

**Seminar on "Mainstreaming Energy for Sustainable Development Goals (SDGs), Targets and Indicators into Statistical Programmes in Selected African Countries**

**Addis Ababa, Ethiopia 27- 29 June ,2016**

**Energy Statistics in Ghana**

**by**

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**and**

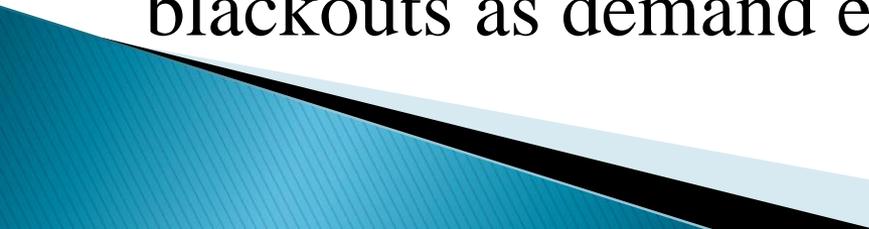
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# Outline of Presentation

- ▶ Introduction
  - ▶ Energy outlook for Ghana
  - ▶ Energy indicators in Ghana
  - ▶ SDG indicators
  - ▶ Challenges
  - ▶ Way Forwards
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# Introduction

- ▶ Over the last two decades the demand for electricity in Ghana has been growing by 10-15 percent annually.
  - ▶ The expansion of commercial and industrial sectors, together with the high population growth are the main drivers of electricity demand.
  - ▶ On the supply side, the power sector has consistently fallen short of capacity demanded.
  - ▶ This has resulted in frequent load shedding and blackouts as demand exceeds available supply.
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# Introduction Cont'd.

- ▶ Ghana's annual electricity consumption per capita since 2010 has been averagely below **400 kWh** compared to the global minimum average of **500 kWh** for lower middle-income developing countries.
- ▶ Electricity consumption decreased marginally from 399 to 396 kWh per capita between 2013 and 2014, and further declined to 348 kWh in 2015 as a result of deficit in supply

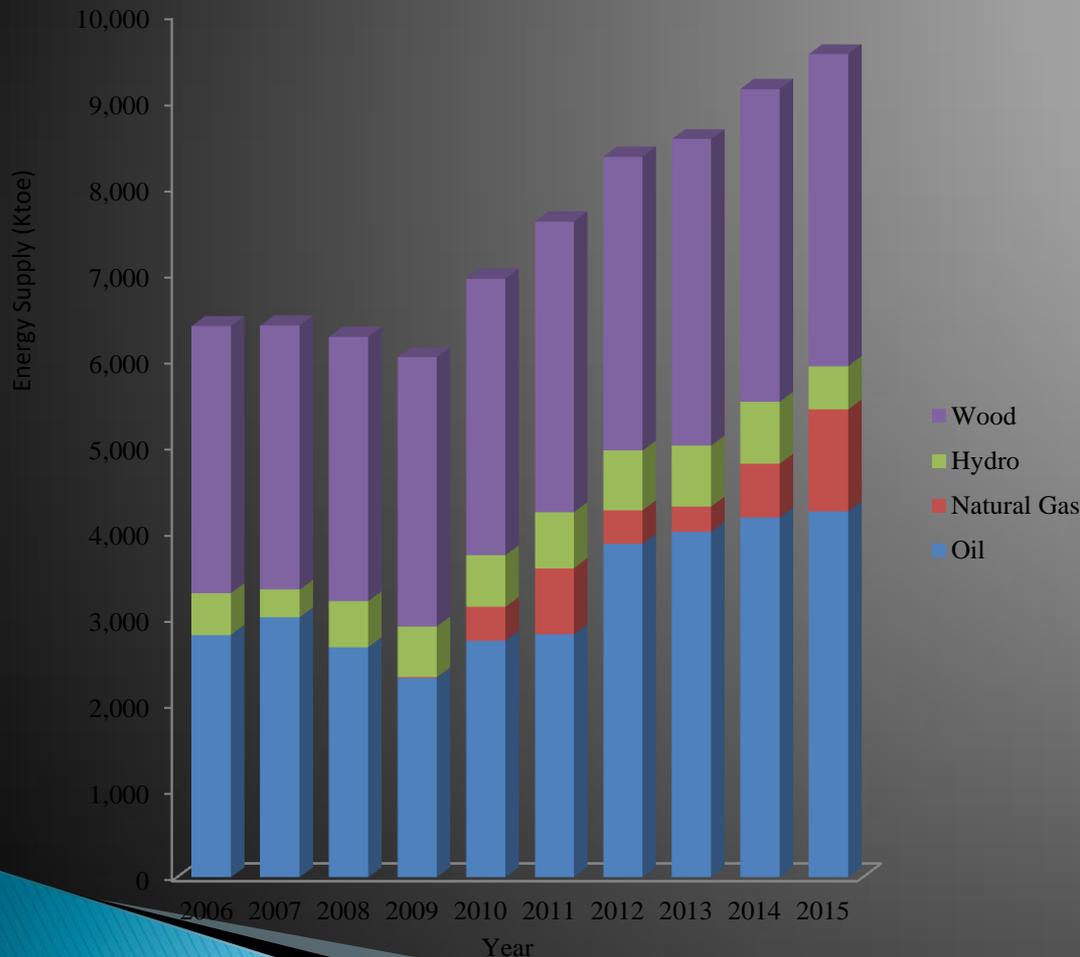
# Energy outlook for Ghana

- ▶ In 2015, the total electricity generated was 11,492 GWh as against 12,963 GWh in 2014, representing (11.4%) less than the previous year.
- ▶ Electricity import increased from 27 GWh in 2013 to 51 GWh in 2014. It further increased to 223 GWh in 2015.
- ▶ The Producer Price Inflation for the electricity production and distribution declined from 54.2 percent in 2014 to 16.6 percent in 2015.
- ▶ In 2014, crude oil production from the Jubilee field increased marginally to 37.3 million barrels from 36.9 million barrels in 2013.
- ▶ In 2015, crude oil production was 38.9 million barrels, corresponding to 106,603 barrels per day
- ▶ In 2014, a total of about 22.5 trillion standard cubic feet (Tscf) of gas was delivered by the West Africa Gas Pipeline (WAGP) for thermal generation. It decreased to 20.5 trillion standard cubic feet (Tscf) in 2015.

# Energy Indicators in Ghana

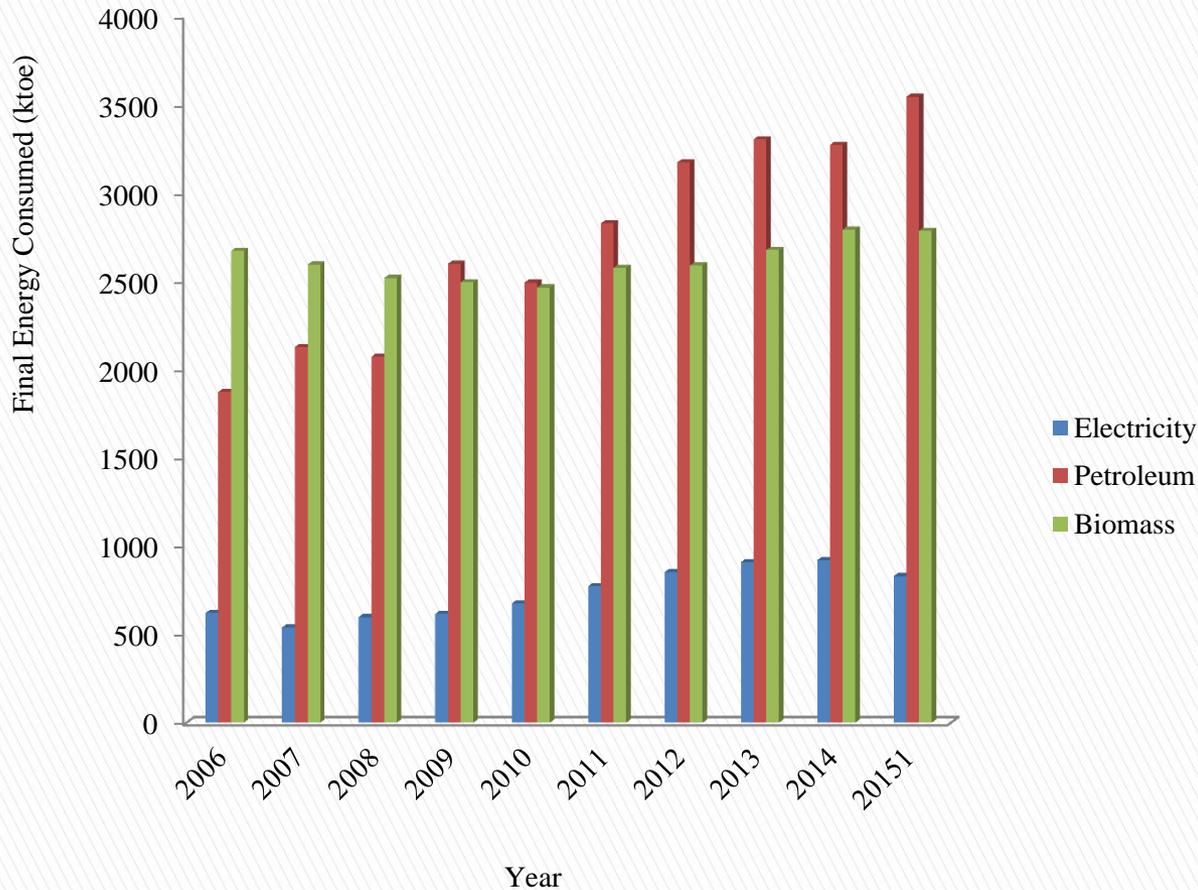
Energy Indicator	Unit	2014	2015
Primary Energy Supply	KTOE	9,147	9,550
Final Energy Consumed	KTOE	6,983	7,158
Electricity Generated	GWh	12,963	11,492
Electricity Consumed	GWh	10,696	9,639
Petroleum Products Consumed	KTOE	3,377	3,544
Biomass Consumed	KTOE	2,792	2,785
Energy Intensity of the Economy	TOE/GHS 1,000 of GDP	0.21	0.21
Energy Consumed/capita	TOE/capita	0.26	0.26
Electricity Generated/capita	kWh/capita	480.1	414.9
Electricity Consumed/capita	kWh/capita	396.1	348
Petroleum Products Consumed/capita	TOE/capita	0.13	0.13
Biomass Consumed/capita	TOE/capita	0.1	0.1
Electricity Consumed/GDP	kWh/GHS 1,000 of GDP	319.1	276.3
Primary Energy Supply/GDP	TOE/GHS 1,000 of GDP	0.27	0.27
Petroleum Products Consumed/GDP	TOE/GHS 1,000 of GDP	0.1	0.1
Primary Energy Supply/capita	TOE/capita	0.34	0.34
Energy Sector Producer Price Index	Percentage	54.2	16.6
Proportion of population with access to electricity/ fuel for cooking			

# Total Primary Energy Supply (ktoe)



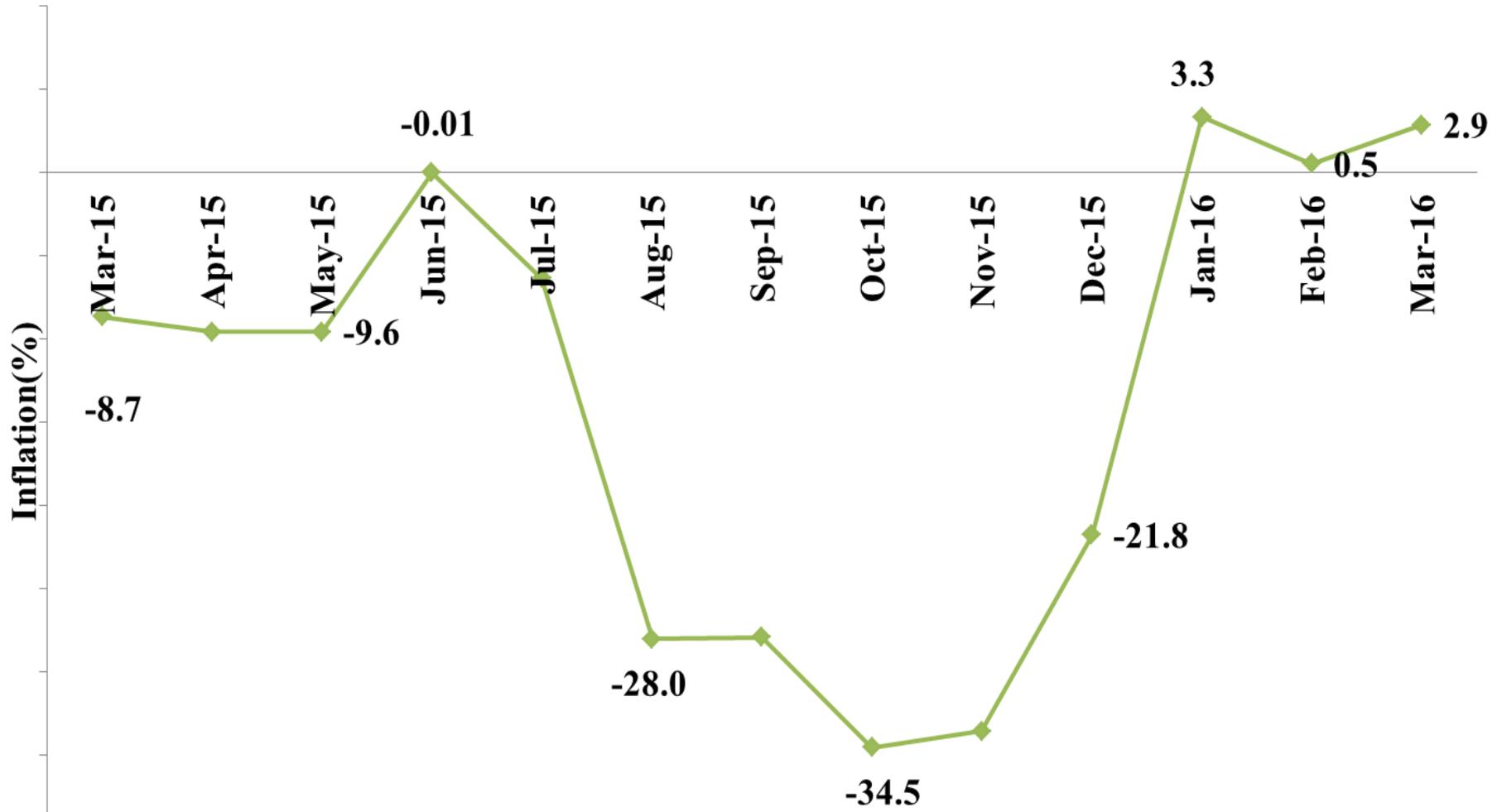
- ▶ Wood has been the major primary energy supply
- ▶ Natural gas as a source of primary energy supply started in 2010.
- ▶ In 2015, the share of Natural Gas exceeded Hydro.

# Total Final Energy Consumed (ktoe)

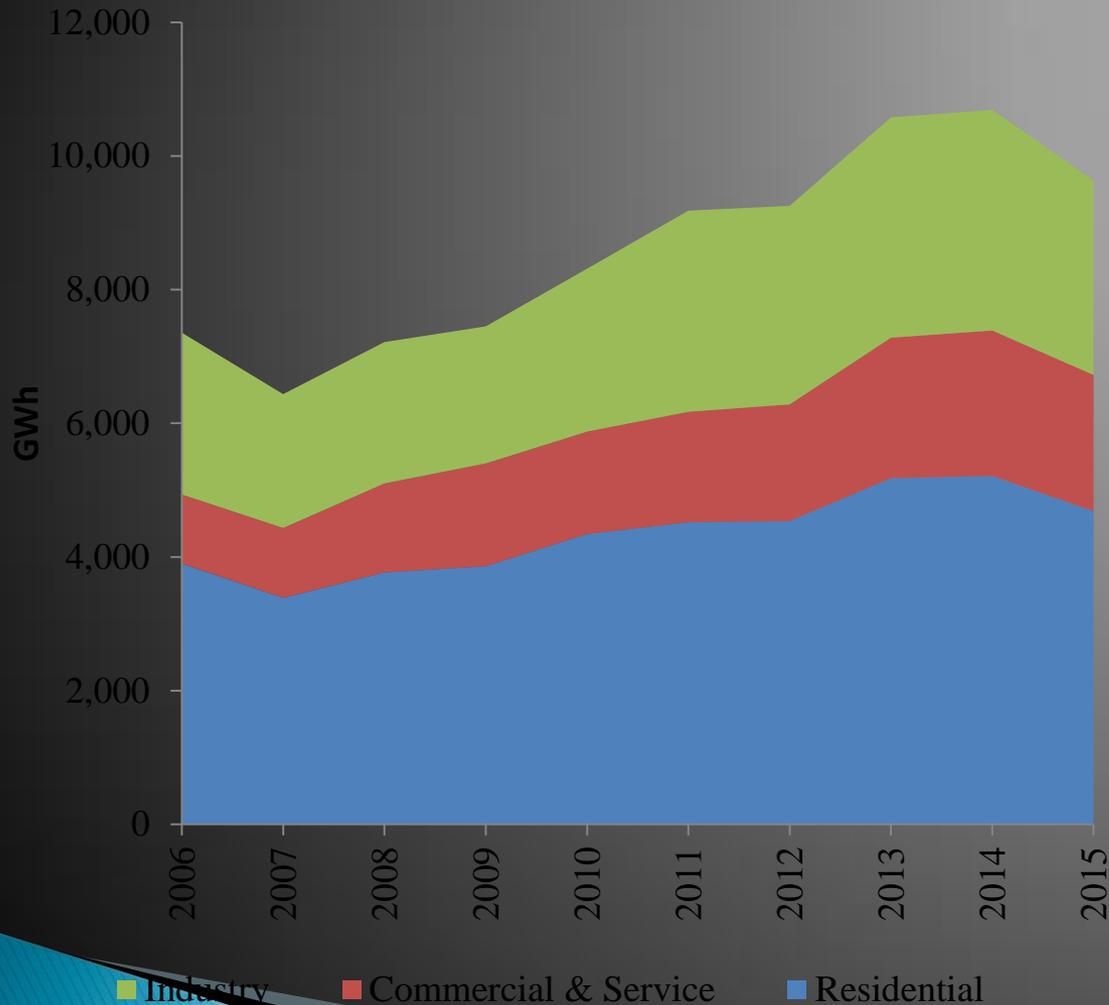


- ▶ Until 2009, Biomass was the largest energy consumed.
- ▶ Petroleum is currently the largest energy consumed in the country.
- ▶ Petroleum consumption has increased by about 36 percent between 2009 and 2015.

# Inflation trend in petroleum industry



# Electricity Consumption by Sectors (GWh)



- ▶ The highest electricity consumption is by residential sector followed by Industrial sector
- ▶ In 2015, electricity consumption in industry declined by about 11.5 Percent .

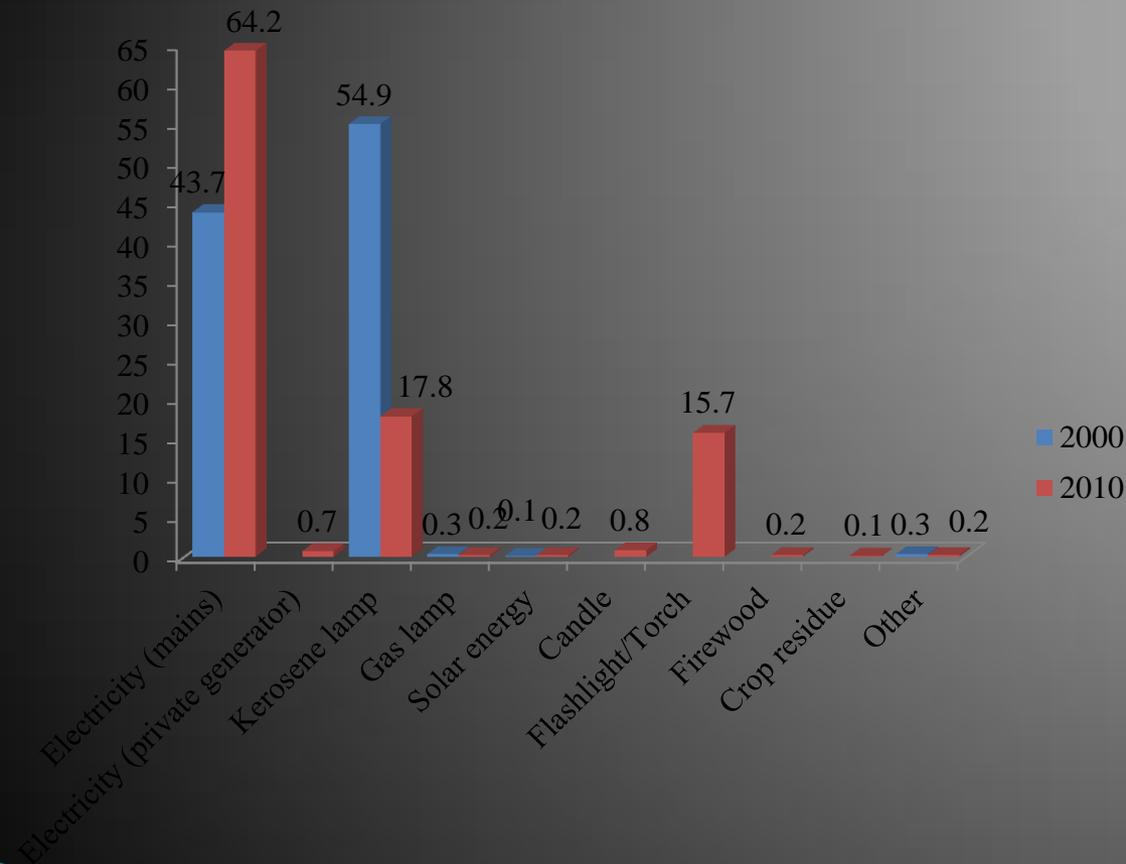
# SDG Indicators

	<b>Indicator</b>	<b>Indicator already produced: 1=Yes 2=No</b>	<b>Does data exist for computation: 1=Yes 2=No</b>	<b>Current data source: 1=census 2=survey 3=admin 4=other</b>	<b>Specify data source</b>	<b>Institution producing data</b>	<b>Existing cycle of data production</b>	<b>Most recent year available</b>	<b>Current level of disaggregation</b>	<b>Indicate other existing data sources for indicator, if any</b>
<b>7.1 By 2030, ensure universal access to affordable, reliable and modern energy services</b>	7.1.1 Proportion of population with access to electricity	Yes	Yes	Census, Survey	Ghana Living Standard Survey, Population and Housing Census	GSS	5 Years 10 Years	2012/2013 ; 2010	Region; District; Urban/Rural	Ghana Demographic Health Survey(GDHS), Multiple Indicator Cluster Survey(MICS)
	7.1.2 Proportion of population with primary reliance on clean fuels and technology	Yes	Yes	Census, Survey	Ghana Living Standard Survey, Population and Housing Census	GSS	5 Years 10 Years	2012/2013 ; 2010	Regional; District	
<b>7.2 By 2030, increase substantially the share of renewable energy in the global energy mix</b>	7.2.1 Renewable energy share in the total final energy consumption	Yes	Yes	Administrative	Annual Report	Energy Commission	Annual	2014	National	
<b>7.3 By 2030, double the global rate of improvement in energy efficiency</b>	7.3.1 Energy intensity measured in terms of primary energy and GDP	Yes	Yes	Administrative	Annual Report	Energy Commission	Annual	2014	National	

# Fuel for Cooking & Lighting

- ▶ The three main sources of fuel for lighting in households were electricity (grid) (64.2%), kerosene lamp (17.8%) and flashlight (15.7%) in 2010
- ▶ The three main sources of energy for cooking in 2010 were firewood (40.2%), charcoal (33.7%), and gas (18.2%) .
- ▶ National LPG penetration share increased from 6% in 2000 to 18.2% in 2010.

# Fuel for Cooking & Lighting cont'd



- ▶ The three main sources of non-natural lighting in households were electricity (grid) (64.2%), kerosene lamp (17.8%) and flashlight (15.7%).
- ▶ The proportion of dwelling units using electricity (excluding private generator) increased from 43.7 percent in 2000 to 64.2 percent in 2010
- ▶ In 2000, 54.9 percent of households were using kerosene lamp, but this reduced to 17.8 percent in 2010, the reverse of the trend for electricity

# Fuel for Cooking & Lighting Cont'd

	All regions (2000)	All regions (2010)
None no cooking	3.5	5.6
Wood	55.8	40.2
Gas	6.2	18.2
Electricity	1.1	0.5
Kerosene	2.0	0.5
Charcoal	30.0	33.7
Crop residue	*	0.8
Saw dust	*	0.1
Animal waste	*	0.0
Other	1.1	0.1
Total	100.0	100.0

- ▶ The three main sources of energy for cooking in 2010 were firewood (40.2%), charcoal (33.7%), and gas (18.2%)
- ▶ While the proportion using firewood declined from 55.8 percent in 2000 to 40.2 percent in 2010, that of charcoal increased from 30.0 percent in 2000 to 33.7 percent in 2010.
- ▶ The use of gas tripled during the inter-censal period: from 6.2 percent in 2000 to 18.2 percent in 2010.

# Challenges

- ▶ **Timeliness**

Data suppliers unable to supply data early enough to meet publication schedule;

- ▶ **Non Response to survey Questionnaire**

Respondents unwillingness to respond to survey questionnaires affect the collection, compilation and dissemination of Energy Statistics;

- ▶ **Inadequate Financial Resources**

Lack/inadequate financial resources to undertake periodic survey;

# Way Forward

- ▶ Establishment of local inter Agency Working Group to track SDG indicators
  - ▶ Continuous education to Improve the level of awareness and knowledge of the citizenry on the importance of SDGs and Statistics;
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# Thank You

