

## CHAPTER FIVE

### OIL AND GAS DEVELOPMENT

#### 5.1 INTRODUCTION

The discovery of oil and gas in commercial quantities and their subsequent exploitation have provided Ghana the opportunity for accelerated economic growth and structural transformation. Its effective integration into the rest of the economy will catalyse the diversification of the economy.

In the medium-term, the development of the oil and gas sub-sector will be a major factor to the transformation of the economy. The transformation agenda will be driven by the following priorities:

- oil and gas industry development and its effective linkage to the rest of the economy;
- strengthening of the regulatory regime with the passage of relevant laws including the Petroleum Production and Exploration law;
- local content development;
- employment creation;
- protection of the environment; and
- transparency in revenue management.

#### 5.2 STATUS OF SELECTED INDICATORS, KEY POLICY MEASURES AND STRATEGIES IN 2014

To assess the progress towards the attainment of the above policy objectives, the following section analyzes the performance of specific indicators adopted to track the progress against targets, as well as the key policy measures and strategies implemented to ensure the attainment of the objectives in the sector.

##### 5.2.1 Development of the Oil and Gas Industry and its Effective Linkage to the Economy

In order to track the progress towards the attainment of the objectives outlined in this focus area the following indicators were adopted:

- Amount of new investments in oil and gas sector (US\$ billion)
- No of barrel of oil production and cubic feet of gas production per year
- The share of Oil and gas activities in GDP
- % of oil and gas processed within country

##### Status of Selected Indicators:

##### *Oil Development and Production*

Total crude oil produced from the Jubilee Field in 2014 was 37,201,691 barrels or 101,976bopd, compared with the 2014 Budget estimate of 33,955,644 barrels or 93,029 bopd and the 2013 actual production of 35,587,558 barrels. The 2014 Jubilee production represents a 4 percent increase over that of 2013. Total production from Saltpond Field was 95,093 barrels as against 105,040 barrels in 2013, representing a 9.5% decline in production. The amount of new investment in oil and gas exploration in 2014 was US\$ billion.

The average achieved Jubilee crude oil price for 2014 was US\$103.504 per barrel against a projected price of US\$93.34. The price achieved was below the previous year's average price of US\$106.945 per barrel.

### ***Contribution of Oil and Gas to the Economy***

The Mining and Quarrying sub-sector registered a growth rate of 6.9 percent in 2014, against a target of 12.1percent, with the petroleum sub-sector achieving a growth rate of 18.2% against a target of 15.2%.The share of the oil and gas sector in GDP was 4.6% in 2012, 6.06% in 2013 and X% in 2014

### ***Gas and Oil Processing and Utilization***

The Plan of Development (PoD) for the Sankofa-Gye Nyame (SGN) Fields of the Offshore Cape Three Points (OCTP) Block was approved with parliament reviewing and ratifying thenecessary commercial contracts. Technical appraisal work indicates combined petroleum reserves of 131.3 millionbarrels of crude oil, 1.07 trillion cubic feet of gas and 30 million barrels of oil equivalentof condensate.It is expected that first oil from SGN will be in the third quarter of 2017 whiles production of first gas exports will be in the first quarter of 2018.

As at December 2013, the gas from the Jubilee Field was still being re-injected into the wells; A year later in 2014 gas was received at Atuabo Gas Processing Plant after the Jubilee Partners offshore facilities were interconnected to the Western Corridor Gas Infrastructure (WCGI) offshore (pipeline end terminal). The Energy and Petroleum Commission gave a temporary permit to Ghana National Gas Company for gas to pass through the offshore pipeline.

Total natural gas exported from the Jubilee Field to the Atuabo Gas Processing Plantwas 1,906.39 MMScf (382.77 MMScf for November 2014 and 1,523.62 MMScf inDecember 2014).

The Ministry developed a gas master plan to provide the framework for theinfrastructure development priorities that will contribute to the development of thecountry's natural gas resources and security of energy supply.

### ***Regulations***

As part of government's effort tostrengthen and ensure the efficient management of the oil and gas sector, a draft Petroleum Exploration & Production Bill, to replace PNDC Law 84, 1984 to better regulate the upstream sector was laid before Parliament.

To enhance the pace of exploration activities, 8 new Petroleum Agreements (PA) were ratified by Parliament. These are the:

- Expanded Shallow Water Tano Block with CAMAC;
- Offshore Central Tano Block with Amni International;
- Offshore Cape Three Points South PA with UB Resources Limited;
- South West Tano Block with Heritage/Blue Star;
- Ultra Deepwater East Keta Blocks with Heritage/Blue Star;
- Shallow Water Cape Three Points PA with Sahara Energy Fields;
- South-West Cape Three Points PA with A-Z Petroleum Products; and
- South West Saltpond PA with Britannia-U.

**Table 5.1: Oil and Gas Exploration, Development and Production**

Indicator	Baseline data (2013)	Targets 2014	Indicator Status in 2014	Progress towards target
1. Amount of new investments in oil and gas sector (US\$ billion)	US\$ 1.63 billion	US\$ 0.57 billion	US\$ 2.35 billion	
2. No of barrel of oil production and cubic feet of gas production per year	Jubilee Oil: 35,587,558 barrels (bbls) Jubilee Gas: 47.43 Billion cubic feet (Bcf) SOPCL: 105,039.60 bbls Total Oil: 35,692,597.60 bbls Total Gas: 47.43 Bcf	Jubilee Oil 37,201,991 bbls Jubilee Gas: 55.8 Bcf SOPCL: 95,092.57 bbls Total Oil: 37,297,083.57 bbls Total Gas: 55.8 Bcf Gas Export: 1.9 Bcf	Jubilee Oil 37,201,991 bbls Jubilee Gas: 55.8 Bcf SOPCL: 95,092.57 bbls Total Oil: 37,297,083.57 bbls Total Gas: 55.8 Bcf Gas Export: 1.9 Bcf	
3. The share of Oil and gas activities in GDP/ contribution of growth in Petroleum output to GDP growth	6.06%	6.84%		
4. % of oil and gas processed within country: - % used in power generation - Percentage of crude refined locally - Others (incl. fertilizer and petrochemical industry)	0%	Na	3430mmscf None None	
5. Share of indigenous companies in total contracts	Na	Na		
6. % share of domestic goods and services used in the sector	Na	Na		

**Key Policy Measures Strategies and Activities**

The key policy measures, strategies and activities implemented to promote the oil and gas industry in 2014 were as follows:

- Development activities continued in the Tweneboa-Enyera-Ntomme (TEN) Fields. It is expected that first oil will be realized in the third quarter of 2016 and the first gas exports in 2017. As at end of 2014 the progress on the project was 46.1% against a target of 47.7%.
- Appraisal activity of the West Cape Three Points (WCTP) Block by Kosmos Energy was concluded in December 2014
- The Energy and Petroleum Commissions issued temporary permit to Ghana National Gas Company for gas to pass through the offshore pipeline and the Gas Processing Plant (GPP) for commissioning. It is expected that commercial operations will commence in 2015.
- The inauguration of the Local Content Committee responsible for overseeing the implementation of the Local Content regulations in the Petroleum Upstream sub-sector. Also a committee is developing a local content policy for the power and petroleum downstream sub-sectors which will be finalized and submitted to Cabinet in 2015.
- GNPC has intensified exploration activities on the inland Voltaian basin. These activities are geared toward enhancing the prospects of the basin and also to establish a petroleum system and thermal maturity in the basin.
- The Rural LPG Promotion Project entered its second phase. Thirteen thousand 6kg LPG cylinders and cook stoves were distributed in Tano South, Ajumako-Anyan Essiam, Central Gonja and Tolon districts.
- The Ministry undertook an assessment of solar stand-alone power systems for 150 off grid basic schools in 98 districts. Fifty solar energy systems are expected to be installed by the end of the year and the remaining 100 to be installed in 2015 to power ICT facilities in off grid basic schools.
- The installation of two hundred and seventy-five (275) in some selected roads in Accra.
- Under Solar Lantern Promotion programme, 10,372 lanterns were distributed at subsidized rate. Procurement for additional 50,000 is at 98 percent complete and expected to be distributed in 2015.
- The Ministry Energy and Petroleum (MoEP) led in the Gas Sales Agreement (GSA) negotiations between the Jubilee Partners and GNPC, leading to the signing of the GSA to satisfy one of the pre-conditions for tie-in between offshore and onshore facilities.
- The completion of the Right of Way (ROW) clearing, line pipe stringing, pipe fitting and welding, Non-Destructive Tests (Ultrasonic Test, Radiography Test) for weld joints, coating of welding joints, trenching, lowering and backfilling for the 111 km onshore (main) Pipeline
- Tie-in with the Volta River Authority (VRA) pipeline system was successfully carried out at Aboadze and discussions on the Construction & Tie-in Agreement (CTIA) and Gas Sales Agreement are on-going
- Auxiliary buildings which contain the control rooms, machine cabinet rooms (MCC), Cathodic Protection room, transformer room and Uninterruptable Power Supply (UPS) room at the Esiam Distribution Station (EDS) and Takoradi Regulating and Metering Station (TRMS) completed

- Earthworks at the Gas Processing Plant (GPP) and Gravel (vibro-stone column) piling have been completed. Concrete (bored) piles for the site and the foundation for equipment for the initial station is complete. Work on the Irish bridge at Eloyincompleted.
- Fabrication of the GPP modules by Thermo Design Engineering (TDE) is complete and all components have been assembled and erected on site. The 3 main components which are the Debutanizer, Deethanizer and Flare Stack were successfully installed on the 17th and 18th of June and 10th October, respectively. Civil works at the GPP is almost complete.

## 5.2.2 Revenue Management and Transparency

In order to track the progress towards the achievement of the objective outlined in this focus area the following indicators were adopted:

- The level of compliance with the provisions under the Petroleum Revenue Management Act
- Proportion of petroleum revenue allocated to priority areas.

### Status of Selected Indicators:

The Ghana National Petroleum Corporation (GNPC) on behalf of Government of Ghana, made seven oil liftings in 2014, two each in the first two quarters and one lifting in the third and two liftings in the fourth quarter which amounted to 6,690,798 barrels of crude oil, amounted to US\$691.99 million (GH¢1,982.10 million). Royalties, corporate taxes and rentals raised the GoG receipts to US\$978.89 million (GH¢2,774.92 million) compared with a budget estimate of US\$777.0million (GH¢1,709.40 million) and the 2013 amount of US\$846.77 million (GH¢1,645.59 million). About 18% of the receipts was transferred to GNPC for its operations, while the remaining 82% was then to be allocated in line with the Petroleum Revenue Management (PRM) Act, 2011 (Act 815).

**Table5.2: GOG Crude Oil Lift and Sources of Petroleum Receipts by End December 2014**

Item	Unit	Qtr1(liftings)	Qtr2(liftings)	Qtr3(liftings)	Qtr4(liftings)	Total
Total Volume of Lift	Barrels					
o/w GOG/GNPC	Barrels	1,864,409	1,894,850	987,415	1,944,124	6,690,798
o/w Partners	Barrels					
Date of GNPC Lift	d/m/yy	16 <sup>th</sup> Lift – 20-Dec-13 17 <sup>th</sup> Lift – 29-Jan-14	18 <sup>th</sup> Lifting – 25-Mar-14 19 <sup>th</sup> Lifting – 13-May-14	17-July-14	21 <sup>st</sup> Lifting – 2-Sept-14 22 <sup>nd</sup> Lifting – 10-Nov-14	
selling Price Per Barrel	US\$	110.965 108.975	107.591 109.25	105.769	98.057 83.807	
Gross Receipt from GOG/GNPC Lifting	US\$	204,999,176.89	205,440,831.62	104,437,897.14	177,113,227.57	<b>691,991,133.20</b>
o/w Royalties	US\$	57,074,875.25	57,197,838.62	29,077,092.12	49,311,004.68	192,660,810.66
o/w Carried and Participating Interest	US\$	147,924,301.64	148,242,993	75,360,805.02	127,802,222.89	499,330,322.56

Transfer to GNPC	US\$	55,218,538.01	57,237,473.34	24,471,694.21	43,784,797.98	<b>180,712,503.53</b>
o/w Equity Financing Cost	US\$	15,487,496.46	18,235,107.76	2,662,075.29	7,777,330.16	44,162,009.67
o/w Net Carried & Participating	US\$	39,731,041.55	39,002,365.58	21,809,618.92	36,007,467.82	136,550,493.86
<b>GOG Net Receipt from Lifting</b>	<b>US\$</b>	<b>254,999,459.72</b>	<b>195,028,792.50</b>	<b>193,111,436.86</b>	<b>154,165,596.08</b>	<b>797,305,285.17</b>
o/w Royalties from Jubilee	US\$					
o/w Net Carried & Participating Interest	US\$					
<b>Other GOG Petroleum Receipts</b>	<b>US\$</b>	<b>105,218,820.84</b>	<b>46,825,434.22</b>	<b>113,145,233.93</b>	<b>20,837,070.49</b>	<b>286,026,559.48</b>
o/w Corporate Income Taxes	US\$	105,104,943.00	46,010,013.00	112,778,217.31	20,653,018.00	284,546,191.31
o/w surface rentals	US\$	17,864.45	655,186.14	60,000.00	174,000.00	907,050.59
o/w Royalties from Saltpond Offshore Co (3%)	US\$	-	151,986.14	-	-	151,986.14
o/w Others	US\$	96,013.39	8,248.94	307,016.62	10,052.49	421,331.44
<b>Total GOG Net Receipts</b>	<b>US\$</b>					<b>978,017,692.70</b>

Source: MOF

During the 2014 fiscal year, 51% of GoG net receipts was allocated to ABFA instead of the 70% stipulated by Law, but the balance of 49% was allocated to Stabilisation and Heritage Fund in a ratio of 7:3 in accordance with the Law.

**Table 5.3: Distribution of Oil receipts to Allowable Sources in 2014**

Item	TOTAL RECEIPTS FROM OIL LIFTING (US\$)				
	Qtr1 (16 <sup>th</sup> and 17 <sup>th</sup> Lift)	Qtr2 (18 <sup>th</sup> and 19 <sup>th</sup> Lift)	Qtr3 (20 <sup>th</sup> Lift)	Qtr4 (21 <sup>st</sup> and 22 <sup>nd</sup> Lift)	Total
Transfer to GNPC	55,218,538.01	57,237,473.34	24,471,694.21	43,784,797.98	180,712,503.53
o/w Equity Financing Cost	15,487,496.46	18,235,107.76	2,662,075.29	7,777,330.16	44,162,009.67
o/w Net Carried & Participating Interest	39,731,041.55	39,002,365.8	21,809,618.92	36,007,467.82	136,550,493.86
<b>GOG Net Receipt from Lifting</b>	<b>254,999,459.72</b>	<b>195,028,792.5</b>	<b>193,111,436.86</b>	<b>154,165,596.08</b>	<b>797,305,285.17</b>
o/w Annual Budget Funding Amount	102,268,194.45	102,268,194.45	102,268,194.45	102,268,194.45	409,072,777.80
o/w Stabilization Fund	106,911,885.69	64,932,418.64	63,590,269.69	36,328,181.14	271,762,755.16
o/w Heritage Fund	45,819,379.58	27,828,179.42	27,252,972.72	15,569,220.49	116,469,752.21
<b>TOTAL Receipt</b>	<b>310,217,997.73</b>	<b>252,266,265.84</b>	<b>217,583,131.07</b>	<b>197,950,394.06</b>	<b>978,017,788.70</b>

Source: MOF, 2014

Out of the amount allocated to ABFA, 39% was allocated to road and other infrastructure development; 31% to agricultural modernization; 30% to expenditure and amortization of loans for oil and gas infrastructure; while 0% was allocated to capacity building (including oil and gas) resulting from both the non-disbursement of the CDB loan for existing projects and the capping of the CDB facility later in 2014. (Tables 5.3 & 5.4). The non-disbursement of the full CDB loan resulted in the Government's inability to disburse all of its

planned matching funds. The main difference between the 2013 and 2014 utilization of ABFA was the significant decrease in the allocation to road infrastructure from 68.4% to 39% and the non-allocation to capacity building.

In compliance with Section 8 of the Petroleum Revenue Management Act 2011, (Act 815) all petroleum receipts for the 2014 fiscal year were published in at least two state-owned daily newspapers, on the MoF website and in the Gazette.

**Table 5.4: Utilization of Annual Budget Funding Amount (ABFA) on the Four Priority Areas 2011-2014 (GHC)**

Srn	Item	Expenditure	% of Total	Expenditure	% of Total	Expenditure	% of Total	Expenditure	% of Total
		2011		2012		2013		2014	
1	Expenditure and Amortization of Loans for Oil and Gas	20.0	7.6	100.0	19.3	137,9 20,84	25.4	163.0	30.0
2	Road Infrastructure	227.64	87.0	232.4	45.0	372,0	68.4	215.7	39.0
3	Agriculture Modernization	13.147	5.0	72.7		13,60	2.5	170.6	31.0
4	Capacity Building (including Oil and gas)	0.750	0.29		21.7	20,18	3.7	-	
5	<b>Total</b>	<b>261.539</b>	<b>99.89</b>	<b>516.8</b>	<b>100</b>	<b>543.7</b>	<b>100</b>	<b>549.4</b>	<b>100</b>

Source: MOF, 2014

**Table 5.5: Oil and Gas Revenue Management and Transparency**

Indicator	Baseline data (2013)	Targets 2014	Indicator Status in 2014	Progress towards target
1. Level of compliance with the provisions under the Petroleum Revenue Management Act	Na	Na	Annual report to Parliament Reconciliation Report Quarterly reports	
2. Proportion of petroleum revenue allocated to priority areas	Na	Na	\$186.14 million out of \$ 409.07 million for priority areas	

Source: MOF, 2014

### ***GNPC Utilization of Petroleum Funds***

In 2014, an amount of US\$ 180.7 million was transferred to GNPC, coming from equity financing and net carried and participating interest. About 74.8% of this transferred amount was spent in 2014 compared to 64% in 2013. Jubilee equity financing accounted for 26.2% of the expenditure.

The total resources committed to other projects besides Jubilee Field amounted to US\$14.23 million, representing 7.9% of funds transferred to the Corporation. General operational and administrative capital expenditure accounted for 7.2 % while staff cost was 4.9% of total expenditure in 2014 (Table 5.6).

**Table 5.6: Analysis of Utilization of Transfers to GNPC, 2011-2014**

Srnr	Description	Amount (US\$ million)			
		2011	2012	2013	2014
1	Equity Financing		124.63	68.32	44.16
2	40% of Net Carried and Participating Interest		106.32	154.10	136.55
3	<b>Total Amount Received</b>	<b>297.96</b>	<b>230.95</b>	<b>222.42</b>	<b>180.71</b>
4	Jubilee Equity Financing Cost	132.48	125.82	76.27	47.41
5	Acquisition & Processing of 2,612sq km of 3D plus other related G&G studies	30.31	-	-	-
6	TEN Project cost	-	-	3.03	-
7	Reservoir Characterization; Voltaian Basin project exp; ICT Upgrade & Organizational Development	-	10.78	-	-
8	Commitments for projects other than Jubilee		61.67	9.92	14.23
9	Gas Project - Fabrication & Installation of 14km gas pipeline and related cost	28.12	5.59	-	-
10	Staff Cost	17.04	9.01	9.7	8.81
11	General Operational & Administrative & capital expenditure	-	16.27	9.82	12.94
12	BNP Paribas	-	-	31.34	
12	BoG Transfer Charges	-	1.81	2.3	1.81
13	Amount Advanced to Ministry of Finance	-	-	-	50.0
14	<b>Total Expenditure As % of transfer</b>	<b>207.96</b> <b>69.8</b>	<b>230.95</b> <b>100.0</b>	<b>142.39</b> <b>64.02</b>	<b>135.20</b> <b>74.8%</b>

Source: MOF, 2014

### **Key Policy Measures, Strategies and Activities**

To ensure prudent management and utilisation of petroleum revenues, the following specific interventions were pursued in 2014:

- Oil and gas revenues allocated as ABFA were disbursed through the budget
- The Ministry Finance published the 2014 Annual Petroleum Report
- The Ministry of Finance submitted to Parliament the 2014 Reconciliation Report on the Petroleum Holding Fund.

#### **5.2.3. Protecting the Environment**

In order to track the progress towards attainment of the objective outlined in this focus area, the following indicator was adopted:

- Percentage of companies complying with condition of their respective Environmental Assessment (EA) and Environmental Management Plans (EMP) Permit

#### **Status of Selected Indicator:**



To ensure environmental safety of the oil and gas industry, the EPA conducted an Environmental Assessment (EA) of all companies and also inspected all companies to ascertain whether they were complying with the conditions under their Environmental Management Plans (EMP) Permits (Table 5.7).

**Table 5.7: Protecting the Environment**

Indicator	Baseline data (2013)	Targets 2014	Indicator Status in 2014	Progress towards target
1. Percentage of companies complying with condition of their respective Environmental Assessment (EA) and Environmental Management Plans (EMP) Permit	100% (all companies compliant)	100% (all companies compliant)	100% (all companies are compliant with condition of their respective Environmental Assessment (EA) and Environmental Management Plans (EMP) Permit	

*Source: MESTI/EPA, 2014*

**Key Policy Measures, Strategies and Activities**

The key policy measures, strategies and activities implemented to protect the environment in 2014 were as follows:

- Environmental Protection Authority (EPA) organized awareness creation on oil spill contingency planning and response in Ellebelle, Jomoro, Sekondi-Takoradi, Nzema East, Ahanta West and Shama districts in the Western Region and completed the Strategic Environmental Assessment of the oil and gas sector.
- Environmental Protection Authority (EPA) trained 163 agricultural input dealers and 100 Agricultural Extension Assistants in pesticide regulations, safe handling of pesticide and the proper management of pesticide retail outlets.
- Environmental Protection Authority (EPA) trained and created awareness of agricultural scientists and pesticide importers on the use of the ECOWAS harmonized pesticide bio efficacy trial protocols and the pesticide registration manual.

**5.2.4 Local Content Development**

In order to track the progress towards attainment of the objective outlined in this focus area, the following indicator was adopted:

- Share of indigenous companies in total contracts
- % share of domestic goods and services used in the sector

**Status of Selected Indicator:**

**Table 5.8: Local Content Development**

Indicator	Baseline data (2013)	Targets 2014	Indicator Status in 2014	Progress towards target
1. Share of indigenous companies in total contracts	Na	Na		
2. % share of domestic goods	Na	Na		

Indicator	Baseline data (2013)	Targets 2014	Indicator Status in 2014	Progress towards target
and services used in the sector				

*Source: Petroleum Commission, 2014*

### 5.2.5 Employment Creation

In order to track progress towards the attainment of the objectives outlined in this focus area two indicators were adopted:

- Amount of jobs created by oil and gas industry directly, including subcontractors
- No of Ghanaians employed in the oil and gas sector

#### Status of Selected Indicator:

**Table 5.8: Local Content Development**

Indicator	Baseline data (2013)	Targets 2014	Indicator Status in 2014	Progress towards target
1. Amount of jobs created by oil and gas industry directly, including subcontractors	Na	Na		
2. No of Ghanaians employed in the oil and gas sector	7,000	7,980		

## **CHAPTER SIX**

### **INFRASTRUCTURE AND HUMAN SETTLEMENTS**

#### **6.1 INTRODUCTION**

The GSGDA II recognises that the pace of socio-economic development of the country is linked directly to the quality of available infrastructure, as well as its human settlements. In this regard, the policies, programmes and projects implemented in 2014 were aimed at achieving results in the following focus areas:

- Transport infrastructure including road, railways, air transport and water ;
- Science, Technology and Innovation to support productivity and development;
- Information Communication Technology development;
- Social, Community and Recreational infrastructure;
- Energy supply to support industry and households; and
- Human settlements development, including housing and shelter, water and sanitation.

#### **A. INFRASTRUCTURE DEVELOPMENT**

##### **6.2 TRANSPORT INFRASTRUCTURE: ROAD, RAILWAY, WATER AND AIR**

Ghana's central location in the West African sub-region constitutes an important platform for the development of her transport infrastructure into a hub for regional and international trade and commerce. To ensure the achievement of this potential, the key policies and programmes implemented in 2014 were aimed at achieving the following objectives: establishing Ghana as a transportation hub for the West African sub-region; creating and sustaining an integrated transport and logistics system that facilitates the efficient movement, storage, packaging and distribution of goods across the country and beyond; integrating land use, transport planning, development planning and service provision; creating appropriate environment for private sector participation in the delivery of transport infrastructure; ensuring sustainable development and management of

the transport sector; developing adequate skilled humanresource base; and developing and implementing comprehensive and integrated policy,governance and institutional frameworks. The various modes of transportation within the sector are road, rail, air, sea, and inland water.

### **Status of Selected Indicators:**

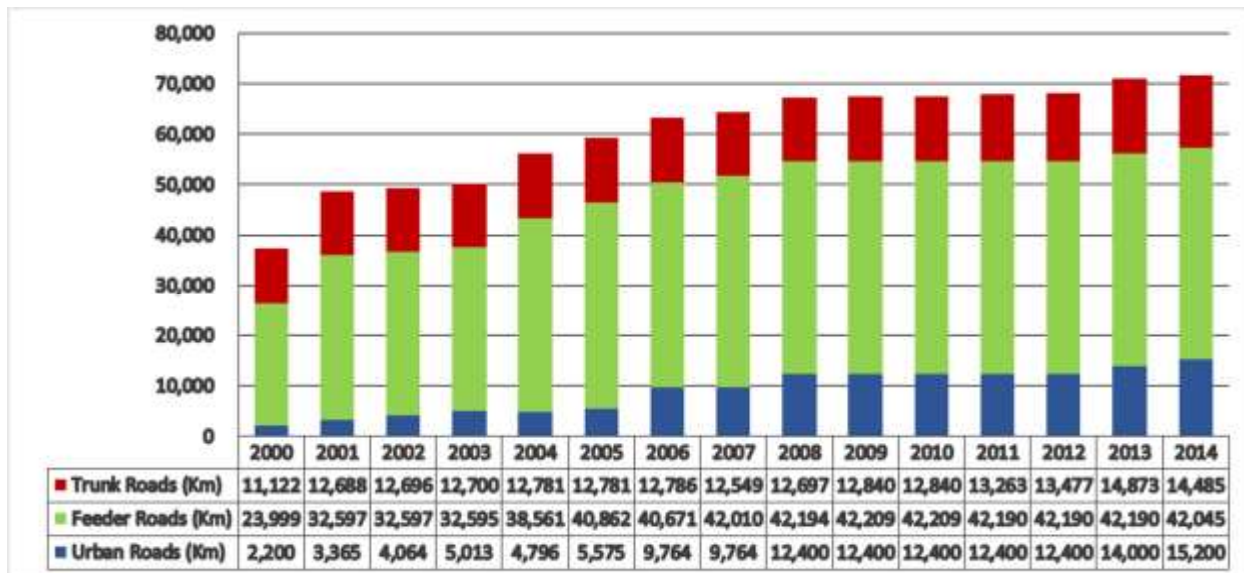
To monitor the progress towards the attainment of these objectives the following indicators were adopted:

- volume of goods transmitted through Ghana in the form of transit traffic and transit containers;
- number of passengers transiting through Ghana;
- Total road network size;
- Proportion of roads maintained/rehabilitated;
- Road condition mix;
- Annual accident statistics;
- Total air freight and number of air traffic passengers
- Passenger traffic and goods traffic by railways;
- Maritime traffic;
- Percentage change in turn-around time of vessel

#### **6.2.1 Road Transport**

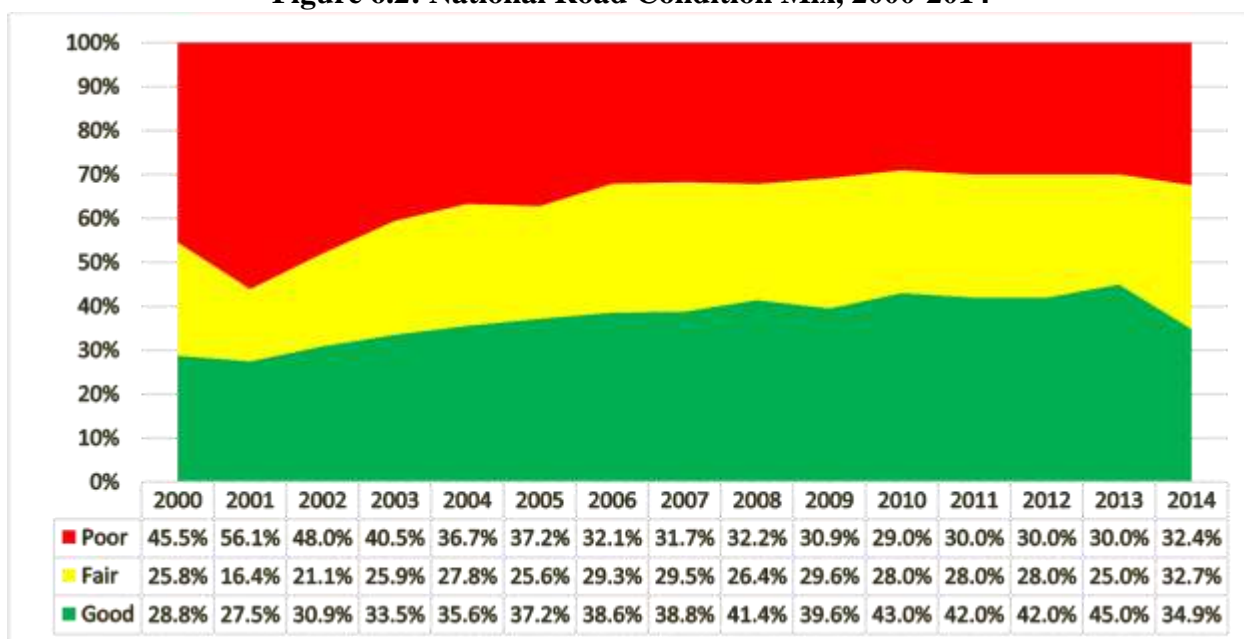
Road transport services account for over 95% of total transport supply in Ghana. The record of national network size of roads in 2014 was estimated at 71,729 kms. This represents just about 1% increase over the 2013 network size of 71,063 kms. The increase in network size is attributed mainly to an increase of 1,200kms in urban roads. Feeder roads constituted 58.6% of the national roads, trunk roads 20.2% and urban roads 21.2% (Figure 6.1). The condition report indicated a road condition mix of 34.87% in good condition, 32.69% fair and 32.44 % poor (Figure 6.2). This shows a deterioration in the road condition from 2013 when about 45% of the roads was in good condition.

**Figure 6.1: Total Road Network Size, 2000-2014**



Source: MRH, 2014

Figure 6.2: National Road Condition Mix, 2000-2014



Source: MRH, 2014

The main sources of funding for the road sector are the Road Fund, the Consolidated Fund, and donor inflows. The proportion of roads maintained/rehabilitated also declined from 45% in 2013 to 33% in 2014; this was far below the target of 50% set for 2014.

The estimates on the annual road crashes (accidents) indicate a decline from 14,390 in 2013 to 10,500 in 2014.

**Table 6.1: Development of the Road Transport**

Indicator	Baseline data (2013)	Targets 2014	Indicator Status in 2014	Progress towards target
1. Total Road Network Size: - Trunk road - Urban road - Feeder road	14,873 km 14,000 km 42,190 km	14,873 km 14,000 km 42,190 km	*14,484.92 km *15,200 km 42,045 km	
2. Road condition mix	45% good 25% fair 30% poor	45% Good 29% Fair 26% Poor	*34.87% Good *32.69% Fair *32.44% Poor	
3. Proportion of roads maintained/rehabilitated	45%	50%	*33%	
4. Annual accident statistics for each transport mode: - Road crushes - Maritime accident - Train derailments - Air traffic accidents	14,390	10,500  Na	10,500  Na	

Source: MRH, MOT

## 6.2.2 Railways

Passenger traffic decreased by 10.8% from 19,400 (thousand passenger-km) in 2013 to 2,129 (thousand passenger-km) in 2014. Goods traffic and passenger traffic recorded a 42.9% and 8.23% deviation off the target (Table 6.2).

**Table 6.2: Development of Rail Transport**

Indicator	Baseline data (2013)	Targets 2014	Indicator Status in 2014	Progress towards target
1. Passenger traffic and goods traffic by railways: - Passenger traffic (in 1000 passengers-km) - Good traffic (1000 tonnes-km)	19,470	25,857  83,160	2,129  35,658	

Source: MOT, 2014

## 6.2.3 Maritime and Inland Water Transport

Maritime traffic for both container and cargo recorded a decline. Container traffic declined from 849,548 (TEUs) in 2013 to 793,737 (TEUs) in 2014, while cargo declined from 16,970,304 tonnes in 2013 to 15,876,265 tonnes in 2014.

The turn-around times for vessels saw a decline in all ports. The port in Tema saw a decline from 142.27 in 2013 to 111.56 in 2014, while the Takoradi port saw a slight decline from 41 to 40 in 2013 and 2014 respectively.

**Table 6.3: Development of Marine and Inland Water Transport**

Indicator	Baseline data (2013)	Targets 2014	Indicator Status in 2014	Progress towards target
1. Maritime traffic : - Container traffic (TEUs) - Cargo traffic (tonnes)	849,548 16,970,304	1,048,000 17,058,600	793,737 15,876,268	
2. Percentage change in turn-around time of vessel • Tema • Takoradi	142.27 41.00	115 40	111.56 40	

Source: MOT, 2014

## 6.2.4 Air Transport

Domestic air craft movement saw a decline from 23,437 in 2013 to 16,978 in 2014, while international aircraft movement experienced a slight increase from 23,437 in 2013 to 24,871 in 2014. Domestic passenger movements also saw a decline from 778,466 in 2013 to 719,234 in 2014. The decline in international passengers in 2013 continued in 2014 to 1,650,520. Total freight declined from 43,688 metric tonnes in 2013 to 54,390 tonnes in 2014. The volume of goods transited through Ghana in 2014 fell short of the target set whereas number of passengers transiting through Ghana exceeded its target in 2014 (Table 6.4).

**Table 6.4: Development of the Air Transport Sector**

Indicator	Baseline data (2013)	Targets 2014	Indicator Status in 2014	Progress towards target
1. Volume of goods transited through Ghana: - Transit traffic - Transit Container	Na Na	652,051 tonnes 37,284 TEUs	609,320 tonnes 27,978 TEUs	
2. Number of passengers transiting through Ghana	Na	177,773	194,594	
3. Total air freight and number of air traffic passengers - domestic aircraft movement - international aircraft movement - domestic passengers - international passengers - Freight Movement in (tonnes)	23,437 23,437 778,466 1,669,603 43,688	25,150 15,787 652,055 1,729,289 47,969	16,978 24,871 719,234 1,650,520 54,390	

Source: MOT, 2014

## Key Policy Measures, Strategies and Activities

As a strategic support sector under the GSGDA II, the following key activities were undertaken in 2014 in the road, rail, maritime and air transport sectors:

### Road Transport Sector

The Road Sector maintained its focus on routine and periodic maintenance, and minor rehabilitation activities to protect the huge investment made by Government in the provision of the road infrastructure.

Routine maintenance was undertaken on 9,533km trunk, 10,061km feeder and 6,313km urban road networks. Periodic maintenance activities, comprising re-gravelling, spot improvement and resealing works were carried out on 100km, 948km and 645km trunk, feeder and urban road networks respectively. Minor rehabilitation works were done on 1,631km stretch of roads.

In all, a total of 257km of development works (representing 75% of the approved program), 227km (representing 117% of approved program) and 30km (representing 20% of approved program) have been executed on the trunk, feeder and urban road networks respectively.

Twelve (12) Bridges at various locations have been completed on the feeder roads network as at the end of December, 2014.

The details of progress on some of the projects are shown below;

Project	Dec 2012	June 2013	Dec. 2014
Tetteh Quarshie – Madina	88%	92%	98%
Asankragwa-Enchi Road	78%	90%	93%
Buipe – Tamale	37%	62%	100%
Ffulso-Sawla	20%	38%	98%
Dodi-PepesuNkwanta	Commencement	14%	66%
TarkwaBogoso-Ayamfuri	6%	11%	64%
Agona Junction – Elubo	Commencement	11%	68%
Awoshie – Pokuase Road Project	26%	64%	97%
Burma Camp Roads	Signing of Contract	36%	89%
Giffard Road	Signing of Contract	38%	88%
Sunyani Road (in Kumasi)	70%	80%	86%

As at the end of December the following projects were also at various stages of completion:

- Kasoa By-pass – 55 percent
- Kwame Nkrumah Interchange – 85 percent
- Polo Grounds By-pass – 92 percent
- Ayamfuri – Asawinso - 47 percent

To ensure quality is infrastructure delivery the Ministry completed the monitoring of projects in ten (10) regions as at December 2014. A total of 231 road projects were inspected.



The Road Sector pursued the implementation of the Law on Axle Load Limit as stipulated in the New Road Traffic Regulation LI 2180. Intensive education and sensitization on the new regulation has been undertaken for key stakeholders such as Freight Forwarders, Haulers, Truckers, Ports, Private Weighbridge Station Operators at Aflao, Kumasi and Nkwanta. Overloading is now reported at less than 10% for vehicles weighed.

Workshops were held with various organisations and CSOs such as the Ghana Police Service, Ghana Shippers Authority, Burkina Faso Shippers Authority and the Borderless Alliance on improving trade facilitation along Ghana's transit corridors.

Construction of a Joint Border Post (JBP) at Neope for Ghana and Togo was substantially completed. The National Road Transport and Transit Facilitation Committee of the Ministry of Roads and Highways organized an education and sensitization workshop on the operationalization of the Neope JBP for all border agencies. Further training of Border Agencies will be undertaken in 2015.

The Road Sector commenced the use of Public Private Partnership (PPP) model for the financing, construction and management of the following road infrastructure projects:

- Accra – Takoradi: The Pre- feasibility study on the dualization of the Accra-Takoradi road was completed.
- Accra – Kumasi: Packaging and documentation by a Transaction Advisor will be completed by the end of the year and further approvals will be obtained to finalise the contract in 2015.
- Accra-Tema Motorway: The procurement of Transaction Advisor to undertake feasibility study for the widening and rehabilitation of the Accra-Tema Motorway is in progress.

### **Railway Transport**

The Ghana Railway Development Authority is undertaking the re-construction of the Sekondi-Takoradi via Kojokrom section of the Western Line to provide sub-urban passenger rail transport service between the twin cities of Sekondi-Takoradi. Re-construction works is about 35 percent complete and expected to be completed by the end of 2015.

To decongest the Tema port and bring import and export services closer to shippers in the northern part of the country, a PPP Transaction Advisor was selected for the reconstruction of the Eastern Railway line to link the Boankra inland port.

### **Maritime and Inland Transport**

The Ministry procured 3 No. 50-Seater high speed passenger ferries, to improve passenger and cargo services along the Volta Lake. One was delivered to Akosombo port and the other two are yet to be cleared at the Tema port. In addition, one Modular Passenger/Freight Vessel will be delivered by the end of the year.

To improve transportation services on the Volta Lake, construction work on the Eastern Corridor Multi-Modal Transport project is on-going whilst landing sites, access roads, ship building, ports and floating docks have commenced.

### **Air Transport**

To improve infrastructure at the Kotoka International Airport (KIA), the Ministry commenced work on the expansion of the arrival hall, construction of the southern apron and completion of 3 new boarding gates bringing the total to five.

The construction of a 7-Storey Ghana Aviation Training Academy (GATA), which will support the development of the human resource capacity of the industry, is about 80 percent complete.

Work on the upgrading of the Tamale Airport as an alternative international airport to KIA commenced. The runway and installation of the Air Ground Lighting System are on-going.

Rehabilitation of the Kumasi Airport runway is about 48 percent complete. Installation of the Instrument Landing System was completed, whilst that of the Airfield Lighting System commenced in 2014.

## **6.3 SCIENCE AND TECHNOLOGY TO SUPPORT PRODUCTIVITY AND DEVELOPMENT**

Science, Technology and Innovation (STI) is seen as a principal vehicle to drive Ghana's development agenda. The policy objectives to be achieved under this focus area include:

- Promote the application of science, technology and innovation in all sectors of the economy
- Strengthening the institutional framework to promote research and development as well as the application of STI in all sectors of the economy.

### **Status of Selected Indicators**

To assess the progress of implementation of the science, technology and innovation policies and programmes under GSGDA II, the following indicators were adopted:

- Research and development (R&D) expenditure as percent of GDP;
- Number of research findings adopted by industry; and
- Rate of adoption of improved locally-packaged technologies by MSMEs

The assessment of the indicators shows that apart from the share of R&D expenditure as a percentage of GDP which remained the same, all the other indicators recorded a decline in 2014. The number of research findings adopted by industry significantly decline from 54 in 2013 to 1 in 2014. The rate of adoption of improved locally-packaged technologies by MSMEs also suffered a decline from 48% in 2013 to 20% in 2014 (Table 6.5).

**Table 6.5: Science, Technology and Innovation**

Indicator	Baseline data (2013)	Targets 2014	Indicator Status in 2014	Progress towards target
1. Research and development (R&D) expenditure as percent of GDP	0.05%	0.05%	0.05%	
2. Number of research findings adopted by industry	54	Na	1	
3. Rate of adoption of improved locally- packaged technologies by MSMEs (%)	48%	Na	20%	

*Source: MESTI/CSIR/GAEC, 2014*

### **Key Policy Measures, Strategies and Activities**

The key policy measures and strategies implemented to promote Science, Technology and Innovation (STI) in 2014, included the following:

- The Council for Scientific and Industrial Research (CSIR) developed pest management strategies using seed extracts of Jatrofa and Neem plants to protect groundnut pods from insects damage for a storage period of 6 months in order to reduce post-harvest loses.
- The CSIR also developed potentially cost effective feed packages for small ruminants to improve productivity of sheep and goats as well as using root and tuber crop by-products to develop feed for livestock production, specifically for pigs. In addition it developed feed packages for commercial rearing of grass cutters to enhance meat production and livelihood of small-scale farmers.
- The CSIR promoted the utilization of Biochar among farmers to improve soil fertility and crop productivity. The Council established that, a combined rainwater management and soil fertility improvement techniques have better effect on seed and Biomass yields of maize and soya beans in the three Northern Regions.

## **6.4 DEVELOPING INFORMATION AND COMMUNICATION TECHNOLOGY (ICT)**

The main policy objectives for the Information and Communication Technology (ICT) under GSGDA II (2014-17) are:

- promotion of rapid development and deployment of ICT infrastructure;
- strengthening of the institutional and regulatory framework for managing the ICT sub-sector; and
- promotion and use of ICT in all sectors of the economy.

### **Status of Selected Indicators:**

To monitor the progress towards the achievement of the objectives the following key indicators were adopted:

- Size of ICT industry
- Broadband capacity availability for ICT development
- Percentage change in the value of total investment in the ICT sector

- Teledensity/Penetration Rate
- Dropped-call-rate (DCR)
- Internet penetration Rate

The share of the ICT sector in the overall service sector increased from 24.7% in 2013 to 30.05% in 2014 (Table 6.6). The number of calls cut off as a percentage of all call made reduced from a high of 2.21 in 2013 to 0.05 in 2014.

**Table 6.6: Developing Information and Communication Technology**

Indicator	Baseline data (2013)	Targets 2014	Indicator Status in 2014	Progress towards target
1. Broadband capacity availability for ICT development	National submarine cable capacity is 12.3 terabits	Na		
2. Percentage change in the value of total investment in the ICT sector	Na	Na		
3. Size of the ICT Industry	24.7% (service sector) 2.4 (Overall GDP)	Na	30.05% (service sector)	
4. Teledensity/Penetration Rate	108.23% (28,296,904)	Na	114.35%	
5. Dropped-call rate (DCR)	2.21	0.05	0.05	
6. Internet penetration rate:		Na		
• Subscribers	9.68% (2,529,818)		59.02%	
• Providers	67		55%	
• Schools	Na		Na	

*Source: MOC, 2014*

The penetration rate of telephones increased from 108.2% in 2013 to 114.35% in 2014. On the other hand, the number of subscribers of internet service increased from 9.7% in 2013 to 59.02% in 2014. The number of providers of internet to subscribers saw a decrease from 67% in 2013 to 55% in 2014.

### **Key Policy Measures, Strategies and Activities**

The following were the key policy measures and activities undertaken in the Information and Communication Technology sector in 2014:

- The Ministry through the National Communications Authority (NCA) collaborated with the Ghana Standards Authority to develop the Ghana Minimum Technical Specifications in line with the ECOWAS common specifications for the Digital Terrestrial Television (DTT) receivers. The specifications were published in January, 2014 for implementation. In addition, the procedure for the award of the Conformance Logos for the Digital TV sets and decoders were published and the NCA signed Conformance Test Agreements with 9 test laboratories.
- The Ministry through the Ghana Investment Fund for Electronic Communications (GIFEC) provided internet connectivity for 100 institutions. In addition, ICT Centres were established at Ghana Fire Service Regional Offices whilst 600 desktop computers were distributed to 40 Community Information Centres. The Ministry also facilitated

capacity building for 62 nursing training schools and trained 42 Community Information Centre managers.

- To offer girls the opportunity to opt for the study of science, engineering and mathematics subjects, the national girls in ICT celebration was held in Koforidua. Out of a target of 500, a total of 411 girls from 48 public schools participated in the programme.
- The Ministry reviewed the Draft Broadcasting Bill aimed at strengthening and sanitizing the broadcasting industry and forwarded it to the Ministry of Justice and Attorney-General's Department for finalization and subsequent submission to Cabinet.
- Meet-The-Press Series were organized for 12 Ministries to promote transparency and accountability in the operations of MDAs and MMDAs and to keep the citizens informed about development programmes.
- The KAICE continued its core training activities on software development, security and networking among others, as well as organized sandwich programmes for tertiary students, executive and corporate institutional bodies. Over 2,000 participants benefited from the training. The Centre also established distance learning and launched a number of distance education courses to support ICT skills acquisition and e-government functions.
- The construction of the 780km Eastern Corridor fibre optic project linking Ho to Bawku and from Yendi to Tamale is on-going. Some of the areas so far covered are: Yendi to Tamale link is fully completed and ready for use. Bawku to Gushegu is 65 percent, Gushegu to Yendi is 95 percent, Yendi to Bimbila is 90 percent, Bimbila to Nkwanta is 70 percent, Nkwanta to Jasikan is 40 percent, Jasikan to Kpando is 30 percent and Kpando to Ho is 55 percent complete.
- Under the e-Government Infrastructure Project, an additional 90 Long Term Evolution (LTE) sites are being built across the country. Thirty of these sites were completed and work on the remaining 60 is ongoing.
- The Ministry through NITA embarked on the deployment of an enterprise level hospital administration, radiology information and communications systems for managing the health care provision needs of Korle Bu, Wa Regional and Zebilla District Hospitals. This centralized electronic medical record system will provide unique patient ID that can be used by a patient to access medical care nationwide.

## **6.5 ENERGY SUPPLY TO SUPPORT INDUSTRY AND HOUSEHOLDS**

In the medium-term, priority policy interventions will focus on the following key areas: electricity and thermal energy; renewable and other sources of energy (hydro, biomass, wind, and solar, waste-to-energy, geothermal, and nuclear); access to petroleum products; energy efficiency and conservation; transportation of energy products; energy and environment; regulatory environment; mobilisation of investment for energy sector development; and building human resource capacity; and research and development.

### **Status of Selected Indicators:**

To monitor progress towards the attainments of these objectives the following indicators were adopted:

- Percentage of households with access to electricity;
- Average number of hours of electricity outage per consumer per year
- Additional kms of transmission and distributional lines constructed
- Power supply deficit/surplus
- Percentage of indigenous energy sources such as: hydro, thermal, renewable (i.e. solar)
- Percentage change in transmission losses

Biomass in the form of firewood and charcoal continues to be the major source of energy in the country, followed by petroleum products and electricity. The proportion of the population with access to electricity has increase from 72% in 2013 to 76% in 2014. The average number of hours of electricity outage per customer per year worsened significantly in 2014 for both customers under ECG and NEDCo. Customers under ECG suffered worsened electricity outages from 173.76 for urban areas and 146 for rural areas in 2013 to 653.30 and 623 for Urban and rural areas respectively in 2014 while those under NEDCo suffered worsened electricity outages from 95 for urban areas and 142.62 for rural areas in 2013 to 170 and 173 for Urban and rural areas respectively.

**Table 6.7: Energy Supply to Support Industry and Households**

Indicator	Baseline data (2013)	Targets 2014	Indicator Status in 2014	Progress towards target
1. Percentage of households (or population) with access to electricity	72% 47.3%	76% 51.7%	76% Na	
2. Average number of hours of electricity outage per consumer per year	NEDCo SAIDI: Urban – 95 Rural-142.62 ECG SAIDI: Urban-173.76 Rural – 146	NEDCo SAIDI: Urban:170 Rural:173 ECG SAIDI: Urban-653.30 Rural-623	<b>NEDCo</b> SAIDI: Urban-170 Rural-173 <b>ECG</b> SAIDI: Urban- 653.30 Rural-623	
3. Additional kms of transmission and distributional lines constructed	33kV Lines-130.51km 11kV Lines-607.56Km LV Lines - 33,784.83Km  NEDCo: 169	33kV-835.22Km 11kV-344.59Km LV-10,703.47  NEDCo: 670	<b>ECG</b> -33kV-835.22Km 11kV-344.59Km LV-10,703.47 <b>VRA</b> - 34.5kV-131.6Km 11.5kV-105.9Km LV-474.3	
4. Power supply deficit/surplus	92%	100%	85%	
5. Percentage of indigenous energy sources such as: - Hydro - Thermal - Renewable sources (i.e. solar)	VRA, BUI, TICo, SAPP, CENIT 63.97 36.01 0.02	Na	64.98 34.99 0.03	
6. Percentage change in: - Transmission losses - Distribution losses	ECG-23.37% NEDCo-21.2%	ECG-24.13% NEDCo-22.0%	ECG-24.13% NEDCo-22.0%	

Source: ECG/VRA, 2014

ECG and VRA continued to expand the transmission, sub-transmission and distribution networks. ECG added 11,883.38kms of sub-transmission and distribution lines consisting of 33kv, 11kv and LV to its existing plant, VRA added 711.8 kms of lines.

The relative importance of hydroelectric power in the overall power supply continues to decline, as more thermal plants come on stream. In 2014, the share of hydroelectric power increased slightly from 63.9% to 64.98% with a decline in thermal power. A small percentage (0.03) of solar was also generated.

There was marginal worsening in distribution losses for ECG and NED, from 23.37% in 2013, to 24.13% for ECG and 21.2% to 22% for NED, all above the PURC benchmark of 21%.

### **Key Policy Measures, Strategies and Activities**

To ensure reliable supply of high quality energy products and services for all sectors of the economy, the following policy measures and strategies were implemented in 2014:

- The Ministry as part of measures towards efficient use of energy, launched 3 energy conservation programmes namely Switch-off-deep freezers, Save-a-Watt and Save Energy/Money
- An energy efficiency strategy and a public education campaign documents which look at the long term strategy to reduce demand and address the current power shortage challenges were developed. Under the Energy Efficiency and Transformation of Refrigerating Appliance Market Programme, over 4,000 used refrigerators were turned in and replaced with new ones.
- Work on the Kpone Thermal Power Plant is progressing and commissioning of one unit (110MW) is expected to commence by the end of the year with commercial operations for the entire 220MW starting by the first quarter of 2015. Work on the 110MW TICO expansion is about 90 percent complete and also expected to be completed by the end of the year. Feasibility studies and Environmental and Social Impact Assessment were completed on the proposed 12 MW Solar PV plant in the Upper West Region.
- Pursuant to Government's policy to create a non-congested transmission system, GRIDCO commenced the Substations Reliability Enhancement Project (SREP) to improve operational reliability, security and control among others. The Sunyani-Mim 161kV line Upgrade and the Kumasi 2nd Bulk Supply Point (BSP) were completed. Work on the Tumu-Han-Wa 161kV line is 80 percent complete. The Wa and Tumu sub-stations are to be commissioned by the end of 2014. The Prestea-Bogosu 161kV line is 90 percent complete whilst the Kpando-Kadjebi 161kV line is 35 percent complete.
- To improve supply and operational reliability and reduce system losses, ECG undertook system loss and network improvement projects in Accra West and Teshie, upgraded 8 primary sub-stations and migrated 2,100 out of 2,555 MDAs to the prepayment metering system whilst 3 new Bulk Supply Points (BSPs) and construction of 11 new primary sub-stations commenced.

- In line with the goal to achieve universal access to electricity by 2016, 1,081 communities were connected to the national electricity grid in 2014. The breakdown is as follows; Self Help Electrification Project (94), Outstanding Upper West Electrification Projects (8), Northern Regional Electrification by Hunan (82), Upper East Regional Electrification (120), Extension of Upper West Electrification Project (363) and the US-Exim Bank funded Electrification Project by Weldy Lamont (414).
- The Ministry undertook an assessment of solar stand-alone power systems for 150 off grid basic schools in 98 districts. Fifty solar energy systems are expected to be installed by the end of the year and the remaining 100 to be installed in 2015 to power ICT facilities in off grid basic schools.
- Under Solar Lantern Promotion programme, 10,372 lanterns were distributed at subsidized rate. Procurement for additional 50,000 is at 98 percent complete and expected to be distributed in 2015.

## **B. HUMAN SETTLEMENT DEVELOPMENT, INCLUDING HOUSING AND SHELTER, WATER AND SANITATION**

### **6.6 HUMAN SETTLEMENTS DEVELOPMENT**

The main policy objective of human settlement development is to ensure that all organised human activities within our cities, towns, and villages are undertaken in a planned and spatially determined manner in order to bring about equity and enhance socio-economic development. The policy focuses on spatial/land use planning and management; urban development and management; housing/shelter, slum upgrading and prevention; disaster prevention; rural development and management.

#### **Status of Selected Indicators:**

To monitor human settlements development, the following key indicators have been adopted:

- Human settlements Policy formulated and adopted;
- Percentage of MMDAs with professional Town Planning officers
- Urban development Policy formulated
- Rural Development Policy and Action Plan approved
- Average number of rural service centres established per district to support agriculture and agro-based industries
- Establishment of national Human Settlements Commission

In 2009 a Human Settlements Policy study was conducted and a Policy was later formulated and subjected to discussion. In 2013, baseline studies for policy formulation were completed; but no action was taken in 2014 due to the lack of funding. There are only 34% of MMDAs that have professional Town Planning officers. The target for the establishment of National Human settlements commission was for the relevant law to be passed in 2014 however this was not



achieved although the department is pursuing the passage of the land use and spatial planning law to catalyse establishment of the Authority.

**Table 6.8: Human Settlements Development Indicators**

Indicator	Baseline data (2013)	Targets 2014	Indicator Status in 2014	Progress towards target
1. Human Settlements Policy formulated and adopted	Baseline studies for policy formulation completed	Review of baseline report for policy completed	No action	
2. Percentage of MMDAs with professional Town Planning Officers	Na	Na	34%	
3. Urban development Policy formulated	Na	Review of policy		
4. Rural Development Policy and Action Plan approved	Na	Na		
5. Average number of rural service centres established per district to support agriculture and agro-based industries	Na	Na		
6. Establishment of the National Human Settlements Commission	Land Use and Spatial Planning Authority not established. Legal backing for establishment 80% done.	Relevant law establishing Authority passed	No action/progress	

*Source: MESTI/TCPD, 2014*

### **Key Policy Measures, Strategies and Activities**

To promote sustainable, spatially integrated, and orderly development of human settlements, the following policy measures and strategies were implemented in 2014:

- The Town and Country Planning Department (TCPD) collected data from 20 MMDAs on permitting indices and baseline data on the state of development and building permitting to ensure compliance to lay down development schemes. In addition, 25 stakeholders were trained in Geographic Information Systems (GIS) applications related to street addressing.

## **6.7 HOUSING AND SLUMS UPGRADING**

The policy objectives for housing under the GSGDA are: (i) Increase access to adequate, safe, secure and affordable shelter; (ii) Improve and accelerate housing delivery in the rural areas; and (iii) upgrade existing slums and prevent the occurrence of new ones.

### **Status of Selected Indicators:**

The key indicators identified to track the progress towards the attainments of these objectives was: (i) proportion of people living in slum areas (5 largest cities).

**Table 6.9: Housing and Slum upgrading**

Indicator	Baseline data (2013)	Targets 2014	Indicator Status in 2014	Progress towards target
1. Proportion of people living in slum areas (5 largest cities)	Na	Na		

### **Key Policy Measures, Strategies and Activities**

To ensure improved access to safe, adequate and affordable housing, the following policy measures, activities and strategies were implemented in 2014:

- The Ministry rehabilitated and refurbished 56 No prestige bungalows. Six hundred and eighteen out of a target of 836 housing units under the Keta Sea Defence Resettlement Programme were completed.
- The construction of the 5,000 housing units at Saglemi-Ningo Prampram and the completion of 4,720 affordable housing units in Greater Accra, Ashanti, Northern, Upper West and Eastern Regions are on-going and will continue in 2015.
- Under the Phase 1 of the construction of housing units for the Security Services, 168 housing units of 2 and 3 bedrooms were completed in Sakumono near Tema in the Greater Accra Region. The Phase II, comprising of 368 housing units commenced and will continue in 2015.

## **6.8 SAFE WATER**

Improving access to safe drinking water in rural and urban communities continues to pose a challenge to the Government and stakeholders in the water and sanitation sector. The two agencies which operate under the Ministry of Water Resources, Works and Housing responsible for the supply of safe and affordable water are the Ghana Water Company Limited for the urban areas and the Community Water and sanitation Agency (CWSA) for the rural communities. The policy objectives of GSGDA II are: (i) accelerate the provision of affordable and safe water; and (ii) the management of water resources.

### **Status of Selected Indicators:**

The following indicators were adopted to monitor the progress towards achieving the objectives:

- Percentage of population with sustainable access to safe drinking water sources;
- Percentage distribution losses
- Total number of functional water systems constructed/rehabilitated
- Percent of districts in the country benefiting from/ enjoying safe water services.

Assessment of progress in 2014 shows that the percentage of the population with access to safe water in the urban areas declined slightly from 57.47% in 2013 to 55.90% in 2014, compared to the target of 65.76% set for 2014. The rural areas continued to record improvements in access to safe drinking water. With 70.1% of the population in rural areas with access to safe water in 2014 against 63.38% in 2013, though it still fell short of the target of 72% set for 2014 (Table 6.10). Percentage distribution losses of water improved from 50% in 2013 to 49.04% in 2014 but still fell below a target of 45%.

**Table 6.10: Safe Water Indicators**

Indicator	Baseline data (2013)	Targets 2014	Indicator Status in 2014	Progress towards target
1. Percentage of population with sustainable access to safe drinking water sources	Urban:57.47% Rural: 63.38%	Urban:65.76% Rural: 72%	Urban:55.90% Rural: 70.1%	
2. Percent distribution losses	50%	48%	49.04%	
3. Total Number of functional water systems constructed/ rehabilitated		Na		
- boreholes, with hand pumps (new)	635			
- hand-dug wells, with hand pumps (new)	25			
- piped water system/schemes	66			
- hand dug wells rehabilitated	0			
- boreholes rehabilitated	94			
4. Percentage of districts in the country benefiting from/enjoying safe water services	181	181		

*Source: CWSA/ GWCL, 2014*

### **Key Policy Measures, Strategies and Activities**

To accelerate the provision of affordable and safe water, the following policy measures, strategies and activities were undertaken in 2013:

- To conserve and preserve water bodies as well as provide valuable socio-economic services, a Buffer Zone Policy was officially launched and pilot schemes set up in the Densu, Tano and White Volta river basins
- To ensure uniform and adequate level of safety for all dams throughout the country, a Regulation on Dam Safety was developed and will be laid before Parliament in 2015.
- The Ministry continued with its major expansion and rehabilitation works on the following projects; Kpong Water Supply Expansion to add 40MGD of water to the supply system is about 98 percent complete. Production of water from the system will commence in 2015. The Accra Tema Metropolitan Area (ATMA) Rural Water Supply Rehabilitation & Expansion Project is completed. The Project added 9.24MGD of water to the supply system this year.
- The Mampong Water Supply Project was completed in May this year. Also, the Five Towns (Kibi, Osenase, Apedwa, Anyinam and Kwabeng) Water Supply Project to

produce a total of 1.5MGD was completed. Boreholes are being sunk for the Anyinam system, due to pollution of the surface water source. Also, the 3.16MGD Essakyir Water Supply Project was completed.

- The Nsawam Water Supply Expansion Project to add 1.63MGD of water is expected to be completed this year whilst the Kumawu, Kwahu Ridge, Konongo Water Supply Project is 60 percent complete and will add 8.47MGD of water to the supply system when completed. The rehabilitation and expansion works of the Wa Water Supply Project and the AkimOda, Akwatia, Winneba Water Supply Project are on-going. Work on the supply of water from Sekyere-Heman to Cape Coast and Sekondi-Takoradi is in progress.
- Under the Sustainable Rural Water and Sanitation Project, the Community Water and Sanitation Agency (CWSA) continued with the provision of potable water to rural communities with the following achievements: - 782 boreholes out of the target of 1,200 in Central, Western, Northern, Upper East and Upper West Regions were successfully drilled. Drilling of boreholes in the BrongAhafo Region, rehabilitation of 9 small town water systems in Upper West and Northern Regions, construction of 47 small town water systems are at various levels of completion. 250 institutional latrines out of the 450 were completed.
- Under the Peri-Urban, Rural and Small Towns Water and Sanitation Project in the Brong-Ahafo Region, 11 out of 15 small town piped systems were completed whilst 79 out of 101 institutional latrines were also completed.
- Five projects under the Northern Region Small Towns Water and Sanitation Project (NORST) were completed in Bunkpurugu-1, Karaga-1, Yendi-2, and Nanumba North -1. Three other projects at Binkera, Tanga, Makayili, and Tatali were completed.
- Government is also undertaking water supply extension works at Akorkeri and NkawkawNkona-Kwaja small town water supply rehabilitation and expansion programmes which are at various stages of completion.

## **6.9SANITATION**

Increased access to improved environmental sanitation and hygiene education constitute critical components of policy to ensure a favourable state of health of the general population. A healthy population facilitates sustained poverty reduction and socioeconomic growth of the country. Improved environmental sanitation contributes significantly to the reduction and prevention of water and sanitation-related diseases such as malaria, typhoid and dysentery.

Over the medium-term the implementation of policy interventions will focus mainly on: accelerating the provision of improved environmental sanitation facilities.

### **Status of Sanitation Indicators:**

To track progress towards the attainment of these key objectives, the following indicators have been adopted:

- Percentage of population with access to improved sanitation services

- Proportion of waste generated and properly disposed off in major cities and towns; solid and liquid
- Percentage of communities or districts with Open Defecation Free (ODF) status

**Table 6.11: Selected Sanitation Indicators**

Indicator	Baseline data (2013)	Targets 2014	Indicator Status in 2014	Progress towards target
1. Percent of population with access to improved Sanitation services	14% (Source: JMP, 2014)	Na		
2. Proportion of waste generated properly disposed off (major towns/cities): - Solid - Liquid	75% 1%	Na 1%		
3. % of communities or districts achieving open defecation free (ODF) status	Na	Na		

Source: MLGRD (EHSD), 2014

### **Key Policies, Strategies and Activities**

To improve sanitation in the country, the following policy measures, strategies and activities were undertaken in 2014:

- The Ministry under the Community Led Total Sanitation (CLTS), undertook activities in 7 regions, except in Ashanti, Western and Greater Accra. In all, 3,000 out of over 5,000 communities were declared Open Defecation Free (ODF). In addition, 1,500 CLTS field officers were trained in facilitation, supervision, monitoring and evaluation. An information management system called BASIS was developed and rolled out in 5 of the current 7 CTLS regions to aid reporting.
- A 3-way solid waste segregation program was piloted within the Ministry. The program is to ensure waste reduction, reuse and recycling to facilitate value addition to the waste we generate. It involves the provision of Green, Blue and Brown coloured bins to receive organic, plastic and paper wastes, respectively.
- A sewerage treatment plant was constructed at Legon to serve the University of Ghana and its environs. A sewage dewatering plant was also installed at KorleGonno to reduce the amount of sewage that is discharged into the sea.