Waste to Energy

Expected project CAPEX: 14'389'000 €

Mandating Authority: Msunduzi Municipality

Project Type: Waste to Energy

Summary

Construction of an Advanced Integrated Waste Management Plant (AIWMP) incorporating WASTE SORTING/SEPARATION (material recovery), WASTE TREATMENT (Anaerobic/Aerobic Digestion, Digestion, Bio-stabilisation, Pyrolysis), WASTE BENEFICIATION (Gas extraction, thermal and electrical power generation, composting) and Controlled Landfill Management.

Location and population

Msunduzi, South Africa
619'000 inh.

Social and environmental impact

Reduced toxicity and GHG emissions; safe and clean working conditions for employees on landfill site; job creation (74 new jobs in the operation of the plant); economic development promoted through energy security.

Main stakeholders

(1) Msunduzi Municipality (2) National Department of Environmental Affairs (3) Department Of Energy
Project maturity (IFC / World Bank Categories)
STAGE 1: Concept Development, Site identification
STAGE 2: Pre-Feasibility Studies
STAGE 3: Feasibility Studies
STAGE 4: Permitting / Financing / Contracts
STAGE 5: Engineering/Construction/Commercial Operation

STAGE 1: Concept Development, Site identification

Expected capacity (Input: Output)
2 MW – producing 16,575,000 kwh

Land identified
Yes

Site access:
✓ Adequate road  ❌ Rail access  ❌ Port facilities

Technology:
Gas to Power using Biogas and Syngas produced from waste treatment, as well as waste heat producing both thermal and electrical energy

Waste stream data
?

STAGE 2: Pre-Feasibility Studies

Pre-feasibility study:
Yes - pre-feasibility study is available. Fatal Flaw EIA completed

STAGE 3: Feasibility Studies

Feasibility study:
Feasibility study pending completion of permitting, EIA and contracts

STAGE 4: Permitting / Financing / Contracts

Land concession signed
UNDER NEGOTIATION with Msunduzi Municipality

Building permits signed
No

Environmental impact study
NO - FATAL FLAW EIA completed

Identified sources of fundings
Investor – SDB Holdings (Pty) Ltd as project developer

STAGE 5: Engineering / Construction / Commercial Operation

Engineering, Procurement and Construction Contractor
SEA incorporating De.Co Eng, Isotech, MCJ Engineering (Civil)

Operation and Maintenance Contractor
SDB Waste

Comments
The Advance Integrated Waste Management Plant incorporates different waste beneficiation technologies, dependent on waste streams. In the case of Msunduzi, the feasibility of Waste to Energy has been proven based on the abundance of organic fractions within the waste streams.