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EU strategy for biofuels: the European Commission's perspective

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Outline



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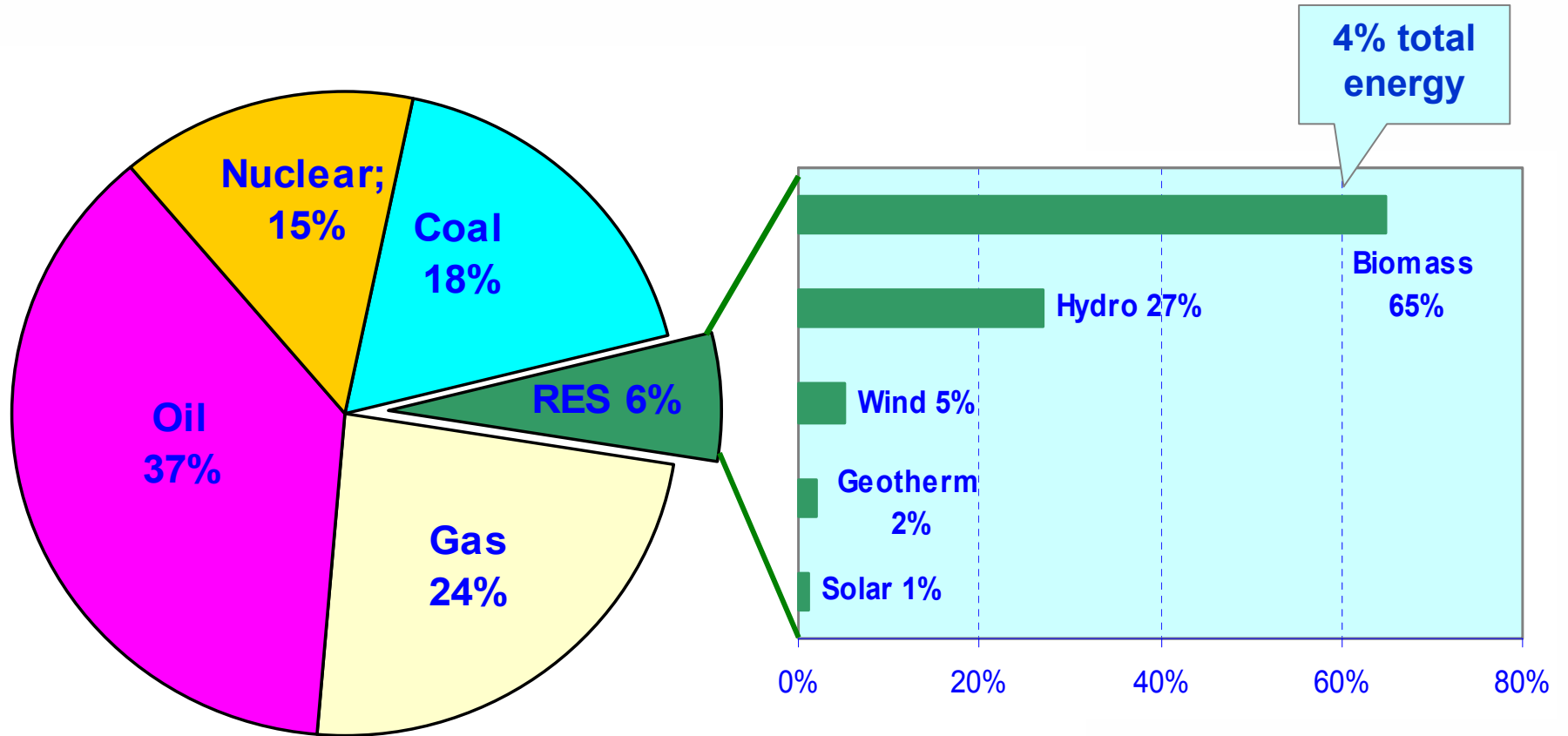
- 1. Bioenergy in the EU – policy framework**
- 2. Biofuels targets: progress assessment**
- 3. Sustainability debate**
- 4. An agricultural perspective: Feedstocks and land use for biofuels**



Breakdown of EU-25 gross energy consumption (2004)



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EU policy framework for renewable energy



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Policy papers and legislation adopted

- ▶ White Paper on renewable energies – November 1997
- ▶ Green Paper on security of energy supply – November 2000
- ▶ Biofuels Directive – May 2003
- ▶ Energy taxation Directive – October 2003
- ▶ Biomass Action Plan – December 2005
- ▶ Biofuels Strategy – February 2006
- ▶ EU Energy and climate change package – January 2007



Energy and Climate Change package – January 2007



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- ▶ Fully **integrated** and mutually **supportive** EU framework for:
 - Climate Change
 - Energy efficiency and security
 - Competitiveness and sustainability
- ▶ Central **pillars**:
 - True internal energy market
 - Accelerating the shift to low carbon energy
 - Energy efficiency
 - Renewable energies – RE roadmap
- ▶ Providing **objectives** and **tools**



Renewable Energy Roadmap : Commission's proposals January 2007 (1)



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- ▶ **Renewable energy:**
 - Effective promotion and development of RE
 - legally **binding target of 20%** for the share of RE in EU energy consumption by 2020
- ▶ **Biofuels:**
 - Progress report
 - Legally **binding minimum target for all MS of 10%** for market share of biofuels by 2020
 - **Sustainable** production of biofuels
- ▶ **New EU legislation on the use of renewable energy in heating & cooling**
- ▶ **National Action Plans** on how to achieve the targets



Renewable Energy Roadmap : Commission's proposals: January 2007 (2)



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- ▶ It foresees the preparation of a new **integrated legislative framework** on the promotion of renewable energy in 2007, including :
- ▶ Review of the current **Biofuels Directive**
- ▶ A system of **incentives for biofuels** which will encourage the production and use of biofuels with the best environmental profile and discourage those with environmental risks
- ▶ Promotion of renewable energy in **heating**



EU renewable energy current use & targets



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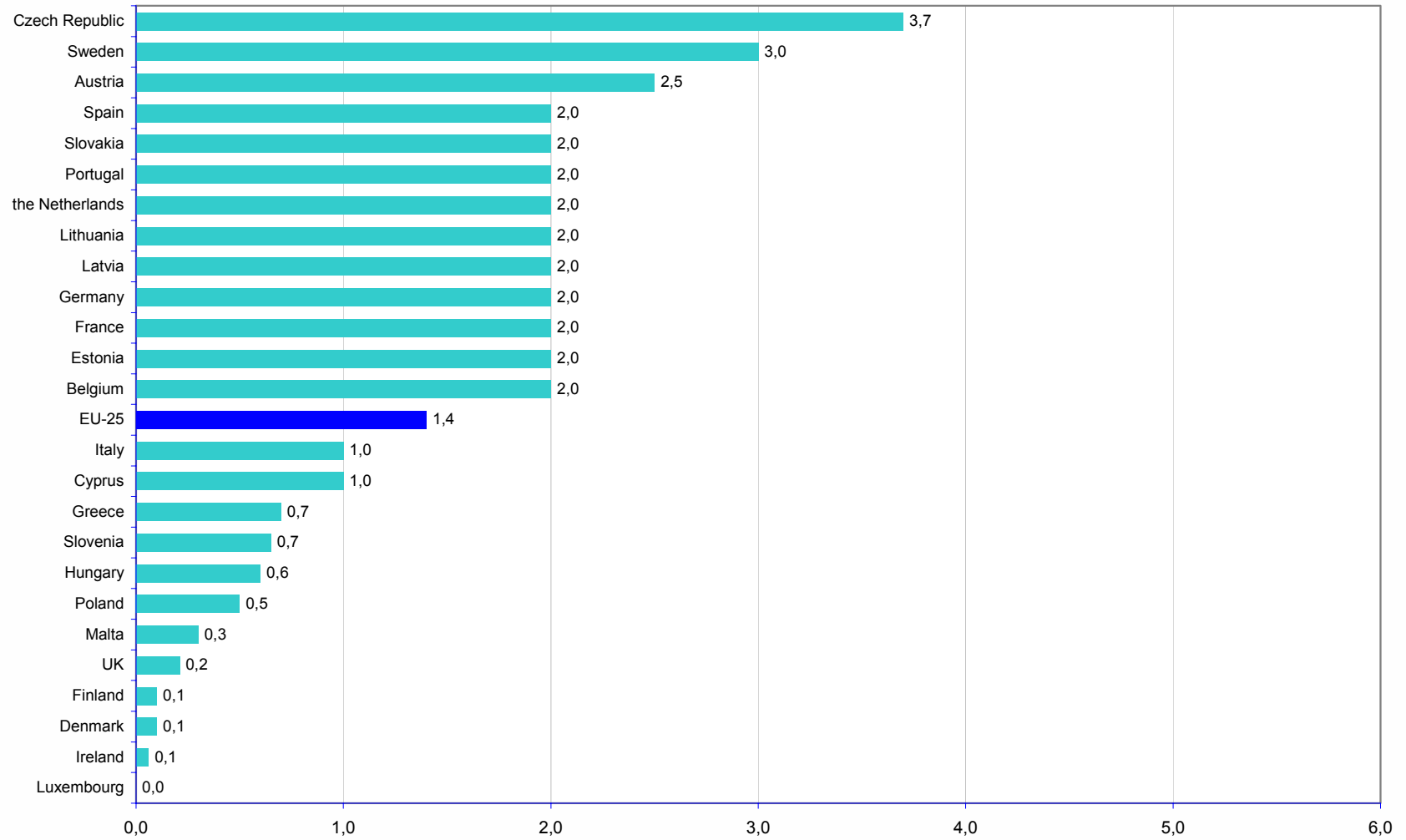
Sector	% of EU energy use	% RE/ energy use	Targets 2010	Targets 2020 (proposal)
Renewable energy		6%	12%	20%
Electricity	25%	14%	21%	No specific target at EU level
Heating	50%	9%	No specific target	
Transport fuels	25%	1.4 %	5.75 %	10%



National indicative targets for biofuels 2005



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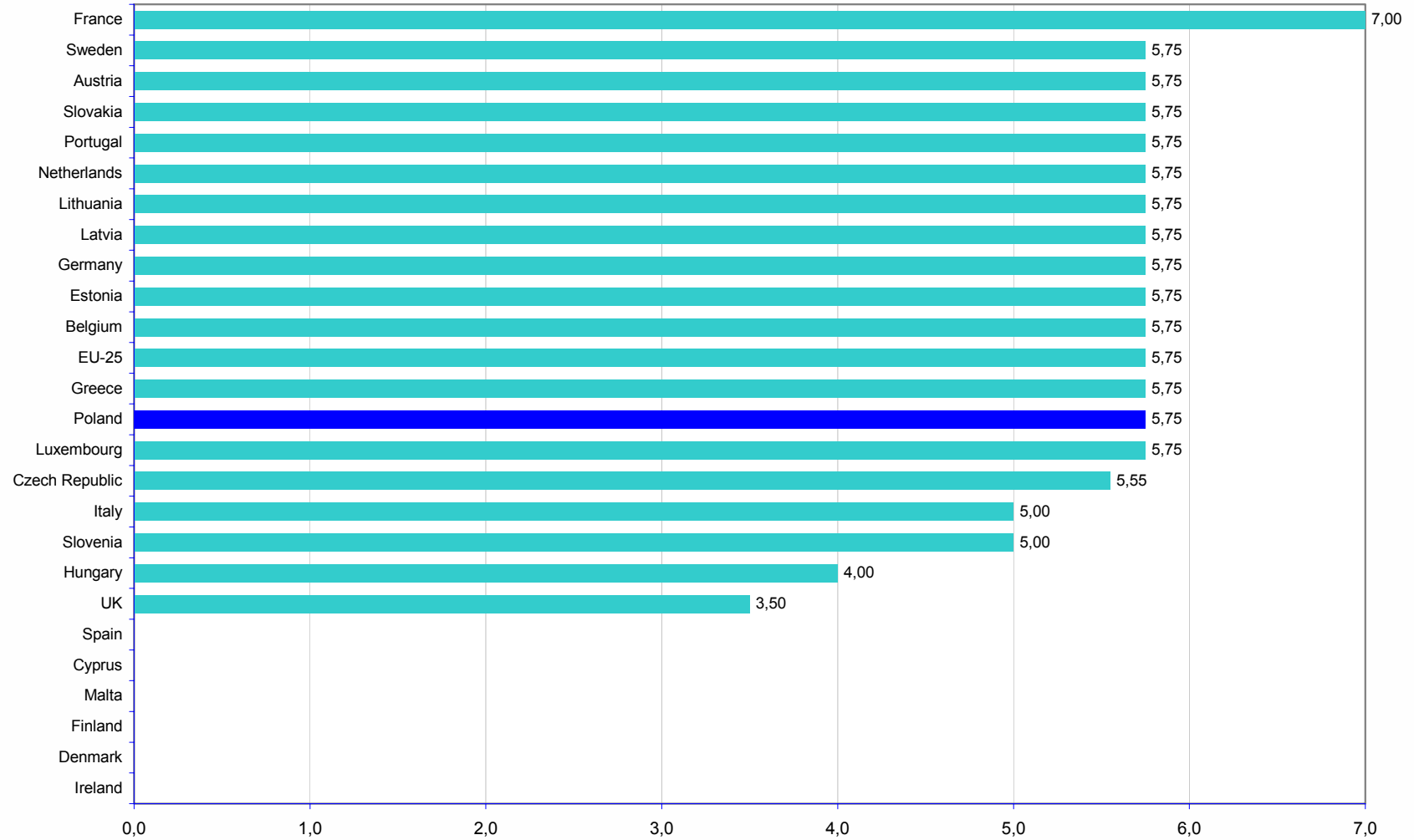




National indicative targets for biofuels 2010



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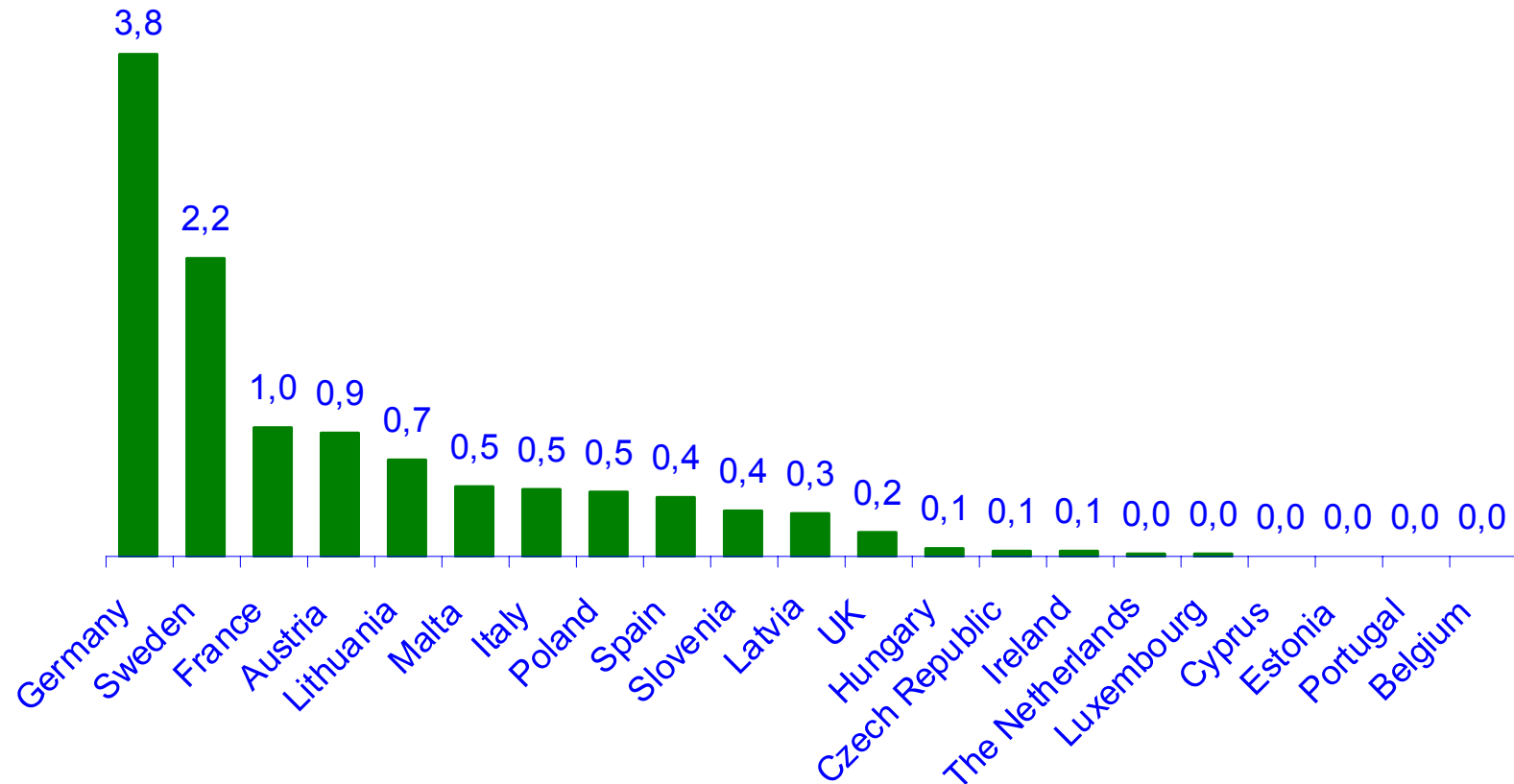




Biofuels market share 2005 (energy content, %)



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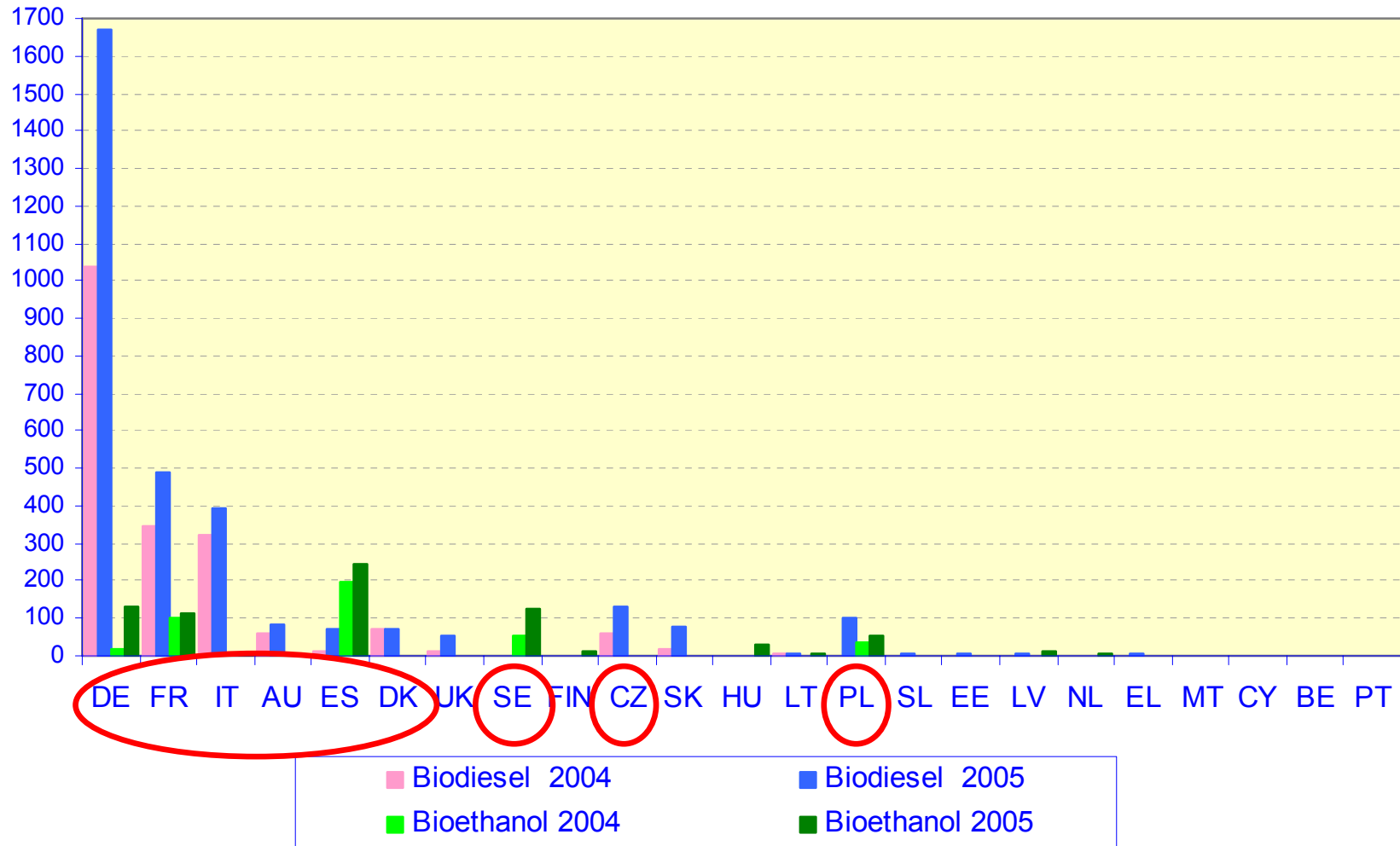
► **EU: 1% market share**



Different national biofuel strategies



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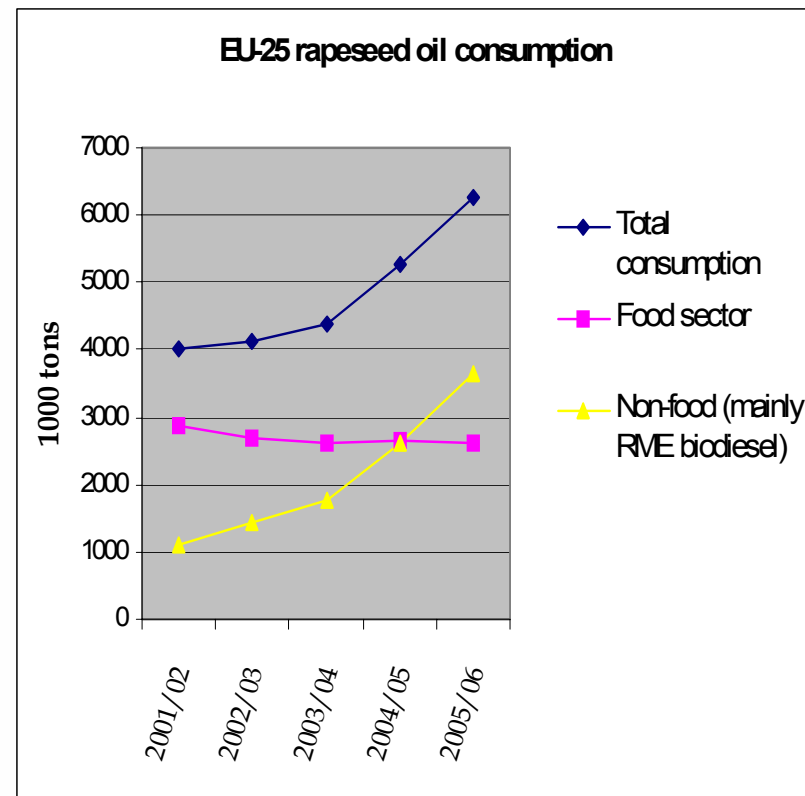
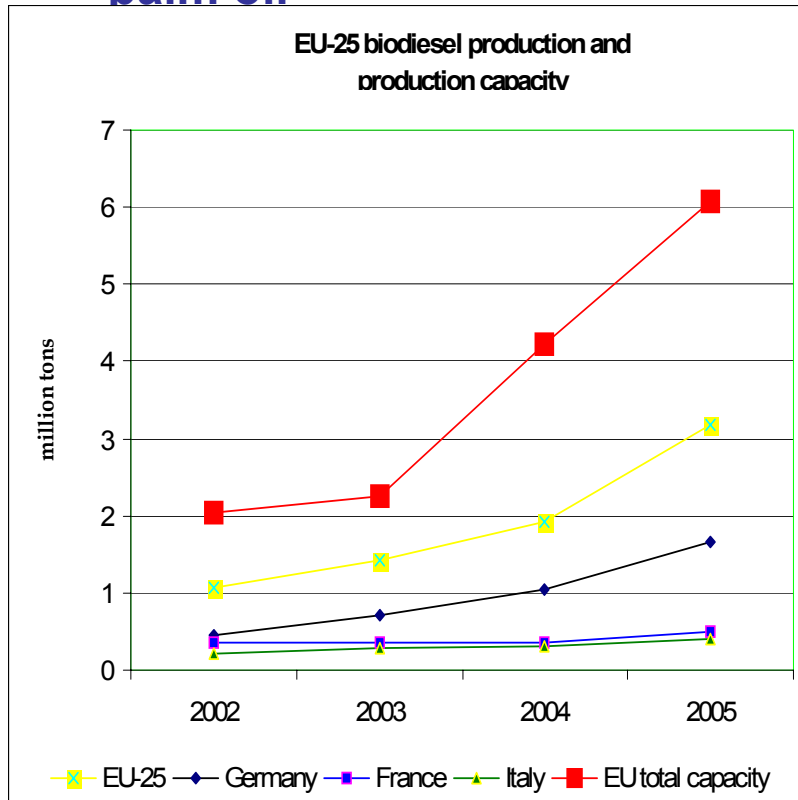


Biodiesel production in the EU



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- ▶ 2005: biodiesel 80% of EU biofuels use
- ▶ 55 % of the car fleet runs on diesel
- ▶ Rapeseed the main feedstock, smaller but growing imports soy and palm oil





Need for a binding biofuel target



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- ▶ To achieve biofuels benefits, the EU needs to signal its **commitment to biofuels** – to investors, the oil market and researchers in 2nd-generation
- ▶ To send a clear and **convincing** signal, as part of its renewable energy strategy
- ▶ A **specific** target for biofuels is needed because:
 - biofuels **cost more** than other forms of renewable energy
 - Without a separate target, their development will fall behind



Biofuels: the sustainability debate



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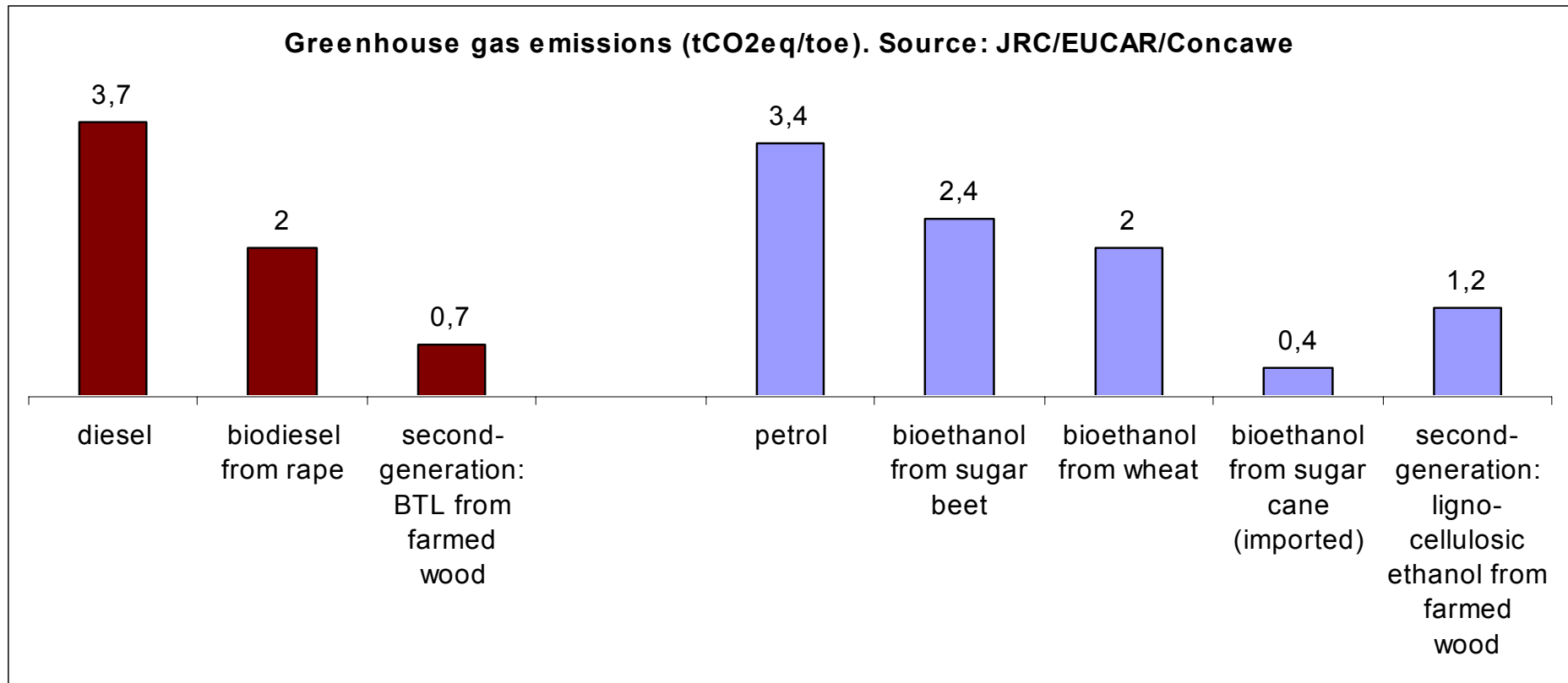
- ▶ Most biofuels bring environmental **benefits** but...
- ▶ Risks of negative **environmental impacts**
 - GHG emissions (high-GHG production pathways)
 - Biodiversity (deforestation)
 - Water availability and quality
- ▶ Impacts on **agricultural markets**
 - Competition for land use
 - Prices for food and feed
- ▶ **Opportunities** for economic diversification and employment in rural areas



Biofuels: reduction in CO₂ emissions



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Biofuels guarantees for the environment



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Measure on **biofuel sustainability**, which:

- ▶ **discourages** the use of bad systems for biofuel production
- ▶ **discourages** the conversion of land with high biodiversity value for the cultivation of biofuel feedstocks
- ▶ **encourages** the use of 2nd generation technologies

The system should:

- ▶ **avoid** any discrimination between domestic production and imports
- ▶ **not act** as a barrier to trade
- ▶ **not favour** one kind of biofuel or crop



Feedstocks for biofuels: current land use



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<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	-
Without specific support (estimated)	0,3	0,5	1,5
Total area	1,2	1,4	3

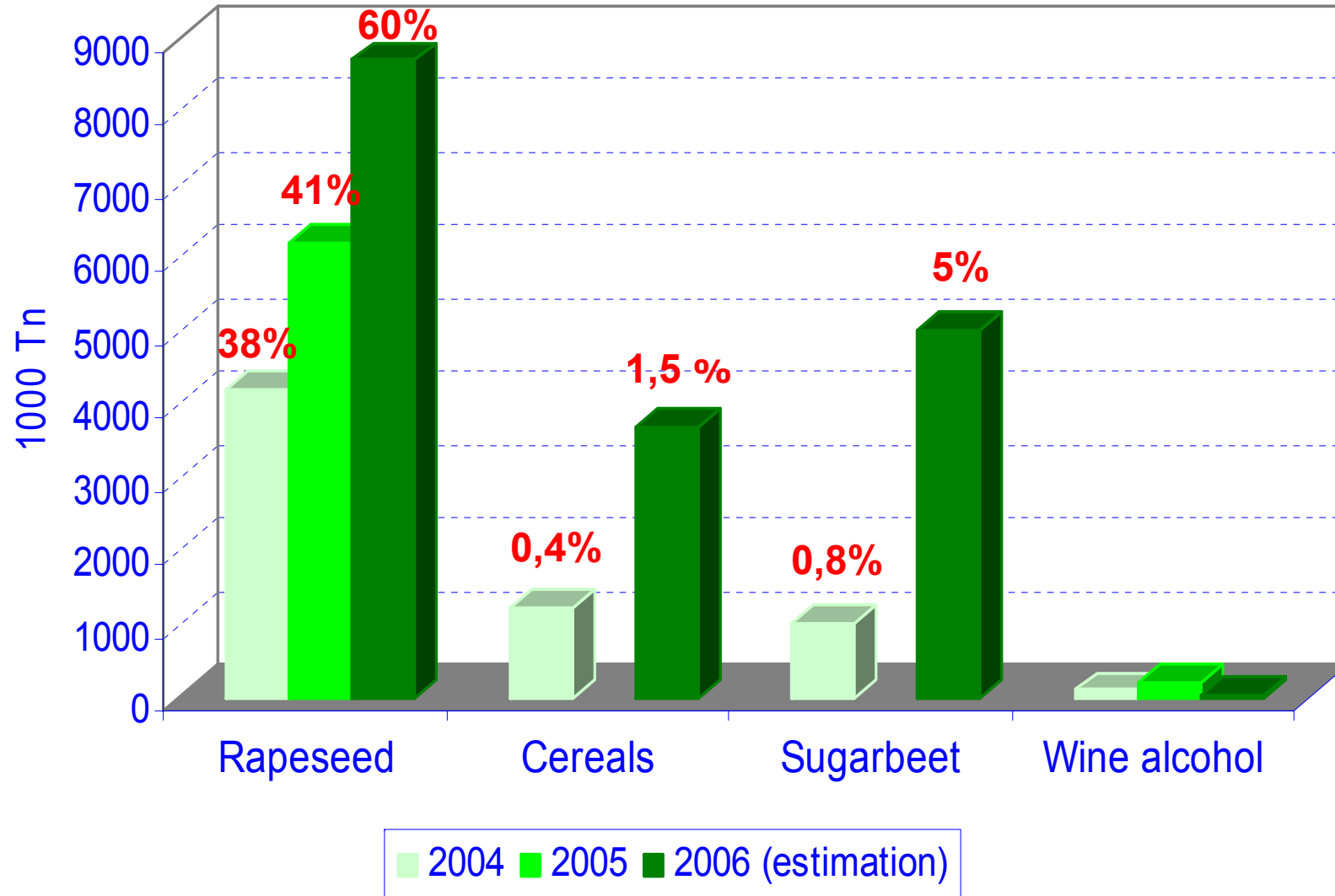
► **Energy crops : about 3% of the EU-25 total arable area**



Feedstocks for biofuels: crops and share of total production



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2020 scenarios: EU-25 arable land use (million ha)



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	7% share of biofuels	10% share of biofuels
Rape for biodiesel	2.7	2.6
Cereals for bioethanol	4.6	6.5
Sugar beet for bioethanol	0.3	0.4
Short rotation coppice & straw (BTL)	0	3.5
Total area for biofuel production	7.6	12.8
non-biofuel arable production	84.8	83
idle arable land (set-aside)	7.7	5.4
Total arable land	100.1	101.3
<i>Share of imports</i>	<i>27%</i>	<i>30%</i>
<i>Share of 2nd generation</i>	<i>20%</i>	<i>n.a.</i>



Where will EU biofuels come from?



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- ▶ EU has considerable **potential** for supplying biofuels industry
 - Cereals **stocks** (market & intervention)
 - Obligatory **set-aside** (EU-15): nearly 4 million ha
 - Use of not cultivated land: 3,2 million ha
 - **Exports** reduction
 - **Productivity** increases
- ▶ The EU pursues a **balanced approach** to domestic production and imports
- ▶ Biomass/biofuels **imports** likely to be an important part of EU consumption (up to 30%), in particular biodiesel/oilseeds
- ▶ **Evolution** of imports depends on: trade policy, availability of 2nd generation, cost-competitiveness of European industry



Improving the prospects for biofuels: next steps



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- Decision **spring European Council** (8-9 March) based on Environmental and Energy Council discussions
- **Renewable energy legislative framework** (September 2007)
- Revision of **standards** (biodiesel: EN 590) (end 2007)
- “Health-check” of the **Common Agricultural Policy** (2008)



Summary



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- ▶ **Renewable energy**: a key element of a sustainable future
 - Significant reduction of GHG emissions
 - Indigenous and decentralised energy sources
 - New opportunities for rural economies
- ▶ **Sustainable** provision of feedstocks, taking into account
 - **potential** of European agriculture
 - impacts on **food and feed markets** - EU and globally
 - **other** possible uses of biomass
 - **environmental** balance of different raw materials
- ▶ **Research** and **technological** development
 - advanced, more cost-effective conversion technologies
 - more diverse feedstocks – not only food crops
- ▶ **Stable** environment for the industry to develop



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Gracias por su atención