New Hungary Rural Development Programme
2007-2013

Hungarian renewable energy (bioenergy) policy

Ministry of Agriculture and Rural Development

Hungary

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Biofuel policy of the EU; Strategic goals

- **Enhancement of supply safety** (reduction of import, enhancement of self energy resources)

- **Environment protection** (reduction of CO2 emission, and other contaminate materials)

- **Local and regional development** (furtherance of economical and social development)

- **Rural development** (creation of local job opportunities)

- **Agriculture:** decreasing of the food production surplus with ensuring alternative land-use possibility
Mariann Fischer Boel: „For me personally, this is a top priority”

- **White book**: enhancement of the rate of renewable energy resources from 6% to 12% till 2010

- **2001/77/EC Guideline**: enhancement of the rate of renewable energy resources in energy consumption related to electric energy from 14% to 22,1% till 2010

- **2003/30/EC Guideline**: rate of bio-fuels should reach the rate of 5,75% till 2010, and the rate of 10% till 2020 (Nürnberg)

- **Kyoto convention**: reduction of emission of gases induce Global warming
Hungary
Green Energy Complex

1. Accomplishment of EU expectations

2. Energy Policy
   (diversification of energy supply, mitigation of gas- and oil – dependence)

3. Agriculture, Rural Development
   (structural change of production and market, alternatives)

4. Environment – and Natural protection
   (reduction of CO2 emission, utilization of energetic wastewater and organic wastage)

5. Domestic economical considerations, complex development of economy
   (GDP, balance of payments, budget effects, employment, new and competitive industry, R+D)
Alignment

Alignment of energy resources originating from agriculture
Main goals in the field of **BIOFUELS**

- **Renewable raw materials (RRM) and production in 2013:**
  - 2.5 million tons of cereal processed
  - 800,000 tons of bioethanol
  - 220,000 tons of biodiesel

- **Plants composition:**
  Larger: 100-200 ktons capacity (99.9% bioethanol)
  Middle: 40 ktons capacity
  Smaller: max 10 ktons capacity (96.2%)
  (development assistance: Ministry of Agriculture and Rural Development)

  - Involve the farmers in the processing system
  - Financial reasons
  - Positive R+D effects
  - Value added advantages
  - Combined with biogas and based on animal breeding
Hungarian potential of raw material

**Corn raw material**
- 1.15 million ha
- 4-5 t/ha production average
- 4.6 million tons/year
- 1 million tons for ethanol

**Maize raw material**
- 1.2 million ha
- 6-8 t/ha production average
- 7,1 million tons/year
- **1.5 million tons for ethanol**

![Map of Hungary showing regions and maize production](image)
## Capacity - Investigation

<table>
<thead>
<tr>
<th>Denomination</th>
<th>Biodiesel (kt/year)</th>
<th>Bioethanol (kt/year)</th>
<th>Sum (kt/year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proposed capacity</td>
<td>220</td>
<td>800</td>
<td>1020</td>
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### Goals

<table>
<thead>
<tr>
<th></th>
<th>According to EU expectations</th>
<th>According to EU expectations + export</th>
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</thead>
<tbody>
<tr>
<td>Investigation claim (million €)</td>
<td>140</td>
<td>464</td>
</tr>
<tr>
<td>Claim of support (million €)</td>
<td>48</td>
<td>120</td>
</tr>
<tr>
<td>Production area (thousand ha)</td>
<td>300</td>
<td>600</td>
</tr>
</tbody>
</table>

### Bioethanol

- **150 kt** – 5.75 % EU expectation
- **500 kt** export

### Biodiesel

- **220 kt** – 5.75 % Expectation
- Slim export possibilities
Main goals in the field of **SOLID BIOMASS**

- RM derives from forests, short rotation copies (SRC) and agricultural byproducts

- 2 million ha forest areas (41% private, 58% state, 1% community ownership)

- **Objectives:**
  - 49,000 ha new planted SRC areas
  - Increase the size of afforested areas
  - Using energy from biomass in agriculture (dryers, greenhouses, animal breeding facilities)
  - Improving the conditions of rural employment
  - Better usage of byproducts (agricultural, forest)
  - Better usage of the RE and the energy decentralisation (heating with biomass - ex: pellets, bricks, wood chips - common institutes)
Main goals in the field of BIOGAS

- Modernisation of agricultural holdings

- **Focus on:**
  - animal husbandry, and other agricultural by- and wasteproducts,
  - fulfil the requirements of the Nitrate-directive (manure handling)

- **Target:** setting up 150-200 biogas system (150 kW – 1.5MW) above 200 animal unit
Proceeds

- Thousands of job opportunities for producers in rural areas (100,000 producers, attached 400,000 people)

- Enhancement of added value with participation in primer processing

- Enhancement of quality of life in rural areas

- Advantageous environmental effects

- Structural change of agricultural production

- New agricultural branch

- Energetic utilization of intervention surplus
The domestic food and fodder demand should be ensured, it shall not create inflation pressure on food (balanced market).

EU expectations shall be satisfied (2003/30/EC Guideline).

Importance of realization of by-products.

Crop market, food market and the balance of animal husbandry shall not be in danger.

Over the self demands it is only allowed to produce bioetanol in such amount, which is possible to sell on EU markets - market shall be assured for crop-types with direct export or in form of bioetanol.

Thinking in complex programmes – with positive energybalance-effect: connection of animal husbandry and bioetanol; bioetanol with biogas; according to the food circulation.
„The field of renewable energies is one option to strengthen European cohesion and European dynamism”

Thank you for your attention!