost 20,000 solar lanterns subsidized under solar lantern promotion program
- Mini-grid Electrification (procurement process underway for 1<sup>st</sup> 4 pilot island communities)

## On-grid Renewable Electrification

- Utility Scale - 2.5MW Solar PV park
- Net-metering
- Resource Assessments





# ENERGY EFFICIENCY AS A TOOL TO INCREASING ENERGY ACCESS

- Efficient Lighting Retrofit Initiative which begun in 2007 which involved the replacement of 6 million incandescent lamps with energy saving compact fluorescent lamps of equivalent light output.

- This single measure has resulted in electricity demand savings of over 124 MW and energy cost savings of over US\$33 million per annum.

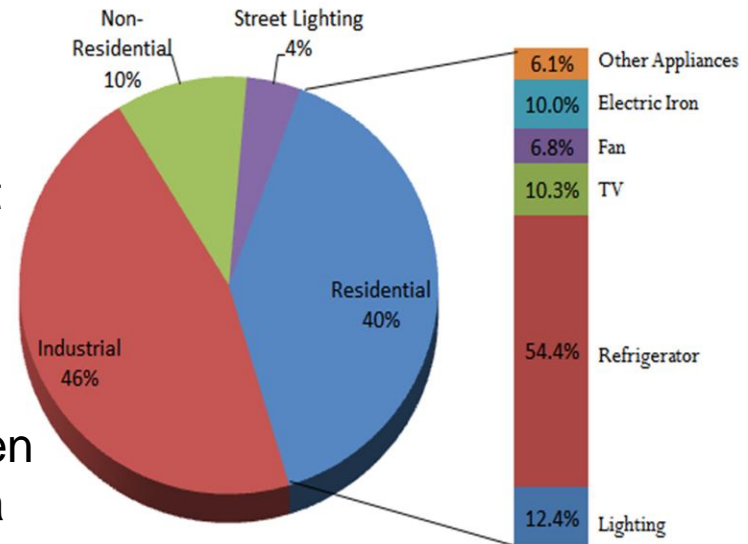
- The use of incandescent lamps has reduced from 58% in 2007 to less than 3% in 2011.

- Energy Efficiency Standards and Labels have been introduced to ensure that all lamps used in Ghana are truly energy efficient.

- Other initiatives are the introduction and implementation of a comprehensive refrigerating appliance efficiency project with the assistance of UNDP and the Global Environment Facility.

- The project involves the extension of standards and labels to refrigerating appliances and the replacement of obsolete refrigerators with more efficient versions under a turn in and rebate scheme.

**Electricity Consumption by Sector & Household Appliance**



Source: Energy Commission, 2010/11  
Graph by: Fred Ken. Appiah, 2012



# CONCLUSION

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- ❑ Ghana is committed to achieving national energy access by 2016.
- ❑ Policy framework and strategic plans are in place towards the attainment of this goal.
- ❑ We acknowledge the contribution of Development Partners to this course CLUB-ER for the efforts in capacity building.

# Thanks for your attention

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