



National Workshop on Business Opportunities for Biodiesel

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Biodiesel in Bulgaria

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ESD Bulgaria Ltd.

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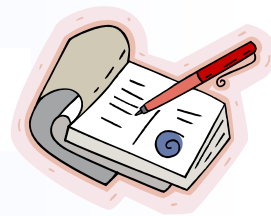
**Private company, established in 1998,
owned by the British consulting
company ESD Ltd.**

Activities:



Consulting services for the energy sector

Local sustainable energy planning



Energy efficiency

Development of renewable energy projects, concerning:

- Biomass;
- Small hydro;
- Geothermal energy;
- Wind energy;
- Solar energy.

Carbon trading activities

History of biodiesel production in Bulgaria (1)



Biodiesel production in Bulgaria started in 2001

by the company SAMPO AD (<http://www.biodiesel.bg>)

-Capacity: 3 000 t/a

-Production in 2001: 26 t (clients: fuel distributors and the transport company Trayana Trans)

-Other products: pharmaceutical glycerin and potassium phosphate

-Raw material: mostly used cooking oil (supplied by McDonalds, KFC, Happy, etc.)

- Standard: Technical Specification TC 0301 (similar to EN 14214)

-The company offers also supply of biodiesel production equipment

The Trade Storehouse in Gabrovo

- Raw materials: waste cooking oil from restaurants**
- Equipment produced by M Engineering (Veliko Tirnovo)**
- Capacity: about 500 t/a**
- Started operation in 2003**
- The biodiesel is used as a fuel of the trucks of the company and for heating of the premises during the winter**

The company Green Oil Ltd., Silistra

(<http://greenoil.hit.bg>)

- **Equipment, produced by Green Oil Ltd.**
- **Capacity: 15 000 t/a**
- **Started operation in January 2006**
- **Among the clients is the company Prista Oil – it operates the oil refinery in Rousse and is also a fuel distributor**
- **Raw material: sunflower oil, rape oil, used cooking oil**
- **Standard: BDS EN 14214**

History of biodiesel production in Bulgaria (4)

Other big producers, in operation since 2006:

NORA AD, Lovech

Capacity: 30 000 t/yr.

Klas Olio OOD, Dobrich

Capacity: 15 000 t/yr.

The first bioetahnol producer in Bulgaria:

- **Evro Ethyl AD, Alfatar, with a capacity of 8 000 t/yr.**

Rape seed and sunflower seed in Bulgaria:

Rape seed (2005 data)

Harvested areas: 10 933 ha

Harvest: 21 778 tonnes (70% come from North-Eastern Bulgaria)

Average price: EUR 207 per tonne

Sunflower seed (for oil production, 2005 data)

Harvested areas: 653 371 ha

Harvest: 934 855 tonnes

Average price: EUR 205 per tonne

**Source: Annual Report – 2006, Ministry of Agriculture and Forestry,
<http://www.mzgar.government.bg/>**

M Engineering - Pencho Ganev ET (Veliko Tirnovo)

<http://www.biodiesel-bg.narod.ru/>

-Installations with capacity: 60 l/h, 200 l/h, 300 l/h, 400 l/h and 1000 l/h and more

-Period for equipment manufacturing, installation and staff training: 65 days

-Have supplied the equipment for the plant in Gabrovo (2003)

-In 2004 have supplied an installation in Jalgava, Latvia with capacity 5 000 t/a



The installation in Jalgava, Latvia

The other 2 important Bulgarian equipment producers:

- **Gamakol EOOD (Plovdiv)**

Address:

Kavala Str. No. 5

4000 Plovdiv

Phone: +359 32 640515

Contact person: Dobrin Dobrev

- **Bioenergomash (Aksakovo)**

Address:

Petleshev Str. No. 67

9154 Aksakovo

Phone: +359 51 132082

Contact person: Slavcho Georgiev

- 1) A general approach for support of renewable energy applications, formulated in several documents, e.g. the National Long-Term Programme for Support of the Utilization of Renewable Energy Sources.**
- 2) Zero excise duty for pure biodiesel (B100) since 1 January 2006.**
- 3) Agricultural subsidies for growing oleaginous crops (the 2006 level was Euro 18 per hectare).**
- 4) Much higher subsidies, expected to be introduced for growing of energy crops on land in Natura 2000 areas (a figure, recently mentioned by the Minister of Agriculture, was Euro 120 per hectare).**
- 5) Expected improvement of legislation with the new Renewable Energy Law, which is still under discussion.**

End users: transport and heat sector

- Transport companies
- Private cars
- Heating system

Three large size investment projects are under development:

- **Of Eco Petroleum OOD, for a plant close to Vidin with a design capacity of 200 000 t/yr. biodiesel**
- **Of Slanchevi Luchi EAD, for a plant close to Provadia with a design capacity of 100 000 t/yr. biodiesel**
- **Of Astra Bio Plant Ltd, for a plant close to Ruse with a design capacity of 60 000t/yr. biodiesel**

It is interesting to note that for Bulgaria the 5.75% European target corresponds to:

- **About 80 000 t/yr. biodiesel**
- **About 53 000 t/yr. bioethanol**

For this purpose will be needed the cultivation with oleaginous crops of some 200 000 additional hectares.

Thanks for your attention!

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