The Swedish experience of biomass trade – trade patterns, incentives and policiy aspects

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STEM - Sweden

Incentives

- Raw material costs
- Production costs
- Tax breaks fuel use
- Costs for alternative “use”
- Energy systems structure
- Currency

Policy level two

Creating competition

Drive market development

Extending the the resource base

Hamper domestic biomass sector

Ministry Industry vs Ministry Environment no big clashes on principles

Future issues

- Perverse incentives vs systems optimization
- Import vs export
- Technological driver vs barrier
- Environmental aspects
- What kind of biomass, pellets, waste etc.

Biofuel import

- 1992 0,5 - 1 TWh
- 1995 3 - 4 TWh
- 1997 5 – 9 TWh
- 2001 5,5 – 8 TWh (new study)

Policy aspects

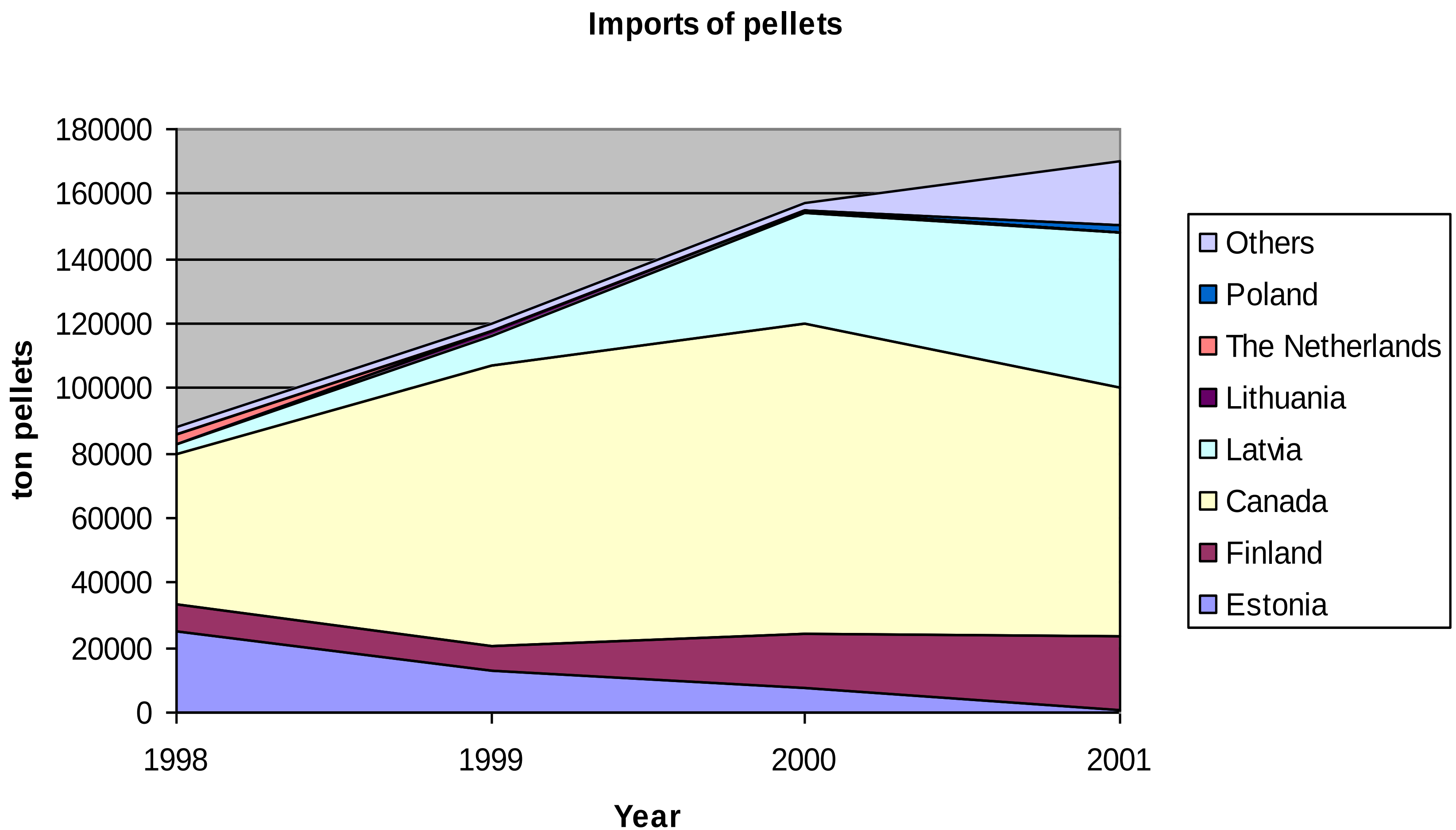
Market is a Market

Swedish biofuel import

	Energy content TWh	Country
Wood fuels		
4. Pellets, briquettes	1	Canada, Latvia, Finland, Estonia
Wood chips, chunks of wood	2-4	Latvia, Estonia, Lithuania
Recycled wood and demolition wood	1-1.5	Germany, The Netherlands
Total import of wood fuels	*4-6.5*	
Other biofuels		
5. Tall oil	1.5	USA, Finland, UK, Norway
Total biofuel import in DH/CHP	**5.5-8**	

Total use of biofuels in DH/CHP: 25.6 TWh
(15 TWh district heating and 1.6 TWh electricity)

Wood fuels account for 16 TWh



Imports of pellets
180000
160000
140000
120000
100000
80000
60000
40000
20000
0
ton pellets
1998
1999
2000
2001
Year
Others
Poland
The Netherlands
Lithuania
Latvia
Canada
Finland
Estonia

Swedish export of pellets