



### The company Alensys

ALENSYS – Alternative Energiesysteme AG, Germany a company for alternative energy-systems, with more than 10 years of experiences, specialized in biomass and biofuel energy project development and investments in Germany and Europe. The range of service includes the analyses of capital investments with fundraising, technology planning, tender, and realisation of biomass plants.

ALENSYS has planned, implemented and conducted successfully over 500 medium to large scale plants including 40 large biogas- and fermentation plants in Germany and abroad.

Please find more information on our webpage: [www.alensys.com](http://www.alensys.com)



### ALENSYS bioOil

About 3 Mio resource poor households in South Africa use the highly flammable and unhealthy paraffin, a by-product from the mineral oil processing, for cooking, lighting and heating.

A healthier and safer alternative source of energy is needed. Used cooking oil is available in many fry shops and restaurants where it is often sold to the households that cannot afford fresh cooking oil.

The public health risks of re-using cooking oil over and over is the frying oil residues remain in the oil and are carcinogenic. The collection of used cooking oil and converting it into a renewable green source of energy, for example bioparaffin, is not only to create a healthier living, but to get independent from limited fossil resources. Buyback collection provides sustainable, local jobs for buyback collectors, production plants and agencies.

### Aims of the project

The German company ALENSYS in association with her South African project partner North West University have installed the training centre for Bioparaffin production from used cooking oils. Using Bio-energy in South Africa is not only important to get independent from limited, fossil resources, but also it is a key-driver in job creation.

The aim of ALENSYS is to get trained and qualified employees in buyback collection and to offer agencies entrepreneurial opportunities in future franchise projects and also to inform

about health risks concerning re-used cooking oil and to implement a sustainable behavioural change.

The operating partner of ALENSYS is responsible for the supply chain management and the product quality of the used cooking oil. Local Area Managers will be established for the distribution of Bio-Paraffin and by-products to earn themselves income.

This will ensure that local jobs and entrepreneurial opportunities are created. The first collection area is Potchefstroom and surrounding rural areas, others will follow.



## Training and research



### ALENSYS DROP training programme

To ensure sustainable capacity building and the economic success, the project offers different training and research programmes:

2013 the first training took place at the Faculty of Chemical Engineering NW University for practical and theoretical applications of Biofuel technologies at the plant. Aim is to strengthen personnel capacities in the field of waste to energy applications in South Africa by a knowhow transfer to the students.

2014/2015 additionally we will also do research on the technical side in the improvement of plant-technology in cooperation with the Faculty of Technical Engineering to the increase production, technology research for additional biofuel plants and development and production of accessory parts

With members of the NWU, Faculty of Engineering and Faculty of Health Sciences, with the communities and facilitators we agreed that the project could not be a success if we only develop a healthier and more eco-friendly product. The success directly depends on the consumer behaviour.

Considering that this is mainly in resource poor communities we have to set the successful and sustainable base for our project here, following ethical guideline and holistic living conditions.

2014 ALENSYS together with AUTHeR (African Unit for Trans-disciplinary Health Research) a research unit at the Faculty of Health Sciences developed the DROP training programme

(Demand Renewable Oil Programme) for capacity building in the Train-The-Trainer courses "Health and Research". During their practical tutorials the so trained students from the Faculty of Health Sciences will train the buyback collectors and interested persons. The first training for buyback collectors, kitchen-workers and interested will took place in September 2014.

## Collection points

6

NorthWest Independent - 29 Januarie 2014



**Bioparaffin project launched at Potch Central**

**Carin Venter**

History was made at Central School last Friday when the pupils were invited to take hands with a German company in the conversion process of domestic cooking oil into high quality bioparaffin.

The German alternative energy system company, Alensys, is the mastermind behind the project which is making use of the training plant and biofuel research facility at the Northwest University in Potchefstroom. Humelani Trading and Projects is the operating partner of Alensys and will be responsible for the supply chain management. Potch Central gets into the picture as the first school in Potchefstroom to join the project. On Friday learners have been being given the task of collecting used cooking oil at their homes, which will be collected by Humelani Trading and Projects, to be recycled into new energy.

*otch Central, the first school in Potchefstroom to become actively part of a biodiesel project.*



In February 2014 we started our pilot collection of used cooking oil at the Potchefstroom Central School with great success.

In June 2014 we have already 5 schools as partners in our collection chain.

Together with restaurants it makes 12 collection points collecting about 3000 litre a month. In an agreement letter each of the collection points agreed to send at least 3 kitchen members to the training programme matching the regulations of health and ethic.

For more information about the project please visit our webpage:

[www.alensys-biooil.com](http://www.alensys-biooil.com)

## Entrepreneurial opportunities

Sequa as a partner of the German economy is co-financing the project. The aim is to support ALENSYS to establish a training centre in bio-Oil for sustainable capacity building in the field of renewable energy in South Africa for future franchise projects. This development partnership with the private sector is supported by the German Federal Ministry of Economics and Development.

The training plant started the production of bio-energy in May 2014

With Elagante Trading ALENSYS found an operating franchise partner who is responsible for the converting process from waste to renewable green energy "Made in Africa" as an alternative to limited fossil resources. Beside a chemical engineer, we appointed 3 trainees at the training plant as plant workers, an area manager and a book-keeper. The first sustainable job creation of the ALENSYS bioparaffin training centre is of 6 employees.



ALENSYS DROP collection drums