

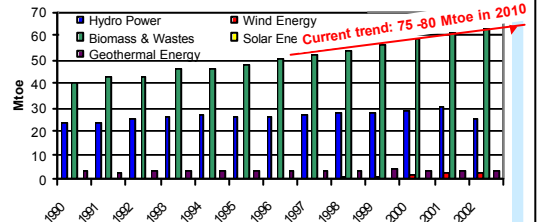
EU Biomass Action Plan

- Biomass action plan adopted December 7, 2005 ... in the form of a communication to the Council and Parliament
- Objectives:
 - 1) security of energy supply
 - 2) reduce greenhouse gas emissions
 - 3) stimulate economic activity in rural areas

Eur. Sustainable Energy Policy Seminar, March 29, 2006

Insufficient Growth of Bioenergy in Europe

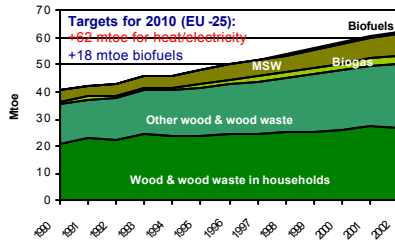
White Paper target for EU-15: 135 Mtoe biomass use in 2010
 Adjusted targets for EU-25: 150 Mtoe biomass use in 2010



Source: EUROSTAT

Europe's Ambitious Targets for Bioenergy

EU25, 1990-2002, biomass & waste only

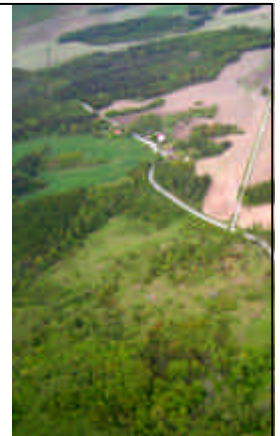


Source: EUROSTAT

ENERGY USES OF BIOMASS

- ❖ **transport biofuels**
 - tackle the most important security of supply problem (oil)
 - employment-intensive
 - most expensive
- ❖ **biomass in electricity generation**
 - highest greenhouse gas benefits
- ❖ **biomass heating**
 - cheapest (often competitive with fossil fuel)

Conclusion:
 biomass should be promoted in all three sectors



MEASURES

- The plan lists 31 measures
- These measures, if implemented, are expected to increase biomass use to **150 mtoe** by 2010 or soon after
- This can be done with **good agricultural practice** and **sustainable production** of biomass and without significantly affecting **domestic food production**


BIOMASS FOR HEATING AND ELECTRICITY

- Work towards legislation on **renewable energy in heating and cooling**. The examination will cover:
 - amendment of the **buildings directive**
 - standards for **household biomass boilers**
 - new **specific legislation** (NB: there are good reasons to think that targets may not be the right solution)
- Encourage **district heating** to modernise and convert to biomass
- Ensure proper implementation of the directive on **renewable energy in electricity**

TRANSPORT BIOFUELS

- Report on implementation of the **biofuels directive**. Look at amending the directive with respect to:
 - national targets
 - "biofuels obligations" for fuel suppliers
 - certification of minimum standards of sustainable cultivation
- "Balanced approach" to **biofuels trade**, respecting interests of domestic producers and trading partners

TRANSPORT BIOFUELS (2)

- Take biofuels into account in reform of **fuel quality directive**
 - Support **developing countries** by helping them to produce biofuels
 - **Specific communication** on biofuels in early 2006
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CROSS-CUTTING ISSUES

- Examine how to improve **biomass supply** through:
 - Common Agricultura Policy(energy crop scheme)
 - forestry action plan
 - waste framework legislation
 - animal by-products legislation
 - standardising biomass fuels
- Encourage Member States to take biomass into account in operational plans under the **structural funds**
- Biomass energy **research** priorities including:
 - bio-refining
 - 2nd-generation transport biofuels from wood and wastes

ESTIMATED COSTS AND BENEFITS (2010)

- **Reliance on imported energy** reduced from 48% to 42%
- **Greenhouse gas emissions** reduced by 209 MT CO₂ per year
- **Direct employment** for up to 250-300 000 people, mostly in rural areas
- Potential **downward pressure on the oil price** as a result of reduced demand for oil
- **COST** about €9 billion per year – equivalent to increases of 1.5 cents/litre for petrol and diesel and 0.1 cents/kWh for electricity

More details (including ranges) are in the impact assessment

EU Strategy for Biofuels

- Adopted by the Commission 8 February
- Three main aims
 - promote use of biofuels in EU and developing countries
 - prepare for large scale use by improving cost-effectiveness and research into 2nd generation
 - support developing countries