



The Mariannahill Mechanical Biological Waste Treatment (MBT) to Energy CDM Project, eThekweni, South Africa



CDM Project Summary - June 2010

The project will entail the removal of organic wastes from the existing mixed municipal solid waste streams of the western regions of the eThekweni Municipality for Composting and Anaerobic Digestion for electricity generation.

Project Location : Mariannahill Landfill Site, Pinetown, KwaZulu-Natal, South Africa

Project Objectives

- Contribute towards offsetting of the **carbon footprint** for hosting the **2010 FIFA World Cup** in Durban
- "Carbon" Capacity Building
- **Financial return** through the sale of Carbon Credits, electricity generated, compost and fertilizer blend
- landfill **airspace savings**
- Provision of **renewable energy**
- **Job Creation** and **sustainable development**
- Combating of global **climate change**

Project Role-players

- Project Developer:
- **eThekweni Environmental Planning and Climate Protection Department**
- Project Partner:
- **eThekweni Department of Cleansing and Solid Waste (DSW)**

Average # of CERs per Year: 24 872
 Total # of CER's Over 14 Years: 348 215
 Average kWh Electricity Output Per Year: 4 032 000
 Total kWh Electricity Output Over 14 Years: 56 448 000
 Average # of Tonnes of Compost Per Year: 5 940
 Total # of Tonnes of Compost or Pellets Over 14 Years: 83 160
 Average # of Tonnes of Fertiliser Per Year: 405
 Total # of Tonnes of Fertiliser Over 14 Years: 5 670

Job Creation

Mechanical Waste Separation Plant

Line supervisors x 2
 Commodity Recovery Workers x 16
 Drivers x 2

AD Plant and Electrical Generator:

Engineering Technician x 1
 Plant Operators x 2
 General Workers x 2

Composting plant:

Plant Supervisor x 1
 Plant Operators x 2
 General Workers x 6

Additional jobs will also be created for the ongoing environmental monitoring of the project, CDM processes for ongoing registration of the CER's Engine Monitoring Carbon transaction administrator Project manager / champion

Mariannahill Mechanical Biological Treatment (MBT) to Energy Project

Carbon Emission Reductions Delivery Profile



Project Technologies

- Materials Recovery Facility
- Composting Plant
- Anaerobic Digestion Plant
- Reciprocating Spark Ignition Engine

*please note that all timeframes / calculations are based on the assumption that plant commissioning will take place in the third quarter of 2012. This date is dependant on a range of factors including capacity within the municipal departments responsible, environmental authorisations, CDM registration and the signing of PPA and ERPA.