CDM SUSAC INTERNATIONAL INVESTORS WORKSHOP

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Integrated Household Waste Management and Processing

PROJECT PROPONENT

Alcyon Engineering SA: Swiss-based private company with an affiliated company in Senegal
Expects the diversification of its portfolio of activities and partnerships

PROJECT OVERVIEW

Objectives: **Provide a sustainable way of disposing of Municipal Solid Waste (MSW)**
Produce power to be sold to the national grid
Produce bio-fertilisers to substitute chemical ones
Purpose: **Reduce greenhouse gas emissions (i.e. CO_2, CH_4, N_20), arising from untreated waste**
Utilize the methane for electricity.

Five processing units installed in three locations in Dakar: Bel-Air (two), Hann and Mbao.
Each unit expected to process 90,000 t/yr of MSW and generate 4500 MWh/yr.
Each one consisted of three components:

- **semiautomatic sorting equipment,**
- **methanization unit and**
- **unit of gasification that would, in turn, supply a cogeneration unit.**

Use of power generated from the waste processing plant:

- **part used in the plant itself, so that the new installation will be autonomous from the provision of power point of view**
- **some of the electricity will be used for water desalinisation and the remaining will be sold to the main grid**
- **used to produce fertilisers to offset the use of chemically produced ones, and bricks.**

The bio-waste used for fertilizer on farmland: the increased use of sludge for fertilizer will reduce the use of chemical fertilizers on the land.

Project regarded as an opportunity to improve sanitation in Dakar and to keep the town free of household wastes.
Also considered as a great opportunity for creating new jobs thus contributing to meet the target of unemployment reduction

BASELINE

GHG Emissions: Current Emissions from landfill (without Project): 6562Gg ECO2Baseline calculated using averages of data collected by ENDA and the CDM SUSAC team,

ESTIMATED CARBON SAVINGS

Baseline : 6562Gg ECO2
Emissions with Project: 5164 Gg ECO2
Avoided emissions: 1398 Gg ECO2

ESTIMATED PROJECT COSTS

Total investment cost estimated at: 77,748,998.791 Euros

SUSTAINABLE DEVELOPMENT AND OTHER IMPACTS

Project in line with national development priorities:

- **will contribute to create new job opportunities and build new skills.**
- **will also contribute to electricity production and help meeting the increasing demand for power.**

Electricity produced will be partly sold to the national utility: meet the increasing demand for electricity (2% increase per year)

Impact on employment, income, national consumption, health and urban welfare

Enhanced quality for the environment in the rural areas.

Impact on agriculture through production and use of organic fertilizers

Project approved in view of its components of poverty alleviation and sanitation

Completely new bio-thermic technology; training of local personnel will be required; improvement of the capabilities and skills of local population.

RISKS

Agreement signed for 25 years
Political situation is stable and no changes foreseeable within the upcoming 7 years
Political controversy