PROJECT SUMMARY

Title of Project:
Evidencing Mauritian Potential of Waste-to-Energy Recovery Systems (EMPOWERS)

Local Company: Sotravic Limitee

Main Collaborating Institution: University of Mauritius

Project Leader: Mr Mehran Abdouramane

Research Collaborator(s)

Name	Organisation
Dr Vikram Seebaluck	University of Mauritius

Technical Abstract

Mauritius generates more than 400,000 tonnes of Municipal Solid Waste (MSW) each year. The quasi-totality of these wastes is collected, transferred and ultimately disposed in the Mare-Chicose landfill. With an integrated waste management approach, it is estimated that renewable energy generation from waste could promote 20-30 MW additional capacity in the forthcoming years. This will increase the amount of electricity produced from such sources by around 10-fold based on the existing CDM certified 3.3 MW landfill Gas-to-Energy facility. The matching benefit of such development will be the diversion of waste from the sole existing landfill which is as significant as the renewable energy potential of the resource. The potential of waste-to-energy (WTE) can only be evidenced with a thorough study on the waste management processes including collection, transport, treatment and disposal together with the quantification and characteristation of the waste. This study will focus on key commercial applications for waste transformation into energy products such as anaerobic digestion of the organic fractions of waste, the potential of waste pyrolysis-gasification, and bulk and refuse derived fuel combustion in existing or new power plants. The penultimate objective is to achieve seamless integration of energy applications within an optimised integrated waste management solution. The project will conclude on the commercial potential of our waste fractions namely organics and combustibles, level of waste processing required, and optimal processing configuration of WTE facilities including centralised or decentralised production for the Mauritian context. The project team will be composed of waste management professionals (Sotravic), energy scientists (University of Mauritius) and waste-to-energy project developers (ETIA). This project is in line with the Government Strategy for renewable energy production and for waste management.

Key Words: Waste, Waste to energy, characterisation, supply chains, centralisation, decentralisation, pre-processing, renewable energy, refuse derived fuel