Energy from Waste

Used Cooking Oil Sourcing from an European Perspective

Growing Demand, Changing Legislation, Challenging Certification
Münzer Bioindustrie GmbH

One Name – One Family – One Company

Münzer Bioindustrie GmbH

The largest disposal company for Used Cooking Oil (UCO) in Central Europe, with more than 26 years of environmental consulting experience.

National wide Collection System

We are serving more than 7,000 partners form the Foodservice Industry like Hotels and Restaurants, Catering businesses and Franchise companies.

We are collecting from households using 3l buckets

Muenzer Bharat Pvt. Ltd.

The Indian government has mandated us to start with a collection system for Used Cooking Oil (UCO) for the purpose of generating Energy.

→ No definition of UCO as waste
→ No definition on oil alteration
→ Reuse in the food chain – Gutter Oil

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Supplying more than 200,000mt per year to large mineral oil companies to fulfill their blending targets.
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Sustainable cooperation - Partnership

1. After the deep-frying-process in the restaurants the UCO is stored in customized containers. This guarantees a hygienic and safe disposal adapted to the everyday work.

2. UCO is frequently collected by Münzer Bioindustrie. We remunerate the value of the waste.

3. The UCO collected the main raw material in our production facilities to produce sustainable and certified biodiesel.

4. This biodiesel is then sold to the central logistics partner of McDonald’s Austria, HAVI Logistics, who is in Austria exclusively using biodiesel produced by Münzer Bioindustrie in their fleet.

5. We calculate the greenhouse gas emission reduction according to international standards resulting out of this closed circular strategy and provide these as a certification for McDonald’s.
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Growing Demand / Growing Supply? in Europe

DEMAND FOR UCO IN EUROPE IN 2016 (EST.)

<table>
<thead>
<tr>
<th>In kT</th>
<th>UCO collected</th>
<th>Import</th>
<th>EU demand</th>
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<tbody>
<tr>
<td></td>
<td>676,000</td>
<td>941,000</td>
<td>1,617,000</td>
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Driving Demand

- Palm oil is seen as bad feedstock
- Overall biofuel blending targets rise – RED2
- HVO - CoProcessing production to overcome blending wall
- Limited availability of animal fat category 1 as substitute to UCO

Supply Side

- Other continents to implement waste based subsidies
- Innovative collection e.g. households
- Definition of Waste and Residue (PFAD – Italy/Norway)

Source: Greenea Presentation at Argus Conference
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Import challenges as Central Europe based biodiesel producer

**Why should you nevertheless export to Austria?**

- Long term partnerships developed with European UCO sellers
- Buying UCO the whole year long — two biodiesel factories in EU
- Münzer is final processor for the UCO
- Münzer has knowledge about UCO collection
- No logistics for FAME — price competitive in feedstock
- 11 years producing — no bankruptcy
- Credit Rating — Security in payments
Christian Dyczek
Authorized Manager
Board member ISCC association - Sustainability

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Energy from waste
Contribution to a sustainable living

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