



Energy for Poverty Reduction Action Plan for Ghana

A TARGETED APPROACH TO DELIVERY OF MODERN ENERGY SERVICES TO THE POOR





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Prepared by



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Sponsored by



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Acronyms & Abbreviations

ATK	Aviation Turbine Kerosene
BAU	Business-as-Usual
BGC	Bulk Generation Charge
BOST	Bulk Oil Storage and Transportation
BPSD	Barrel Per Stream Day
BST	Bulk Supply Tariff
CDM	Clean Development Mechanism
CEDAW	Convention on Elimination of Discrimination Against Women
CEP	Community Enterprise Project
CHC	Community Health Compound
CHO	Community Health Officer
CHPS	Community-based Health Planning and Services
CIC	Community Information Centre
CTC	Close-to-Client
CWIQ	Core Welfare Indicators Questionnaire
CWSA	Community Water and Sanitation Agency
DEL	Direct Exchange Line
DFID	Department for International Development
DOT	Directly Observed Therapy
DSC	Distribution Service Charge
ECG	Electricity Company of Ghana
ECOWAS	Economic Community of West African States
EIC	Extension Information Centres
EPA	Environmental Protection Agency
EPRAP	Energy for Poverty Reduction Action Plan
EUEI	European Union Energy Initiative
FCT	Fixed Cellular Terminal
GDP	Gross Domestic Product

GHS	Ghana Health Services
GIS	Geographic Information System
GLSS	Ghana Living Standards Survey
GNPC	Ghana National Petroleum Corporation
GNSFP	Ghana-NEPAD School Feeding Programme
GOG	Government of Ghana
GPRS I	Ghana Poverty Reduction Strategy
GPRS II	Growth and Poverty Reduction Strategy
GSM	Global System for Mobile Communication
GSS	Ghana Statistical Services
GT	Ghana Telecom
GVEP	Global Village Energy Partnership
HIPC	Highly Indebted Poor Country
IAP	Indoor Air Pollution
ICT	Information and Communication Technology
IMF	International Monetary Fund
IPP	Independent Power Producer
I-PRSP	Interim Poverty Reduction Strategy Papers
IRAGP	Industrial Reform and Accelerated Growth Programme
JI	Joint Implementation
kV	Kilo Volt
kVA	Kilo Volt Ampere
kWh	kilo Watt hour
LPG	Liquefied Petroleum Gas
LV	Low Voltage
MDA	Ministries, Departments and Agencies
MDG	Millennium Development Goal
MoCT	Ministry of Communication and Technology
MoEN	Ministry of Energy
MoESS	Ministry of Education, Sports and Science
MOFA	Ministry of Food and Agriculture
MOH	Ministry of Health
MOTI/PSI	Ministry of Trade, Industry and President Special Initiatives
MTDP	Medium Term Development Plan
MV	Medium Voltage
MWH	Ministry of Works and Housing
NBP	National Bio-fuels Policy
NBSSI	National Board for Small Scale Industries
NDPC	National Development Planning Commission
NED	Northern Electricity Department
NEPAD	New Partnership for African Development

NES	National Electrification Scheme
NGO	Non Governmental Organisation
NPA	National Petroleum Authority
NPTB	National Petroleum Tender Board
NREL	National Renewable Energy Laboratory
NRES	National Renewable Energy Strategy
OMC	Oil Marketing Company
PRSP	Poverty Reduction Strategy Papers
PUE	Productive Uses of Electricity / Energy
PURC	Public Utilities Regulatory Commission
REDP	Rural Enterprise Development Programme
RFO	Residual Fuel Oil
SHEP	Self Help Electrification Programme
SIP	Strategic Investment Plan
SME	Small and Medium Enterprise
SNEP	Strategic National Energy Plan
TOE	Tons of Oil Equivalent
TOR	Tema Oil Refinery
TSC	Transmission Service Charge
U5M	Under-Five Mortality
UNDP	United Nations Development Programme
UPPF	Universal Petroleum Product Fund
VALCO	Volta Aluminium Company Limited
VIP	Village Infrastructure Project
VRA	Volta River Authority
WLPGA	World Liquefied Petroleum Association
WSSD	World Summit on Sustainable Development

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Foreword

The Energy for Poverty Reduction Action Plan (EPRAP) for Ghana is the Government's response to the challenge of ensuring that the energy service needs of our poor people in the rural and peri-urban communities are met in their right quantity and quality at the right time.

The Government recognises that access to reliable and affordable energy services is crucial to the realisation of its strategies for accelerating growth and reducing poverty. This recognition is echoed in the vision of the Energy Sector which seeks to provide reliable supply of energy, in all its useable forms, to all Ghanaian homes and businesses. A primary focus of the energy development agenda is to widen the access of energy to all households, productive sectors and social infrastructure, to facilitate the implementation of the Growth and Poverty Reduction Strategy (GPRS II), which is a Millennium Development Goal (MDG)-based poverty reduction strategy paper for Ghana.

In seeking to enhance access to modern energy services to catalyse growth and reduce poverty, we are mindful of the fact that energy is a cross-sectoral theme that needs to be fully integrated in the development process from the outset. Cross sectoral coordination among different sectors is the key to providing cost effective energy interventions and imperative for maximising the benefits of providing access to energy for the poor. We have consequently worked across six key sectors – agriculture, small and medium enterprises, education, health, water and sanitation, and communication – to determine the energy needs that have to be provided to support the GPRS II.

I am particularly happy that the EPRAP, which seeks to put the provision of reliable modern energy services at the heart of the national growth and poverty reduction strategy, has been developed. For the first time, we have embarked on an extensive consultative and participatory process involving key sectors and civil society organisations in producing the EPRAP, which provides a roadmap for targeted delivery of modern energy services to the poor over the next four years. I am quite optimistic that the strategies outlined in the EPRAP will go a

long way to facilitate the provision of energy services required for the successful implementation of the GPRS II.

I wish to personally thank all the sectors for their cooperation and collaboration which has led to the preparation of this document. It is my hope that we will all show the same tenacity and cooperation in ensuring the effective implementation of the EPRAP. It is also my fervent hope that our development partners will support the execution of EPRAP by funding various components of the recommended energy interventions.

Joseph Kofi **ADDA**,
Minister of Energy, Republic of Ghana

Executive Summary

There is a growing international recognition and understanding regarding the critical role energy services play in global efforts at reducing poverty in all its dimensions. This has led to a call on governments of developing countries to endeavour to integrate fully the provision of reliable energy services into their national poverty reduction strategies. The process of integrating the provision of energy services into a development framework is described as “energy mainstreaming”. This report titled “Energy for Poverty Reduction Action Plan (EPRAP)” has been prepared as an “Energy Note”¹ which seeks to mainstream energy into the Growth and Poverty Reduction Strategy (GPRS II). The GPRS II is an MDG-based Poverty Reduction Strategy Paper (PRSP) for Ghana.

The goal of this report is to provide a roadmap for the targeted delivery of energy services to support the realisation of national developmental/poverty reduction goals and strategies outlined for the implementation of seven key sectors under the GPRS II. The sectors are Agriculture, Small and Medium Enterprise (SMEs), Health, Education, Water and Sanitation, Communication and Technology, and Household. The EPRAP thus identifies the energy services implications of the proposed goals/strategies as outlined in the GPRS II and suggests steps and actions to be taken by various stakeholders to ensure that the identified energy service needs are met. The overall objective of the EPRAP is to help focus adequate attention on the energy needs of the poor and the underserved during the implementation of the GPRS II and beyond. Essentially, the EPRAP seeks to put the provision of access to reliable modern energy services at the heart of the national poverty reduction agenda.

The EPRAP is one of the key outputs of a cross-sectoral collaboration between the Ministry of Energy (as the executing agency) and six other ministries/agencies of government, with critical inputs from key Civil Society Organisations (CSOs). A list of all the stakeholders who collaborated in the preparation of the EPRAP is attached in Annex 1. A local Not-for-Profit Organisation, KITE, implemented the EPRAP with funding provided by the United Nations Development Programme (UNDP), under the umbrella of the Global Village Energy Partnership (GVEP) Initiative.

¹The World Bank's “Sourcebook for Poverty Reduction Strategies” (see Annex Q in Vol. 2) recommends that countries should prepare “Energy Notes” for inputs into PRSPs. The Energy Note is supposed to identify the linkages between energy services and priority poverty reduction strategies as well as proposing energy sector goals and strategies for achieving them.

The energy interventions proposed under the EPRAP are expected to contribute towards the achievement of the following broad MDG-consistent energy targets:²

1. Facilitate the provision of reliable electricity to support and enhance the delivery of essential social services such as education, health care and potable water as well as the deployment of Information and Communication Technologies (ICTs) in rural communities
2. Facilitate the provision and use of modern energy services (in the form of mechanical and/or electrical power) at the community level for all rural communities for productive uses
3. Facilitate the provision and use of affordable modern cooking fuels and devices to at least 50% of households currently using traditional biomass for cooking

The EPRAP concludes, inter alia, that grid extension through the Self Help Electrification Programme (SHEP) will continue to play an important role in the national quest to meeting the energy service needs of the “energy have-nots” in the rural areas. This is because of its sheer expanse and the unrelenting political support from successive governments. EPRAP however cautions that grid electricity does not present “a-one-size-fits-all” solution to meeting all the energy service needs of poor people. The decision as to whether to extend the grid network or not to a community should therefore be made on a “case-by-case” basis. The report also concludes that unlike electricity access, energy interventions aimed at providing access to modern cooking energy services have largely been ineffective. This suggests that a lot more targeted and innovative interventions need to be devised to help ensure that more and more people are enabled to switch over from the use of traditional biomass to modern cooking fuels.

Key Recommendations

1. A major recommendation from the EPRAP is the need to foster closer collaboration and coordination between the Ministry of Energy and the other sectors and agencies. This is to ensure that sectoral programmes are better aligned and synchronised with planned extension of the grid under the SHEP programme. The report therefore recommends the institutionalisation and formalisation of the multi-sectoral working group constituted as part of the EPRAP development process. More specifically, the report advocates the establishment of systems and mechanisms that will ensure that the sector working groups are functional and talking to each other.

²The ECOWAS White Paper on Energy Access has slightly more ambitious targets than the minimum targets set by the Millennium Project.

2. The EPRAP recommends that setting targets for existing, as well as planned access initiatives should be guided by the minimum MDG-consistent energy service targets proposed by the UN Millennium Project. This calls for a reappraisal of all such initiatives to ascertain their effectiveness and adequacy in delivering these minimum energy service targets underpinning the achievement of the MDGs.
3. The report further recommends that appropriate support mechanism(s), such as subsidy or credit scheme, should be instituted to help ensure that poor households are enabled to procure modern energy services whenever they are available. This will help remove any affordability constraints likely to be imposed by tariff increases and low purchasing power of poor households
4. The report again recommends that the EPRAP should be disseminated among all relevant MDAs to be used as a decision support tool. This will help create greater awareness among non-energy specialists as to the pivotal role energy plays towards the realisation of various sectoral developmental goals.
5. Finally, EPRAP recommends that a body, independent of the Ministry of Energy (MoEN), should be established to manage the implementation of the EPRAP. This will help ensure that the EPRAP does not get sidelined in the face of other equally pressing demands on the MoEN's limited resources.

The MoEN or its designated representative are expected to lead and coordinate the implementation of the EPRAP, which will be implemented as an integral part of the GPRS II for an initial four-year period (2006-2009). An indicative cost of **US\$340 million** will be required to execute the key energy interventions identified by the EPRAP. Another **US\$350 million** will be needed to electrify 2,500 communities under the SHEP 4 programme.

To help jumpstart the implementation of the EPRAP, Project Designed Documents (PDDs) have been prepared on ten priority projects that emerged during consultations with all stakeholders. The PDDs were developed in reference to initiatives such as the World Liquefied Petroleum Gas Association (WLPGA), European Union Energy initiative (EUEI) and the ECOWAS White Paper on Energy Access. This was done in recognition of the need to build on and work with other initiatives to achieve our collective objectives. A list of the priority projects, some of which were project concepts developed under the WLPGA Rural Energy Challenge and the EUEI, is attached in Annex 2.

The report has been organised into seven main chapters.

Chapter 1 gives the general background to the project, outlines the goal and objectives and discusses the methodology used in preparing the report

Chapter 2 discusses the conceptual issues in energy and elucidates the energy-poverty nexus with the view to highlighting and deepening the understanding of energy and non-energy specialists regarding the multi-faceted role energy plays in the global effort at reducing poverty.

Chapter 3 presents a general summary of the main characteristics of Ghana's energy sector.

Chapter 4 discusses the poverty situation in Ghana and tries to understand how poverty could have contributed to the energy use patterns of households in different income quintiles or vice versa.

Chapter 5 presents the key poverty reduction strategies and measures earmarked for implementation by priority sectors under the GPRS II. It also discusses the energy service implications of the various strategies.

Chapter 6 recommends energy interventions to support priority programmes/projects and outlines the range of actions that need to be taken in order to provide the energy interventions required to facilitate the implementation of programmes/projects

The last Chapter then distils conclusions and makes recommendations based on the conclusions.