



European Trends in Bioenergy Policies Results of EU legislation

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Statement 1:

The current variation
in support schemes for bioenergy
results
in policy competition and
a inefficient subsidies

Statement 2:

A more harmonised approach
to renewable energy support
would
lead to larger benefits
at the same cost

Contents

- Policy trends
- EU directives
- Support Schemes
- Level Playing field
- Recommendations
- Conclusion

Source: CE Delft: *Bioenergy in Europe 2005: trends and issues*



Policy Trends

- Energy and Climate high on the political agenda
 - Heads of State in Lahti
- Societal need:
 - Security of Supply
 - Cost of energy
 - Climate Threat
 - Diversification of resources
 - Rural Development

-> Biomass and Bioenergy good prospects

BUT: Politicians might want faster results than can be realised

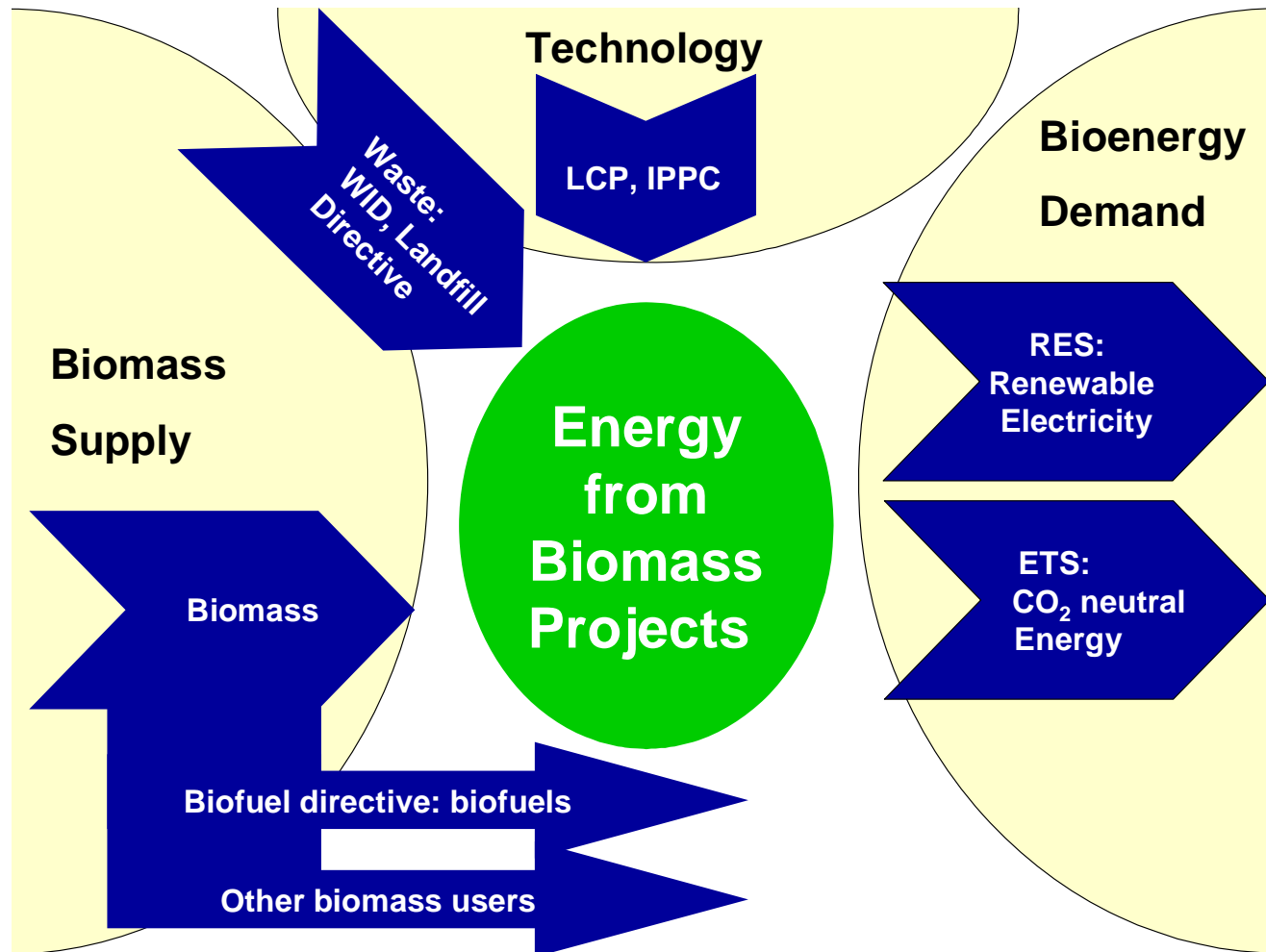
Biomass Action Plan

- Set of actions to accelerate biomass in all areas
 - Power, Fuels, Heating and Cooling
 - Legislation, directives
 - Standards
 - Utilization of structural funds
 - Common Agricultural Policy
 - R&D
 - Sustainability
 - Trade

European Directives with effect on Bioenergy

- Demand:
 - (2001/77/EC) Renewable Electricity
 - (2003/30/EC) Biofuels
 - (2003/87/EC) Emission Trading Scheme
- Biomass Supply
 - (1999/31/EC) Landfill Directive
 - (2000/76/EC) Waste Incineration
- Environmental conditions
 - (1996/61/EC) Integrated Pollution Prevention Control
 - (2001/80/EC) Large Combustion Plants

EU Directives influence Bioenergy Projects



Renewable Electricity Support schemes

- Three types:
 - Feed-in tariffs
 - Quota obligations
 - Other subsidies
- Blue: quota
- Yellow: feed-in or other subsidies



Source: ECN 2005

Feed-in tariffs

Big differences across Europe:

- Level
 - Low: 0.5 - 5 €ct/kWh FI, L
 - Middle: 5 – 8 €ct/kWh
 - High: 8 – 21.5 €ct/kWh D, NL, SL
- Support in segments (ranging from 1 category to over 24)
- Duration (7 – 20 years)

Example: Feed-in tariff structure

Germany (EEG) (€ct/kWh):

	≤ 150 kW	≤ 500 kW	≤ 5 MW	≤ 20 MW
Basic tariff	11,5	9,9	8,9	8,4
Exception: waste wood categories AIII and AIV	3,9	3,9	3,9	3,9
Bonus for self-regenerating raw materials	6	6	4	0
Exception: bonus for wood	6	6	2,5	0
Bonus for CHP	2	2	2	2
Bonus for innovative technologies and CHP	2	2	2	0
Maximum tariff	21,5	19,9	16,9	10,4

Netherlands, Feed in on top of Power sales: Subsidy for Renewable Electricity (MEP)

- 2000 – 2003: Green consumer support
- MEP Start at 1 July 2003
- 10 yr contract small scale
- 3 yr tariff set large scale
- Only support of additional cost
- Check on State Aid Support
- Budget: 2006: 370 MEuro increasing to 700 MEuro in 2010
- Closed for new applications on 18th August, because target of 9% in 2010 reached

	after €ct/kWh	Juli 2004	Jan 2005	Jul 2005	Jul 2006
Biomassa > 50MW (3yr) wood pellets		5.5	7.0	0 new	2.5 6.1
Mixed flows		2.9	2.9	3.6	3.6
Biomass <50 MW		8.2	9.7	9.7	9.7
Oils >10MW		8.2	9.7	6.0	6.0
Wind op land		6.4	7.8	7.8	7.8

Results of differences Germany -Netherlands

Category	Price difference (€ per tonne)
NL: Biomass categories that can be combusted more profitably in a Dutch installation:	
Waste wood (AIII, AIV / B, C)	16 – 87
Biodegradable fraction of municipal or similar waste	10
Ger: Biomass categories that can be incinerated more profitably in most German installations (small scale < 20 MWe):	
Waste wood (AI / A)	10 – 51
Oil cake	12 – 58
Straw	9 – 44
Cocoa shells	7– 32
Chicken manure	4– 22
Sludge	8 – 11

ETS: Emission Trading Scheme

- Price 20 Euro/ton CO₂
- =
- Support of 20 Euro/MWhe

- Opportunities for Co-firing
 - Finland
 - Germany

- New Member States?

Landfill Directive

- EU25: 113 Mton of combustible MSW still landfilled
- Netherlands:
 - 5 Mton is incinerated in 11 efficient plants with energy recovery and utilisation of rest material (iron/ashes)
 - Accepted by public, because of Low emissions
- Opportunity for Europe:
 - 113 Mton waste -> 95 TWhe, (3% of EU power)
 - CO₂ reduction
 - and CH₄ emission reduction from landfills

Recommendations

1. Avoid Policy Competition and realise level playing field by e.g.:
 - Quota in all EU Member states
 - Harmonisation of feed-in support
 - Harmonisation of categories possible
 - Take ETS in account by financial support
2. Utilise Waste for Energy, rather than landfilling
 - realise public acceptance
3. Realise Balanced use of Biomass
 - Avoid distortion in markets (food, products)
 - Simultaneous support for heat, fuels and power

Conclusion

Set of Directives available, with strong interaction

Need for Directive on Renewable Heating and Cooling

Agree on a set of sustainability criteria and approach to implement them

Implementation on Member State level should be done by taking situation in neighbouring countries into account

Thank you for your attention