



European Commission



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EU policy developments and the forest-based sector

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Summary of presentation:

1. Challenges: climate change, energy security
EU response to climate change
2. Political and policy commitment by EU MS
3. Wood market effects
4. Targets and potentials
5. Renewed challenges
6. Other EU policy responses (industry, agric.)
7. Conclusions

1. Overall challenges

- **mitigate climate change:** by reducing greenhouse gas (GHG) emissions and enhancing carbon sinks, including forests; (also work on CO₂ capture)
- **increase EU energy security:** by diversifying energy types & sources

EU (EC + MS) responses to climate change:

GHGs emissions reductions: Under the Kyoto Protocol:

- the EU to reduce GHG emissions by 8% from 1990 levels (2008-2012)

(2012→ review by Inter-Governmental Panel on CC, Bali, December 2007)

Forest-based sector:

- de-/af-/re-forestation since 1990 are counted in carbon calculations;

(NB world-wide 18 % of GHG emissions come from deforestation!)

- « other forest practices » (e.g. forest products) may be counted

Emissions Trading Scheme (EMS) under the Emissions Trading Directive, 2003/87/EC, aims to fulfil the EU KP commitments through an efficient European market in GHG emission allowances **(1st international trading system for CO₂)**

2. Political commitment by EU Member States:

Policies especially for new & renewable energy sources (RES)

a) Since 1997 « White Paper » 12 % energy from renewable energy sources (RES) by 2010 (1997 = 6 % for EU-15)

Member States to fulfil indicative « targets » at national level using:

Wind

Hydro

Geo-thermal

Photo-voltaic

Solar thermal

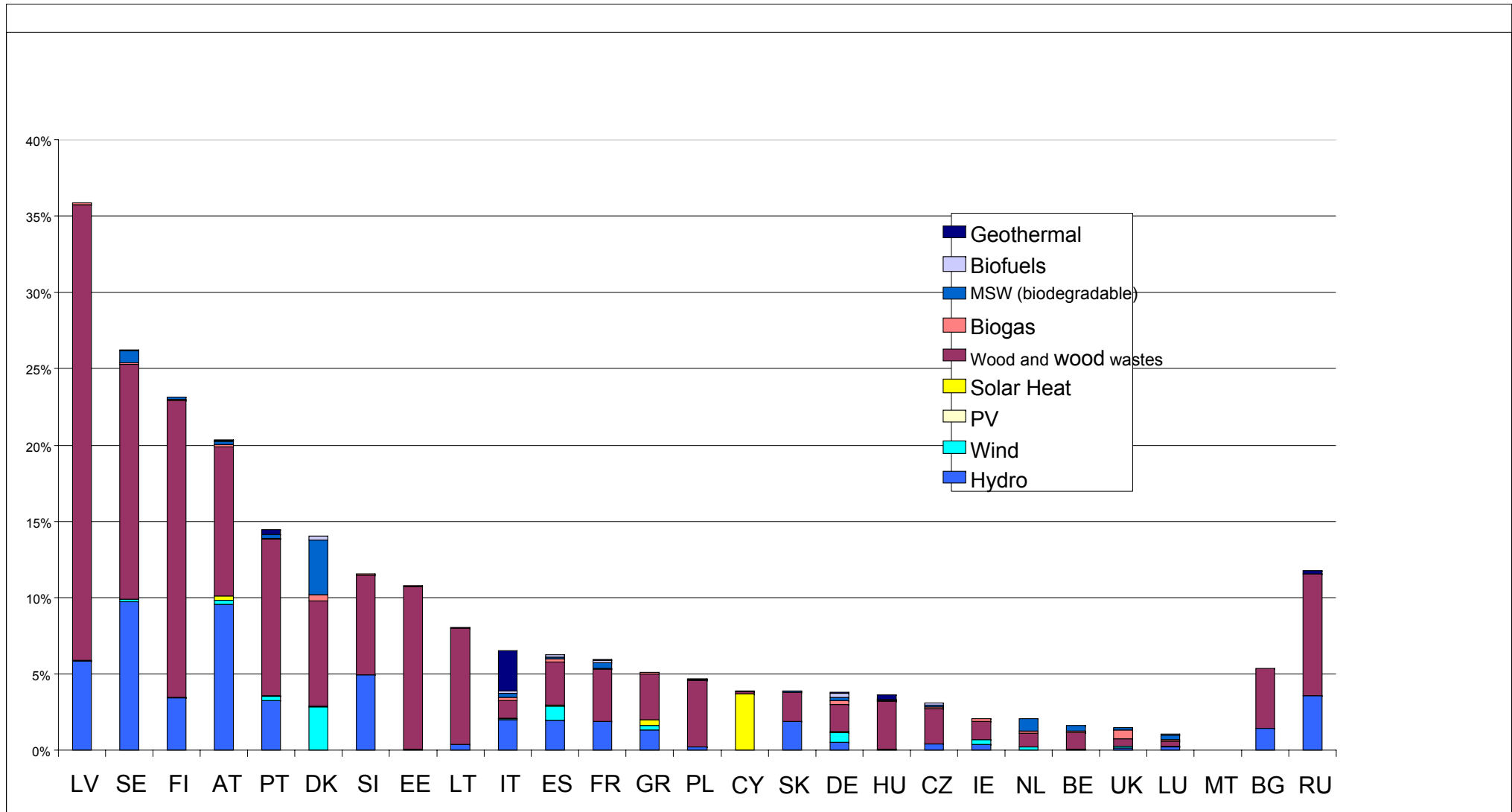
Biomass = agri + urban + wood (no « target », est. 27 Mtoe)

b) Papers on Energy Security: NB other technologies becoming available:
hydrogen & fuel cells; zero-emission fossil fuel plants; smart grids

A comprehensive but complex framework for RES and EE (energy efficiency) is already in place

	Sector		Supply	Demand		
	RES	EE		Buildi ng	Tran sport	Indus try
Political and legislative instruments:						
1997 White Paper on RES	X		X	X		X
Green Paper on Security of Energy Supply	X	X		X	X	X
Directive on RES-electricity	X		X	X		X
Directive on Energy Performance of Buildings	X	X		X		
Directive on Biofuels	X		X		X	
Directive on a Scheme for GHG Allowance Trading	X	X	X			X
Directive on the Taxation of Energy Products	X	X	X	X	X	X
Directive on Co-generation	X	X	X	X		X
Green Paper on Energy Efficiency		X		X	X	X
2007 Green Paper on Energy	X	X	X	X	X	X
Energy & Climate Pkg (To be continued....)	X	X	X	X	X	X

Renewable energy sources (%) by MS in 2004



3. What has happened in the wood biomass market?

- wood has provided up to 80% of biomass overall
- but **big regional variations**
- **opportunities**: e.g. markets for forest owners & sawmillers
peripheral regions can find energy markets for wood
- **risks**: e.g. reduced competitiveness for wood-based panels,
some pulp mills (closures)
roundwood prices have risen sharply, in some cases &
tight supply in many regions, esp. Central Europe
- heightened concern by EU forest-based industries (F-BI) that
trend will continue
- **lack of good quantitative information** on wood supply/demand

4. 2010 “targets” for EU BAP & Bio-fuels Strategy:

“**Scary scenario**” for biomass energy use “**if all biomass = wood**”

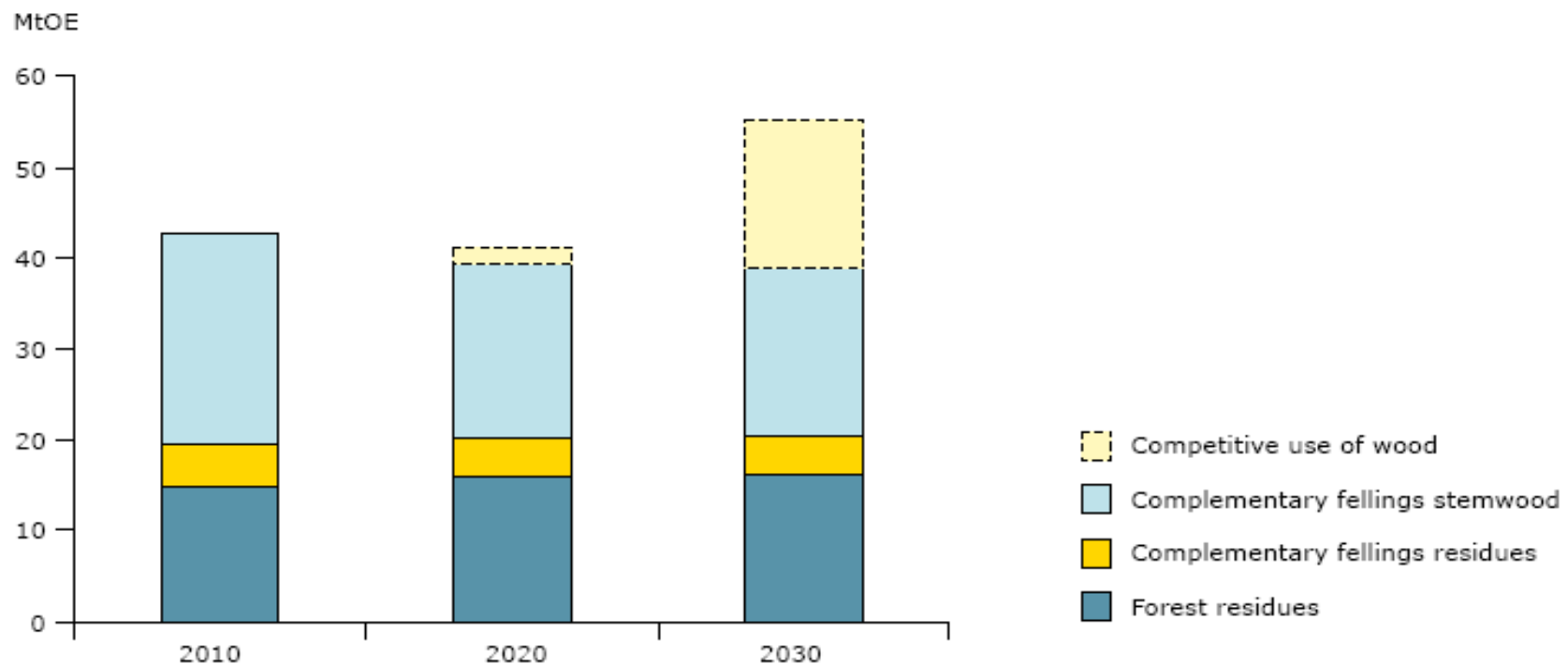
(NB not all biomass foreseen to come from wood, but also agri- residues, waste and liquid bio-fuels should play a significant role).

(M toe)/Mm ³	(2003)	(2010)	Difference
Green Electricity	110 Mm ³	303 Mm ³	(35 Mtoe) +193 Mm3
Heating & cooling	264 Mm ³	413 Mm ³	(27 M toe) +149 Mm3
Transport Bio-fuels	6 Mm ³	105 Mm ³	(18 M toe) +99 Mm3
TOTAL	380 Mm³	820 Mm³	+440 Mm3

Ex. “The share of renewable energy” COM 366/2004 (For EU-25)

4. Environmentally compatible bioenergy potential from forests

- European Environment Agency Report No 7/2006

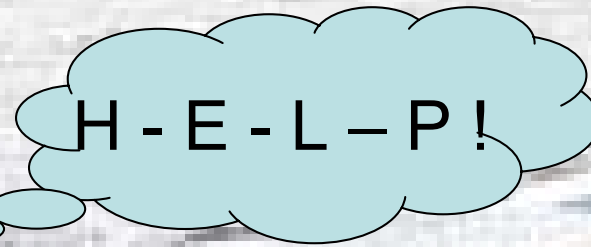


Note: Calculations cover EU-25 Member States without Cyprus, Greece, Luxembourg and Malta

5. 2006 -2007: renewed challenges:

- **High and volatile prices** for oil and gas will stay
- **Global energy demand** is predicted to increase by 60% over the next 30 years (So, CO₂ emissions will also rise)
- By 2030 the **EU energy dependency** could rise from 50% to 70%, mostly from regions threatened by insecurity
- Stern and IPCC Reports (Climate Change more rapid)
- Thus, January 2007: EU “**Energy Package**”, including Renewable Energy Road Map - 20% RES by 2020
- EU Council conclusions 09/03/2007 (- 20 % CO₂, etc.)

Challenges - climate change



EU Council: integrated & mutually supportive approach to climate and energy policies

Three goals:

- promoting environmental sustainability and combating climate change
- increasing security of energy supply
- **ensuring the competitiveness of European economies and the availability of affordable energy**

Energy Policy for Europe, incl. Energy Action Plan (2007-9)

In addition to RES, the EAP seeks to complete EU internal energy market and develop a European Strategic Energy Technology Plan, including safe carbon capture.

EAP will be target of Strategic Energy Review in 2009

European Energy Action Plan (DG TREN) includes:

- review of state-aid guidelines for environment (2007)
- energy efficiency: reduce consumption 20 % by 2020

For RES:

- binding 20 % target RES by 2020 (MS burden sharing)
- **comprehensive “implementing” directive on use of all RES (electricity, heating & cooling, bio-fuels), incl.:**
 - member states’ overall national targets
 - national (**biomass**) **action plans** (sub-targets & measures)
 - **sustainability criteria** for bio-energy (esp. bio-fuels)
 - provisions to **avoid conflicts between diff. uses of biomass**

Energy policy - other actions:

- Review directive on **energy efficiency in buildings** to incentivise use of RES: “Nega-J”
- Study on performance of household biomass boilers and possibly set eco-design requirements (NB efficiency)
- **Review the impact of the energy use of wood and wood residues on forest-based industries**
- CEN standards on quality of bio-fuels
- Development and Trade policies to promote sustainable biomass & bio-fuels production (NB major international bio-fuels conferences)

RES “targets” and progress

	2006	2010	2020
All renewables:	7%	12% (indicative)	20% (binding)
Bio-fuels:	1%	5.75%	10%
Green electricity:	15%	21%	(MS sectoral targets)
Heating/ cooling:	9%	none	
Biomass:		150 Mtoe	195 Mtoe
Wood “share”		(?27 → 35? Mtoe)	
		(?108-149 Mm3 → 140-194Mm3?)	

Natioal Biomass Plans (nBAPs)

Council June 2006 endorsed EU Biomass Action Plan & « invited MS to develop or up-date nBAPs, concentrating on national bottlenecks »

- Follow-up: **nBAPs Working Group** set up 2006 (EC + MS)
- nBAPS **Information Matrix** established (questionnaire)
- By 2nd meeting (13/03/2007):
 - - significant N° of MS preparing nBAP or biomass part of national energy plan (linked to their draft Operational Programmes for Structural & Cohesion Funds).
 - - biomass supply is key element of nBAPs, but still
 - - no uniform MS understanding of nBAPs
 - - MS requests to exchange information & experiences
 - - possibility of « guidelines » from Commission?

Natioal Biomass Plans (nBAPs)

Some countries have already started drafting an nBAP:
e.g. Austria, Estonia, Ireland, NL, UK (Scotland)

Others have identifiable biomass components of their Energy Action Plans: e.g. Fr, Gr, Lithuania...

To help the MS develop the biomass components, the EC intends to develop a working paper for the **3rd meeting 12/12/2007**

NB the new wood-energy information will be a valuable input

Communication on BAPs foreseen end of 2008

Web-site established:

http://ec.europa.eu/energy/res/biomass_action_plan/national_bap_en.htm

6. Actions from other EC services?

DG Enterprise:

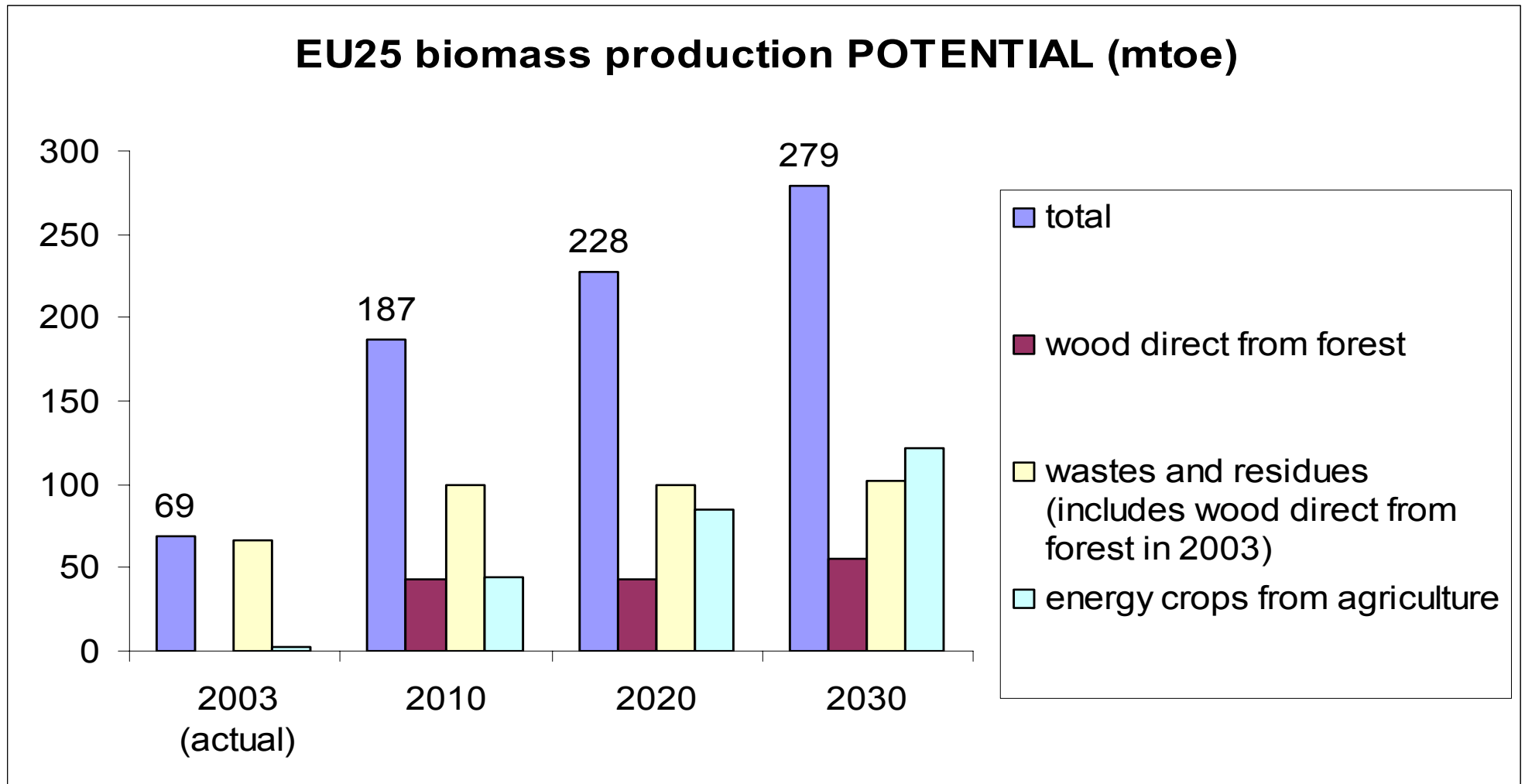
- **Inputs to « Lisbon Agenda » & High Level Group (Energy & CC)**
- **developed new communication on innovative and sustainable forest-based industries (foreseen November 2007)**
- **reconvened RES Working Group of the EU F-BI Advisory Committee:**
working document identified:
 - **more woody biomass can be mobilised for all uses**
 - **factors influencing the availability of wood and its increased use for energy**
 - **economic instruments – how they should be used**
 - **forest and agri-energy resources can better be developed by using a package of co-ordinated measures**
- **co-operation with international organisations (FAO/IEA/UNECE) et al.**

DG AGRI: EU Forest Action Plan - Key Action 4

Promote forest biomass use for energy generation through:

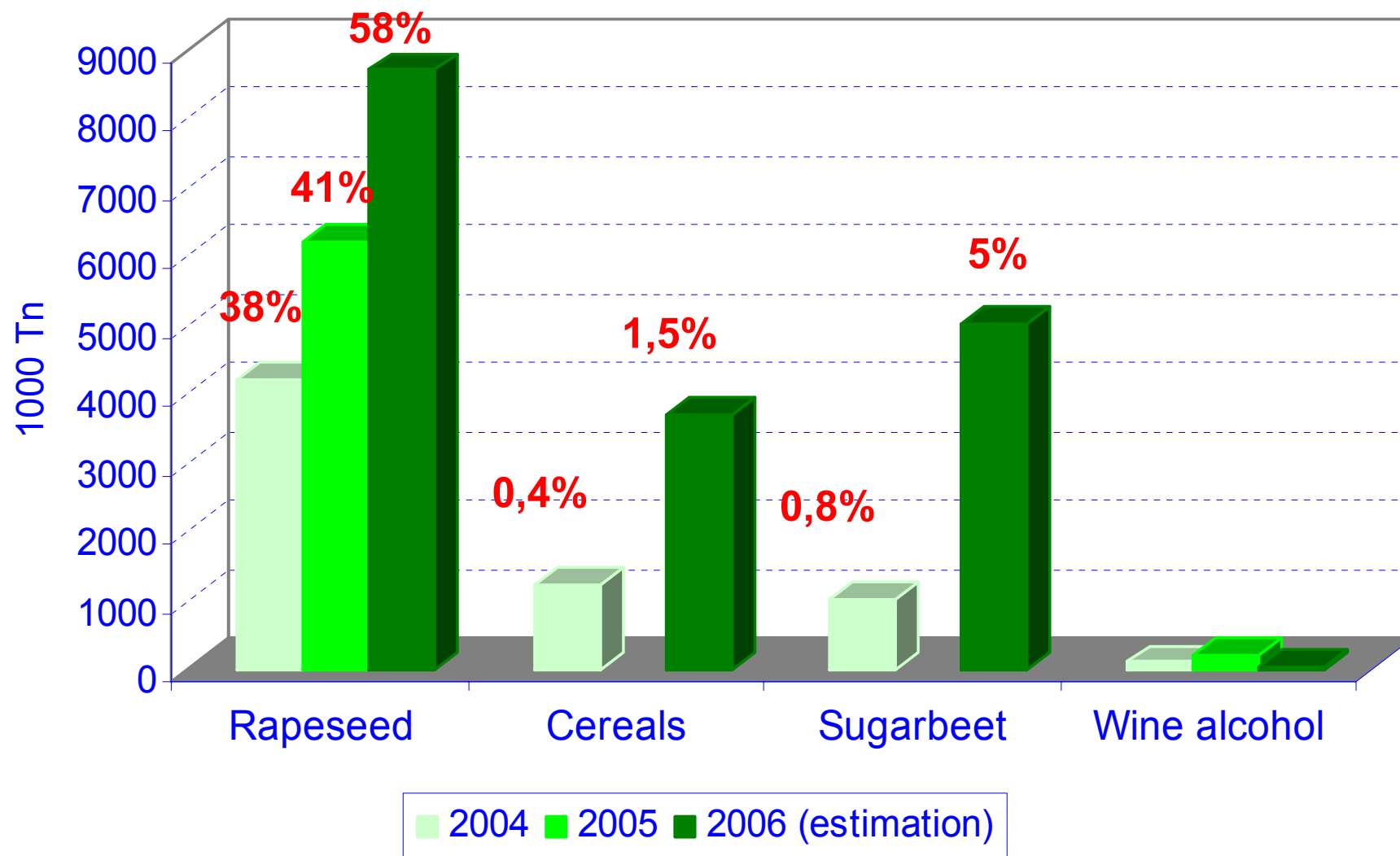
- Assessment of the availability and possibilities for increased mobilisation of small/low-value timber and harvesting residues for energy; disseminate good practices
- Assessment of the feasibility of using forest residues and tree biomass for energy in the context of sustainable forest management; examination of environmental limits
- Examination of possibilities for co-operation between forest owners in energy projects
- Support for R&D for heating and cooling, green electricity and fuels from forest resources
- **18 mth Working group set up (22/05/2007; 16/10/2007) to examine mobilisation of wood resources for energy use - inputs sought outputs: report on mobilisation; opinion on SFM for biomass**
- **Also: CAP reform:** Non-food (energy) crops on set-aside areas
- **Rural Development Policy (2007-2013):**
 - ▶ Menu of measures in support of renewable energy

EU-25 biomass production potential



Sources: Eurostat (2003) / European Environmental Agency (projections)

Feedstocks for biofuels: share of different crops



Land use and market impacts: current land use for energy in the EU

<i>(Million hectares)</i>	2003 (EU-15)	2004 (EU-25)	2005 (EU-25)
On set-aside area , of which	0,9	0,6	0,9
– Rapeseed		0,5	0,8
With energy crop premium , of which		0,3	0,6
– Rapeseed		0,2	0,4
Without specific support (estimated)	0,3	0,5	1,1-1,3
Total area	1,2	1,4	2,6-2,8

► **Energy crops : about 3% of the EU-25 arable area**

7. CONCLUSIONS – strategic considerations:

- ▶ The EU has great **potential for increased production** of biomass
- ▶ The minimum targets should be achieved without unmanageable tensions between biomass demand for energy and for food, feed and industrial uses (diversified feed-stocks)
- ▶ In the EU, **CAP cross compliance** gives a guarantee for environmental protection
- ▶ Production pathways and land use for biofuels with undesirable consequences **will be discouraged**
- ▶ Nationally, should forests be used as carbon sinks for Kyoto credits and maintaining/increasing bio-diversity, or should wood be used for products and/or energy?
- ▶ **Added value of forest-wood chain is substantially higher** than that of energy sector and wood products can be **recycled**. But what about F-BI profitability, capital intensity and returns on investments? Is CO2 potential more important, e.g. CO2-saving by 2nd-generation bio-fuels?
- ▶ **How much (more) wood could/should be used**; how can that best be managed? i.e. at national, regional & local (+ company) levels. How can **EU & MS policies & actions help**?
- ▶ Which points in the forest/wood flow system should be addressed?
- ▶ Logistics and harvesting **costs are crucial**. How can e.g. subsidies be used without unduly distorting markets?
- ▶ Which specific (new) measures (e.g. R&D) are needed?
- ▶ How to get better statistical and other **information**?