



ENERGY SECTOR INTERVENTIONS



**CAPACITY BUILDING WORKSHOP ON DEVELOPMENT
OF CDM ACTIVITIES AND NAMA FOR PUBLIC AND
PRIVATE SECTOR IN ZIMBABWE, 24-25 AUGUST 2016
MONTCLAIR HOTEL, NYANGA**

INTRODUCTION

- The energy sector in Zimbabwe is supervised by the Ministry of Energy and Power Development (MoEPD). The mandate of the Ministry includes policy formulation, performance monitoring, research and promotion of new and renewable sources of energy as well as energy conservation.
- Regulation of the sector is done through the Zimbabwe Energy Regulatory Authority (ZERA).

Vision

- To achieve universal access to sustainable energy in Zimbabwe by 2030

POLICIES, LEGISLATION & OTHER SUPPORTING DOCUMENTS

- National Energy Policy of 2012 promotes the increase in uptake of renewable energy resources in the country.
- The Renewable Energy Policy and the Biofuels Policy are currently being developed.
- Renewable Energy Feed in Tariffs (REFITS) have been developed.
- The Electricity Act of 2002 makes provision for IPPs to participate in electricity generation.
- Zimbabwe Agenda for Sustainable Socio-economic Transformation (ZIMASSET) also promote increase in uptake of renewable energy.

POLICIES, LEGISLATION & OTHER SUPPORTING DOCUMENTS

- The Zimbabwe Energy Regulatory Authority Act of 2011 created an entity to enforce and monitor policy implementation
- The Rural Electrification Fund Act created an entity that promotes rural energy development through electricity grid extension and off-grid renewable energy options
- Other documents under development are the Rural Energy Master Plan (REMP) and the Renewable Energy Readiness Assessment (RRA) by IRENA.
- Updated UNSE4ALL Rapid Assessment and Gap Analysis (2012, then updated 2015)

WHY RENEWABLE ENERGY OPTIONS

- Zimbabwe has vast renewable energy resources (solar, hydro and biomass) that largely go unexploited, yet the majority-poor have no access to basic energy services and the energy supply-demand gap continues to increase

CURRENT INITIATIVES IN PROMOTING RETS

- A number of programmes have been implemented to promote the adoption of renewable energy technologies.
- The increased use of renewable energy has a potential to mitigate the current energy (including power shortages)

BIOGAS DEVELOPMENT

- The potential of biogas production depends on the availability of feedstock, which is mainly in the form of animal waste
- In Zimbabwe this is provided by a number of animals ranging from cattle to horses

BIOGAS DEVELOPMENT

- There is an Institutional Biogas Digester Programme which involves construction of biogas digesters at schools, hospitals and colleges
- About thirty five (35) institutional biogas digesters have been constructed to date

BIOGAS DEVELOPMENT

- The other programme is for Domestic Biogas Digesters which targets to build about 7 000 biogas digesters nationwide over a five year period
- To date 200 digesters (6m³-16m³) have been constructed

Modified Carmatec Digester for Domestic Use



Homesteads in Mudzi Using Biogas for Cooking



BIOGAS DEVELOPMENT

- Municipal digesters have been constructed at Kotwa Growth point (350m³) and Mbare vegetable market (800m³)
- City of Harare is constructing a biogas-fired power plant (2.5MW) at Firle Sewage treatment plant

Construction of Digesters at Mbare Vegetable Market



SMALL HYDROPOWER (SHP)

- Potential for SHP of about 120MW exists on both irrigation dams and perennial rivers especially in the Eastern Highlands for both grid-connected and off grid systems
- Only 24 MW has been tapped on inland rivers to date and there are quite a number of sites yet to be developed on inland dams
- Two power plants with a total installed capacity of 4MW are under construction in Manicaland

SMALL HDROPOWER (SHP)

- Development can be done as joint ventures, community driven projects or as independent power producers as provided for in the Electricity Act (Chapter 13:19)
- Only 24 Mega Watts has been taped on inland rivers to date and there are quite a number of sites yet to be developed on inland dams

Powerhouse Pungwe B Power Plant(15MW)



Pungwe B Diversion Weir



Canal to Pungwe B



Pungwe B Substation



SOLAR ENERGY

- The government of Zimbabwe has installed about four hundred (400) solar mini-grids in rural schools and clinics with a capacity of 0.84 Kilo-Watts each
- Five hundred and twenty five (525) solar mobile units that were donated by the Chinese Government were distributed to schools, police posts, national parks and health care centers in the remote areas of Zimbabwe
- Solar street lights have been installed in Harare (CBD, Airport road, Enterprise road & Borrowdale road), Chinhoyi, Marondera, Beitbridge and Murewa

SOLAR ENERGY

- Recently the Government launched a Solar Water Heating Programme in a bid to reduce the amount of energy consumed through water heating
- Adjudication to list eligible local companies involved in manufacturing of solar water heaters is underway
- This will reduce the grid electricity demand by 40% hence reducing the required generation also by 40%. It also seeks to replace more than 200 000 electric geysers in the country by solar geysers.

Solar energy

- Three power plants of 100 MW each are to be constructed in Gwanda, Insukamini and Munyati. Another project is a 150 MW plant in Marondera to mention but a few
- Practical Action, a non-governmental organisation has put up a 99kW solar photovoltaic power plant in Gwanda

Mashaba 99kW solar power station



Mashaba 99kW solar mini grid power station



THANK YOU