

**AFRICAN DEVELOPMENT BANK GROUP**



**GHANA**

**REVIEW OF BANK ASSISTANCE TO THE POWER AND  
TELECOMMUNICATIONS SECTORS**

**OPERATIONS EVALUATION DEPARTMENT  
(OPEV)**

**14 December 2005**

# TABLE OF CONTENTS

## Page N°.

ABBREVIATIONS AND ACRONYMS.....	i
PREFACE.....	ii
EXECUTIVE SUMMARY .....	iii
1. BACKGROUND.....	1
1.1 Objective of the Review .....	1
1.2 Scope and Methodology .....	1
1.3 Country Economic Context .....	1
1.4 Brief Description of Historical Relationship with Bank Group .....	3
2. BANK ASSISTANCE TO THE SECTOR .....	4
2.1 Bank Sector Strategy, Relationship to Government Strategy and Relevance .....	4
2.2 Lending Activities .....	6
2.2.1 Description of lending Activities to Sector .....	6
2.2.2 Evaluation of Sector Projects.....	7
2.2.2.1 Relevance.....	7
2.2.2.2 Efficacy .....	7
2.2.2.3 Efficiency.....	8
2.2.2.4 Institutional Development Impact .....	8
2.2.2.5 Sustainability .....	9
2.2.2.6 Overall Ratings .....	9
2.3 Non-lending Activities.....	11
2.3.1 Economic and Sector Work/Studies .....	11
2.3.2 Aid coordination .....	11
2.3.3 Resource Mobilization/Co-financing.....	12
2.4 Overall Assessment .....	12
2.4.1 Impact on Poverty .....	12
2.4.2 Impact on Gender .....	13
2.4.3 Impact on Environment .....	13
2.4.4 Private Sector Participation .....	14
2.4.5 Community Participation.....	14

2.4.6 Regional Integration .....	14
2.4.7 Overall Assessment of Assistance by Sector .....	15
2.4.8 Conterfactual.....	15
<b>3. CONTRIBUTOR'S PERFORMANCE.....</b>	<b>16</b>
3.1 The Bank Group .....	16
3.2 The Government and Executing Agency.....	17
3.3 Donors.....	17
<b>4. MAJOR FINDINGS/LESSONS AND RECOMMENDATIONS.....</b>	<b>18</b>
4.1 Major Findings/Lessons Learnt .....	18
4.2 Recommendations.....	19

## **LIST OF TABLES**

Table 1.1	List of Bank Group Projects	1
Table 2.1	Summary of Project Ratings: Power	10
Table 2.2	Summary of Project Ratings: Telecommunications	10
Table 2.3	Overall Sector Performance: Power and Telecom	11

## **ANNEXES .....N°. OF PAGES**

Annex 1	Project Information	4
Annex 2	Country Crosscutting and Sectoral Policies	3
Annex 3	Bank Group's Cross-Cutting and Sectoral Policies	3
Annex 4	Evolution and Current Performance of the Ghana Power Sector	3
Annex 5	Evolution and Current State of the Ghana Telecommunications Sector	2
Annex 6	List of Documents Examined	2

---

This report was prepared by Mr. Shashi Desai, Power Engineer and Dr. Anup Wadhawan, Public Utilities Specialist (Consultants), under the overall supervision of Mrs. G. Hall-Yirga, following their mission to Ghana in August-September 2004. Any further matters relating to this report may be referred to Mr. Getinet W. Giorgis, Director, Operations Evaluation Department (OPEV), extension 2041 or to Mrs. G. Hall-Yirga, Principal Post-Evaluation Officer, OPEV, extension 2263.

## ABBREVIATIONS AND ACRONYMS

ADB	:	African Development Bank
ADF	:	African Development Fund
APR	:	Annual Progress Report
CPA	:	Country Performance Assessment
CPRR(s)	:	Country Portfolio Review Report(s)
CSO	:	Civil Society Organisation
CSP	:	Country Strategy Paper
DANIDA	:	Danish Development Agency
DFID	:	Department for International Development (UK)
EA	:	Executing Agency
ECG	:	Electricity Company of Ghana
ECOWAS	:	Economic Community of West Africa States
EIA	:	Environmental Impact Assessment
EPA	:	Environmental Protection Agency
EU	:	European Union
GDP	:	Gross Domestic Product
GNP	:	Gross National Product
GOG	:	Government of Ghana
GPRS	:	Ghana Poverty Reduction Strategy
GSS	:	Ghana Statistical Service
HIPC	:	Highly Indebted Poor Country
IDA	:	International Development Association
IMF	:	International Monetary Fund
MDA	:	Ministries, Departments and Agencies
MOF	:	Ministry of Finance
NCA	:	National Communications Authority
NEC	:	National Energy Commission
NGO	:	Non-Government Organisation
NTF	:	Nigeria Trust Fund
OPEV	:	Operations Evaluation Department
PAD	:	Project Appraisal Document
PCR	:	Project Completion Report
PIU	:	Project Implementing Unit
PPAR	:	Project Performance Audit Report
PPER	:	Project Performance Evaluation Report
PRSP	:	Poverty Reduction Strategy Paper
PSP	:	Private Sector Participation
PURC	:	Public Utilities Regulatory Commission
RMC	:	Regional Member Country
SAP	:	Structural Adjustment Programme
SMR	:	Supervision Mission Report
TAF	:	Technical Assistance Fund
UA	:	Unit of Account
VAT	:	Value Added Tax
VRA	:	Volta River Authority
WB	:	World Bank

## PREFACE

1. The objectives of this review are to assess the policies and strategies put in place over the years both by the Government and the Bank in order to guide priority setting for the development of the Power and Telecommunications sectors and the performance of the projects. The standard evaluation benchmarks: Relevance, Efficacy of Bank Assistance, Efficiency of Implementation, Institutional Development Impact, and Sustainability including impact on cross-cutting issues were applied in assessing performance and development effectiveness of the interventions.
2. The evaluation is based on findings from the review of documents such as economic prospects and country programming papers (EPCPs); sector and cross cutting policies; country strategy and poverty reduction papers, appraisal reports, project completion reports, and project performance audit/evaluation reports. These findings were supplemented with a field mission to Ghana in order to share the views of government officials, executing agencies, donors, the private sector and civil societies.
3. The review has documented the Bank's experience from its past and recent assistances and interventions in the transport sector, drawn lessons and made recommendations for the way forward. The finding of this review will serve as an input for the Country Assistance Evaluation of the Bank Group in Ghana.
4. The Bank expresses its appreciations to the Government officials of Ghana and the various development partners for their cooperation and collaboration that immensely contributed to the successful completion of this task.

## EXECUTIVE SUMMARY

1. **Objective, Scope and Methodology of the Review:** The objective of the review was to evaluate the Bank's entire lending and non-lending activities in the Power and Telecommunications sectors in Ghana to document good practices/shortcomings and draw useful lessons to recommend a prudent road map for the future. To achieve this objective the focus of the examination was extended beyond the project level, to enable an assessment of key overarching policy and sector issues on a qualitative basis. Two Electricity projects and one Telecommunications project were examined. Information was obtained from documentary sources and interactions with Bank Staff and officials/stakeholders in the field during the country visit. Major gaps were experienced in project related documentation. The review applied the standard evaluation benchmarks of relevance, efficacy, efficiency, institutional development impact and sustainability of the assistance, as also assessment of the overall impact on crosscutting issues. An effort was made to assess the contra-factual to the Bank's interventions through an examination of the 'with and without' intervention scenarios.
2. **Country Economic Context and Sectoral/Cross-Cutting Policies:** An examination of the country economic context and the Country/Bank Group policy stance on various sectoral/cross-cutting issues was done to understand the economic climate and developmental priorities within which the Power and Telecommunications sector interventions in Ghana were/are expected to identify and achieve their objectives. The macroeconomic environment has been conducive in Ghana in the recent period. Debt relief under HIPC, higher cocoa production and favourable international cocoa and gold prices have been facilitating factors. The Cedi has of late remained relatively stable. While inflation has been somewhat high (23.6% at end of 2003), the GDP growth rate (4.5% in 2002) has been satisfactory. In spite of the recent improvement, much needs to be done to make up for the decline in intervening years. Ghana's per capita income in 2003 is lower than it was 44 years ago.
3. The policy environment on sectoral and crosscutting issues like poverty, gender, environment, PSP and community/civil society participation has also been conducive in Ghana in the recent period. Broadly there is synergy between the Bank and Country policies.
4. **Bank Sector Strategy, Relationship to Government Strategy and Relevance:** The Bank's interventions in the Power and Telecommunications sectors in Ghana pre-date formal policies on sectoral and most crosscutting areas. They were thus shaped by Country priorities/development strategies, prudent working practices and ADB/ADF lending/programming documents. Cross-cutting/other policies that existed at the time of the intervention were not articulated through working guidelines. This shortcoming persists even today. One of the first formal policy documents that impacted the Public Utilities Sector was the Bank's Policy of 1985 titled 'A Framework for Public Utility Tariff Policy'. Even though some interventions were subsequent to this, effective steps to ensure cost recovery by Public Utilities have only recently been taken in Ghana. Subsequently the Energy Policy of the Bank Group was formalised in 1994. For the Telecommunications Sector, even today there is no formal Bank policy. The Bank has not laid much emphasis on this sector and the developmental momentum in this area has shifted to the private sector. Ghana also has a

formal Energy Policy now. A formal policy for the Telecom Sector is currently under preparation by GOG.

5. Notwithstanding this background, Bank interventions were relevant and in accordance with prudent development objectives. Power sector interventions promoted and made possible regional integration and electrification (particularly in rural areas) and are models for replication. The Telecom sector intervention emphasised interconnection across countries and lowered dependence on Europe.
6. In its early years of operations, the Bank was preparing Economic Prospect and Country Programming (EPCP) papers to identify the assistance strategy. Since the 1990's this has been replaced by the Country Strategy Papers (CSPs). Although the sectors included in the Ghana CSPs are broadly in conformity with ADF IX, the omission of the power sector, which plays a significant role in poverty reduction, is striking. The last project approval was as far back as 1986. There is generally no clear discussion in the CSPs of the rationale behind the choice of sectors. There is need to give balance to the country intervention of the Bank by ensuring that key areas like rural electrification are not left out. In the recent period a remarkable transformation of the Power and Telecommunications Sectors has been brought about by ongoing reforms in Ghana. The Bank, however, has not been a part of this effort.
7. **Evaluation of the Sector Intervention:** The interventions were assessed on the standard evaluation benchmarks of relevance, efficacy, efficiency, institutional development impact and sustainability. Numerical scores were given on these attributes. The Bank's interventions in the Power sector obtained an average score of 3.5 on a scale of 4, which was rounded down to 3 and rated as satisfactory (plus). The high rating is based on the prudent choice of projects, which led to very beneficial regional integration and extension of the network to un-served areas of the country. The sustained impact of the intervention, which remains to date, was also a positive feature. The effect has, however, been somewhat dampened by the lack of subsequent engagement by the Bank.
8. The Bank intervention in the Telecommunications sector obtained a score of 3 (satisfactory) after rounding down. This is in large part due to the prudent choice of project, which promoted regional integration and reduced dependence on Europe.
9. The combined intervention in the two sectors was evaluated after factoring in Borrower and Bank performance also. The overall score was 3 after rounding down, and was rated as satisfactory.

### **Major Findings/lessons**

10. Policy objectives are articulated in very broad terms in the Country and Bank crosscutting and sector policy documentation. There is an absence of related operational guidelines. This makes their implementation and monitoring and evaluation difficult. (2.1.4 and 2.4.1)
11. There has been a lack of continuity in Bank Group engagement in the power and telecom sectors. The Country Strategy Papers provides no explanation for their exclusion. Key poverty reduction interventions such as rural electrification, that have far reaching impact on sustainable development of the rural areas, are left out as a result. (2.1.10 & 2.1.11)

12. There is a concern in the country that the Bank's involvement in donor coordination is hampered by lack of a country office in Ghana. (2.3.2.1)
13. Even though choice of projects has been good, sectoral interventions in the country have not been based on a comprehensive long-term vision/master-plan for the sector. The Bank has largely failed to shape or engage in the key reform activities that have been taken up in the Power and Telecom sectors in Ghana. (2.3.1.3)
14. While in some quarters the Bank is seen to be bureaucratic and inflexible and to have slow response time in communications, there is also a distinct feeling of affiliation towards it as Africa's own Bank. These are both a challenge and an opportunity for the Bank to attend to. (3.1.5, 3.1.6)
15. The Bank's interventions in the power sector had been very successful. The Bank's projects and the Government's reform efforts have paved the way for the subsequent regional projects implemented or being implemented in neighbouring countries. Regional transmission interconnections can lead to manifold benefits from relatively modest investment. This is best practice and deserves to be emulated across Africa (2.4.6).
16. While the sole Bank intervention in the Ghana Telecom sector, implemented in the late 70's/early 80's, promoted regional integration and reduced dependence on Europe, the contribution to the sector on the whole has been marginal. The momentum of the sector has since shifted to the private sector. The reform space too has been occupied by other donors. The telecom sector reforms in Ghana are undoubtedly a success story. A policy based on independent regulation, entry of private firms and competition can lead to a quick and significant transformation in the service quality and number of persons/areas served. (2.1.13)

### **Recommendations**

- i) Crosscutting and sector specific operational guidelines must be formulated to enable sector and cross-cutting policy concerns to be explicitly mainstreamed and addressed in project and program design (2.1.4, 2.4.1)
- ii) Bank needs to ensure that comprehensive sector studies are carried prior to its intervention in a particular sector (2.3.1.3, 2.3.1.4)
- iii) Within the compulsions of resource constraints, a minimal degree of engagement in key sectors should be ensured to remain an active partner and retain a voice in the country and the sector. Suitable indicators should be adopted to monitor progress of various sectors, and accordingly shape future country strategy papers. (2.1.10, 2.1.11)
- iv) The Bank needs to be pro-active in areas like policy initiatives and reforms to enhance its leadership in the knowledge space. (2.1.11, 2.3.1.4)
- v) Efforts should be made with donor group coordinators to fix a six-monthly/quarterly roster of meetings in advance and arrange supervision/other missions to the country accordingly to enhance Bank's participation in donors' coordination meetings. (2.3.2.1)

- vi) On going efforts for e-record keeping and transmission of information to client should be reinforced. (3.1.6)
- vii) Enhance support to rural electrification projects to preserve the environment, alleviate poverty and exploit the full potential of infrastructure already created by Bank interventions. (2.4.1.2)
- viii) Facilitate hydro/other generation projects based on locally resources and make them viable through interconnections. (2.1.12 & 2.4.6.1)
- ix) The momentum for the Telecom sector has shifted to the private sector. The Bank needs to find a suitable intervention space for itself through the development of a suitable policy to fully engage its private sector window (2.1.8, 2.1.13).

## 1. BACKGROUND

### 1.1 Objective of the Review

This review evaluates the Bank's assistance to the Power and Telecommunications sectors of Ghana in order to draw lessons of experience from past and recent lending and non-lending assistance in these sectors. The evaluation extended the focus beyond the project level so as to enable an assessment of key overarching policy and sector issues and draw lessons to guide future strategy and interventions. The findings of this review will serve as inputs for evaluation of the Bank's country assistance strategy for Ghana.

### 1.2 Scope and Methodology

The scope of the review extended to all Bank Group assistance in the Power and Telecommunications sectors of Ghana. These are listed in Table 1.1 below. In addition to examination of documents and conducting interviews, key projects were also seen on the ground during the field visit. The review stressed an approach that extended beyond a narrow project focus. While extensive project related information was obtained, the focus was on analysing this information in the context of broader sector and crosscutting issues arising from Country/Bank Group policies/priorities. This enabled lessons to be drawn on issues ranging from key micro to broad policy issues. A list of documents examined is given in Annex 1. The documents listed there reveal the unavailability of key project documents like PCRs, for many projects. The key evaluation benchmarks were employed in assessing the relevance, efficacy, efficiency, institutional development impact and sustainability of the assistance. Overall impact on crosscutting issues was also looked at. An effort was made to assess the contra-factual to the Bank's interventions through an examination of the 'with and without' intervention scenarios.

**Table 1.1: List of Bank Group Projects in Ghana in the Power and Telecom Sectors**

<u>Sub-Sector</u>	<u>Project Title</u>	<u>Date Approved</u>	<u>Source</u>	<u>Loan Approved</u> (Million UA)
<b>Power</b>	Electricity Interconnection	08/22/78	ADB	6.24
	Brong Ahafo Electricity Network	06/17/86	ADB	35.00
<b>Telecommunications</b>	Telecom. Network	10/21/77	ADB	5.00

### 1.3 Country Economic Context<sup>1</sup>

1.3.1 The examination of the country economic context, involves an assessment of the macroeconomic environment and the policy stance on various crosscutting issues that impact sector interventions. This assessment described in succeeding paragraphs is aimed at understanding the economic climate and developmental priorities within which interventions in the power and telecommunications sectors in Ghana were/are expected to identify and achieve their objectives.

---

<sup>1</sup> Information in this sub-section was obtained mainly from: Selected Statistics on African Countries, ADB (2004), An Agenda for Growth and Prosperity: Ghana's Poverty Reduction Strategy 2003-05 (Govt. of Ghana) and Implementation of Ghana's Poverty Reduction Strategy: 2002 and 2003 Annual Progress Reports (Govt. of Ghana).

1.3.2 *Macroeconomic Situation:* For about two decades up to the 80's Ghana experienced poor or declining growth in GDP. This can be attributed to policy shortcomings, weak international prices for cocoa and gold, spurts in oil prices and recurrent drought. The GDP growth rate was 0.61% between 1972-75 and -0.79% between 1976-82. The Economic Recovery Program (ERP) implemented in two phases between 1983-1988 was able to reverse the economic decline. The GDP growth rate recovered to 3.59% between 1983-86 and 5.2% between 1987-90. In the 1990s, with the slowing down of reforms following political liberalization, the GDP growth rate fell to 4.5% between 1991-95 and 4.4% between 1996-99. Government moved to restore fiscal discipline after the elections of 1996. GDP grew by 4.2% in 1997 and 4.7% in 1998. The period 1999-2000 saw another crisis due to a decline in international prices of gold and cocoa. Strong stabilisation measures introduced in 2001, by way of stringent controls on wasteful government spending, reduction/restructuring of domestic debt, improved public expenditure management and improved fiscal resource mobilisation saw an improvement in the GDP growth rate to 4.2 percent in 2001 and 4.5 percent in 2002. Debt relief under the Highly Indebted Poor Countries (HIPC) initiative has also helped in improving the fiscal position. Improvement was facilitated by higher cocoa production and favourable international prices for cocoa and gold. However, the impact of growth on per capita GDP in Ghana has been reduced by a relatively high annual rate of population growth, which has been in the region of 2.6 to 2.7% per annum. In recent years the Cedi has remained relatively stable against foreign currencies as compared to the earlier position.

1.3.3 Poverty incidence, which was 50% in 1991-92 reduced to about 39% in 2000, with bulk of it existing in rural areas. The Government proposes to bring it down to 32% by 2005. In spite of the recent improvement, much distance needs to be covered to make up for the decline in the intervening years. The per capita income for the country in 2003 is lower than it was 44 years ago.

1.3.4 *Expenditure Priorities:* The Government priorities for poverty alleviation, given in the Ghana Poverty Reduction Strategy (GPRS) are being reflected in an increasing manner in the Government expenditure pattern. In the year 2003, 38.67% of total Government expenditure was devoted to Social Services (Health & Education), 9.06% to Economic Services (related to Ministry of Food and Agriculture), 15.33% to Infrastructure and 11.53% to Public Safety, which is 74.78% of the total. Looking purely at poverty reduction expenditure in 2003, Rural Water, Feeder Roads and Rural Electricity received 1%, 6.8% and 1.2%, respectively, of the total poverty reduction expenditure. Bulk of the poverty reduction expenditure (53.7%) was devoted to Basic Education. The efficacy of programmes in addressing poverty reduction was affected by the fact that in 2003, 68% of the poverty related expenditure was on personal emoluments. In the 2004 Budget an effort has been made to better align Ministries, Departments and Agencies (MDA) budgets with GPRS priorities. Planned poverty related expenditures have been enhanced by 27%.

1.3.5 *Donor Contribution:* Efforts of the Government under the GPRS are supplemented by donor efforts. 51.5% of donor expenditure in 2003 was allocated to infrastructure, 16.7% to Social Services and 20.3% to Economic Services. Percentage of donor expenditure allocated to infrastructure in 2003 was considerably higher than that in 2001 (30.5%) and 2002 (38.2%), which reflects increased emphasis on infrastructure. Even though total donor funds have fallen, 85.5% of total investment in the country in 2003 was financed through foreign funds.

1.3.6 *Crosscutting Government Policies:* These policies impact sectoral interventions across the board, both in terms of the prudent objectives for these interventions at entry and in terms of shaping the environment in which these interventions are implemented. Government of Ghana (GOG) policies

on Poverty Alleviation, Environment, Governance Reform, Gender and Private Sector Development are discussed in this context in Annex 3 along with the country policies for Power and Telecom sectors.

#### **1.4 Brief Description of Historical Relationship with Bank Group<sup>2</sup>**

1.4.1 The Bank Group commenced its operational activities in Ghana in 1973 with the financing of the Nasia Rice Project. Up to the end of 2003, the total financial approvals for Ghana by sector stood close to UA 855 million. This was 2.6% of total cumulative Bank Group approvals in Africa up to 2003. The sectoral distribution in percentage terms is given below:

Agriculture and Rural Development	21.9%
Social Sectors	17.3%
Power	4.8%
Telecommunications	0.6%
Water Supply & Sanitation	3.6%
Transport	14.9%
Industry and Mining	14.0%
Financial Sector	10.7%
Multi-sector	<u>12.2%</u>
Total	100%

1.4.2 Thus, while 5.4% (Power – 4.8% and Telecom – 0.6%) of Bank approvals to Ghana up to 2003 have been for Power and Telecommunications, the Africa wide figure for the Bank up to 2003 is 12.1% (9.4% Power and 2.7% Telecommunications). Thus the Bank’s lending to Ghana was less focused towards Power and Communications than the overall Bank lending.

1.4.3 For the last two decades or so there has been no Bank Group project approval for the Ghana Power and Telecom sectors. Thus, the Bank’s engagement in these sectors in Ghana has lacked continuity.

1.4.4 *Relative Importance of Bank Group in RMCs:* The Bank Group approvals by sector for RMC’s in 2003 amounted to 1764.46 Million UA (approx. \$2470 Million). This was about 12 to 13% of the total annual external assistance from all sources to RMCs, which is estimated to be of the order of \$20 Billion. In co-financed projects taken up by the Bank, its share in 2003 was 23%. The aggregate figure up to 2003 was also about 23%. Thus, the Bank group has a relatively small share of total aid flows to Africa. However, its share of funding in co-financed projects is higher. These proportions have implications for the Bank Group’s ability and approach to leveraging policy/other reform through its interventions.

---

<sup>2</sup> Information for this section was obtained from Compendium of Statistics on Bank Group Operations, African Development Bank, 2004.

## **2. BANK ASSISTANCE TO THE SECTOR**

### **2.1 Bank Sector Strategy, Relationship to Government Strategy and Relevance**

2.1.1 In the initial years the Bank Group did not have formal policies in many sectoral and crosscutting areas. The interventions at that time were largely shaped by Country priorities and development strategies, prudent working practices and ADB/ADF lending/programming documents. One of the first formal policy documents that impacted the Public Utilities Sector was the Bank Group Policy of 1985, 'A Framework for Public Utility Tariff Policy'. This policy emphasised a combination of cost reduction and additional revenues from tariffs as the means to cost recovery and a realistic rate of return for Public Utilities. While recognizing the need to address equity concerns, it advocated financial viability for reducing the burden caused by Public Utilities on the Government Budget.

2.1.2 The Energy Policy of the Bank was formalised in 1994. It lists assisting RMC's in providing adequate energy for all economic/social activities at the least economic/environmental cost as its basic objective. It envisages a role for the Bank in strengthening sector institutions, creating appropriate legal and regulatory framework, promoting regional integration through interconnection/removal of inter-state barriers, developing hydropower and promoting rural electrification.

2.1.3 With regard to the Telecommunications Sector, even today there is no formal Bank policy. It needs to be recognised, however, that the Bank Group has not laid much emphasis on this sector. The developmental momentum in this area too has shifted from the public to the private sector.

2.1.4 Both the Power Sector interventions of the Bank in Ghana (1978 and 1986) predate the Bank Energy Policy of 1994. The second project, however, was conceived after the adoption of the Tariff Policy of 1985. Ghana, however, is only now taking requisite steps towards the imposition of economic tariffs, subject to efficient performance, through an independent regulator. The Telecom sector project (1977) was also conceived long before the subsequent revolution in the sector with the advent of digital and wireless technology. Cross-cutting/other policies that existed at the time were not articulated and operationalised through working guidelines to facilitate their incorporation at the time of project selection and formulation. This shortcoming persists even today. It also makes Monitoring & Evaluation difficult. Thus, the fulfilment of policy objectives has largely been through general prudence in project formulation rather than design.

2.1.5 Recently Ghana also has adopted a formal Energy Policy, which recognizes the provision of adequate energy supply for meeting development objectives of poverty alleviation and economic growth. It emphasises private sector participation to overcome funding constraints. The policy aims to facilitate a "Golden Age of Business" and stresses improved availability, accessibility and affordability, with special focus on rural areas. The GPRS documentation also emphasises reliable supply of high quality energy to boost industrial development, cost recovery pricing while protecting the poor, continuation of rural electrification, promotion of energy efficiency and renewable energy.

2.1.6 A formal policy for the Telecom Sector is currently under preparation in Ghana. Events, however, have overtaken this effort. Without waiting for a formal policy document, the Government has initiated a major transformation of the sector. Policy objectives reflected in these actions of the GoG/regulator include competition, private sector participation and independent regulation.

2.1.7 Notwithstanding the lack of formal sector policies/studies, guidelines or master plans to articulate policy priorities and generate a shelf of prioritised projects for implementation, the two power sector interventions in Ghana were relevant and consistent with country priorities, prudent development objectives and subsequently articulated policy objectives. This would in part be due to the fact that the Bank's interventions have been marginal compared to the investment needs of the Ghana power sector, which would have made the selection of good projects somewhat trivial. The projects made possible regional integration and electrification (particularly in rural areas). The interventions are models for replication and shaped the subsequent policy that followed in 1994. As a result Ghana today has a much higher degree of electrification than most sub-Saharan nations.

2.1.8 Looking at the Ghana Telecom sector, despite the lack of formal policies, here again the sole intervention addressed prudent priorities of the times. It emphasised interconnection across countries in the region, thus lowering dependence on Europe for intra-Africa telecom traffic.

2.1.9 A detailed description of the Country and Bank Group sector and crosscutting policies that impact the Power and Telecom sectors, is given in Annexes 3 and 4, respectively. There is no contradiction between the objectives and strategies articulated by the Bank and those articulated by the Government of Ghana. Stated objectives are prudent and follow a progressive vision. This can be the basis for fruitful further engagement by the Bank in these sectors in Ghana.

2.1.10 In its early years of operation, the Bank was preparing Economic Prospect and Country Programming (EPCP) papers to identify the assistance strategy. Since the 1990's this has been replaced by the CSPs, which in essence reflect the Bank's three-year lending programme in the country. These are based on review and analysis of the country's macroeconomic/social conditions for the Medium Term Development Strategy. The 2002-04 CSP for Ghana stresses poverty reduction through policy, institutional and governance reforms, as also through project investments in agriculture, basic infrastructure and social services, which are considered priority areas. Although the sectors are broadly in conformity with ADF IX the omission of the power sector, which plays a significant role in poverty reduction is striking. Similar gaps are visible in earlier CSPs also. The 1996-98 CSP stresses accelerated growth and poverty reduction through improved economic/social infrastructure and an enabling environment for private sector growth. It limits the Bank's interventions to social sectors, transport, agriculture and multi-sector projects in light of the content of Government programmes, the Bank's expertise/strategy and assistance by other donors. The Economic Prospects and Country Programming Papers 1994-96 and 1991-93 are also silent on the power sector. There is generally no clear discussion of the rationale behind the choice of sectors. There is need to give balance to the country intervention of the Bank by comprehensively identifying priorities on the basis of a thorough review of important sectors, to ensure that key areas like rural electrification are not omitted. Sector analysis in the CSP should include key indicators for each sector so that their progress and performance can be measured over time, and shape the Bank's future interventions.

2.1.11 The CSP process must also ensure that future interventions logically build on earlier projects to ensure that the infrastructure created is exploited to its full potential. For instance Transmission projects must be followed up with projects focusing on providing connections to users. Within the compulsions of resource constraints, a minimal degree of engagement in key sectors must be ensured for the Bank to remain an active partner and retain a voice in the country and the sector. Co-financing could be an appropriate tool for this purpose. The lack of engagement in the Ghana power sector since the last intervention approved in 1986 and the telecommunications sector since the sole intervention of 1977, has meant that the Bank has not been a part of the recent reforms and major transformation of

these sectors. There is thus also need to address the fact that other than financing projects and programmes, the Bank has not been pro-active in non-lending activities such as policy dialogue and reform efforts in the country.

2.1.12 In shaping future interventions in the Power and Telecom sectors in Ghana, the Bank must recognise and factor in the major reforms that are already underway in Ghana. In the power sector the Ministry of Mines and Energy (MOME) has initiated reforms that are beginning to transform the sector, which currently comprises the Volta River Authority (VRA) and the Electricity Corporation of Ghana (ECG). Two regulatory bodies, namely the Public Utilities Regulatory Commission (largely for tariff and consumer welfare issues) and the National Energy Commission (largely for entry, licensing and technical issues) have been created. There is a proposal to un-bundle VRA into four companies (a hydro generation company, a thermal generation company, a transmission company and a distribution company comprising VRA's Northern distribution operations and ECG's distribution network). Further generation capacity is largely envisaged in the private sector. Efforts are underway to improve efficiency of thermal plants through steam re-cycling. Due emphasis is proposed for cost-effective hydropower such as the Bui Dam project, which is under consideration. Transmission would remain Government owned but independently regulated. To overcome inefficiency in the distribution sector, steps to engage a private entity through a Management Contract are proposed.

2.1.13 The Telecom sector too has seen major changes in Ghana in recent times. These have resulted in increased competition (facilitated by wireless technology), private sector participation and independent regulation by the National Communications Authority (NCA). A technology/service neutral policy followed by the regulator has led to increased competition. Rollout obligations, including rural service provisions, are addressing rural-urban equity issues effectively. The Bank needs to recognise the largely privately owned industry structure and identify the role it can play in this scenario. A Bank Group policy needs to be formalised for this purpose. Key area that could be considered for engagement is interventions through the private sector window.

## **2.2 Lending Activities**

### **2.2.1 Description of lending Activities to Sector**

2.2.1.1 The Bank has had two interventions in the Ghana Power Sector. The first one, approved in 1978, was an inter-country transmission interconnection project, namely the 225 KV Cote D'Ivoire Ghana Interconnection Project. The line was commissioned in 1983 and power flow took place in 1984. The second project was the Electricity Network Reinforcement and Extension (to the Brong Ahafo Region) Project, which had elements of both transmission and distribution and was aimed at extension of the grid to the largely un-served areas of Northern Ghana. The project was approved in 1986 and completed in February 1991.

2.2.1.2 The Bank has funded only one project in the Ghana Telecom Sector, namely the Telecom Network project involving regional interconnection with Togo and Cote d'Ivoire, which was approved in 1977. The proposed Telecom Masterplan Updating Study (1994) was dropped. The network project was completed successfully, with savings of .09 Million UA from the approved amount of UA 5 Million. No documentary information is available on the project beyond disbursement details.

## **2.2.2 Evaluation of Sector Projects**

### **2.2.2.1 Relevance**

2.2.2.1.1 The first Bank power project in Ghana was highly relevant. The Bank Group initiated the interconnection study under bilateral aid, which formed the basis of the first intervention. Aspects related to the route of the line, selection of 225 KV voltage and cost estimates were well conceived. The project was consistent with the Government's policy of development and promotion of locally available/renewable hydropower and enhancing regional cooperation. The objective of the project was to transfer power between Ghana and Cote D'Ivoire. It was initially envisaged that Ghana would export surplus hydropower to Cote D'Ivoire. Even though the project was appraised without any preparation and objectives were not specified in the appraisal report, the project far exceeded the targeted exchange of power.

2.2.2.1.2 The World Bank initiated the second project. The Bank financed the component related to reinforcement and extension of the grid to the North. The Northern region had only 17000 consumers at that time and only about 10% of the population had access to electricity. The project was consistent with one of the priorities of the economic recovery programme 1985-90, which stressed development of the Northern region by providing adequate infrastructure, including electricity. It also encompassed the Bank's emphasis on rural electrification and improving quality of life. The project involved a useful innovation by way of using an insulated earth wire to supply rural areas, which reduced cost of supply. This approach is still working satisfactorily. The project was appraised without any preparation, cost estimates were very high (which led to subsequent savings) and certain technical aspects were overlooked. The project was undoubtedly relevant.

2.2.2.1.3 The Telecom Network Project had high degree of relevance. The project involved creation of the Ghana portion of the Cote d'Ivoire to Togo link and was based on analogue transmission, which was the technology of the time. It promoted key Bank and Country objectives of regional integration and reduced dependence on routing intra-Africa telecom traffic through Europe. Rapid obsolescence in the telecom sector affected the life of the project.

### **2.2.2.2 Efficacy**

2.2.2.2.1 Both power projects achieved the objectives and output targets defined at the appraisal stage. In case of the interconnection project, power transfer was far in excess of the initial target. Today the direction of power transfer is reversed, as Ghana is buying cheap power produced from natural gas in Cote D'Ivoire. The project gave considerable stability and reliability to the Ghana power sector, which was of critical importance in dealing with the situation arising from the hydro-generation crisis and saved the need to create expensive generation facilities. Moreover power is also exported now to Togo and Benin through this interconnection. Had the borrowers accepted the Bank's recommendation of a double circuit line, power transfer would have been triple today. The setting up of the coordination committee for the interconnection, helped improve the performance of the project and strengthen regional cooperation. The second project helped Ghana to increase the degree of electrification from 10% in 1981 to 43% in 2003. The number of consumers in the project area increased from 17,000 in 1980 to 163,000 in the year 2003. The reinforcement of the 161 KV transmission line helped reduce line losses as well as improve reliability and quality of service.

2.2.2.2.2 The Telecom sector intervention performed satisfactorily on the criteria of efficacy. The project objectives were successfully achieved and the link was operational for about eight years. One part of the link from Accra to the Togo border is still operational, notwithstanding the impact of technological obsolescence. The rest has been replaced with modern equipment with the advent of private management in Ghana Telecom. The intervention can be seen as a modest contribution to the chain of events, which have led to the few thousand-telecom customers at that time, growing to over 1.4 million today. The intervention reduced dependence on Europe for inter-country regional traffic. Thus it did have a distinct impact on the Ghana telecom sector at that time.

### **2.2.2.3 Efficiency**

2.2.2.3.1 For the first (interconnection) project the FIRR and EIRR were estimated to be 10.25% and 15.16% at appraisal, respectively. No information is available on the estimated values at completion. The project was initially designed for 70 MW transfer, whereas 180 MW are being transferred today. Thus the FIRR and EIRR are likely to be much higher than estimates at appraisal. It is estimated that the project recovered its cost within three years of operation. To meet a demand of 80 MW, Cote D'Ivoire would have had to invest about 80 million US dollars on a thermal plant. The time overrun (estimated from the consultants PCR) of 17 Months for the project is not likely to have a significant impact on the rates of return, given the long life of the project, which is still operational after over two decades. The cost overrun of about UA 0.36 Million on a total envisaged cost of UA 14.16 Million, on account of additional civil works, would also not significantly impact rates of return.

2.2.2.3.2 With regard to the second (Brong Ahafo Network) project there was a cost under-run of UA 10.55 Million due to the combined impact of initial cost over-estimation and favourable market conditions realized through International Competitive Bidding. The time overrun was only eight months. Not surprisingly the FIRR and EIRR (as given in the abridged PPAR) on completion were quite high at 17.64% and 25.40%, which compare favourably with the initial estimates of 16.5% and 35.5%, respectively. Thus the Bank Group Power Sector interventions performed highly efficiently.

2.2.2.3.3 From discussions with country officials (in the absence of documentation) it was ascertained that the Telecom project was satisfactorily completed and functioned well for over eight years till it was overtaken by technological change. There was possibly some delay due to time taken for resolution of certain implementation issues with Togo. There was also a minor cost under-run. It would be reasonable to conclude that the project performed efficiently.

### **2.2.2.4 Institutional Development Impact**

2.2.2.4.1 Although institutional development was not a primary objective of the first (interconnection) project, the loan condition for setting up an inter-country coordination committee for implementation and O&M of the project helped promote interaction and conducive working relationships between the utilities of the two countries. Personnel gained valuable experience in teamwork, in addition to project construction and operation. This committee is still meeting on a quarterly basis to exchange data and resolve technical problems, if any.

2.2.2.4.2 During implementation of the second power project in Ghana, VRA staff gained experience in design, procurement, construction and operation of distribution lines, and continued extension to other areas on their own, without assistance from a consulting firm. (Annex 5 for details).

2.2.2.4.3 The extent of capacity available is reflected in the fact that barring proprietary servicing etc. of equipment from foreign suppliers, Ghanaian power utilities are almost completely self-sufficient today in operational matters. Thus, the performance on this criterion was substantial to high.

2.2.2.4.4 The Bank Group project in the Ghana Telecom Sector can be seen as a small link in a chain of events that have led to increasing sophistication in technology, services and operations in the Ghana Telecom sector. The sector today is in an excellent condition and there is good managerial/operating capacity available. (Annex 6 for details).

### **2.2.2.5 Sustainability**

2.2.2.5.1 Both power projects in Ghana have shown high degree of sustainability. The first project has operated successfully for over twenty years. The transmission line is very well maintained and sub-station equipment is refurbished whenever required. Access road has been constructed to facilitate maintenance. Line availability is over 97%.

2.2.2.5.2 Similarly with regard to the second project also, the impact has been significant and ongoing. The project opened up the largely un-served northern part of the country and eventually promoted regional integration with northern neighbours by enabling supply to their border areas as the network expanded further.

2.2.2.5.3 Sustainability of the interventions has also been ensured by demand for and accessibility to the electricity services offered through the network. There is a huge unsaturated/suppressed demand for power in Ghana. Lifeline tariffs make access affordable for economically weaker sections.

2.2.2.5.4 With regard to the financial viability of the executing agency/utility, VRA's financial performance in the early 80s and 90s was satisfactory. VRA was earning 8 to 10% rate of return on assets. Later, due to low tariffs, VRA's financial situation deteriorated and it started making losses. During the last five years tariffs have been increased by about 300%. Further tariff increases (by the regulator) would be based on mandated improvement in operational efficiency. VRA has also taken steps to improve generation capacity at Akosombo Dam through retrofitting of all turbines, thereby raising generation by over 10% over the rated capacity.

2.2.2.5.5 Sustainability of the Telecom project was affected by technological developments, which are rapid in the Telecom Sector. Only a small part of the link created through the project is operational today. While information is not available to conclusively comment on this aspect, an eight year operational life for the intervention appears to be satisfactory in this field. Looking at the other sustainability issue of affordable access, developments have been encouraging in the Ghana telecom market, with prices having fallen as a result of competition and prudent regulation.

### **2.2.2.6 Overall Ratings**

2.2.2.6.1 On the basis of the above analysis the two power projects financed by the Bank have been numerically rated on the evaluation criteria of relevance, efficacy, efficiency, institutional development and sustainability. The ratings are given in Table 2.1 below. Other project details are given in Annex 3. Both interventions were conceived in the pre-reform period for the sector. Thus an assessment of the impact of the reform on implementation quality is not possible. The analysis reveals

the very satisfactory nature of the Bank Group intervention in the sector, especially for the first project. The overall average score for the interventions is 3.5 on a scale of 4, which was rounded to 3 and rated as satisfactory (plus). Average scores in fractions have been rounded on the basis of the overall impression of the particular attribute. The high rating for the power sector projects is based on the very prudent choice of projects, which led to very beneficial regional integration and extension of the network to un-served areas of the country. The sustained impact of the intervention, which remains to date, is also a very positive feature. The effect has, however, been somewhat dampened by the lack of subsequent follow-up engagement by the Bank.

**Table 2.1: Summary of Project Ratings: Power**

<u>Ser. No.</u>	<u>Project</u>	<u>Date of Approval</u>	<u>Relevance</u>	<u>Efficacy</u>	<u>Efficiency</u>	<u>Institutional Development</u>	<u>Sustainability</u>	<u>Outcome Rating Score</u>
1.	Electricity Interconnection project	22-08-78	4 (highly relevant)	4 (highly satisfactory)	4 (highly efficient)	4 (high)	4 (highly likely)	4 (highly satisfactory)
2.	Brong Ahafo Electricity Network project	17-06-86	3 (relevant)	3 (satisfactory)	3 (efficient)	3 (substantial)	3 (likely)	3 (satisfactory)
	Aggregate Score		4 (highly relevant)	3 (satisfactory)	3 (efficient)	3 (substantial)	4 (highly likely)	3 (satisfactory +)

\* Average scores in fractions have been rounded on the basis of the overall impression of the particular attribute.

NOTE: (1) Outcome Rating Score = the average measure that takes into account the ratings on relevance, efficacy, efficiency, institutional development and sustainability; (2) Aggregate Score = Sum of Individual project scores divided by number of observations, and rounded. The performance indicators are rated on a four-point ordinal scale, ranging from 1 to 4, with 1 indicating highly unsatisfactory performance and 4 indicating highly satisfactory performance. Subjective judgement has been used to assess fractions.

2.2.2.6.2 The Bank Group intervention in the Ghana Telecom sector involves only one project. The project was clearly in the pre-reform period for the sector. The overall rating for the intervention is 3 (satisfactory) on a scale of 4, which is in large part due to the prudent choice of project, which promoted regional integration and reduced dependence on Europe. Details are given in Table 2.2.

**Table 2.2: Summary of Project Ratings: Telecommunications**

<u>S. No.</u>	<u>Project</u>	<u>Date of Approval</u>	<u>Relevance</u>	<u>Efficacy</u>	<u>Efficiency</u>	<u>Institutional Development</u>	<u>Sustainability</u>	<u>Outcome Rating Score</u>
1.	Regional Telecom. Network Project	21.10.77	4 (highly relevant)	3 (satisfactory)	3 (efficient)	3 (substantial)	3 (likely)	3 (satisfactory)

\* Average scores in fractions have been rounded on the basis of the overall impression of the particular attribute.

2.2.2.6.3 The overall evaluation of both sectors taken together, after factoring in Borrower and Bank performance also, is described in Table 2.3 below. A numerical scale similar to the one used in Tables 2.1 and 2.2 is used. The overall performance of the Bank's intervention in the Power and Telecom sectors scores 3 points on a scale of 4 and is rated satisfactory.

**Table 2.3: Overall Sector Performance: Power and Telecom**

<u>S. No.</u>	<u>Sector</u>	<u>Relevance</u>	<u>Efficacy</u>	<u>Efficiency</u>	<u>Institutional Development</u>	<u>Sustainability</u>	<u>Borrower Performance</u>	<u>Bank Performance</u>	<u>Aggregate Sector Score</u>
1.	Power	4 (highly relevant)	3 (satisfactory)	3 (efficient)	3 (substantial)	4 (highly likely)	3 (satisfactory)	3 (satisfactory)	3 (satisfactory +)
2.	Telecom	4 (highly relevant)	3 (satisfactory)	3 (efficient)	3 (substantial)	3 (likely)	3 (satisfactory)	3 (satisfactory)	3 (satisfactory)
	<b>Overall</b>	4 (highly relevant)	3 (satisfactory)	3 (efficient)	3 (substantial)	3 (likely)	3 (satisfactory)	3 (satisfactory)	3 (satisfactory)

\* Average scores in fractions have been rounded on the basis of the overall impression of the particular attribute.

## 2.3 Non-lending Activities

### 2.3.1 Economic and Sector Work/Studies

2.3.1.1 While the Bank Group did not fund any studies in the Power and Telecom Sectors and its interventions were traditional projects, the first power sector intervention was based on a project study initiated by the Bank under bilateral aid. The feasibility study was well executed and technically sound. Groundwork for the Bank's second power sector intervention was done by the World Bank. The Bank financed a component of this collaborative effort. The telecom sector intervention was implemented within a framework facilitated by the International Telecom Union.

2.3.1.2 With regard to general economic/structural support, the Bank Group is closely involved in the poverty reduction effort under GPRS through participation as a major donor and partner in the Ghana Social Investment Fund (SIF). The SIF is engaged in projects in the areas of Economic Infrastructure and Services, Social Infrastructure and Services, Urban Poverty Reduction, Micro-finance and Capacity Building. Over 771 projects in 80 districts of all ten regions currently stand approved.

2.3.1.3 On the whole the Bank is not effectively engaged in Economic and Sector Work and is highly dependent on the work done by the IMF and World Bank. The Bank should focus on comprehensive sector studies to develop a comprehensive long-term vision/master-plan for the sector. This would ensure that the Bank is engaged in the sector with continuity through a series of logically progressing interventions that are in conformity with the long-term vision and policy objectives, and build on previous engagements. Moreover, the Bank's pro-active engagement in areas involving policy initiatives, reform efforts etc. would allow it to have leadership in the knowledge space and makes it at par with other major donors such as the World Bank.

### 2.3.2 Aid Coordination

There was concern amongst country/donor officials that the Bank was not an active/regular participant in the overall/sector coordination meetings organised by donors in the country. This was stated to be in large part due to the absence of a country office. While the Bank cannot have country offices in every country, it can work with donor group coordinators to fix a six-monthly/quarterly roster of meetings in advance. It can be ensured to a large extent that supervision/other missions to the country are suitably scheduled around these dates to enhance Bank's presence. The opening of a Country Office could also facilitate participation in aid coordination meetings and conferences.

### **2.3.3 Resource Mobilization/Co-financing**

2.3.3.1 The Bank and European Investment Bank (EIB) co-financing the first power project. Its smooth implementation demonstrates good donor coordination. There were numerous meetings of the donors with the borrower on various issues, including functioning of the interconnection committee comprising Cote d'Ivoire and Ghana officials.

2.3.3.2 The second power project (Brong Ahafo) was part of a larger co-financed effort involving the Bank, the World Bank, Kuwait Fund and other donors. However, the appraisal report and subsequent project related documents considered only the component financed by the Bank. PCR prepared by the project consultant outlines aspects related to the participation of various donors in the project. The good quality of the project is testimony to the harmony achieved in the efforts of various donors.

2.3.3.3 There is no sector specific donor issue arising from the Bank's intervention in Ghana in the Telecom sector. The Bank Group intervention was broadly during the period of the First Telecom (infrastructure rehabilitation) Project of the 70's. The major donors to this effort also included the World Bank (being the largest contributor), EDC (Canada), OECF (Japan) and ECGD (UK).

## **2.4 Overall Assessment**

### **2.4.1 Impact on Poverty**

2.4.1.1 Poverty reduction is at the core of all developmental interventions funded by the Bank. Policy documentation of both the Bank and the Country emphasize this aspect. These prescriptions are directly and suitably applied in targeted interventions for poverty affected groups. However, mainstreaming poverty reduction measures in every project and program design has not yet been effectively achieved.

2.4.1.2 On more general terms, it can be asserted that efficient provision of power makes available a clean and affordable energy source, which can potentially open up vast avenues for economic betterment and poverty alleviation. Households can save expenditure devoted to expensive, environmentally unfriendly fuels, as also benefit from time saving in performing chores to better their economic circumstances. Power availability also makes possible sophisticated technology based businesses and improvements in education and other services, which have huge employment and poverty reduction effects. Electrification can strengthen the effectiveness of various steps aimed at meeting the Millennium Development Goals. While this impact has not been studied for the Bank Group interventions in the sector in Ghana there is reason to believe that these beneficial effects would have occurred in substantial measure given the major expansion in electricity provision that has resulted from the interventions. Today about 45% of the population has electricity, compared to about 10% at the time of the intervention. The poverty reduction impact of the intervention would have been enhanced by affordable access ensured through a lifeline tariff category.

2.4.1.3 Potentially, the impact of telecom growth is also very positive on poverty alleviation. It has provided direct business opportunities in the formal and informal sector. It also has indirect employment effects by making possible new lines of business on the basis of better communications. Falling prices for telecom services in Ghana, as a result of competition and prudent regulation, is also a positive factor from the point of view of impact on poverty. While this impact has not been studied for

the Bank Group intervention in the sector in Ghana there is reason to believe that these beneficial effects would have occurred to the extent expected from the limited nature of the intervention.

## **2.4.2 Impact on Gender**

2.4.2.1 The policy documentation of both the Bank and the Country emphasize a suitable orientation to developmental interventions aimed at improving the welfare of excluded groups, including women.

2.4.2.2 While the power sector interventions of the Bank do not have any overtly stated gender related objectives, efficient and affordable provision of clean energy for households has important implications for women. Women bear the brunt of health consequences of using polluting energy sources. Access to an efficient energy source reduces the drudgery involved in performing household chores and obviates the need for gathering firewood. It thus improves the lives of women and enables additional economic activity. To the extent electricity improves economic opportunities and alleviates poverty, it helps women and children who bear a disproportionate burden. While this impact has not been studied for the Bank's interventions in the sector in Ghana, there is reason to believe that these beneficial effects would be significant.

2.4.2.3 The poverty alleviating effects of Telecom growth, as discussed above, impact women (and children) differentially due to the disproportionate burden of poverty borne by them. This would be especially true for Ghanaian society where women participate freely in economic/commercial activity outside the home.

## **2.4.3 Impact on Environment**

2.4.3.1 Environmental concerns captured in the stress on sustainable development, are an underlying consideration in all developmental interventions. These concerns are addressed through requirements for environmental approvals based on Environment Impact Assessments (EIAs). However, often within the activities permissible under environmental law, there is scope for making choices that are more or less environment friendly. For instance thermal coal based electricity generation may be permissible, but an option based on clean power through interconnections may be the better option environmentally. Hence, guidelines that amplify these issues and facilitate incorporation across sectors are desirable.

2.4.3.2 EIA was not required at the time of the first (interconnection) power project, which had a negative environmental impact due to forest clearing required for construction. Extension of the electricity network, however, also has significant positive implications for the environment. It can contribute to reduced pollution and better health as a result of lower dependence on polluting fuels. It is also essential from the point of view of preserving forest wealth and preventing environmental degradation, which can undermine all developmental interventions and make life unsustainable. While these impacts have not been studied for the Bank Group interventions in the sector in Ghana, there is reason to believe that these beneficial effects would be substantial.

2.4.3.3 In addition to the general issues discussed above, there are no major environment related issues specific to the Telecom Sector. A significant recent development, however, in the form of wireless technology, greatly reduces the need for physical network extension, which has higher environmental cost. This factor needs to be considered while devising developmental interventions in the sector.

#### **2.4.4 Private Sector Participation**

2.4.4.1 While not necessarily the focus of or the direct result of Bank Group interventions, Private Sector Participation (PSP) finds a prominent place in the power sector reform effort in Ghana. PSP exists on the generation side. Future plans envisage further generation projects mainly in the private sector. Even on the distribution side, a Management Contract is proposed with a private partner. From another perspective, extension of the power network, which has been substantial in Ghana, is useful for promoting private sector business opportunities.

2.4.4.2 It is apparent from the discussion in previous sections that the Telecom sector offers immense direct and indirect opportunities for PSP in both formal and informal activities. The growth and dynamism of the Ghana Telecom sector, mainly due to new private operators, is testimony to this fact.

#### **2.4.5 Community Participation**

2.4.5.1 While community participation in the planning, implementation and operation of projects is not formalised in the Ghana power sector, there has been participation in various forms in rural electrification projects, including through provision of labour and poles. Community involvement has increased in recent times as a result of the pro-activeness of the regulator (PURC) in providing an institutional forum for civil society/beneficiaries to air views and grievances on various power sector issues, including tariffs and service quality. PURC has held regular public discussions for this purpose. In 1997 civil society objected to the massive tariff increase proposed and the Government had to withdraw the revision. Later, improvements in the quality of supply and transparent efforts by PURC facilitated acceptance of a 200% tariff increase by the general public in two steps in 1998/99.

2.4.5.2 Community participation in the planning, implementation and operation of projects is not formalised in the Ghana Telecom sector. In recent times, civil society has been engaged by the regulator through an effective and vigorous complaints redressal mechanism, which has put pressure on the companies (particularly Ghana Telecom) to improve their practices.

#### **2.4.6 Regional Integration**

2.4.6.1 The Bank Group interventions in the Ghana power sector have had very significant positive effects on regional integration. The first project has enabled a continuing institutionalised relationship between Ghana and Cote d'Ivoire, which has been extended to Benin and Togo. The second project has also enabled better regional integration by making possible supply of Ghanaian power to border areas of neighbouring countries like Togo. Apart from the permanent capacity building effect and implications for exploiting Africa's power potential and minimizing power costs, these interventions are a model for emulation across Africa and have provided the building blocks for further integration. The Bank has recently approved a grant/loan of UA 12.56 Million to finance a 330 KV interconnection between Benin and Nigeria, which would potentially build on the Bank's project. In 2002-03 many regional interconnection projects and studies have been approved or are in the pipeline through NEPAD under the Short Term Action Plan. An energy protocol to facilitate such efforts has been signed under ECOWAS.

2.4.6.2 The Telecom sector intervention of the Bank had a major beneficial impact on regional integration by providing inter-country telecom links and reducing dependence on routing telecom traffic via Europe. Since then these links have been further strengthened. Authorities/regulators of the

region are coordinating their activities in this regard. ECOWAS is considering a 'GSM Roaming Model' recommended by experts to enable seamless communications in the region.

#### **2.4.7 Overall Assessment of Assistance by Sector**

2.4.7.1 The overall performance of the Bank's power projects in Ghana (although limited to two) has been very satisfactory in terms of the achievement of objectives and continuing sustainability, as also regional integration. Both projects are operating satisfactorily even today and their outputs exceed expectations at appraisal. The transmission and distribution lines constructed under this project will continue to provide reliable supply of power in the future. Thus the project selection was excellent. Monitoring of implementation was effectively done through progress reports, although no supervision mission was sent to Ghana. The projects have led to multiplier effects in providing significant benefits from relatively modest investments. The Bank has, however, failed to build on this success through further engagement, and has also failed to participate in sector reforms.

2.4.7.2 The overall outcome of the Telecom intervention itself has been satisfactory and to expectation. The impact, however, has been marginal and transient, given the fact that the engagement was not sustained after the one and only intervention. The Bank Group also did not participate in the very major and successful reform effort in the sector.

2.4.7.3 Thus, the Bank's interventions in these two sectors was satisfactory on the whole, as reflected in Table 2.3 above.

#### **2.4.8 Conterfactual**

2.4.8.1 It is apparent from the analysis in proceeding paragraphs that the Bank's interventions in the Power Sector have contributed significantly to regional integration and creation of transmission and distribution infrastructure in Ghana, as also the capacity to operate it and replicate it elsewhere. In the Telecom sector, the Bank's interventions made an impact on regional integration and self-reliance.

2.4.8.2 An assessment of what would have been the state of things in these sectors if the Bank interventions had not taken place, requires an assessment of the funding alternatives that were available with the country at the time and subsequently, and the direction country investment priorities would have assumed if the Bank had not shaped them to the extent it did through its interventions.

2.4.8.3 With regard to resource availability, given the low proportion of Bank lending (12 to 13%) in total external assistance to Africa from all sources, as also the relatively small quantum of the Bank's assistance to the Ghana Power and Telecom sectors, it can be conjectured that given the will, the country would have found from other sources, as required, the resources for the projects financed by the Bank. At the margins it would have perhaps implied small impacts arising from slightly aggravated resource constraints across sectors.

2.4.8.4 Looking at the possible direction of investment priorities in the absence of the Bank's engagement in these sectors, it is realized that the Government of Ghana has given significant emphasis to the Power sector, which is reflected in the relatively high degree of electrification. This would support the contention that, in the absence of the Bank's interventions, the state of the power sector in Ghana would not perhaps have been qualitatively very different in terms of overall electrification. However, there is a possibility that this would perhaps have been achieved through

means other, and perhaps less optimal, than the one based on regional interconnection, facilitated by the Bank's intervention, given the Bank's policy orientation and its comparative advantage in achieving cooperation of all concerned for such projects. In the Telecom sector, the Bank's interventions, while useful and relevant, had a limited and somewhat short-lived effect. The major transformation in the sector came much later with the advent of private mobile operators to which the Bank did not contribute. By 2003, of the 1.4 million telephone subscribers in Ghana only about 280,000 were fixed subscribers from the era in which the Bank intervened. It can be concluded that for the Telecom sector the contra-factual to the Bank's intervention would have differed only marginally from what came to be.

### **3. CONTRIBUTOR'S PERFORMANCE**

#### **3.1 The Bank Group**

3.1.1 The two power projects were appraised and implemented a long time ago. Hence details of timing of requests to the Bank and responses etc. are not available. Aspects like lack of supervision missions, especially for the second project, did not appear to affect project implementation quality. The appraisal of the second project involved high cost estimates (which led to savings) and certain changes became necessary during implementation to enhance benefits of the project. It appears that the PCR for the first project was not carried out, while only the abridged PPAR is available for the second project. From overall time taken to complete the projects and from discussions with VRA, it can be stated that response time from the Bank was satisfactory.

3.1.2 The Bank's performance in the power sector of Ghana has been very satisfactory. Although only two projects were financed in forty years of operations, the projects have played and would continue to play an important role in regional integration and providing reliable and cheap power to consumers in Ghana. The second intervention would contribute in particular to rural development in the Northern region.

3.1.3 It is indeed regrettable that despite the remarkable success achieved by the Bank in the power sector of Ghana, there were no follow up engagements to build upon and fully exploit the potential of the infrastructure created by the two interventions. The Bank has remained an outsider in the on-going power sector reforms. This is somewhat unfortunate, as the reforms are key area for intervention by multilateral institutions, with many conventional interventions now driven through bankable privately financed projects. This was thus a missed opportunity.

3.1.4 The Bank's performance in the Telecom Sector intervention was satisfactory. The Bank, however, has not been active in the sector in Ghana since then and has thus not participated in subsequent reforms that have taken place and are ongoing. It needs to be appreciated that the reforms were beneficial and has facilitated private sector participation. The Bank's private sector window could carve out a niche in this sector.

3.1.5 The review reveals shortcomings in the Bank's practices related to record keeping and document storage/availability as well as response time in communications. The Bank is unfavourably compared with agencies like the World Bank for not making consolidated and updated information available in a timely and convenient manner. WB information related to disbursements etc. is available on the web and is regularly updated. The on going effort to enhance the Bank's IT is commendable

and needs to be reinforced. The opening of a Country Office could also facilitate Bank's presence on the ground to resolve issues in real time.

3.1.6 The overall feeling of stakeholders towards the Bank is one of affiliation. The Bank Group has a special place in the minds and hearts of officials and stakeholders in the country. It is considered to be Africa's own Bank and expectations from it are much higher than from other agencies in this field. As a consequence disappointment arising from perceived or real shortcomings of the Bank Group is heightened. Thus, while the Bank Group has a special responsibility to improve its communication with the borrower and executing agencies, it also has a special advantage in terms of getting cooperation from its client, which it must capitalise on.

## **3.2 The Government and Executing Agency**

3.2.1 VRA, the executing agency, demonstrated commendable ownership and commitment to the successful implementation and operation of both power projects. VRA's managerial and technical competence compensated for shortcomings in supervision by the Bank. VRA/Government performed tasks related to project completion well in matters like compliance with loan effectiveness conditions, project management, local currency payments, supervision, monitoring and progress reporting. For both projects, PCRs were prepared and sent to the Bank.

3.2.2 Although physical implementation time was as planned, the projects had delays of 8 and 17 months, respectively, mainly due to delays in preliminary activities, including non-performance in some aspects on the Cote D'Ivoire side in the first project and operational problems in the second. These relatively small delays are not entirely attributable to VRA. In the first project due to change of scope, there was a small cost over run. VRA provided the additional funds in time.

3.2.3 On completion of the projects, VRA is operating and maintaining the transmission lines, distribution lines and sub-station equipment in good condition. The projects are working well even today. VRA took the initiative to use the interconnection for sale of power to Benin and Togo from Cote D'Ivoire. It is making full use of the interconnection capacity and is also connecting a large number of consumers to the grid in the North region. VRA is committed to increasing the degree of electrification and its progress so far is much better than many countries in the sub-Saharan region. Ongoing power sector reforms would enhance sustainability of both projects.

3.2.4 The commitment of the executing agency and the Government on the Telecom side can be gauged from the very healthy state of the sector today. A detailed description of the subsequent evolution of the power and telecom sectors in Ghana and their current state of performance is given in Annexes 5 and 6, respectively.

## **3.3 Donors**

3.3.1 Among the donors, the World Bank has historically played a dominant role in the Ghanaian electricity sector and has been instrumental in the reform process. Government of Ghana has, however, shaped the direction and content of reforms quite independently to suit their own circumstances. IFC has recently given a loan of US\$60 million for the Takoradi II thermal project.

3.3.2 The Government of Denmark is funding technical assistance to formulate a detailed long-term energy sector implementation strategy to consolidate policy objectives and actions, programmes and projects into a "Strategic National Energy Plan" with a twenty-year horizon.

3.3.3 Ghana has over the years been able to attract foreign capital from bilateral/multilateral sources to develop and expand telecom services. The Government embarked on two major rehabilitation projects in the 70s and 80s, referred to as the First Telecom Project (FTP) and the Second Telecom Project (STP). Funding for the FTP came from multi/bilateral sources with the World Bank being the largest contributor and EDC (Canada), the African Development Bank, OECF (Japan) and ECGD (UK) being other contributors. STP was launched in 1987. Funding sources were largely foreign and included France (CCCE), Netherlands (NKF), Japan (JICA, EXIM and OECF), Ireland and IDA. In view of the above donor performance in the Power and Telecom Sectors in Ghana is perceived as satisfactory.

## **4. MAJOR FINDINGS/LESSONS AND RECOMMENDATIONS**

### **4.1 Major Findings/Lessons Learnt**

4.1.1 Policy objectives are articulated in very broad terms in the Country and Bank crosscutting and sector policy documentation. There is an absence of related operational guidelines. This makes their implementation and monitoring and evaluation difficult. (2.1.4 and 2.4.1)

4.1.2 There has been a lack of continuity in Bank Group engagement in the power and telecom sectors. The Country Strategy Papers provides no explanation for their exclusion. Key poverty reduction interventions such as rural electrification, that have far reaching impact on sustainable development of the rural areas, are left out as a result. (2.1.10 & 2.1.11)

4.1.3 There is a concern in the country that the Bank's involvement in donor coordination is hampered by lack of a country office in Ghana. (2.3.2.1)

4.1.4 Even though choice of projects has been good, sectoral interventions in the country have not been based on a comprehensive long-term vision/master-plan for the sector. The Bank has largely failed to shape or engage in the key reform activities that have been taken up in the Power and Telecom sectors in Ghana. (2.3.1.3)

4.1.5 While in some quarters the Bank is seen to be bureaucratic and inflexible and to have slow response time in communications, there is also a distinct feeling of affiliation towards it as Africa's own Bank. These are both a challenge and an opportunity for the Bank to attend to. (3.1.5, 3.1.6)

4.1.6 The Bank's interventions in the power sector had been very successful. The Bank's projects and the Government's reform efforts have paved the way for the subsequent regional projects implemented or being implemented in neighbouring countries. Regional transmission interconnections can lead to manifold benefits from relatively modest investment. This is best practice and deserves to be emulated across Africa (2.4.6).

4.1.7 While the sole Bank intervention in the Ghana Telecom sector, implemented in the late 70's/early 80's, promoted regional integration and reduced dependence on Europe, the contribution to the sector on the whole has been marginal. The momentum of the sector has since shifted to the private sector. The reform space too has been occupied by other donors. The telecom sector reforms in Ghana are undoubtedly a success story. A policy based on independent regulation, entry of private firms and

competition can lead to a quick and significant transformation in the service quality and number of persons/areas served. (2.1.13)

## **4.2 Recommendations**

4.2.1 Crosscutting and sector specific operational guidelines must be formulated to enable sector and cross-cutting policy concerns to be explicitly mainstreamed and addressed in project and program design (2.1.4, 2.4.1)

4.2.2 Bank needs to ensure that comprehensive sector studies are carried out prior to its intervention in a particular sector. (2.3.1.3, 2.3.1.4)

4.2.3 Within the compulsions of resource constraints, a minimal degree of engagement in key sectors should be ensured to remain an active partner and retain a voice in the country and the sector. Suitable indicators should be adopted to monitor progress of various sectors, and accordingly shape future country strategy papers. (2.1.10, 2.1.11)

4.2.4 The Bank needs to be pro-active in areas like policy initiatives and reforms to enhance its leadership in the knowledge space. (2.1.11, 2.3.1.4)

4.2.5 Efforts should be made with donor group coordinators to fix a six-monthly/quarterly roster of meetings in advance and arrange supervision/other missions to the country accordingly to ensure Bank's participation in donors' coordination meetings. (2.3.2.1)

4.2.6 On going efforts for e-record keeping and transmission of information to client should be reinforced. (3.1.6)

4.2.7 Enhance support to rural electrification projects to preserve the environment, alleviate poverty and exploit the full potential of infrastructure already created by Bank interventions. (2.4.1.2)

4.2.8 Facilitate hydro/other generation projects based on locally resources and make them viable through interconnections. (2.1.12 & 2.4.6.1)

4.2.9 The momentum for the Telecom sector has shifted to the private sector. The Bank needs to find a suitable intervention space for itself through the development of a suitable policy to fully engage its private sector window (2.1.8, 2.1.13)

## GHANA

### Project Information

#### Part I: Project Components and Objectives

<u>S. No. / Name of Project</u>	<u>Objectives</u>	<u>Components</u>
Electricity Interconnection (1978)	To transfer power between Ghana and Cote D'Ivoire. It was initially envisaged that cheap surplus hydropower from Ghana would be exported to Cote D'Ivoire	A 225 KV single circuit line, 215 KM long between Abidjan and Prestea in Ghana One sub-station with two transformers 225/161 KV. Tele-transmission, control and measurement equipment Reinforcement of 161 KV network in Ghana. Consultancy services and training of local staff in operation of the interconnection.
Brong Ahafo Electricity Network (1986)	To reinforce the National grid to increase overall system reliability and transport capability. To reduce power system losses and to extend the grid to Northern parts of Ghana to replace expensive diesel power stations and increase the degree of electrification.	<ul style="list-style-type: none"> <li>a) Reinforcement of existing grid</li> <li>b) Extension of the grid to Brong Ahafo Region</li> <li>c) Construction of the distribution network in the Brong Ahafo region</li> <li>d) Purchase of operational vehicles</li> <li>e) Engineering and contract management services</li> </ul>
Telecom. Network (1977)	No documentation is available. Based on information obtained through interactions with officials in the country it appears that the project involved creation of the Ghana portion of the Cote d'Ivoire-Togo line and was based on analogue transmission, which was the technology of the time. It was aimed at reduced dependence on routing to Europe for intra-Africa telecom traffic.	

**Part II: Implementation Information**

<b><u>S. No. / Name of Project</u></b>	<b><u>Approval Date</u></b>	<b><u>Loan Amount</u></b>	<b><u>Date: Loan Effectiveness</u></b>	<b><u>Date: Completion (appraisal)</u></b>	<b><u>Date: Completion (actual)</u></b>	<b><u>Variation (months)</u></b>	<b><u>Reasons</u></b>
Electricity Interconnection (1978)	22-08-78	UA 6.24 Million	31-12-79	January 1982	June 1983  (actual operational use in Feb. 1984)	17 Months	Delay on Cote D'Ivoire side of the line. Scope of the project was revised by additional civil works to supply water to the site and the village.
Brong Ahafo Electricity Network (1986)	17-06-86	UA 35.0 Million	20-03-87	June 1990	February 1991	8 month delay	Physical works were completed as planned but due to operational problems commissioning was delayed.
Telecom. Network (1977)	21-10-87	UA 5.0 Million	15-06-78	NA	NA	NA	No project documents available.

**Part III: Project Cost Variations**

<b><u>S. No. / Name of Project</u></b>	<b><u>Loan Approved</u></b>	<b><u>Loan Disbursed</u></b>	<b><u>Proj. Cost at Appraisal</u></b>	<b><u>Actual Project Cost</u></b>	<b><u>% Variation in Cost</u></b>	<b><u>Causes for Variation and Unspent Balance if any</u></b>
Electricity Interconnection (1978)	UA 6.24 M	UA 6.24 M	UA 14.16 M	UA 14.52	2.54% over-run	VRA financed cost overruns of approximately US \$3.98 Million for ADB and EIB components.
Brong Ahafo Electricity Network (1986)	UA 35.0 M	UA 24.34 M	UA 48.50 M	UA 27.93 M	42.4% under-run	UA 10.66 M was cancelled. Actual costs were lower as costs at appraisal were overestimated. ICB also contributed towards lower costs.
Telecom. Network (1977)	UA 5.0 M	UA 4.91 M	N/A	N/A		UA 0.09 M was cancelled.

**Part IV: Qualitative Assessment**

<b><u>S. No. / Name of Project and Project Components</u></b>	<b><u>Objectives / Relevance</u></b>	<b><u>Quality at Entry</u></b>	<b><u>Achievement of Objectives (Efficacy)</u></b>	<b><u>Sustainability:</u></b>	<b><u>Institutional Development Impact:</u></b>	<b><u>Remarks</u></b>
Electricity Interconnection (1978)	Exchange of power between two countries. Regional cooperation	Feasibility was initiated by ADB was of excellent quality	Fully achieved. Power is exchanged among three countries	Project is in operation and well maintained.	Both countries obtained experience in operating a regional interconnection and also in implementing a regional power project.	Power is now transferred from Cote D'Ivoire to Ghana, Togo and Benin. It is proposed to connect with Nigerian Grid to take advantage of cheap power from natural gas.
Brong Ahafo Electricity Network (1986)	Consistent with Ghana's economic recovery programme	Feasibility study Environmental aspects considered	Fully achieved	Project is well maintained and number of consumers have increased from 17000 to 163000.	VRA staff obtained experience in design, procurement and construction of transmission line	VRA staff extended the network in the project area later on without external help.
Telecom. Network (1977)	To complete Panaftel link with Togo and promote regional integration.	Feasibility study done by ITU	Panaftel link in West Africa was completed	Project worked satisfactorily for eight years but was replaced by digital technology due to obsolescence. One small link from Accra to Togo border still operational in original form.	Ghana Telecom staff gained experience in project management	

**Part V: Overall Financial and Stakeholder Performance**

<b><u>S. No. / Name of Project</u></b>	<b><u>FIRR at Appraisal</u></b>	<b><u>FIRR on Completion</u></b>	<b><u>EIRR at Appraisal</u></b>	<b><u>EIRR on Completion</u></b>	<b><u>Remarks</u></b>
Electricity Interconnection (1978)	10.25 %	N/A	15.16 %	N/A	Power transmitted was much higher than originally estimated and presently over 180 MW are transmitted from Cote D'Ivoire to Ghana and Benin. PCR not available.
Brong Ahafo Electricity Network (1986)	16.50 %	17.64 %	35 %	25.40 %	
Telecom. Network (1977)	NA	NA	NA	NA	No project documents available.

**Part VI: Stakeholder Performance**

<b><u>S. No. / Name of Project</u></b>	<b><u>Bank Performance:</u></b>	<b><u>Borrower Performance:</u></b>	<b><u>Remarks</u></b>
Electricity Interconnection (1978)	Bank's performance has been satisfactory. Feasibility study was well carried out and the project was well implemented. Although no supervision mission was sent to Ghana the project is performing with excellent results.	Although there were delays in fulfilment of loan conditions by Cote D'Ivoire, the project was completed as planned. O&M is satisfactory.	The project promoted regional cooperation and optimal use of generation capacity in the region was achieved.
Brong Ahafo Electricity Network (1986)	The Bank's performance was not satisfactory. Although the selection of project was well done, project estimates were very high at appraisal. Technical aspects were not examined with care during appraisal or implementation.	The Borrower's performance has been satisfactory and as a result VRA was handed over the responsibility of distribution in the North region.	
Telecom. Network (1977)	NA	NA	Based on information obtained through interactions with officials in the country the Telecom Network Project had high degree of relevance and quality at entry. The project involved creation of the Ghana portion of the Cote d'Ivoire to Togo line and was based on analogue transmission, which was the technology of the time. It promoted key Bank Group and Country objectives of regional integration and reduced dependence on routing to Europe for intra-Africa telecom traffic. Rapid obsolescence in the telecom sector affected the life of the project, which was inevitable and unavoidable.

## GHANA

### Country Crosscutting and Sectoral Policies

#### **1. Approach to Poverty Alleviation**

In the mid 90s the Government of Ghana launched the 5 year Medium Term Development Plans. These were shaped by the Ghana Vision 2020 exercise, which is a twenty-five year perspective plan. As the poverty reduction effort needed a more concerted effort, a more focused outcomes oriented approach was adopted in 2002, by way of the Ghana Poverty Reduction Strategy (GPRS). Initiatives for economic development in Ghana are implemented within this framework. Currently the GPRS 2003-05 is in operation. Key policy and budgetary decisions have been taken at both the national and district level within this framework, which has been geared towards achieving the medium term priorities of the Government. Annual Progress Reports (APRs) 2002 and 2003 have been prepared on the basis of feedback provided by various departments and Monitoring and Evaluation (M&E) activities. M&E is stressed through initiatives like the National Intra-Agency Poverty Monitoring Groups (NIPMGs) chaired by Ministries, Departments and Agencies (MDAs), the GPRS Strategic Environment Assessment and Special Impact Assessment (PSIA) Technical and Advisory Committees.

The APRs assess the impact of programmes the in the following five GPRS prescribed thematic areas: Macroeconomic Stability; Production and Gainful Employment; Human Resources Development and Provision of Basic Services; Vulnerability and Exclusion; and Good Governance. The focus areas for the poverty reduction effort under the GPRS are the following: Development of the Rural Economy through Modernization of Agriculture; Sustained Environment Protection through re-forestation; Enhancing Infrastructure Development; and Creating an Enabling Environment for Private Sector Activities and Development. Thus the Infrastructure sector, part of which is the subject of this evaluation, receives major emphasis in Ghana's developmental strategy.

#### **2. Environmental Policies**

These policies are evolved and implemented under the leadership of the Ministry of Environment and Science. Hitherto, focus in this area has largely been on sustainable natural resource management. However, in 1994 the Environment Protection Council, which was an advisory body, was converted into the Environment Protection Agency (EPA) with statutory powers to issue environmental permits, prescribe standards/guidelines for water, air purity etc. and ensure compliance with environment impact assessment (EIA) procedures. This has extended the applicability of environmental considerations/approvals in a crosscutting manner across sectors, including public utilities projects.

### **3. Governance Reform**

Decentralization and Public Sector Reform have been particularly emphasised by Government of Ghana (GOG) under Governance Reform. This has important implications for operational efficiency in Public Utilities and improved service delivery at the grassroots. As part of political decentralization enshrined in the constitution, District Assemblies were established in 1992 and the District Assemblies Fund became operational. The National Decentralization Action Programme was approved by Cabinet in 2003. As a part of these efforts capacity building has been undertaken in District Assemblies. This includes initiatives to formulate district composite budgets. Efforts have been made for the voice of the citizenry to be heard by way of budget advocacy in the budget making process through Civil Society organisations like the Centre for Budget Advocacy. District Assemblies are generating funds through their own sources, in addition to funds from Government, development partners, the District Assemblies Common Fund and HIPC relief. The recent Local Government Service Bill has improved service conditions in local governments. Decentralization on the administrative side has lagged behind, with MDAs still largely controlling their programmes through field offices. By way of Public Sector reform, efforts to enhance civil service leadership capacity and accountability through measures like performance contracts have been introduced.

### **4. Gender Issues**

Programmes for the welfare of excluded and vulnerable groups like women have been emphasised as a focus area of the poverty alleviation effort by GOG. The Women's Development Fund under the Ministry of Women's and Children's Affairs has provided improved income earning capacity to 500,000 women through financial assistance. 50,000 new jobs have been created for women around the country by the Ministry. Micro-finance programmes have also benefited women through the Women's Special Microfinancing Fund. Government policy aims at removing gender disparity in enrolment and retention in schools. Gender related social indicators like maternal mortality (214 in 1998), however, show scope for significant improvement. Between 1998 and 2003, infant mortality and below five years mortality have worsened from 57 to 64 and 108 to 111, respectively. A formal National Gender and Children's Policy and an Early Childhood Development Policy have recently been launched in September 2004, which formalises the approach of the Government.

### **5. Private Sector Development**

The Ministry for Private Sector Development, which is mandated to cooperate with various MDAs, NGOs, private entrepreneurs and other stakeholders to achieve its objectives, has focused on private sector access to long term finance, reducing bottlenecks in private sector development, promoting entrepreneurship and improving the investment climate. Steps like institutional and legal reform by way of introduction of the Companies Code, Insolvency Bill, Insurance Bill and the Money Laundering Bill have been taken. Customs operations have been modernized, a new Labour Act is in place and the time taken to start a business has been reduced.

## **6. Power Sector Policy**

Ghana's Energy Policy Document recognizes the provision of adequate energy supplies as critical for meeting Government's development objectives of poverty alleviation and general economic growth. It states Government's intention to foster a better relationship with private sector investors and development partners to overcome funding constraints. The content of the policy is shaped by the Government's developmental objectives. In particular, the objective to usher in a "Golden Age of Business" to reverse social and economic shortcomings and create a conducive environment for strong and sustainable growth and prosperity. The policy recognizes that the provision of adequate, reliable and competitive energy supply is a prerequisite that will underpin the growth of the national economy and consequently alleviate poverty. This requires energy service based on improved availability, accessibility, affordability and acceptability of modern forms of energy delivery, with special focus on rural areas to alleviate poverty. Government's priorities listed in the document include consolidation and improvement of existing energy supply systems, increased access to high quality energy services, securing future energy supplies, stimulating economic development, minimizing environmental impacts of energy supply and consumption, strengthening institutional and human resource capacity and R & D in energy development, encouraging renewable energy technologies and undertaking energy sector reforms.

The GPRS documentation also emphasises issues related to the power sector and identifies the key policy goals to be reliable supply of high quality energy, energy provision to boost industrial development, cost recovery pricing and economic expansion while protecting the poor, continuation of rural electrification, promotion of energy efficiency and development of renewable energy.

## **7. Telecommunications Policy**

A formal policy for the Telecommunications Sector in Ghana is currently under preparation with the help of a consultant, with a major role for stakeholder participation in the process. The final draft is under consideration by the Government. Events, however, have overtaken this effort. The Government has not waited for the formal policy document while initiating a major transformation of the sector. The policy objectives reflected in the various actions of the State in recent years have been very far-reaching and significant, and include competition, private sector participation and independent regulation as its key elements.

## GHANA

### **Bank Group's Cross Cutting and Sectoral Policies**

Several crosscutting policies of the Bank Group impact interventions in the Power and Telecommunications sectors. In particular, the policies/stance related to issues like poverty alleviation, the environment, gender, civil society participation and private sector participation merit consideration. These along with the Sectoral Policies are discussed in succeeding paragraphs.

#### **1. Poverty Reduction Policy**

The Bank's Vision Statement (1999), which identifies poverty reduction as the Bank's overarching goal, is the starting point for the Bank Groups Policy on Poverty Reduction, reflected in the 2004 Poverty Reduction Strategy Paper (PRSP). The policy is based on the principles of poverty-focus, national ownership, participation of civil society and outcome orientation. Five priority development areas are identified in the policy, namely: agriculture and rural development including rural infrastructure, human resources development, HIV/AIDS, private sector development, good governance and two cross-cutting issues by way of gender and the environment. Operationally, efforts are underway to link country programs with the PRSP process. Thus the Banks approach to poverty reduction emphasises important crosscutting issues like environment, gender and the private sector.

#### **2. Environment Policy**

The Bank Group has formulated a new policy on the Environment in 2004 to replace the earlier policy of 1990. This is in response to recent developments, which include the recognition of sustainable development as the underlying development paradigm and the need for a greater focus on pro-poor growth policies and programmes to counter unacceptable impoverishment rates. The policy stresses an anticipatory approach rather than one based on reactive response. The overall goals of the new Policy are to improve the quality of life of the people of Africa and help preserve and enhance ecological capital and life-support systems. A number of key environmental issues have been identified, which will have to be addressed in Bank lending operations. The traditional sector-by sector approach in the management of natural resources has been replaced by one based on integrated cross-sectoral environmental policy actions. The key issues include: reversing land degradation and desertification; protecting the coastal zone; protecting global public goods; enhancing disaster management capabilities; promoting sustainable industry; increasing awareness, institutional and capacity building; environmental governance; urban development and population growth; and civil society organisations. In addition to other measures, the Bank will mainstream environmental sustainability considerations in all Bank operations, strengthen existing environmental assessment procedures, assist RMCs to build adequate capacity and improve public consultation and information disclosure mechanisms, to implement the policy.

### **3. Gender Policy**

The Bank's gender policy document of 2001 stresses gender mainstreaming as a means of fostering poverty reduction, economic development and gender equality. The policy is framed within the Bank's New Vision (1999). Poverty reduction is the broad framework within which actions to achieve gender equality will be pursued. The guiding principles of the policy emphasise the need to apply gender analysis to all Bank activities. Particular attention is emphasised in five areas, namely education, agriculture and rural development, women's poverty, health and governance. Gender considerations are proposed to be addressed in all upstream macro-economic activities through which Bank Group policies are translated into programs and projects in order to ensure that implementation strategies respond to the specific needs and priorities of women and men. Concrete proposals as to how projects under consideration intend to address gender considerations, as also gender-disaggregated data of beneficiaries, are envisaged.

### **4. Civil Society Participation**

The Bank Group's Policy Guidelines on Cooperation with Civil Society Organisations (CSOs) formulated in 2004 envisage in the immediate term a concerted dialogue with RMCs to facilitate the creation of an enabling space for civil society to operate autonomously, effectively and accountably. Systematic consultation and collaboration with stakeholder and beneficiary groups in civil society is envisaged to improve the Country Lending Strategy process and performance of Bank supported projects. In the medium and long term, the Bank will endeavour to contribute to the growth of civil society by promoting and facilitating a three-way dialogue between RMCs/CSOs/and the Bank at the national and regional levels. The Bank will draw on the knowledge, contacts, experience and delivery capacity of individual CSOs and networks. Where they possess necessary skills and experience, CSOs may be involved as volunteers or as contracted agents. Consultation with relevant and specialized CSOs is envisaged to take place on draft Bank sectoral policies and new Country Performance Assessments (CPAs).

### **5. NEPAD**

The New Partnership for Africa's Development (NEPAD) is a high level forum comprising Heads of State to ensure greater focus and emphasis on eradication of poverty, sustainable growth and development. It emphasises peace, security, good governance and economic reform, and envisages enhanced aid, debt relief, and market access from partners. Priority sectors covered by the NEPAD program of action are: Infrastructure, including information and communications technology (ICT), Energy, Transport and Water and Sanitation; Human development, including education, health and skills development; Agriculture and Environment; and Access to the markets of developed countries for African exports. In 2002-03 many interconnection projects and studies have been approved or are in the pipeline in the Power Sector through NEPAD under the Short Term Action Plan.

### **6. Power Sector Policy**

The policy document for the Bank Group for the Energy Sector dates back to 1994. It lists assisting RMC's in providing adequate energy for all economic and social activities at the least economic and

environmental cost as its fundamental objective. It aims at providing a prudent general framework for energy sector interventions and recognizes the need to address the situation of high dependence on petroleum based sources. The policy proposes to incorporate energy considerations as an integral part of National Plans in other sectors. A role for the Bank Group in strengthening energy sector institutions, creating a conducive legal and regulatory framework, promotion of regional integration through interconnection and removal of inter-state barriers, development of hydropower and rural electrification is envisaged. Inter-alia, Demand Side Management, gender sensitivity, commercial orientation of utilities, cost recovery and promotion of clean fuels like natural gas is emphasised. The Bank Group also emphasises PSP.

## **7. Telecommunications Policy**

There does not appear to be any formalised Bank Group policy for this sector. Further, Bank operations today (and for that matter in the past also) do not lay much emphasis on this sector. The developmental momentum in this area has shifted from the public sector to the private sector. The largely privately owned industry structure, the very nature of private sector operations, the rapid rate of obsolescence in telecom technology and the risks involved, merit market driven investment decisions and access to funds. The Bank needs to identify the role it can play in this scenario. A Bank Group policy needs to be formalised for this purpose. Key candidate areas that could be considered for engagement are reform interventions in un-reformed scenarios, interventions facilitating regional integration in light of the Bank's institutional/comparative advantage in this area and interventions through the private sector lending window. As seen above, even in Ghana, a formal Telecom Policy document is still under preparation.

## GHANA

### Evolution and Current Performance of the Ghana Power Sector

**1. Institutions:** The Ghana Power sector has had a fairly stable utility structure for the past few decades. Ministry of Mines and Energy (MOME) is responsible for formulating and implementing energy policies with the assistance of sector regulators and utilities. Currently the Government implements policy through the following companies:

Volta River Authority (VRA) set up as a statutory body in 1961, is responsible for transmission, generation, bulk sale to ECG and distribution in the North.

Electricity Corporation of Ghana (ECG) purchases power from VRA and distributes it in the southern part of Ghana.

**2. Reform:** The need for reform in the power sector was brought into focus by the severe drought in 1982-84 and subsequently in 1993, which led to a severe shortfall in hydro generation. By 1984 the hydro-generation level had reached 36% of its pre-drought level while electricity demand was increasing at the rate of 8 % per annum in the 1985-95 period. As a consequence Ghana became a net importer of electricity from Cote D'Ivoire. To meet the growing demand the World Bank agreed to finance the Takoradi thermal Plant (110 MW) on commitment lending requiring sector reforms.

The major transformation in the policy orientation of the power sector in Ghana came with the decision in the early 90's to create an enabling environment for private sector participation. In 1994 Government of Ghana issued a strategic framework for power sector development and launched a study to examine the opportunities for restructuring the power sector. On completion of the study, Ministry of Mines and Energy prepared a sector policy report and established the Power Sector Reform Committee. Cabinet approved the Power Sector Reform proposal in 2003. A Power Sector Reform Secretariat was set up. The proposed reforms are being implemented. The reform approach includes a Public Education and Awareness Strategy.

Two regulatory bodies, namely the Public Utilities Regulatory Commission (inter-alia for tariff and consumer welfare issues) and the National Energy Commission (inter-alia for entry, licensing and technical issues) were created. This has facilitated prudent actions like tariff re-balancing and automatic tariff adjustments on the basis of a framework laid down by the regulator. Restructuring of debt obligations of the two key utilities, the Volta River Authority (VRA) and the Electricity Company of Ghana (ECG) is also envisaged. As a part of the reforms the proposal to un-bundle the Volta River Authority (VRA) into four companies (a hydro generation company, a thermal generation company, a transmission company and a distribution company comprising VRA's Northern distribution operations and ECG's distribution network) is now before Parliament and is likely to be approved soon.

Further generation capacity in Ghana is largely envisaged in the private sector. The approach to generation involves a balance between hydro and thermal sources. However, since the 90's the share of

hydro has fallen due to a decline in water flow. Development of the Bui II hydro project, which is under consideration, should restore some balance. A Cabinet Committee has been set up to oversee this project. VRA's high cost petroleum based thermal plant at Takoradi is being converted to combined cycle through introduction of steam units. Availability of Nigerian gas from the proposed West African Pipeline would further improve the generation position. Transmission would remain a Government owned but independently regulated natural monopoly in the unbundled industry structure. To overcome inefficiency in the distribution sector, which is essential for attracting private investment in Generation, steps to engage a private entity through a Management Contract are in an advanced stage and are to be implemented on completion of the unbundling.

**3. Current Performance:** Institutional performance varies across the Ghana Power Sector spectrum. Looking at the generation side, it can be said that VRA's hydro facilities have performed well, with an availability of around 98%. The thermal unit has, however, proved to be high cost as it uses petroleum based fuel. The availability of the thermal plant is around 70%, which is somewhat low. A combined cycle arrangement involving a steam process is now being introduced for this plant. VRA has successfully implemented a thermal generation project with private sector participation at Takoradi. VRA has performed well as a transmission utility, with energy losses at less than 4% and availability of around 98%. With the remarkable success of the Bank funded interconnection with Cote D'Ivoire, a second line is under consideration by VRA. The existing transmission line along the coast is proposed to be upgraded from Takoradi to Tema to 330 KV with Kuwait Fund funding. This would leave only the Takoradi – Cote D'Ivoire portion at 225 KV. On the distribution and supply side, the T&D losses (inclusive of commercial losses) incurred by VRA in Northern Ghana are quite high in an absolute sense, even though they compare favourably with levels in various developing countries. These currently stand at 24.5%. Collection efficiency stands at 87 %. VRA is attempting to reduce their cost of supply by 30% over the next 3 years by reducing losses and optimising generation. The recent closure of the Volta Aluminium Company (VALCO), which was a bulk VRA consumer under a long-term contract at a very low price, is a blessing in disguise and has eased the power availability position. This power is now being sold at a higher tariff.

ECG, which is a distribution and supply company, experiences T&D losses (inclusive of commercial losses) of about 26%. Collection efficiency is about 85%, which is significantly lower than the corporate norm for bad debts. ECG has deployed innovations like outsourcing of meter reading. It has also made attempts to improve bill collection through arrangements with Banks and Post Offices. A private company has been engaged to oversee the collection arrangements through Post Offices. ECG is fairly aggressive in disconnecting defaulters, who are generally un-wilful defaulters due to genuine economic hardship. Provisions for punishing theft are also enforced. The underlying problem in distribution is perhaps the low level of metering at all levels, which prevents an ongoing concurrent energy audit and allocation of accountability down the organizational structure.

The pace of electrification of households has been better than most sub-Saharan countries. Starting with 10% coverage when the Bank conceived its second project in 1986, the current level of households having access to power is about 45%. Results of the Core Welfare Indicators Questionnaire (CWIQ) survey cited in GPRS documentation report 51% households having electricity in 2003, as compared to 37% in 1997. The pace of rural electrification has been hampered by dependence on uncertain, irregular and inadequate grant funds from donors. While a major portion of the losses are in urban areas, the quality of service lags behind in the rural areas. Line breakdowns due to vegetation etc. are quite high, as is the repair time due to remoteness and absence of Supervisory Computer Aided

Data Acquisition (SCADA) monitoring technology that enables quick detection, isolation and correction of faults. The inadequate technical provisioning for rural lines is due to dependence on inadequate donor funding, which has led to the funds being spread very thin. Rural electrification is envisaged through extension of the grid. Attempts at decentralized approaches to generation and distribution, including those involving non-conventional sources, have not been extensively tried.

The regulatory bodies, PURC and NEC have performed remarkably well. PURC was able to create the constituency with the public and other stakeholders for moving tariffs closer to economic levels. Distortions in the tariff structure have also been addressed. The lifeline tariff for economically weaker sections has been better targeted by making it non-applicable to consumers consuming more than 50 Units per month, even for the initial 50 Units. PURC has also introduced a non-intrusive regulatory system that does not involve frequent rate setting, by stipulating tariffs chargeable and the rules for enhancing them on various external factors.

Thus, the power sector in Ghana has seen a major positive transformation since the mid 90's. Key power sector decisions have been de-politicised through creation of independent regulators. Steps are underway to un-bundle composite utilities and address the issues of inefficiency in distribution and supply, high cost of thermal generation, falling share of hydro power and attracting private investment in generation. The need to accelerate the pace of rural electrification is perhaps an issue that has escaped full attention so far on account of competing claims on scarce resources.

## GHANA

### Evolution and Current State of the Ghana Telecommunications Sector

**1. Reforms:** Ghana is one of the few African countries to have liberalized its telecom market. After the two major rehabilitation projects in the 1970s and 1980s, referred to as the First Telecom Project (FTP) and the Second Telecom Project (STP), the next major change came with Mobitel (Millicom) offering mobile services in 1991. In 1994 the Accelerated Development Plan was launched by the Ministry of Transport and Telecommunications, which was aimed at improving and expanding the system and attracting foreign investment. Tele-density at that time was only 0.31.

The reforms included setting up of an independent sector regulator, the National Communications Authority (NCA) in 1998. Its responsibilities include licensing telecommunications operators (including equipment dealers), the allocation of frequencies and approval of telecommunications equipment. Since then, and particularly since 2001, the NCA has vigorously implemented a policy largely involving technology neutrality and universal service provision based licensing for entry of private firms (essentially mobile operators) into the sector to ensure increased competition in various telecom related areas, including domestic and international telephony. The duopoly of the two national operators in international service ended in February 2002. The regulator also has the power to regulate tariffs. However, mobile tariffs have been left to the market in light of the competitive industry structure. Fixed telephony tariffs are regulated, as there is no competition from other operators in several parts of the country.

**2. Institutions:** The Telecom Sector in Ghana was dominated earlier by the monopoly state-run Posts and Telecommunications Corporation. Ghana Telecom, the Telecom side successor body to the Posts and Telecom Corporation was created after postal and telecom services were separated. Company management was privatised in 1997 through a management contract with a Malaysian company. Presently the Management Contract is with a Norwegian company. Today there are two National (fixed line) Operators (Ghana Telecom and Westel), who offer/can offer mobile services also. Three other telecom operators, namely, Mobitel, Celltel and Spacefon are also operating. Mobile services are provided by Ghana Telecom, Mobitel, Celltel and Spacefon. Westel is in the process of establishing mobile services.

**3. Performance:** Growth has been significant, particularly in the mobile sector. The number of telephone subscribers increased from about 50,000 in 1994 to about 1.4 Million today. Of these, fixed lines were only about 283000 in 2003, even after 40% growth in one year. Thus mobile subscribers greatly outnumber fixed subscribers. An additional 4000000 fixed lines are planned in the next three years. In 2003, 257 schools had ICT links. The target by 2005 is 514. Broadband facility in towns with senior secondary schools and training colleges is also envisaged. Ghana was amongst the first countries in Africa to achieve connection to the Internet.

Ghana Telecom has been able to improve its quality of service in the face of competition created by new private operators entering the sector. The regulator is hopeful that given the rate of progress, the company would attain industry benchmarks in the next few years.

Westel, the other (privately owned) National operator has not lived up to the promise envisaged from it when it was allowed to enter as a privately owned competitor to Ghana Telecom. The company has not been able to set up mobile operations quickly enough. This is expected soon. Its shortcomings are revealed and to a large extent made up for by the great success of other private operators who have entered subsequently.

The performance of the regulator has been remarkable. NCA has been able to create a very competitive and fast growing Telecom sector in a very short period of time through a pragmatic approach that avoids unnecessary interference and relies on creation of competition to ensure consumer welfare.

## GHANA

### List of Documents Examined

#### Documents Obtained During Field Visit

##### General

1. An Agenda for Growth and Prosperity: Ghana's Poverty Reduction Strategy 2003-05.
2. Implementation of Ghana's Poverty Reduction Strategy: 2002 and 2003 Annual Progress Reports.
3. External Resources Mobilisation Mid Year Report, 19-7-04, Ministry of Finance and Economic Planning.
4. IDA Portfolio in Ghana 2004: First Portfolio Report, Ministry of Finance and Economic Planning.
5. EPA Newsletter, Jan-June 2004.
6. Miscellaneous EPA Pamphlets.
7. Social Investment Fund Newsletter, July 2003.

##### Power Sector

1. Volta River Authority Annual Report and Accounts 1987 to 1999, 2001 to 2002.
2. Volta River Authority Audited Financial Statements for Year Ended 31-12-03.
3. Electricity Company of Ghana Corporate Plan 2004-06
4. Electricity Company of Ghana Annual Report 2001.
5. ECG First Quarterly Report 2004.
6. Gazette Notification dated 26-7-02 on Electricity Tariffs.
7. Gazette Notification dated 18-6-04 on Electricity Tariffs.
8. Public Utilities Regulatory Commission Act 1997
9. PURC Guidelines for rates chargeable for electricity services
10. PURC proposed transitional plan for electricity rate adjustment for 2001-2004
11. PURC Consumers Guide
12. PURC Disconnection Document
13. PURC, Public Utilities Complaints Procedure Regulation 1999.
14. Annual Report: National Energy Commission, 2002-03.
15. Energy Policy Document.
16. National Energy Commission, Energy Review, May – July 2004.

##### Telecom

1. National Communications Authority Annual Report and Audited Accounts, Year ending 31-12-2002.
2. Ghana Telecom Annual Report and Accounts 1998-2000 and 2002.
3. National Communications Authority Act 1996.
4. National Communications Authority Regulations 2003.
5. Draft National Telecommunications Policy, June 17, 2004.

## **List of Bank Group Documents Referred**

### **A. Policy Documents**

1. A Framework for Public Utility Tariff Policy 1985
2. Environment Policy 1990
3. Revised Environment Policy 2004
4. Evaluating Environmental Mgt. Of Cat. I and II Projects 2004
5. Gender Policy 2001
6. Energy Sector Policy Paper 1994
7. Policy Paper on Cooperation between ADB and NGO's 1990
8. Vision Document
9. Strategic Plan 2003-07

### **B. Other General Documents**

1. 2001 Portfolio Performance Review.
2. Role of the ADB in Support of NEPAD 2004.
3. Review of Bank Experience in Telecom 2001
4. Review of Bank Experience in Telecom (French)
5. OPEV evaluation Guidelines.
6. Compendium of Statistics on Bank Group Operations, African Development Bank, 2004.
7. Selected Statistics on African Countries, African Development Bank, 2004.

### **C. General Country Specific Background Documents**

1. Country Strategy Papers 2002-04, update (02-04), 1996-98.
2. Country Strategy Paper 91-93, 94-96, 96-98, 99-01
3. Country Portfolio Performance Review 1999
4. Sector Review Study of Agriculture in Ghana (draft) 2004
5. The Economic Prospects and Country Programming Papers 1994-96 and 1991-93.

### **D. Project Related Documents**

1. Electricity Interconnection (1978): Appraisal 1978
2. Brong Ahafo Electricity Network (1986): Appraisal, Project Performance Audit Report 1997  
Telecom Masterplan Updating Study (1994): TOR.