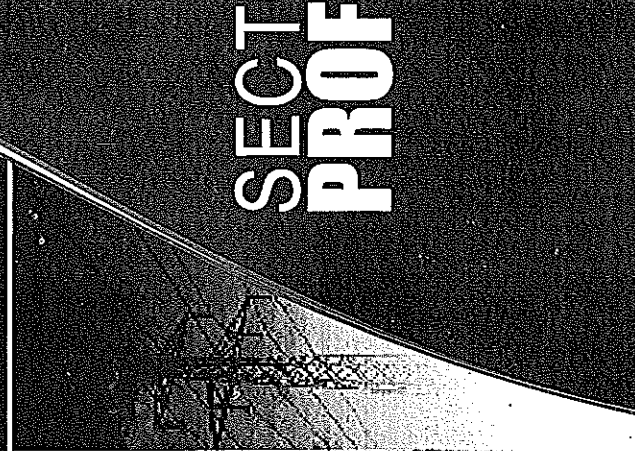
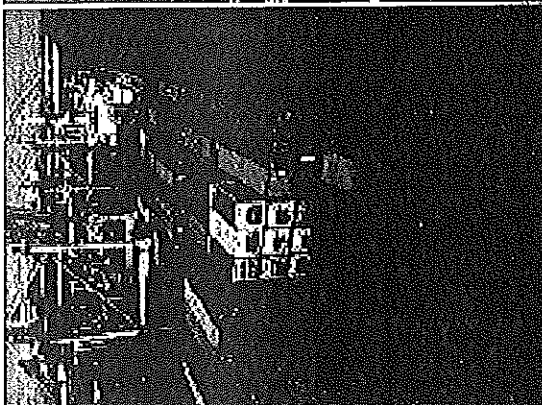
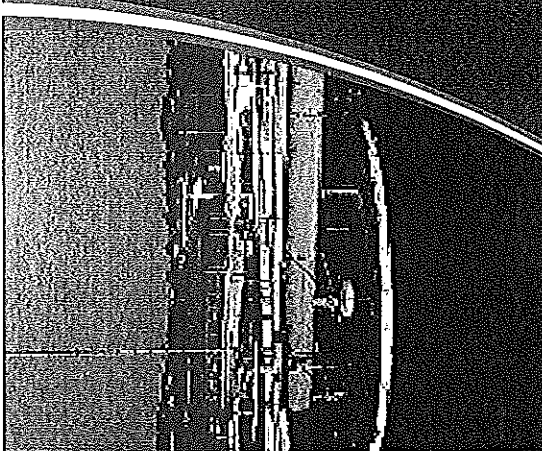
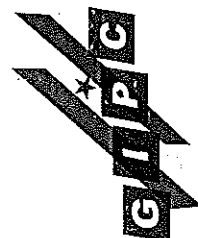




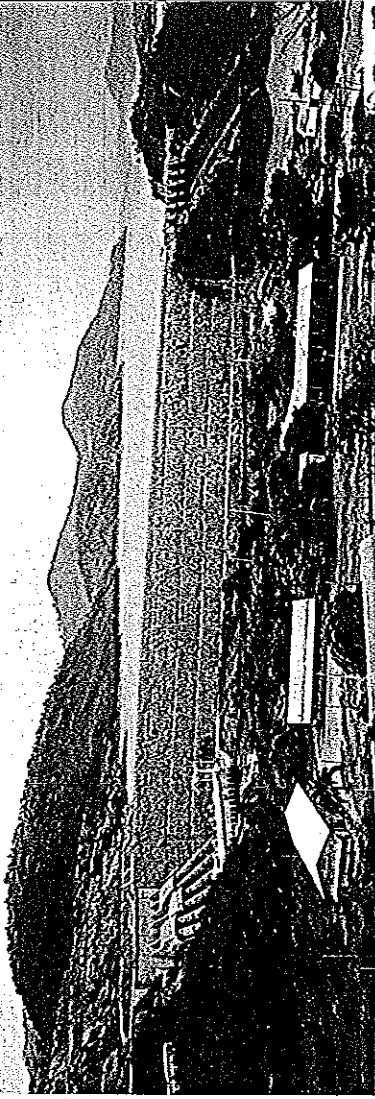
SECTOR PROFILE

INFRASTRUCTURE



Ghana Investment Promotion Centre
Public Services Commission Building
Ministries, Accra

P. O. Box M193 Accra, Ghana
Teli: +233 302 665125 - 9
+233 302 521238 - 42
Fax: +233 302 663801 / 663655
Email: info@gipcghana.com
Website: www.gipcghana.com



Akosombo Dam

SECTOR OVERVIEW

The Infrastructure industry consists of the following sub-sectors:

➤ Electricity
➤ Water and Sanitation
➤ Telecommunications
➤ Roads and Transport

Electricity sub-sector

The electricity sector involves the generation, transmission and distribution of electrical energy for industrial, commercial and domestic use in Ghana. In Ghana electricity is run by three utility companies; the Volta River Authority (VRA), Electricity Company of Ghana (ECG) and Ghana Grid Company (GRIDCO).

The Volta River Authority's primary function is to supply electrical energy and therefore the Authority is responsible for the generation of electricity in Ghana. VRA supplies electricity in bulk to Electricity Company of Ghana for distribution to consumers.

VRA however distributes power in Northern Ghana covering Brong Ahafo, Northern, Upper East and Upper West Regions through its subsidiary - Northern Electricity Department (NED) established in 1997.

Ghana's demand for electricity outstrips the supply from the two hydro generation stations. The shortfall is therefore met by the development of thermal power systems. A 330 MW Combined Cycle Thermal Plant commissioned at Aboadze near Takoradi in 1999, followed by an additional 220 MW simple cycle thermal plant at the same site. A 110 MW steam plant is planned to bring the total installed thermal generation capacity to 660 MW.

The VRA (distributes to the northern sector) and GRIDCO's (distributes to the southern sector) transmission system is made up of 36 substations and approximately 4,000 kilometers of transmission lines linked up in a circuitous loop covering the entire country. The transmission system is also interconnected with the national electricity grids of La Cote d'Ivoire, Togo and Burkina Faso.

VRA sells power to about seven major bulk customers. The major sale, in foreign currency, is made to the Volta Aluminum Company's (VALCO) aluminum smelter at Tema. The second major customer is The Electricity Company of Ghana, which is responsible for distribution of the bulk of local electricity consumption throughout the southern part of the country. Bulk sales are also made to a number of smaller industrial and mining consumers. VRA also exports to Togo and Benin and interchanges power with Cote d'Ivoire.

The Public Utilities Regulatory Commission (PURC) of Ghana is an independent body set up to regulate and oversee the provision of the highest quality of electricity and

water services to consumers. At present PURC only regulates the electricity and water sectors. PURC's key tasks are to:

- Provide guidelines for rates to be charged for the provision of utility services
- Examine and approve water and electricity rates
- Protect the interest of consumers and provides of utility services
- Monitor and enforce standards of performance for provision of utility services
- Promote fair competition among public utilities
- Receive and investigate complaints and settle disputes between consumers and public utility
- Advise any person or authority in respect of any public utility

Water and Sanitation Sector

➤ The Water Sub-sector

Ghana water sector is segmented into two parts, identified as the Urban Water sector and Community Water sector.

The Urban Water sector comprises about 87 cities and towns where the national water utility - the Ghana Water Company Limited (GWCL) owns and manages water supply. The sector is under the dual authority of the Ministry of Water Resources, Works and Housing (MWRWH) and of the Ministry of Local Government and Rural Development (MLGRD). GWCL has contracted Aqua Vitens Rand of South Africa to operate its water system.

The Community Water sector deals with over 16,000 rural communities and some 287 small towns. Management of water supply is the responsibility of District Assemblies with facilitation and oversight role by the Community Water and Sanitation Agency (CWSA). Municipal assemblies and districts are responsible for investment, operation and maintenance of water and sanitation infrastructure within the community water sector.

➤ Environmental Sanitation Sub-Sector

The Environmental Sanitation Sub-Sector covers both the liquid and solid waste management and disposal. The sanitation sector is therefore varied, covering very different types of waste, such organic waste, inorganic and hazardous waste. Depending on the type of waste different methods as regards collection, treatment and disposal are used.

The institutional framework places the overall responsibility of environmental sanitation with the MLGRD, as it is the central government agency in charge of local government affairs and the environment. The responsibility for implementation of environmental sanitation projects and programmes lies with the Metropolitan/Municipal and District Assemblies.

➤ Sewage Systems

In Ghana, part of the collection and disposal of waste water is done using conventional sewer systems. The sewer systems are at Tema and some parts of Accra, Kumasi and Sekondi-Takoradi. A greater part of consumers use underground tanks such as septic tanks. The waste is then transported by de-sludging tankers to treatment



works or dumping sites. The transportation is done by the waste management department of the district/municipal/metropolitan assemblies and private tanker operators.

In Ghana, industrial wastewater is discharged after treatment, if required by the national environmental standard, into the public drainage system. Waste water is discharged from the breweries and such industries as the food processing, textile, mining, chemical and pharmaceutical industries.

➤ **Wastewater treatment facilities**

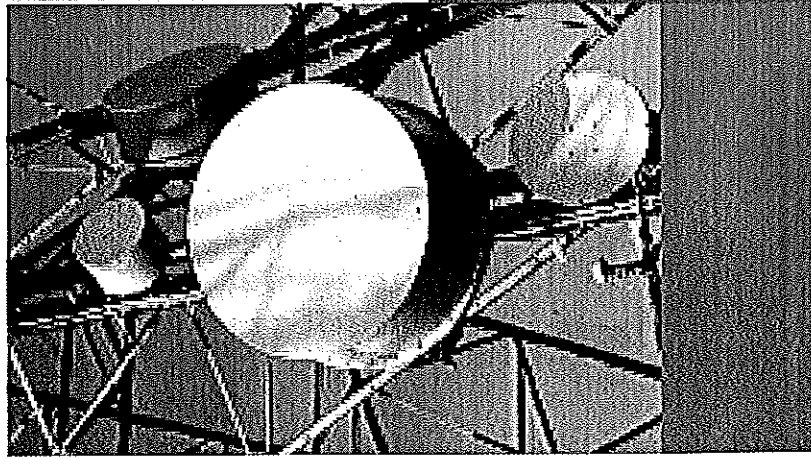
The main types of treatment facilities used in Ghana are oxidation or waste stabilization ponds, aerated lagoons, trickling filter and activated sludge process treatment facilities. The wastewater treatment facilities in the country are largely used for treating domestic wastewater.

Telecommunication

The telecommunication industry has experienced a transformation from a largely monopolized, state-owned model to a broadly competitive, private, and open market model. Ghana has been among the leading countries in Africa to promote these developments.

Market segments (current) include:

- Basic domestic voice telephone
- International voice telephone
- Public pay phones
- Mobile telephone
- Data transmission, circuits



Roads and Transport

The Transport sector is made up mainly of road transport, maritime and water transport, civil aviation and rail. Road transport is the major carrier of Ghana's land transport system, currently taking up about 98% of freight and 95% of passenger traffic. The Road

infrastructure sector is managed by the Ghana Highway Authority (GHA), Department of Feeder Roads (DFR) and the Department of Urban Roads (DUR), under the Ministry of transport.

Transport improvement has been defined by the Ghana Poverty Reduction Strategy (GPRS) as an integral component for increasing national productivity and hence poverty reduction. The fundamental policy objective of the transport sector therefore is to establish an efficient, modally complementary and integrated transport system.

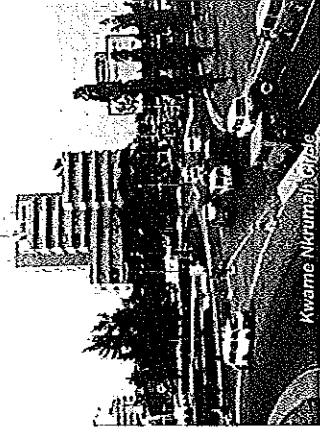
Most major international carriers fly regularly to Kotoka International Airport (KIA) in Accra, the main entry point to Ghana by air. This is the result of Ghana's open skies policy, which frees an air space regulator from the constraints on capacity, frequency, route, structure and other operational restrictions. In effect, the policy allows the Ghana Civil Aviation Authority (GCAA) to operate with minimal restrictions from aviation authorities, except in cases of

safety and standards and/or dominant position to distort market conditions.

The port of Tema covers 166 hectares of water area enclosed by 2 breakwaters. There are 2 quays housing 12 multi-purpose berths. Quay 1 houses berth 6-12, while Quay 2 houses berths 1-5. These berths are operated as common-user, and handle a wide range of cargo including dry bulks, steel products, bagged cargo, newspapers, vehicles and containers. There is a terminal for handling crude and other liquid petroleum products. The oil berth can accommodate tankers of up to 244 metres in length with a maximum draught of 9.7 metres.

The Takoradi port, a smaller one, was commissioned in 1928, but underwent major rehabilitation in the 1990s. It is slated for another massive refurbishment under the Ghana Gateway Project in the near future. Currently, it handles about 60% of Ghana's total exports, which mainly includes minerals (manganese, bauxite and gold), timber and cocoa.

A new centrally located "inland port" is being constructed at Boankra near Kumasi in the heart of the country. This is expected



Kwame Nkrumah Gate

to be an important staging post for goods in transit to and from the landlocked areas in the north of Ghana. This will be a multi-modal facility handling both road and rail traffic.

Accra

THE MARKET

Ghana Market

Electricity

In Ghana, electricity accounts for 9% of the total energy consumption. Energy consumption of Ghana is estimated at 6.6million TOE. Household electricity consumption is primarily for lighting and in some cases for cooking.

The national access to electricity is estimated at 67% with about 82% of urban households having access to electricity compared to about 23% of households in the rural areas. This percentage clearly shows that the majority of the population does not have access to electricity and consequently there is significant potential demand for electricity.

Water

Approximately 12.3 million people (51%) have access to improved water supplies in Ghana. For the 8.4 million residents in the country's urban areas this increases slightly to 61% with two thirds of these or 40% of the total urban population covered by GWCL's networks. With GWCL's unaccounted-for water (UFW) at about 50% of total output, the volume of water that is effectively sold (280,000 m³/ day) is less than half of the daily demand (763,300 m³).

The major consumptive uses of water in Ghana are water for domestic and industrial uses, irrigation and livestock watering. Domestic and industrial urban water supplies are based almost entirely on surface water, either impounded behind small dams or diverted by weirs in rivers.

At present irrigation development does not play an important role in the overall water resources balance considerations. However, the potential for irrigation has been shown to be considerably larger than the present land area under irrigation. The main non-consumptive uses of water are hydropower generation, inland fisheries and water transportation.

On the basis of surface water resources alone, the consumptive water demand for 2020 has been projected to be 5.13 billion m³, which is 13 percent of the surface water resources. Likewise, the non-consumptive demand can also be met from the surface water available. Rainwater harvesting has also become common and has a great potential to increase water availability in certain localized areas. It can be concluded, that if properly conserved and distributed, the surface water resources of the country should be adequate to meet future demands

Telecommunications

Ghana's telecommunications sector has registered one of the most significant growth rates in Africa. The Governments' proactive policy and regulatory interventions, combined with support from the World Bank Group and other development partners, has resulted in a competitive and vibrant industry.

Summary of Operators and Service Providers (Including Internet) as at Dec 2009.

No.	Category	No. Authorised	No. Operating
1	National fixed network operators	2	2
2	National Mobile cellular operators	6	5
3	Direct to Home (DTH) Satellite Services	18	15
4	Internet Service Data Providers	84	39
5	VSAT Data Operators	135	60
6	Public/Cooperate Data Operators	65	40
7	FM Stations	216	185
8	TV Stations	48	9 free-to-air 6 pay/view

Major changes in the market include the acquisitions of WESTEL by ZAIN and subsequently by AIRTEL of India, and Ghana Telecom by Vodafone PLC of the UK. Also, Kasapa has been acquired by Espresso

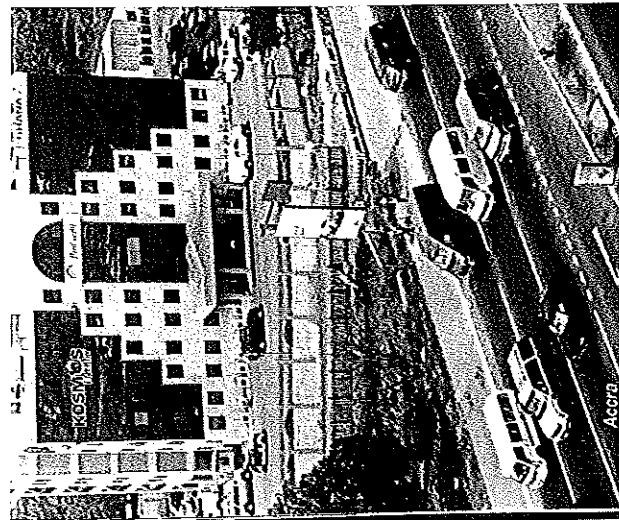


INFRASTRUCTURE INDUSTRY



INFRASTRUCTURE INDUSTRY





Roads and Transport

1. Public Transport Services

'Ensuring affordable, safe and accessible transportation system that recognizes the needs of people' is one of Government's objectives for the transport sector. The promotion of mass transportation is one of the major steps taken to realize this objective. The bulk of passengers on the road network are transported by public transport vehicles such as taxis, 'tro-tros' and buses.

The Metro Mass Transport Company (MMT) was established in October 2003. There is the need to provide more buses and improve on the quality of service to attract more people to use the mass transport system as this will lead to lower congestion in the cities. The plan to introduce Bus Rapid Transit (BRT) in Accra and other cities is therefore in the right direction.

The MMT bus system operates three types of routes. These are: Intra-city, Inter-city and Long distance. Currently the most operated route is the intra-city followed by the intercity and long distance. A total of 89 intra-city, 41 intercity and 23 long distance routes are operated by Metro Mass. The numbers are being increased.

2. Maritime Transport

There are two main seaports (or harbours) in Ghana namely Tema and Takoradi. Tema is the biggest port and major operations at this port are skewed towards import commodities such as heavy machinery, containerized cargo etc. Operations at the Takoradi port are skewed towards the export trade with emphasis on commodities such as cocoa, timber, manganese and bauxite.

Port facilities and the domestic transportation networks serving them are critical elements in Ghana's transportation system.

3. Container Sea Port Traffic

Container seaport traffic increased steadily from 2001. Between 2004 and 2010 there was steady increase of total container seaport traffic (imports & exports) from 385,902 TEUs to 643,189 TEUs.

Imported Containers (TEUs) also increased from 198,149 in 2004 to 336,719 in 2010. Container transport is expected to remain the preferred means of maritime cargo transport owing to its considerable advantages.

4. Vessel Traffic

The number of vessel calls in 2010 was 3,064. Overall vessel calls to the country continued to increase each year. Between 2000 and 2006, Tema Port received between 70 -77% of all vessel calls.

5. Aviation Sector

From 2004 international air passenger traffic increased from 705,370 to 1,204,786 in 2009 and in 2010 further increased to 1,387,045. The air passenger traffic increased every year throughout the period 2007 to 2010. In 2010, movements to and from Europe constituted about 35% of the total passenger throughput that was handled at the Kotoka International Airport (KIA); and the West African sub region contributed about 27.7%.

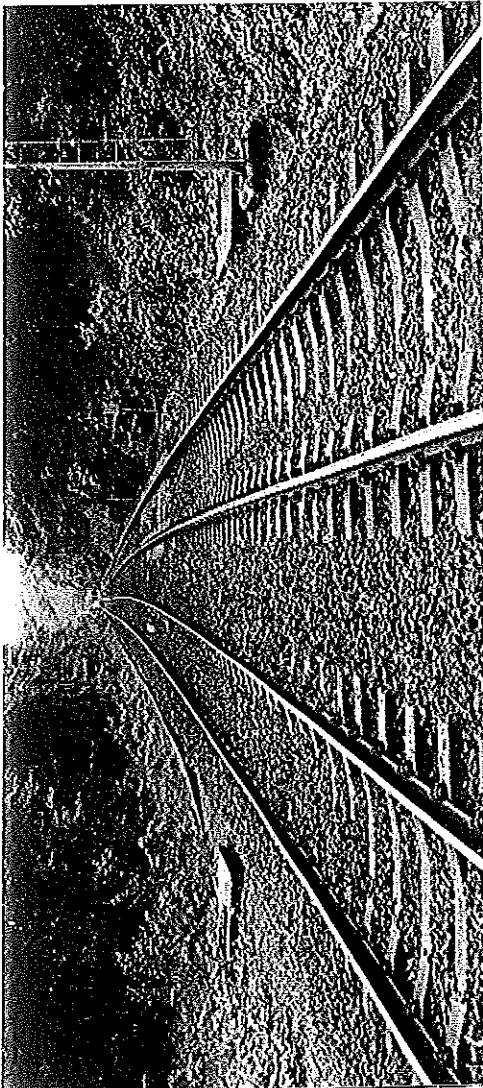
6. Rail Sector

The rail industry in Ghana has a total track length of 1300km and operates a route length of 947km. These track and route lengths have been the same since the year 2000. The annual rail freight revenue increased from 2001 to 2005 but recorded a drop in 2006. It increased from 63 billion cedis in 2001 to 99 billion cedis in 2005. In 2006 there was a decrease of 21%.

ECOWAS Market

ECOWAS with a population of over 250 million offers considerable demand for water for consumption. In addition, a large proportion of the sub-region is facing increasing desertification challenges which make the potential and future demand for water for consumption enormous. On the other hand water demand has increased due to the growing population and higher standards of living, leading to more competition and conflicts between the consumers. In Benin, for example the average quantity of 4.220 m3 of sweet water per person and year indicates the unsatisfactory access to safe drinking water.

Experts agree that pressure on resources will be incomparably higher in 20 years than it is today. This will also be true in Africa and West Africa in particular. The necessary and probable improvement of living conditions of the West African population, the progress towards the Millennium Development Goals, as well as agricultural growth and industrial development all imply a significant increase in water consumption. Below are West African water and sanitation data.



INVESTMENT OPPORTUNITIES

The water supply and sanitation infrastructure is insufficient, especially in rural areas. Major investments are needed to extend coverage, rehabilitate and maintain existing infrastructure and provide Point Sources (boreholes/hand-dug wells), Small Towns Pipe Schemes, Rain Harvest Plants and Household/Institutional Latrines.

Investment is needed to provide electrical services in the construction of the physical facilities including street lighting, improved coverage/access and service efficiency, and manufacturing.

Considerable investment opportunities abound in the telecommunication sector. The sector requires service providers to connect international voice calls to the local public network. Technological and other support related services such as the supply of quality telecommunications equipment are also required.

Major investment opportunities for the roads and transport are in the areas of construction and maintenance, services and sales.

Identified as one of government's priority areas to be developed under its medium term plan, transport services offer exciting opportunities especially the following:

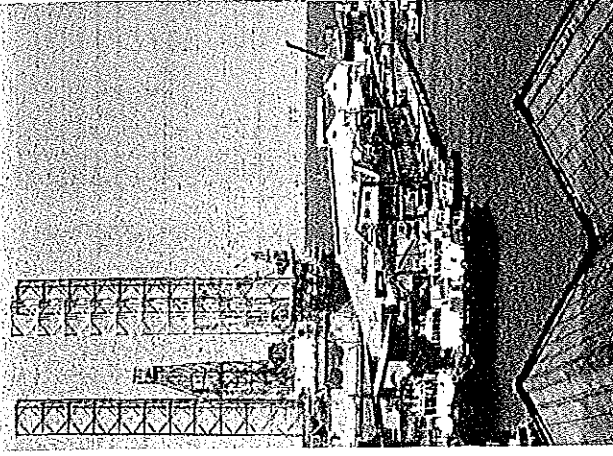
- In mass transportation – scheduled bus system
- Rail upgrades and passenger rail transport on chosen corridors
- Lake transportation systems
- Air transport operators for domestic and sub-regional services

- Development of regional airports
- Upgrading of existing trunk roads under BOT, BOO, BAT, BLT etc. systems

Incentives to the sector may apply under the following provisions:

- There is customs duty exemption for plant, machinery and equipment imported for investment purposes
- All companies enjoy a corporate tax rate of 25 %

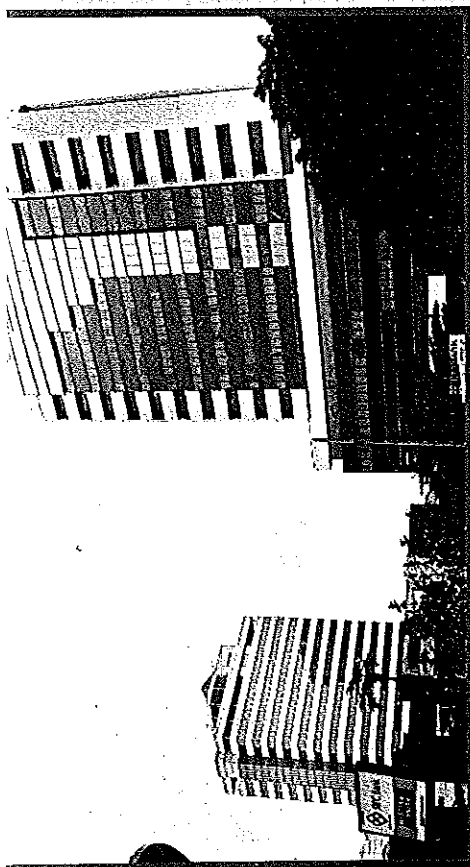
Please consult our website, www.gipoghana.com for further information.



INVESTMENT GUARANTEES

Ghana is a safe investment destination. Guarantee against expropriation of private investments is provided under the investment law and buttressed by the Constitution of Ghana. Some of the guarantees are detailed below:

- Free transferability of capital, profits, dividends and payment in respect of foreign loans contracted.
- Insurance against non-commercial risks – Ghana is a signatory to the World Bank's Multilateral Investment Guarantee Agency (MIGA) Convention.
- Double Taxation Agreements (DTAs) – to rationalize tax obligations of investors in order to prevent double taxation. DTAs have been signed and ratified with several countries.



POTENTIAL SOURCES OF FUNDING

Viable companies and projects can easily attract financing both on the local and international financial markets. The main sources of funding are:-

- 28 local and foreign Banks
- 43 non-bank financial institutions
- 135 rural banks
- The Ghana Stock Exchange (GSE) – note that in the last four years, many issues of shares on the GSE have been oversubscribed by 100% - 300%, meaning that there is a lot of money for investment purposes
- Ghana Venture Capital Fund
- International development finance institutions based in Ghana, such as the International Finance Corporation (IFC) and the African Development Bank (AfDB)

GHANA'S COMPETITIVE ADVANTAGE

The infrastructure sector in Ghana has been subjected to structural reforms at various periods. The different reforms have taken the form of restructuring, commercialization, increased competition and privatization. Over the years, the Government has initiated policies to rationalize the water, sanitation and electricity sectors and to promote and improve the delivery of water and electricity services in terms of economy, efficiency, effectiveness and satisfaction.

The long-term goals of the policies are generally directed at providing the entire country with potable water and electricity by the year 2020 with emphasis on the payment of adequate tariffs by consumers to ensure full cost recovery and to

provide adequate revenue for operations and maintenance and replacement of the systems. Private sector participation is a key element in the operations and management of urban water supply.

The road and transport sector has readily available and accessible market for prospective investors who want to invest in the sector. There are several automobile sales companies which sell different brand of cars and also provide after sales services. Moreover, hundreds of spare-parts dealers support the industry all over the country.

The government has introduced new tolling practices which have paved the way for Build, Operate and Transfer (BOT) systems and other forms of private sector participation.

The roads and transport industry has available to it:

- Adequate transport fuel and a number of automotive service centres
- Raw materials for roads construction, including affordably-priced gravel, chipping, sand and laterite
- Low labour rates, with current minimum wages at GH¢3.73 (approximately US\$ 2.49) per day as at March 2011.



2. Macro-economic Policies

The Government of Ghana has initiated a number of sound macroeconomic policies designed to accelerate the process of growth and transformation of the economy under competitive conditions. In the face of high crude oil prices and global credit crunch, Ghana's economy is still relatively stable. Management and access to foreign exchange in Ghana continues to get better.

3. Foreign Ownership

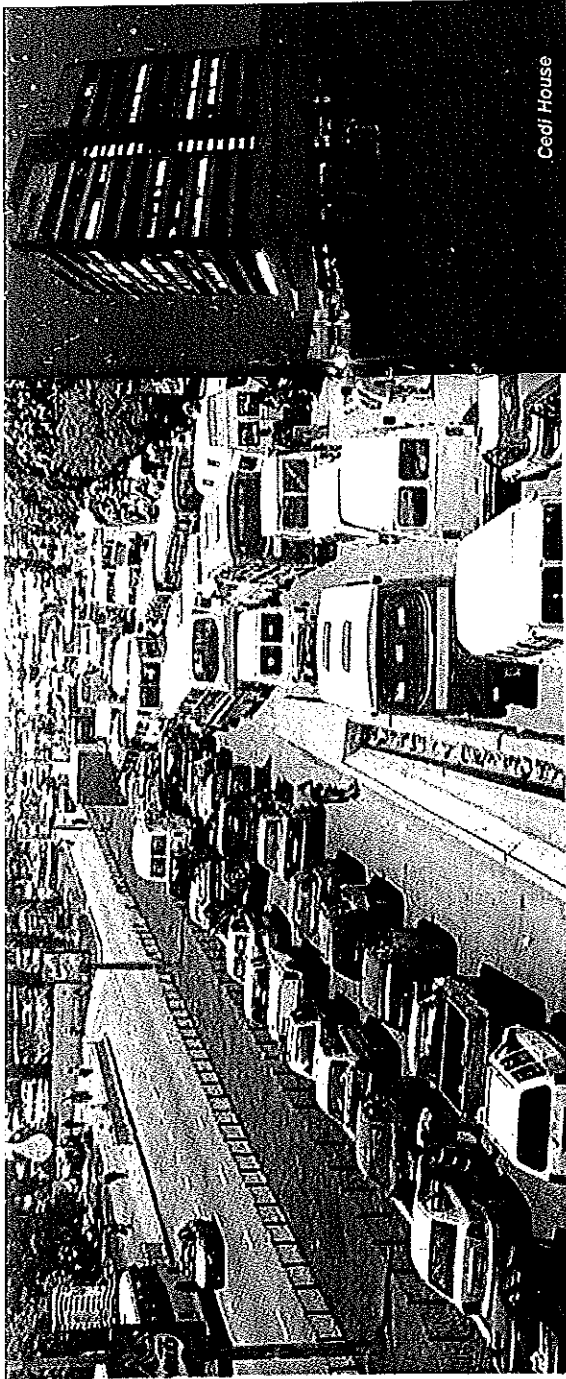
In the on-going privatization program, hundred per cent (100%) foreign ownership is permitted.

4. Access to ECOWAS Market

Ghana is easily accessible to the markets of all the member states of the Economic Community of West Africa (ECOWAS) with its population of approximately 250 million people.

5. Good Physical Infrastructure

Ghana possesses well developed seaports, airports and road networks capable of meeting the needs of businesses in the 21st century. There is an effort to upgrade the rail network to make it easy to get to the ports from inland. Telecommunication facilities in Ghana are excellent with more private service providers offering telephone, internet and other telecommunication services. Basic utilities such as water and electricity are readily available at relatively affordable rates.



Cedi House



Kotoka International Airport

Ghana is a very good destination for foreign direct investment.

The importance to investors of the cost of doing business in Ghana is fully grasped by the Government of Ghana. Appropriate legislation and structural frameworks have been put in place to make the low cost of doing business in Ghana an incentive.

The other factors that make Ghana a favourable place for investors in Africa and among developing countries in general, include the following:

1. Stable Political Environment

Ghana is a politically stable country. This has been recognized by the world's famous leaders including US President Barack Obama and his predecessors and UK Prime Minister David Cameron and his predecessors who have all commended Ghana for the political stability in the country over the years.

6. *Excellent Labour Force*

There is a large human resource base of both skilled and unskilled labour which can be sourced at relatively low rates. The minimum wage in Ghana is GH¢3.73 (approximately US\$2.49) per day as of March 2011.

7. *Access to International Markets*

Ghana has easy access to the USA and European Union Markets. The flight time to almost all European Union countries is about 6 hours and 9 hours to the USA.

8. *Availability of Fund Sources*

Ghana has a large number of fast developing financial institutions available to raise long-term capital at competitive rates. These institutions include banks, insurance and venture capital companies and a stock exchange market (Ghana Stock Exchange).

9. *High Safety Standard*

There are high standards of health and safety measures in the country.

10. *Warm and Friendly People*

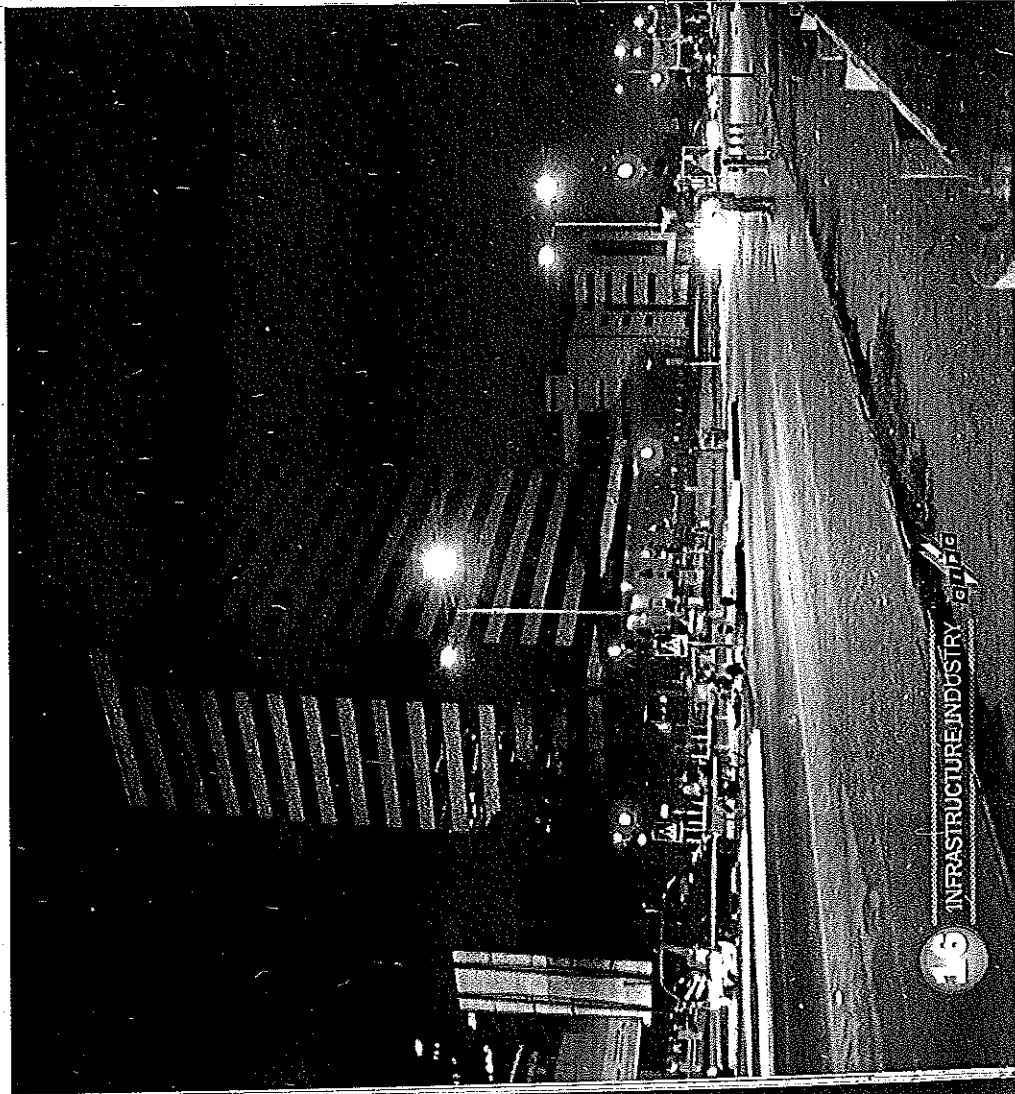
Ghana is internationally acclaimed for her hospitality to her investors and foreigners as a whole.

11. *High Quality of Life*

The quality of life of Ghanaians is fairly high.

12. *Availability of Land*

Ghana has a wide expanse of land that can be acquired with little difficulty through appropriate agencies and owners.



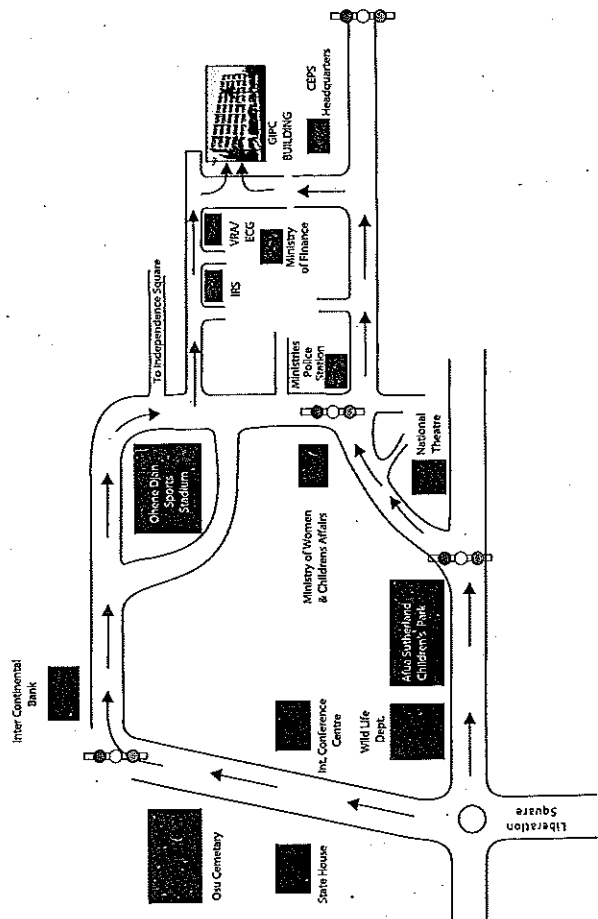
*Please note that this leaflet is an abbreviated version of the "Sector Profile" for this industry. The full-length version is available - as are all application forms - on our website: www.gipcghana.com.

We look forward to discussing Ghana's potential with you.

Institutions that play key roles in the establishment and running of businesses in Ghana

No.	Stat e Institution	Logo	Address	Telephone	Facsimile	Website/Email
1	Bank of Ghana (BOG)		The Governor P.O. Box GP 2674 Accra	+233(30)2 666174-8 666381-5 666302-8 66621-5	+233(30)2 662886	www.bog.gov.gh bogsecretary@bog.gov.gh
2	Registrar General's Department (RGD)		P.O. Box 118 Accra	+233(30)2 664691-3	+233(30)2 666081 666469	www.rgd.gov.gh info@rgd.gov.gh
3	Ghana Immigration Service (GIS)		The Director Private Mail Bag Accra	+233(30)2 258250 224445 221667 674125 213401	+233(30)2 258249	www.ghanaimmigration.org director@myzprod.com
4	Ghana Revenue Authority		The Commissioner PMB, TUC Post Office Accra	+233(30)2 666106 664363		www.gra.gov.gh info@gra.gov.gh
	a Customs Division		The Commissioner P.O. Box 68 Accra	+233(30)2 666319 666641		www.ghanacustoms.gov.gh pr@ghanacustoms.gov.gh
	b Domestic Tax Revenue Division		The Commissioner P.O. Box 2202, Accra	+233(30)2 675701-10 665933	+233(30)2 664938	www.ina.gov.gh info@ina.gov.gh commissioner@ina.gov.gh
	c Support Services Division		The Commissioner PMB, TUC Post Office Accra	+233(30)2 666106 664363		www.gra.gov.gh info@gra.gov.gh
5	Environmental Protection Agency (EPA)		The Executive Director P.O. Box M 326 Accra	+233(30)2 664697/8	+233(30)2 662890	www.epa.gov.gh
6	Ghana Free Zones Board		The Executive Secretary P.O. Box M 626 Accra, Ghana	+233(30)2 780535 785037 785038 +233(24) 2174534	+233(30)2 780536 780537	www.gfzb.com.gh info@gfzb.com.gh
7	Ghana Export Promotion Council		P.O. Box M 146 Ministries Accra	+233(30)2 680989 683153	+233(30)2 677256	www.gopghana.com info@gopghana.com
8	Minerals Commission		The Chief Executive P.O. Box M.248 Accra, Ghana	+233(30)2 771318 / 773053 / 772783	+233(30)2 773324	www.ghana_mining.org Mincom@mc.ghanamining.org

9	Ghana Tourist Board		P.O. Box GP 3108 Accra	+233(30)2 682501 682607 682608	+233(30)2 682510	www.touringghana.com
10	Ministry of Communications		The Minister P.O. Box M42 Accra	+233(30)2 685626 685901	+233(30)2 667114	www.moc.gov.gh moc@ghana.gov.gh
11	Ghana Standards Board		The Executive Director P.O. Box MB 245 Accra	+233(30)2 500231, 500656, 500992-8	+233(30)2 500231, 500992	www.ghanastandards.org gsb@ghanastandards.org gsbnet@ghanastandards.org
12	National Communications Authority		The Director General P.O. Box 1568 Cantonments Accra	+233(30)2 779821 771701	+233(30)2 763449	www.nca.org.gh nca@nca.com
13	Association of Ghana Industries		Executive Director P.O. Box AN 8624 Accra North	+233(30)2 779793 779023/4	+233(30)2 773143, 763983	www.agi.org.gh agi@agighana.org
14	Social Security And National Insurance Trust		Pension House P.O. Box M. 146, Accra	+233(30)2 667731 - 2 667734 - 9 668664 668667 668669	+233(30)2 667731 667746 669881	public@ssnit.org.gh
15	Ghana National Chamber of Commerce & Industry		2nd Floor Adabla Plaza, Okroko Street, Kokotomile P.O. Box 2325 Accra - Ghana	+233(30)2 7012780 7012781	+233(30)2 255202	www.ghanachamber.org info@ghanachamber.org gnc@ghana.com



Directions to our Head Office