



EZULWENI DEVELOPMENT PROJECT

A 140Ha Agri-Eco estate on the Tugela river in central KwaZulu-Natal, South Africa



The area is currently unused agricultural land, diagonally bisected by an Eskom power line servitude which will be utilised for the biogas power plant feedstock. Either side of the servitude, to the West there will be residential and educational zones, and to the East residential and commercial zones. In the North there is a club house and community centre with three freehold lodge villages all set within a secure indigenous park.

Background

Early in 2014 the SA Cane Growers Association under the aegis of Dr Thomas Funke embarked on a plan to improve its members cane farming profitability by introducing small-scale biogas plants to produce power for their irrigation needs. Sucropower was established to enable this plan and the Thorny Park 50kW Demonstration Biogas plant was commissioned in June 2017. The Ezulweni project is the next step commercialisation of the concept.

Development Concept

In isiZulu the word Ezulweni means “Heavenly”. The Ezulweni Agri-Eco Estate is being developed to bring an elevated lifestyle to the people of Mandini, within an estate that is as self-sufficient as possible and with emphasis on making it as green and eco-friendly as is commercially viable.

This includes:

- Providing sustainable 'off the grid' power including solar and biogas usage where practical.
- Utilizing the Eskom powerline servitude that cuts diagonally through the estate for feedstock plantation (Agri-estate), feeding a 1MW biogas power plant at the junction of the river bridge and the R102.
- Utilizing the liquid organic fertilizer produced by the biogas plant for recycling onto the feedstock and also for other community cash crop areas.
- The residential space is to be designed around a number of villages comprising 800 houses (GAP and low cost), with cash-crop areas and open spaces with indigenous trees planned throughout.
- Club House and Community Center with 44 freehold lodges set with a secure indigenous park.
- Retaining as much as possible of the riverine bush areas and wetland for conservation and recreational activities.
- The 17 commercial mixed-use sites are to be developed for or by specific companies. The 6 corporate office sites are to be designed as green energy efficient buildings. These include a clinic with attendant medical specialist rooms.
- The petrol station will also sell biogas fuel for the cane delivery trucks and local taxis and busses that have been converted to dual fuel.
- The construction of a primary school and an Agric/technical school linked to the estate and its operations.

The project is to serve as a model that can be replicated around the country, with the attendant new SME businesses and job opportunities being created.

Thus far the developers have achieved:

Biogas Plant

- An operational 50Kw demonstration biogas plant at Thorny Park (commissioned July 2017)
- The Google Earth co-ordinates are: 29° 11' 15.9"S 31° 26' 18.40"E

Agri-Eco Estate

- Land area Geotechnical study
- Town plan layout
- Wetland study
- Social Needs and Desirability Study

Estimated Costs

Biogas Plant

The estimated cost for the Ezulweni Biogas Plant – (1MW) is **R98.0m**

Land acquisition Agri-estate 30Ha at R100,000/Ha (optional) is **R 3.0m**

Ezulweni Agri-Eco Estate

Land acquisition value: Residential & commercial 120Ha at R100,000/Ha **R12.0m**

Infrastructure, residential and commercial development is **R300m**

It should be noted that in July 2017 Sucropower took part in a workshop sponsored by the SA Sugar Association who commissioned CSIR to draw up a KZN Regional Biogas Industry Plan. The Ezulweni Agri-Eco Estate concept fits into this, and could be replicated throughout the sugar cane growing areas of KZN bringing with it thousands of sustainable job opportunities.

We look forward to hearing from you if you'd like to take part in making this exciting and ground-breaking project a reality.