GHANA MILLENNIUM CHALLENGE ACCOUNT PROGRAM



GHANA COMPACT II

POWERING GHANA FOR ACCELERATED AND SUSTAINABLE ECONOMIC GROWTH

CONCEPT PAPERS

SUBMITTED TO

THE MILLENNIUM CHALLENGE CORPORATION WASHINGTON D.C.

Accra,

19 October 2012

Table of Contents/Order of Documents

Section	Title	Page/Order
1	Introduction	1
2	Approach	2
3	Executive Summary	5
	Compact II Estimated Cost	6
Concept Papers	 Increasing Private Sector Investment Through Power Sector Reform Increasing Private Sector Investment Through Improved Fiscal Position of GoG and Improved Financial Performance of Utilities in the Electricity Sector. Power Generation Power Distribution and Utilisation 	
Annexes	 Positioning Ghana Compact II within the GSGDA Summary Reports from Consultations Social and Gender Analysis Report Social and Gender Implementation Plan M & E Strategy 	
Attachment 2	 Ghana Power Problem Tree Gridco SCC Daily Report National Energy Policy NED Long Term Load Forecast 	
Attachment 3	 Electricity Supply and Distribution L.I. 1935 Energy Commission Act 541 Environmental Assessment Regulation 1999 National Energy Policy 	
Attachment 4	 2011 Electricity Supply Plan Electricity Supply and Distribution L.I. 1816 	
Attachment 5	 Nedco Network Studies NES Master Plan Review Power Sector Financial Recovery Final Report 	
Other Documents	 Loss Study- ECG Executive Summary Loss Study- Nedco Executive Summary Nedco Final Business Plan Network Studies Report Final 	

1.0 **INTRODUCTION**

Ghana has made substantial progress in promoting both political and economic development. It is recognized that to sustain Ghana's growth and development will require increasing the level of private investment. In the 2010 Progress report on the Ghana Shared Growth and Development Agenda (GSGDA), the effective participation of the private sector in the country's economy has been identified as crucial to accelerating the growth and transformation of the economy¹. The conclusions of the joint government of Ghana (GOG) and the United Sates government (USG) team, using a growth diagnostic approach² in analysing the constraints to private sector investment and economic growth in Ghana identified three critical binding constraints³. These are: 1) inadequate and unreliable supply of electricity, 2) lack of access to credit and 3) lack of access to secure land rights

In accepting the Constraints Analysis (CA) report the GoG agreed that inadequate and unreliable supply of power should be the key area for attention for Ghana Compact II being developed for support through the Millennium Challenge Account. Following this, a power problem tree was prepared through consultations to further identify underlying problems contributing to this constraint. The main problem nodes arising from the low reliability of power were identified as⁴:

- 1. Governance and regulatory framework do not meet the needs of all stakeholders.
- 2. Insufficient power supply to meet demand
- 3. Transmission capacity is constrained
- 4. Distribution system is constrained and inefficient

Underlying these four (4) broad constraints in the power sector are the following specific challenges which have been identified through consultations:

- Cost reflective tariff regime
- High technical and commercial losses
- Inefficient use of installed capacity
- Obsolete distribution infrastructure
- Inadequate system protection, controls and response times
- Weak financial position of utilities
- Obsolete billing and collection systems
- Gas availability and allocation challenges
- Inadequate rural electrification levy
- Human and technical capacity in handling modernized operations.

This Concept Paper on Ghana Compact II is titled" *Powering Ghana for accelerated and sustainable economic growth*". With the selection of Ghana as a Partnership for Growth (PFG) country, it is

¹ 2010. Annual Progress Report. GSGDA. GoG. National Development Planning Commission.

² Hausmann. R., Rodrik, D. and Velasco, A. 2005. "Growth Diagnostics", John F Kennedy School of Government. Havard University. Cambridge, MA.

³ 2011. Ghana Constraints Analysis. Final Report. GoG-USG Technical Team

⁴ Ghana Power Sector Problem Tree.

imperative to position the Concept Papers in the wider context of the five-year Joint Country Action Plan (JCAP). It is also important to note the goal of the PFG, which is:

To assist Ghana to sustain and broaden its economic growth by addressing key constraints that inhibit private sector development and participation in the Ghanaian economy by strengthening the power sector⁵.

It is the intention of the two Governments to focus initially on and address the need for increased investments and reforms in the power sector, and this has been factored into the development of the concept papers. The concept papers cover all the five problem areas identified in the JCAP, i.e.

- 1. Policy and strategy planning.
- 2. Institutional regulatory and structural reform
- 3. Electricity demand and generation capacity
- 4. Transmission and distribution infrastructure and operations
- 5. Rural access.

The concept papers also have taken into account the general GoG policy direction in the development of the power sector and aligned with the Ghana Shared Growth and Development Agenda (GSGDA), 2010-2013⁶. (see Annex 1 on Positioning Ghana's Compact II within the GSGDA).

2. APPROACH

Following the identification of power as the focus for Ghana Compact II, a power sector problem tree was developed Consultations were held with the public and private sectors as well as civil society and political parties and Parliament to seek opinions on the identified problems and propose strategies to address the problems. (See Summary report from the consultations Annex 2.). In addition, a Social and Gender Analysis (SGA) report was prepared to guide the development of the concept papers and the proposed projects. (see Annex 3 and 4 for SGA report and the Social and Gender Integration Plan). The suggestions and issues raised were factored into the development of the program logic (see M & E Strategy, Annex 5). The results chain of the Ghana Compact II program is shown below. The overall goal of the Compact Program is to accelerate economic growth and reduce poverty through increased private sector investments.

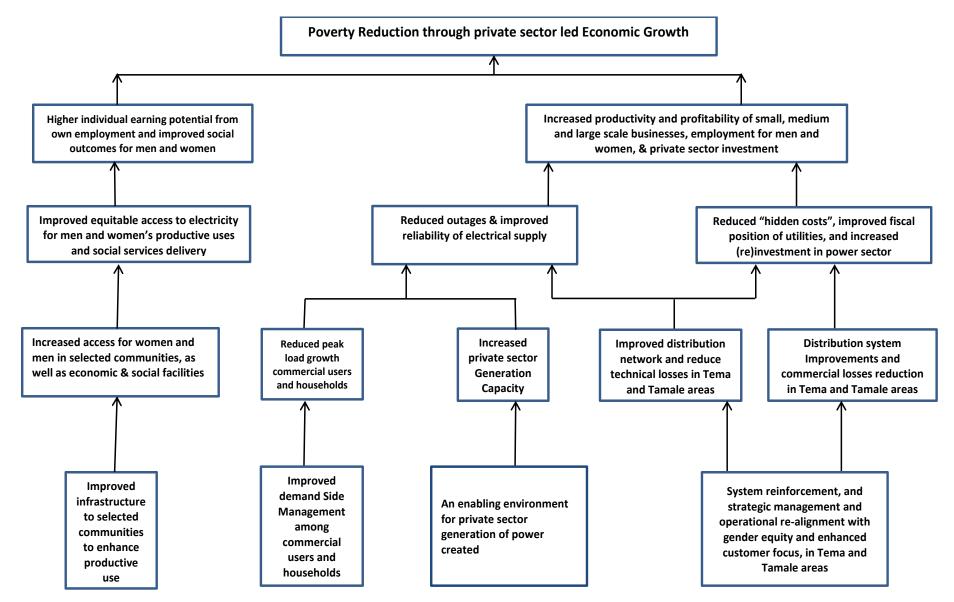
Three critical outcomes are expected from Compact II. These are:

- 1. Improved and equitable access to electricity for men and women's productive uses and social services delivery.
- 2. Reduced outages and improved reliability of electrical supply.

⁵ Partnership for Growth: Joint Country Action Plan. Ghana 2012-2016.

⁶ Positioning Ghana's Compact II within the GSGDA

RESULTS CHAIN OF GHANA'S COMPACT II PROGRAM



3. Reduced "hidden costs", improved fiscal position of utilities, and increased reinvestment in the power sector.

These outcomes are presented in the context of a broader power sector reform program, system reinforcement, strategic management and operational realignment with gender equity.

The proposed activities were originally grouped under five programs. These were:

- 1. Access and productive use program
- 2. Demand side program
- 3. Improved generation capacity program
- 4. Distribution system reinforcement program
- 5. Revenue improvement program.

Problems and strategies associated with these were considered during the consultations.

Following further discussions and consultations on the program logic it was agreed to present the Ghana Compact II under five projects (see details under the M&E Strategy). These are:

- 1. Project 1. Sector Governance, Institutional and Regulatory Reform
- 2. Project 2
 - A. Tema Distribution Commercial Viability Pilot.
 - B. Tamale Distribution Commercial Viability Pilot
- 3. Project 3. Enabling Environment for Private Investment
- 4. Project 4. Improved Demand Side Management
- 5. Project 5
 - A. Improved Access for (Wo)men in Select Communities, Economic Enclaves and Social Facilities
 - B. Improved Access for (Wo)men in Select Peri-Urban Communities
 - C. Improved access for (Wo)men in Selected Communities and Social Facilities.

Activities under Project 1 Sector Governance, Institutional and Regulatory Reform are proposed to provide the conditions necessary for activities in other Projects to be successful and for improvements to be sustained. Project 2 focuses on making selected areas of the distribution system more efficient and commercially viable. Project 3, Enabling Environment for Private Investment, focuses on making Ghana's power generation market more attractive to prospective investors. It is necessary to undertake activities in Project 4, Improved Demand Side Management, to reduce the strain imposed by the high demand growth rate. Finally Project 5 is made up of activities that increase access to electricity equitably in socially deprived areas.

Assessments of the Ghana team are that the level of investment required to correct deficiencies of the power sector far exceeds what may be expected under the proposed Compact. Projects 2 and 5 have therefore been limited geographically. Project 2 in particular is intended as a demonstration that will lead to uptake of improvements in the rest of the distribution companies.

The Concept Papers are prepared to cover all five projects.

3. EXECUTIVE SUMMARY

Ghana has been in partnership with the United States of America through the Millennium Challenge Account for the past five years and successfully completed the first Compact on February 16, 2012. Ghana was nominated for a second Compact and the Compact development process started with a Constraints Analysis study. This study revealed three binding constraints to private sector investments and growth in the country, the Government of Ghana selected power as the focus for Compact II. This is because the availability of reliable electricity is critical for sustained production and improvement in economic performance. Over the years the Government of Ghana has viewed the development of the electricity sector as a priority area of long-term strategic importance.

The key policy objectives are:

- 1. Reliable, economically efficient and equitable supply of electricity to meet the growing demand for socio-economic development
- 2. Develop an efficient mix of commercially viable public and private sector power utilities.

Ghana's second Compact is address some of the issues identified in the power sector and assist in creating the environment for enhanced private sector participation

Four Concept Papers have been prepared for Ghana Compact II and these address the power sector problems through five projects. They provide details on the project rationale and description, project context and development plans, inventory of existing preparatory work, project benefits and beneficiaries, environmental, social and gender risks and opportunities and M&E Methodology

The Concept Papers and the projects they cover are:

- 1. Increasing private sector investment through power sector reform. (Project 1)
- 2. Increasing private sector investment through improved fiscal position of GoG and improved financial performance of utilities in the electricity sector (Projects 1, 2A, 2B, 3)
- 3. Power Generation (Project 3)
- 4. Power Distribution and utilization (Projects 2A, 2B, 4, 5A, 5B, 5C)

The MCC funding required is 565.55 million dollars. A summary is provided below and details are in Annex 7

GHANA COMPACT II ESTIMATED COST

Description	Project Total (US\$m) ^{1,2}	
Project 1: Sector Governance, Institutional and Regulatory Reform	26.31	
Project 2A: Tema Distribution Commercial Viability Pilot	272.00	
Project 2B: Tamale Distribution Commercial Viability Pilot	79.86	
Project 3: Enabling Environment for Private Investment	196.08	
Project 4: Improved Demand Side Management	1.98	
Project 5A: Improved Access for (Wo)men in Select Communities, Economic Enclaves and Social Facilities	14.04	
Project 5B: Improved Access for (Wo)men in Select Peri-Urban Communities	52.74	
Project 5C: Improved Access for (Wo)men in Select Island Communities and Social Facilities	2.78	
Environmental Related Costs	3.90	
Total Funding Required for Works and Services	649.70	
Operational Expenses including Social and Gender, M&E (15%) of total Works and Services	97.45	
Total Funding Required for Compact	747.15	
Private Funding Required	135.75	
GOG/Utilities Counterpart Funding Required (7.5% of difference between compact total and private funding)	45.86	
MCC Funding Required	565.55	

^{1.} Project costs are made up of Concept Paper estimate including Social and Gender activities, contingencies and project management costs.

^{2.} There will be additional costs to GoG depending on final projects selected.

- (a) Insurance
- (b) Taxes
- (c) Compensations (land etc)