



European Commission

European Legislation to Promote Bioenergy

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Bioenergy and the Forest-based Industries

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MAIN DRIVERS

- Global energy prices (oil,gas,coal)
- EU energy risk profile
- Community Renewable Energy Policy
- Climate change policy (Emission Trading Scheme)

RENEWABLE ENERGY POLICYES (RES)

TARGETS FOR RES and BIOMASS

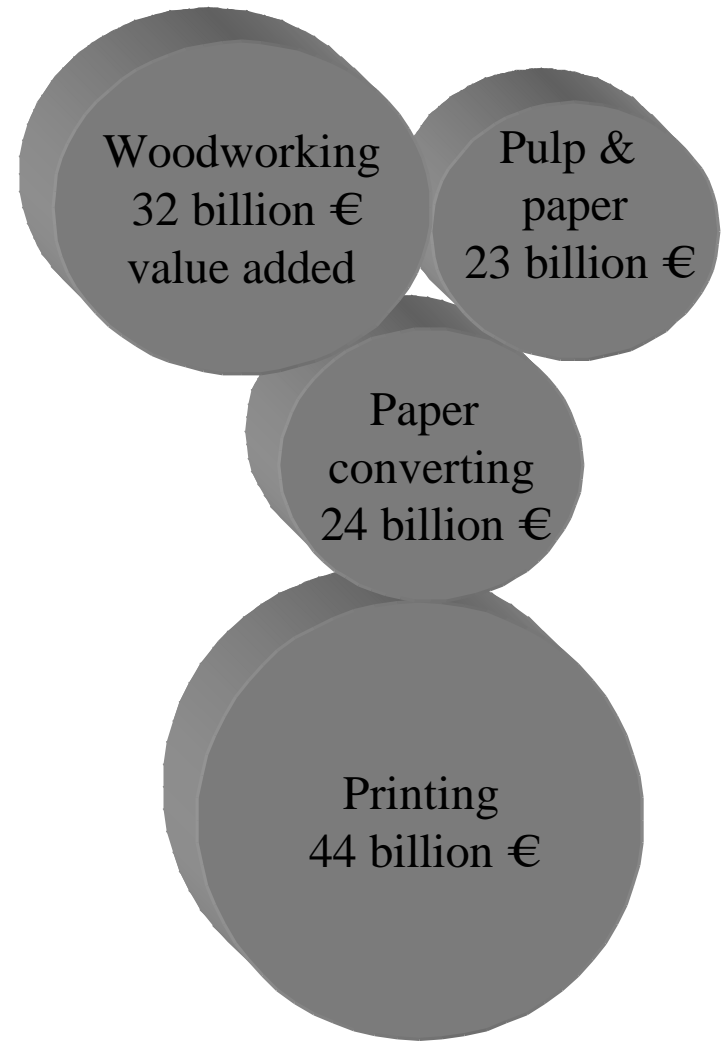
- 12% of all energy production in 2010
- 21% of electricity production in 2010
- 5.75% of vehicle fuel 2010

- Electricity from biomass + 35 Mtoe/y by 2010
- Biomass Heating + 27 Mtoe/y by 2010
- Vehicle biofuels + 18 Mtoe/y by 2010

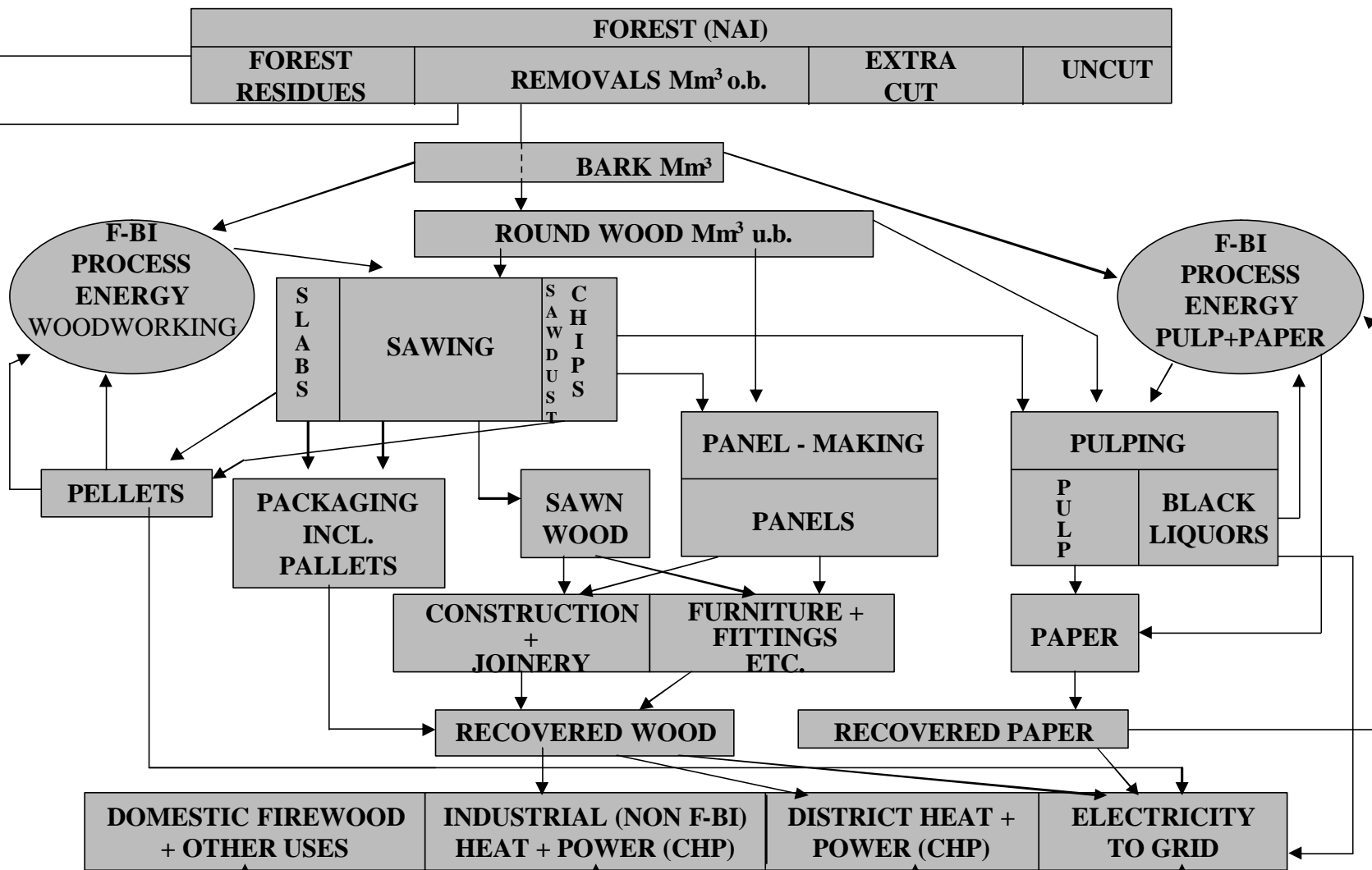
EU FOREST-BASED INDUSTRIES

8% of total value added
in EU manufacturing

9% of employment, i.e.
3 million employees



WOOD & WOOD ENERGY FLOWS



FOREST RESOURCES

- EU has 160 M ha of forests
- EU Forest-based industries use about 2/3 of the yearly forest growth
- Consequently the forest standing volume in the EU is constantly increasing, (250 M m³/y)
- However we have only about 5 % of the global forest resources

FOREST RESOURCES

- EU is importing almost 10 % of the supply of wood for the industries
- Finland ~ 25 % , Sweden ~ 10 %
- Large national, regional and local variations in supply
- Costs for harvesting and logistics are crucial
- Price effects most important

FOREST-BASED INDUSTRIES

Most affected by the increased use of wood for energy production both negatively and positively:

Sawmills

Panel industry (particleboard, MDF, OSB, plywood)

Pulp and paper industry

FOREST-BASED INDUSTRIES

Wood raw material comprise a substantial, and generally the largest, part of the total variable production costs.

Sawmills 70 %

Panel industry 25-50 %

Pulp and paper industry 40 %

FOREST- BASED INDUSTRIES

- Generally sawmills have and will probably continue to benefit from the development of wood-based energy markets because:
- Saw logs have such a high market value that energy producers cannot compete (so far)
- Sawmills get a higher price for secondary products (slabs, chips and sawdust)
- Secondary products also used for internal heat production

FOREST-BASED INDUSTRIES

- In general the panel industry is negatively affected by the development of wood-based energy production because:
- The increasing competition for slabs, chips and sawdust from the sawmills as well as for roundwood
- It has no secondary products to be fed into the energy markets

FOREST-BASED INDUSTRIES

- The pulp and paper industry is in the medium-term both negatively and positively affected by the development of wood-based energy production because of:
 - Increasing competition for roundwood
 - But chemical pulp mills are also positively affected since they are in general net producers of electricity and heat based on biomass
 - (Mechanical pulp production is negatively affected by increasing electricity prices)

FOREST-BASED INDUSTRIES

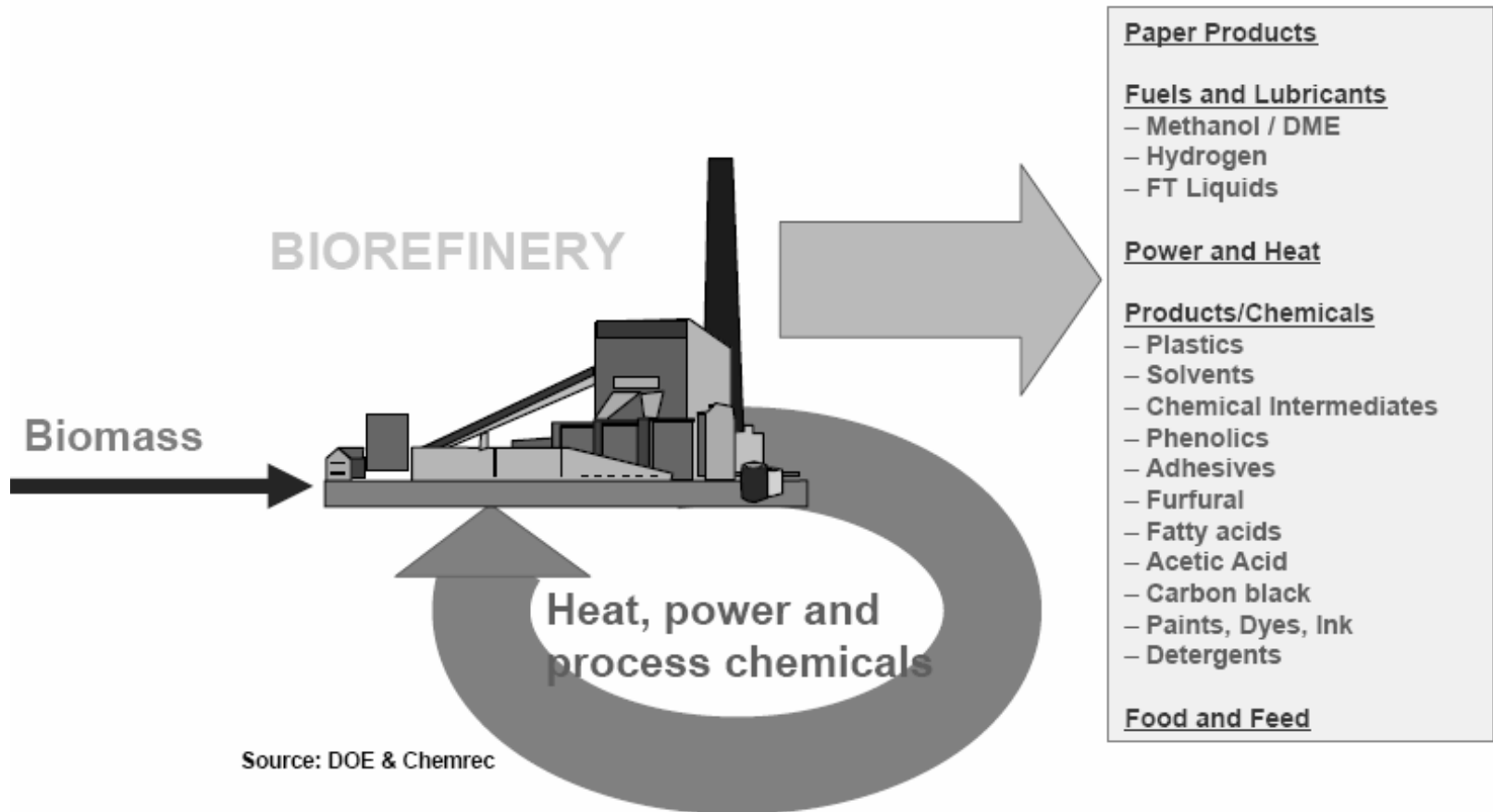
- Furthermore the chemical pulp producing industry has a potential to develop integrated production processes of pulp, paper, heat, electricity, fuels and chemicals.
- Research and development:
 - Forest-based sector Technology Platform
 - Biofuels Technology Platform

OPPORTUNITIES

FUEL PRODUCTION

- ETHANOL BASED ON CELLULOSE
 - Current and new technology
- BLACK LIQUOR GASIFICATION
 - Methanol, DME, new technology
- BIOREFINERY
 - New technology (Forest-based Sector Technology Platform)

WOOD-BASED BIOREFINERY



Source: DOE & Chemrec

A BALANCED VIEW

Generally value-added in the forest-based industry value-chains is substantially higher than in the energy sector value-chain (heat or electricity) and the products can be recycled.

STRATEGY

- Necessary to safeguard resources at competitive prices for both industry and energy production
- Increase the use of residuals
- Mobilise forest resources throughout EU – a responsibility both of forest owners and industry
- Increase raw material efficiency
- Increase recycling of fibre – 50% of paper production based on recycled fibres
- Expand research and development (Forest-based sector Technology Platform, Biofuels Technology Platform - FP 7)

ACTION PLANS

- Forest Action Plan
- Biomass Action Plan
- National biomass plans
- Commission will review the impact of the energy use of wood and wood residues on forest-based industries
- Better information (Member States, Eurostat, UNECE)

SUMMARY

- Wood for energy will mean new business opportunities for the forest-based industries but also increasing competition for raw material
- Potential wood resources need to be mobilised
- Market-based approach supported by public measures