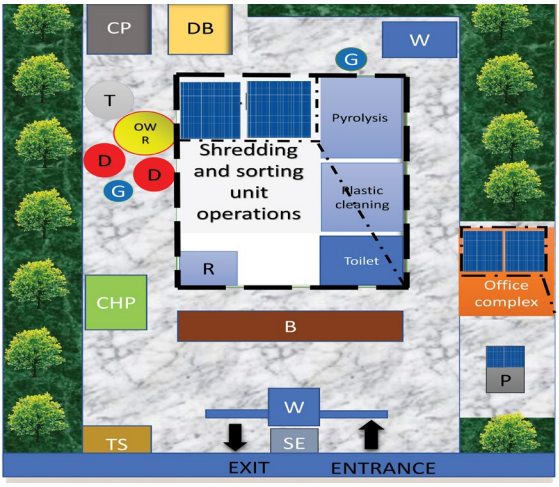

Hybrid Waste-to-Energy (W2E) Pilot Project in the Ashanti Region, Ghana

ABOUT THE PROJECT

The German government through the Federal Ministry of Education and Research signed a 5.8 million euros contract with 4 institutions in Germany and 1 institution from Ghana comprising 3 academic institutions, one research and development institution and a medium scale industry to design and construct a 400 kW hybrid waste to energy power plant to treat municipal solid waste in Ghana. The completion of the 48-month project will help to ensure the conversion of waste to energy commences in Kumasi this year and later extended to other parts of the country.

HOW IT ALL STARTED?

The Federal Ministry of Education and Research of Germany (BMBF) in collaboration with the Ministry of Environment, Science, Technology and Innovation (MESTI) of Ghana, through the West African Science Service Centre on Climate Change and Adapted Land Use (WASCAL) in Accra conducted feasibility studies on renewable energy resources in Ghana and under the supervision of Council for Scientific and Industrial research (CSIR-Ghana). Two scoping studies were commissioned around the same time by BMBF to examine the Bioenergy production and utilization in Ghana (BioGRAG) project and the possibility of producing bioenergy from cocoa husk through the ENergize GHana by COcoa Husk (ENGHACOH) project coordinated by the University of Rostock and SRH-Berlin respectively. The three individual studies and scoping reports crystalized into one project with the common objective of finding an appropriate treatment pathway for municipal solid waste generated in Ghana.

AIM OF THE PROJECT

The overall aim of the project is to through research and development and capacity development, develop concepts for waste segregation and the conversion of various fractions into energy by using biogas, pyrolysis and solar PV plants. Additionally, the project also seeks to create business models to successfully replicate and propagate this model in 10 different regions in Ghana. The project team brings one of its kind research and technologies combinations to Ghana in supporting and enhancing the sustainable waste management.

OBJECTIVES OF THE PROJECT

The project is expected to:

- Improve sanitation by converting the ever-increasing municipal solid waste into energy for productive uses and contribute to sustainable industrial development.
- Train high-level local experts in waste management and waste treatment technologies,
- Transfer proven waste treatment technologies in use in Germany to Ghana.
- Build capacity of local experts to design, construct, and maintain a hybrid waste to energy facility.
- Install a novel hybrid waste to energy treatment facility in Ghana that combines solar PV, biogas, and pyrolysis technologies to treat municipal solid waste and generate power.
- Provide a blueprint for the propagation of 10 additional waste to energy facilities in Ghana
- Contribute to Ghana's climate change mitigation strategy.
- Contribute to the inclusion of renewable energy in Ghana's electricity generation mix

DURATION:
01. 01. 2020 - 31. 12. 2023

FUNDING AMOUNT:
€5.800.000

LOCATION OF PROJECT:
Ashanti Region, Ghana

PROJECT FUNDER

Projektträger Jülich
Forschungszentrum Jülich

BMBF

PROJECT PARTNERS (GHANA AND GERMANY)

WASCAL
West African Science Service Centre on Climate Change and Adapted Land Use

KSTU

FV CONSTRUCTION Ltd.