

OVERVIEW OF THE GHANA RENEWABLE ENERGY MASTER PLAN

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Introduction

Vision,

to develop the renewable energy sector with the capacity to sustainably utilise resources and transform Ghana into a centre of excellence in renewable energy (RE) research, production, and services

Goal

to provide investment-focused framework for the promotion and development of renewable energy resources for economic growth, and contribute to improved social life and reduction of adverse climate change effects.

Objectives of the RE Master Plan

- *Increase the supply of RE in the national interconnected grid electricity supply system to 4,200 MW;*
- *Reduce the dependence on woodfuels for thermal energy applications (cooking and heating) to 50%;*
- *Provide RE-based decentralised electrification options in 1,000 off-grid communities;*
- *Increase the share of RE in agriculture, industry, and the service sectors by 10%; and*
- *Promote local content and participation in the RE industry.*

- Definition of RE
- Overview of Energy Demand and Supply
- Status of RET development in Ghana
- Structure of the Master Plan

Policies and Institutional Framework

List of the major policies, plans and strategic documents taken into consideration:

- Issues and Options in the Energy Sector (1986)
- National Electrification Scheme (1989)
- Vision 2020 (1995)
- Ghana Poverty Reduction Strategy 1&2 (2003/2006)
- National Renewable Energy Strategy (2003)
- ECOWAS white paper on access to energy services (2006)
- Strategic National Energy Plan (2006/2020)

- Ghana Shared Growth and Development Agenda 1&2 (2009/2014))
- The National Energy Policy (2010)
- The National Energy Strategy and Development Plan (2010)
- The Renewable Energy Act, 2011 (Act 832)
- Sustainable Energy for All Action Plan / Agenda of Ghana (2012/2016)
- Mini-grid Electrification Policy (2016)
- Bioenergy Policy Document (draft)

Duration of REMP

- The plan shall be implemented over a 15-year time-space, from 2016 and 2030 in 3 cycles.
- It shall be reviewed at the end of each cycle.

Key Assumptions for setting the targets

- Resource availability and ease of development;
- History of RE development;
- Financial and economic viability;
- Environmental and social-cultural concerns;
- Government policy goals, plans and programmes;
- Political will;
- Private sector interests;
- Research, development and innovations;
- Infrastructural and land use requirements; and
- Domestic and export market potential.

Targets and Action Plan for REs

- Resource
- Opportunities
- Description of interventions
- Targets
- Actions
 - *Challenges*
 - *Strategies*

Economic, Social and Environmental Impacts

- Economic impacts
- Environmental Impacts – Land use and hazardous materials

Enabling Environment

- Support and incentives for manufacturing/assembly
- Local content
- Infrastructural development
- Capacity building
- Research and development
- Development of standards and codes
- Financing

Cross-cutting Issues

- Gender mainstreaming
- Energy efficiency

Implementation Arrangements

- Implementation schedule
- Roles and responsibilities of institutions
- Roles and Responsibilities of CIEBs
- Role of government of Ghana
- Private Sector Participation (PSP)
- Local manufacture and opportunities
- Resource assessment and research into new technologies
- Awareness creation and communication strategy

Risk Analysis and Mitigation Measures

- Funding and Infrastructural Risks
- Policy and Political Risks
- International Development Risks
- Standards and Quality Control Risks
- Research and Development Risks
- Environmental and Climate Change Risks

MONITORING, EVALUATION AND REPORTING

- Monitoring
- Data collection
- Analysis collection
- Evaluation
- Reporting

Appendixes

- BIBLIOGRAPHY
- APPENDIX 1 – RESOURCE MAPS
- APPENDIX 2 – ASSUMPTIONS USED IN SETTING TARGETS
- APPENDIX 3 – CASE STUDIES

Next Steps

- Consider and revise REMP document to reflect the views of stakeholders
- Finalise document by 2nd quarter of 2017
- Adopt and align the REMP in the country's planning cycle – seek Parliamentary approval before the end of the year