



The eThekweni Southern WWTW (Waste Water Treatment Works) AD (Anaerobic Digestion) Biogas to Energy Project, Durban , South Africa



CDM Project Summary - June 2010

The project entails the treatment of raw sewage sludge by way of anaerobic digestion (AD) biological processes, the generation of electricity using the methane-rich biogas produced from the AD plants, and the production of compost and nutrient-rich fertiliser materials from the digestate of the AD processes at the Southern Wastewater Treatment Works, eThekweni Municipality, KwaZulu-Natal, South Africa .

Project Location : eThekweni Municipality, 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 fertiliser blend
- Provision of **renewable energy**
- **Job Creation** and **sustainable development**
- Combating of global **climate change**
- **Technology Transfer**

Project Role-players

- Project Developer:
- **eThekweni Environmental Planning and Climate Protection Department**
- Project Partner:
- **The eThekweni Municipality eThekweni Water and Sanitation (EWS) Unit**

Average # of CERs per Year : 97 038
Total # of CER's (14 Years) : 1 358 537
Average kWh Electricity Output Per Year : 18 679 900
Total kWh Electricity Output (14 Years): 261 518 600
Average # of Tonnes of Agricultural Pellets Per Year: 5 440
Total # of Tonnes of Agricultural Pellets Over 14 Years: 76 160
Average # of Tonnes of Fertiliser Per Year: 656
Total # of Tonnes of Fertiliser Over 14 Years : 9 185

Job Creation

AD Plant and Electrical Generator:

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

Sludge Drying and digestate storage & re-use facility:

Plant Operators x 2
 General Workers x 2

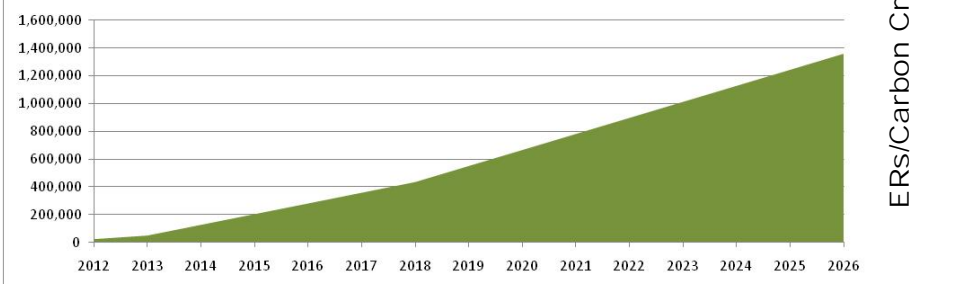
Composting plant:

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 and electrical generation operation maintenance and monitoring Carbon transaction administrator

Project manager / champion

Southern WWTW AD Biogas to Energy Project
 Carbon Emission Reductions Delivery Profile



Project Technologies

- The construction of a new **Anaerobic Digestion (AD) Plant** comprising several AD tanks;
- a new **sludge management facility** comprising sludge separation, sludge drying,
- a **Composting Plant and liquid fertiliser (Digestate) storage**;
- An **electrical generation compound** of gas-fired Spark ignition engine generators of up to 3MW total capacity.

**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.*