THE EU ETS IN THE FINNISH CONTEXT
Does the ETS support local bioenergy implementation?

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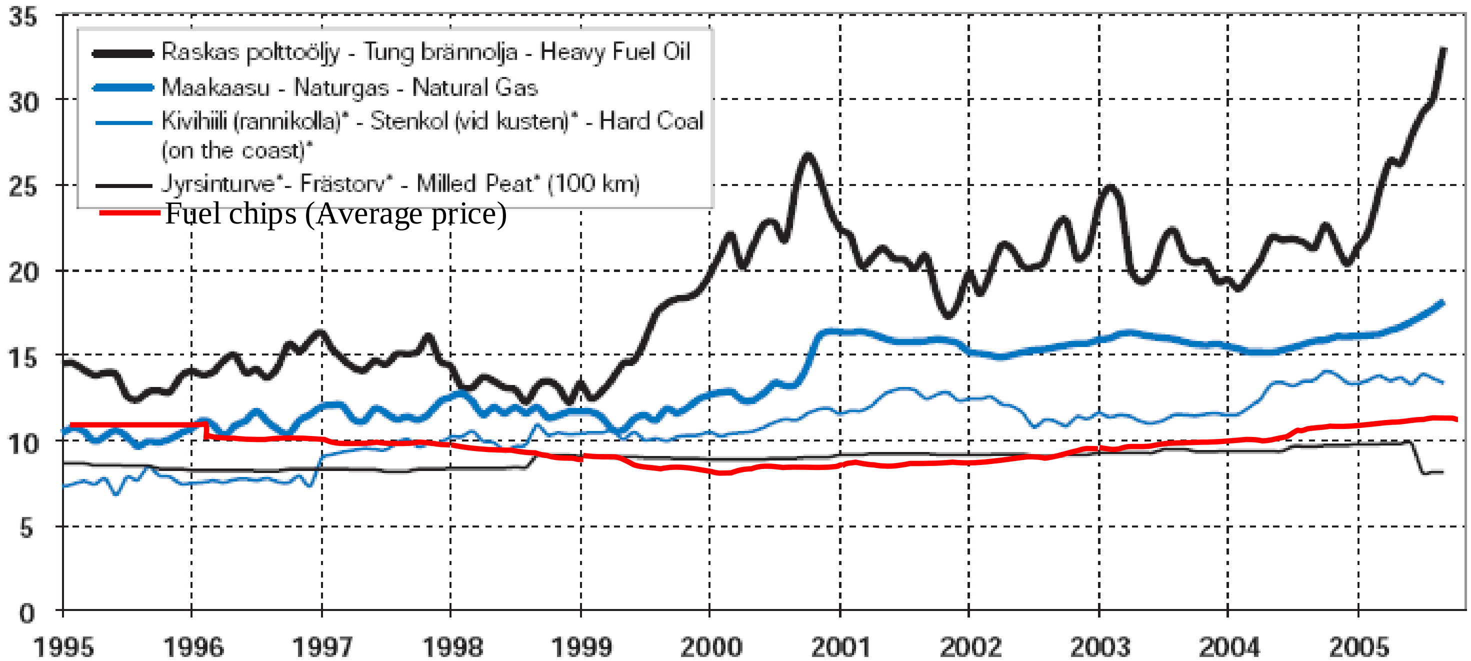
FUEL PRICES IN HEAT PRODUCTION

Kuvio 9. Voimalaitospolttoaineiden hinnat lämmöntuotannossa 1995–, €/MWh
Figur 9. Bränslepriser vid värmekraftverk 1995–, €/MWh
Figure 9. Fuel Prices in Heat Production 1995–, €/MWh

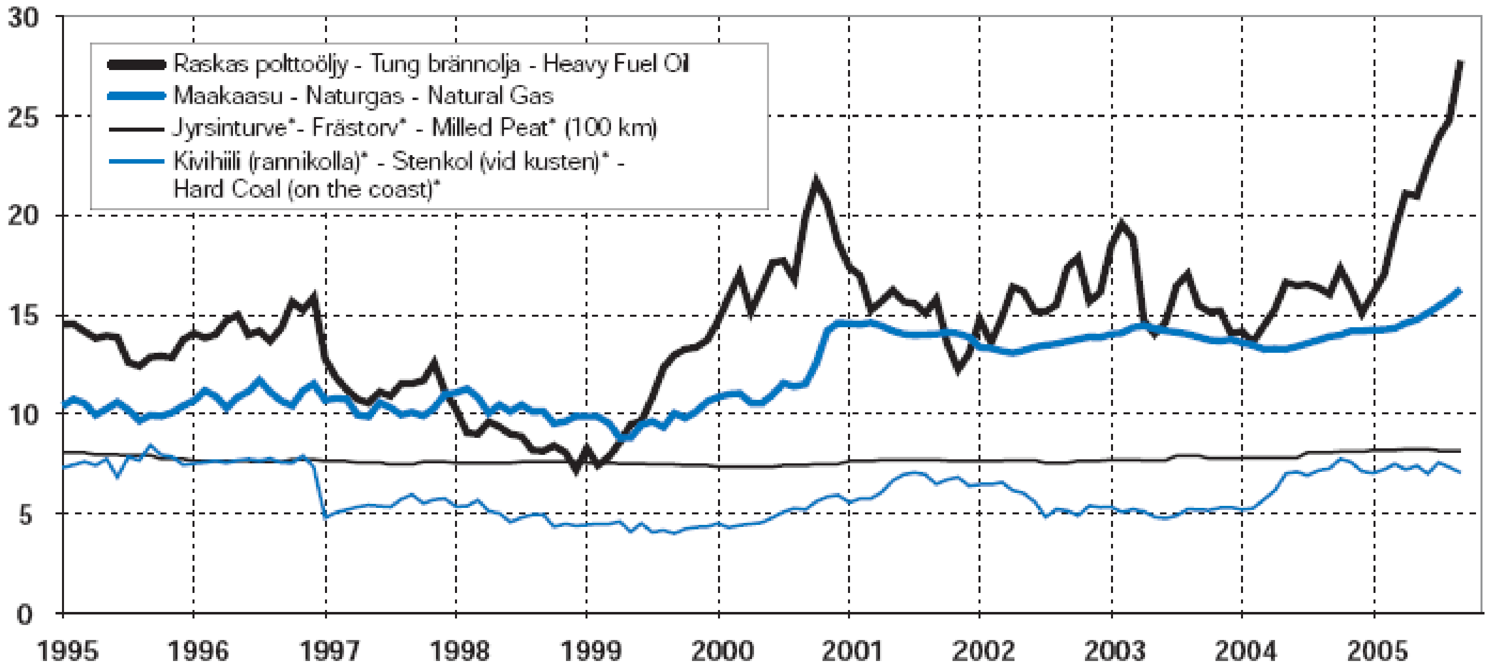


* Kivihiilen ja turpeen hinnat eivät ole keskenään vertailukelpoisia.
* Priserna på stenkol och frästorv är inte jämförbara sinsemellan.
* Prices of hard coal and milled peat are not mutually comparable.

Sources: Energy review 4/2005 & BioEnergia 1/2006

FUEL PRICES IN ELECTRICITY PRODUCTION

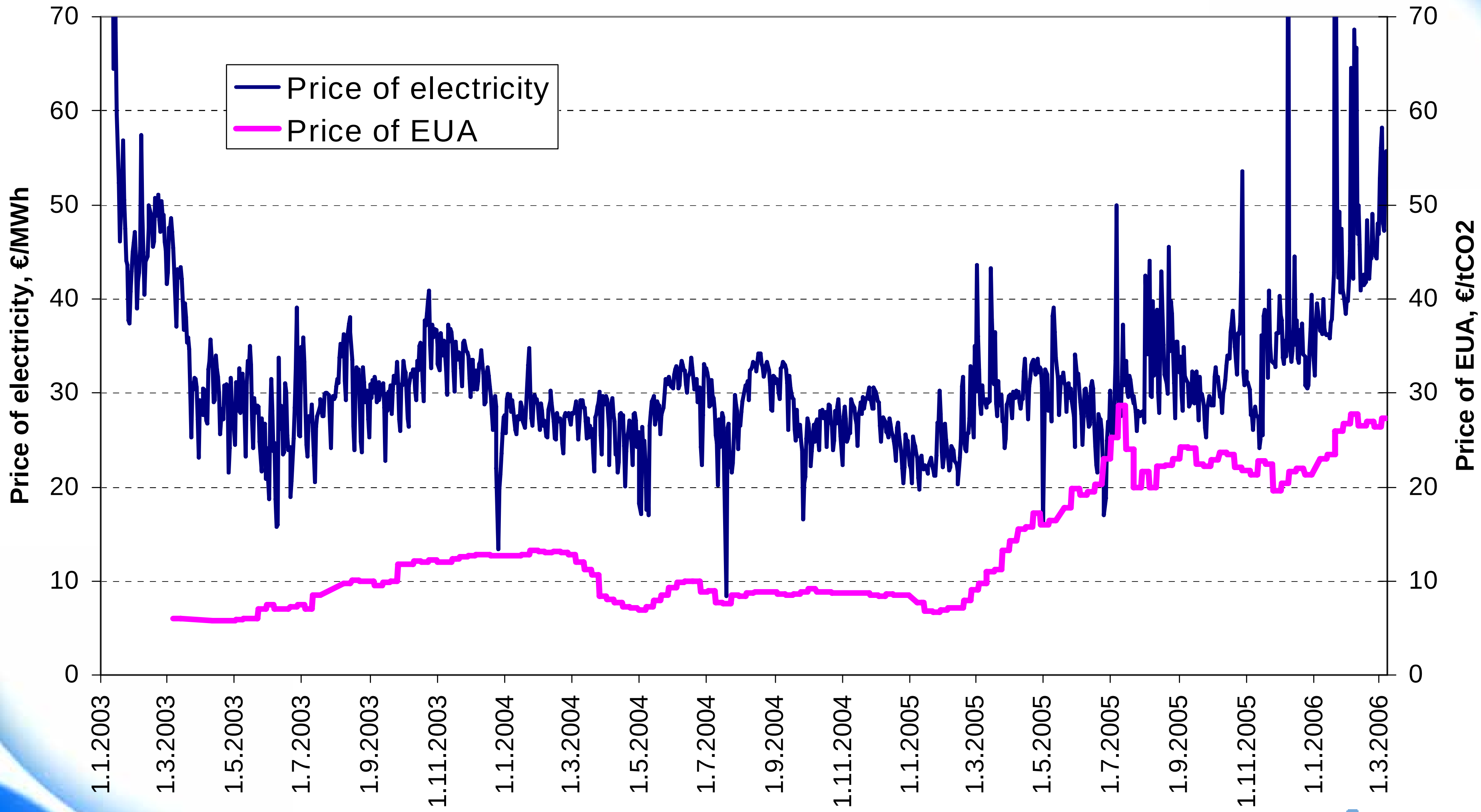
Kuvio 10. Voimalaitospolttoaineiden hinnat sähköntuotannossa 1995–, €/MWh
Figur 10. Bränslepriser vid elkraftverk 1995–, €/MWh
Figure 10. Fuel Prices in Electricity Production 1995–, €/MWh



* Kivihiilen ja turpeen hinnat eivät ole keskenään vertailukelpoisia.
* Priserna på stenkol och frästorv är inte jämförbara sinsemellan.
* Prices of hard coal and milled peat are not mutually comparable.

Source: Energy review 4/2005,
Ministry of Trade and Industry of Finland

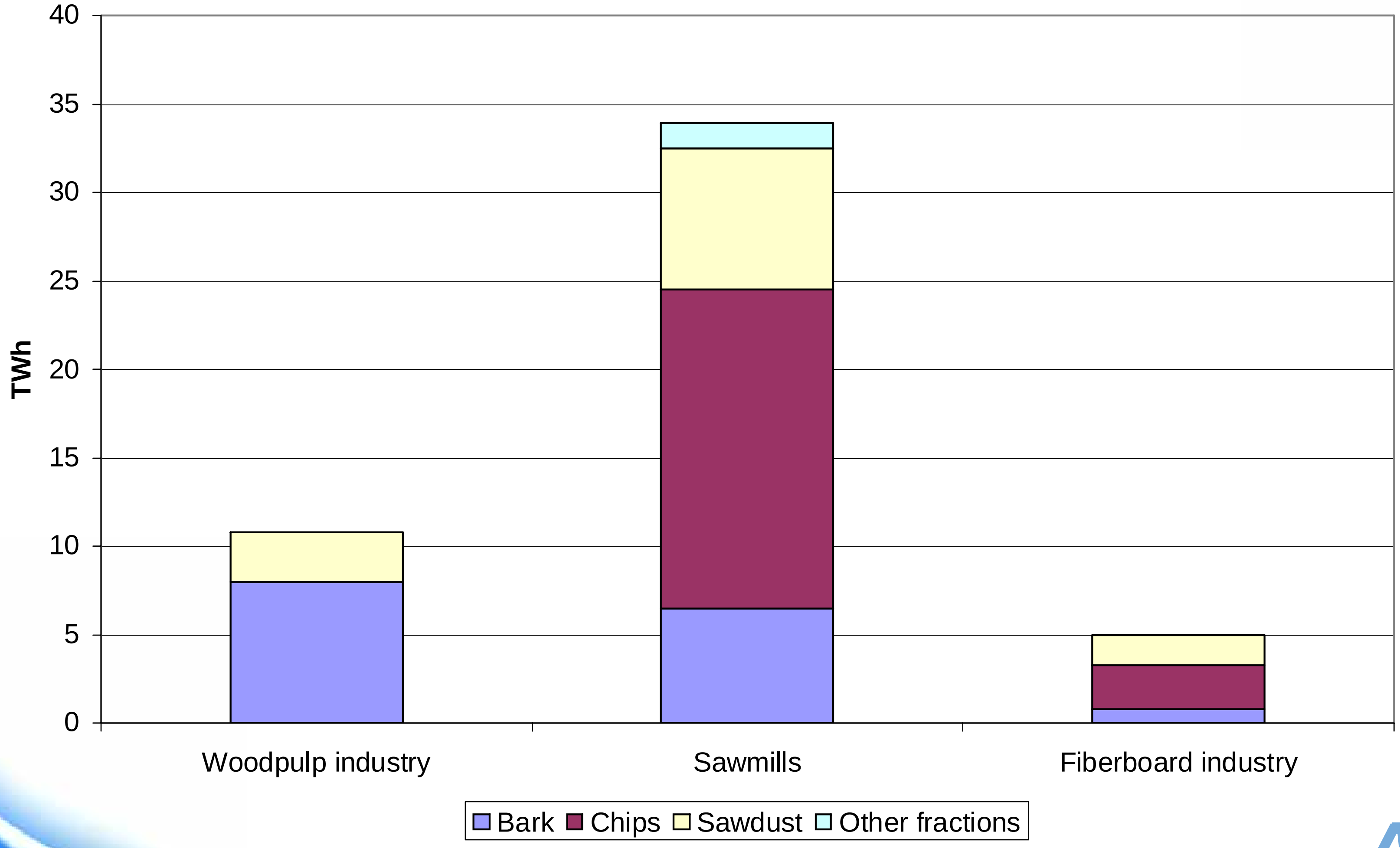
The Price of Emission Unit Allowances has increased since the start of 2005



Price of electricity in the Nordic electricity market

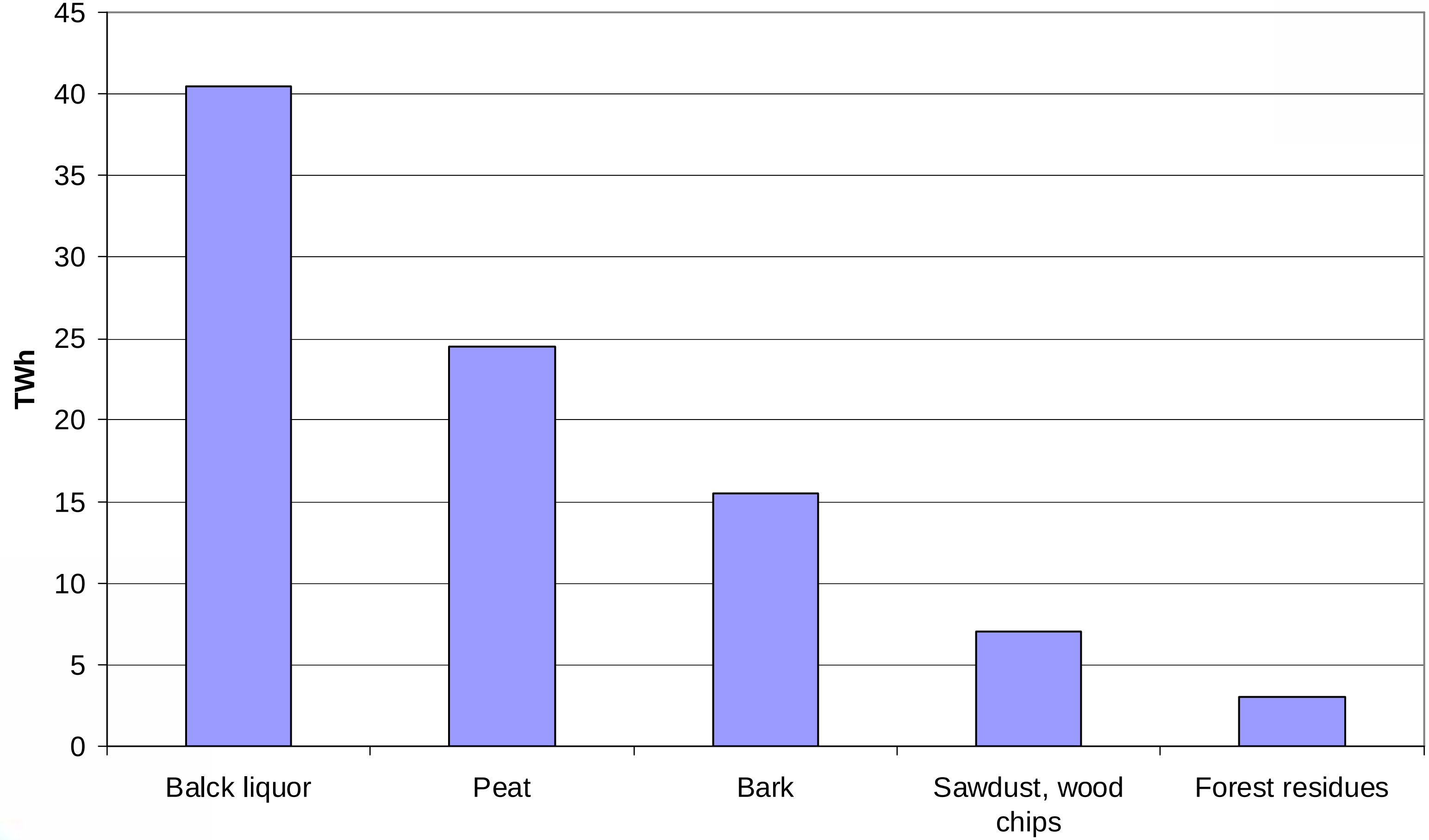
SOLID BIOMASS FROM FOREST INDUSTRY IN 2002

- Sawmills constitute the greatest biomass producer sector -



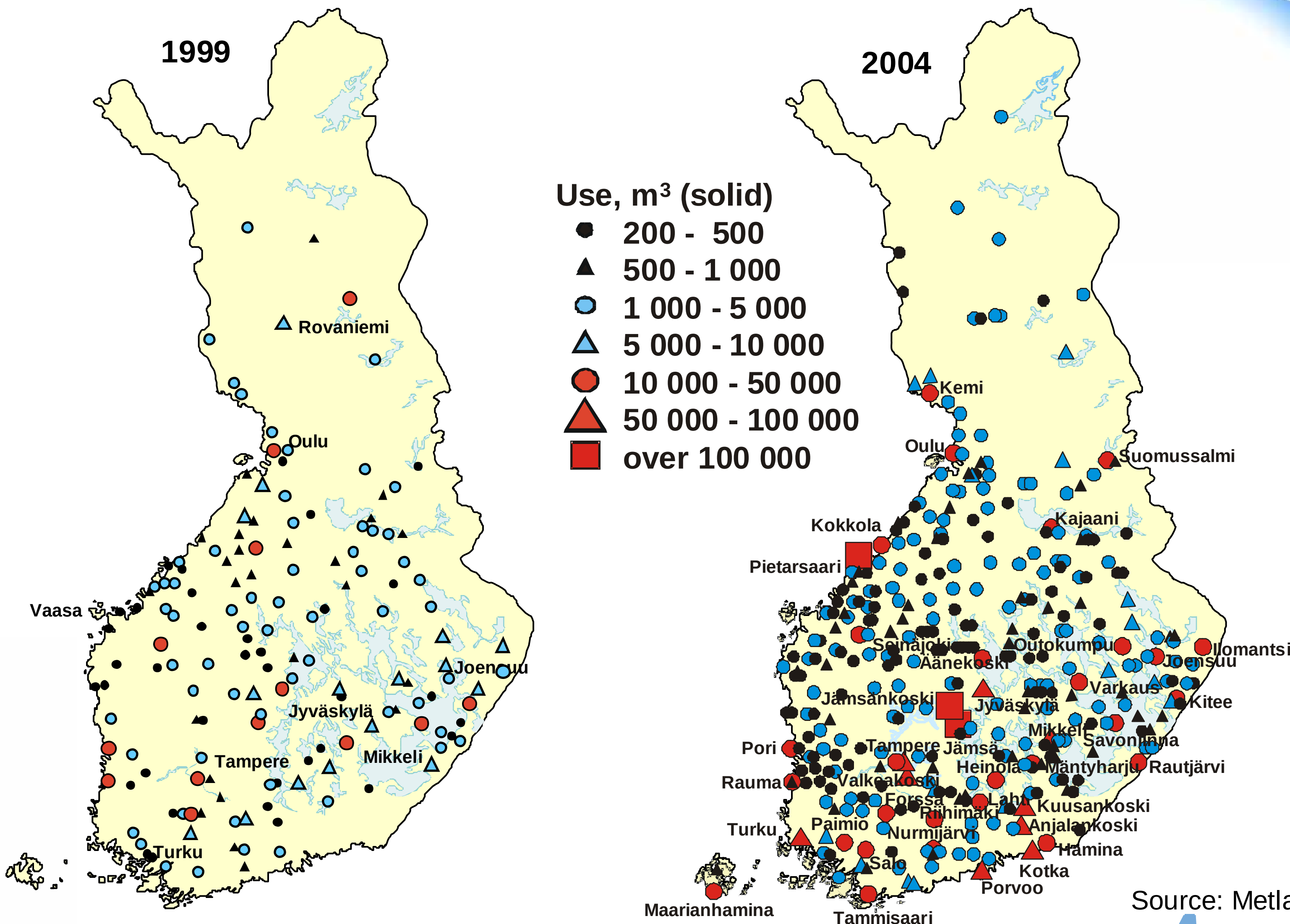
UTILIZATION OF INDIGENOUS FUELS IN 2002

- Depends on the production amounts of forest industry -



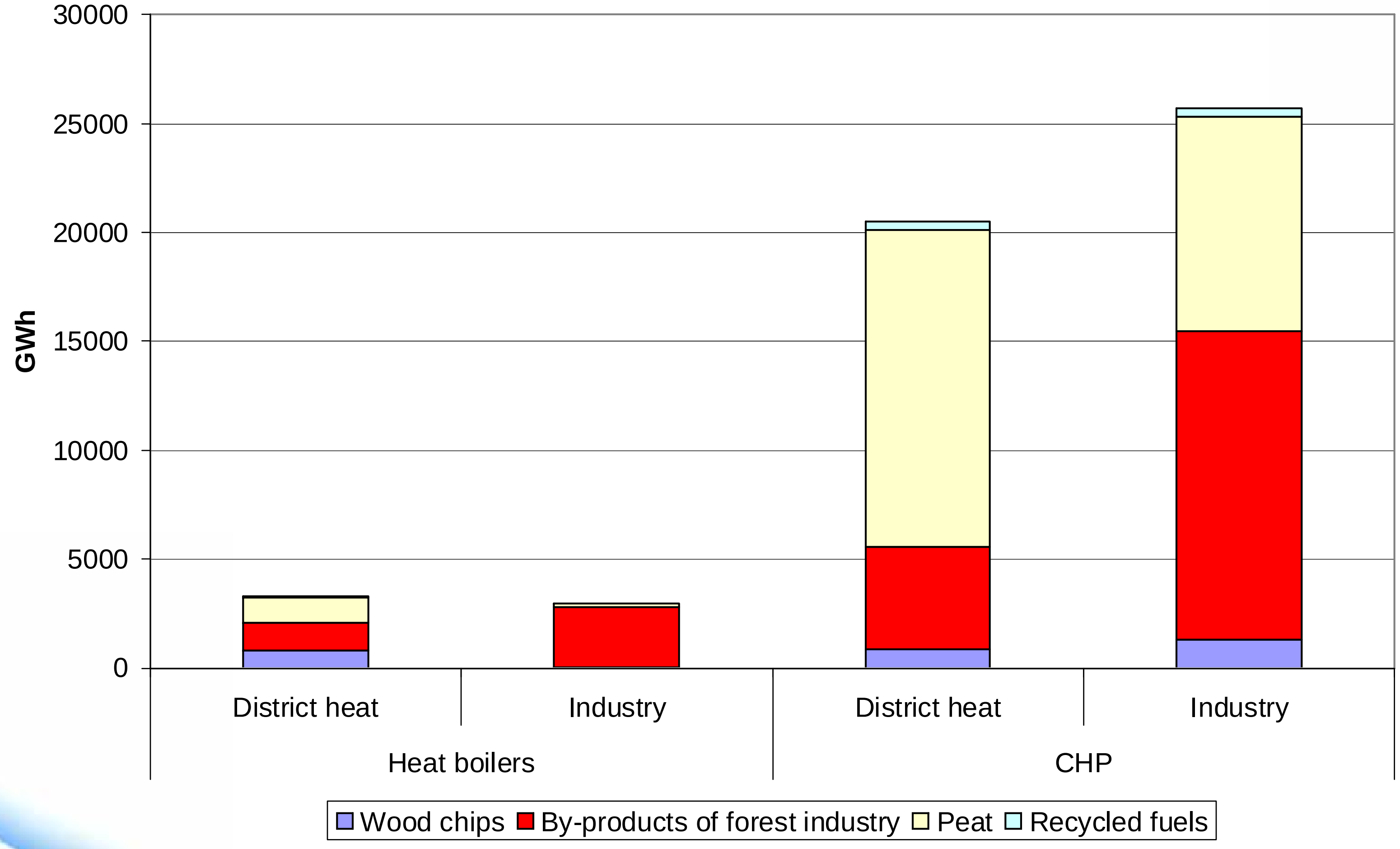
Source: Ministry of Trade of Industry of Finland

Use of forest chips in heat and power plants



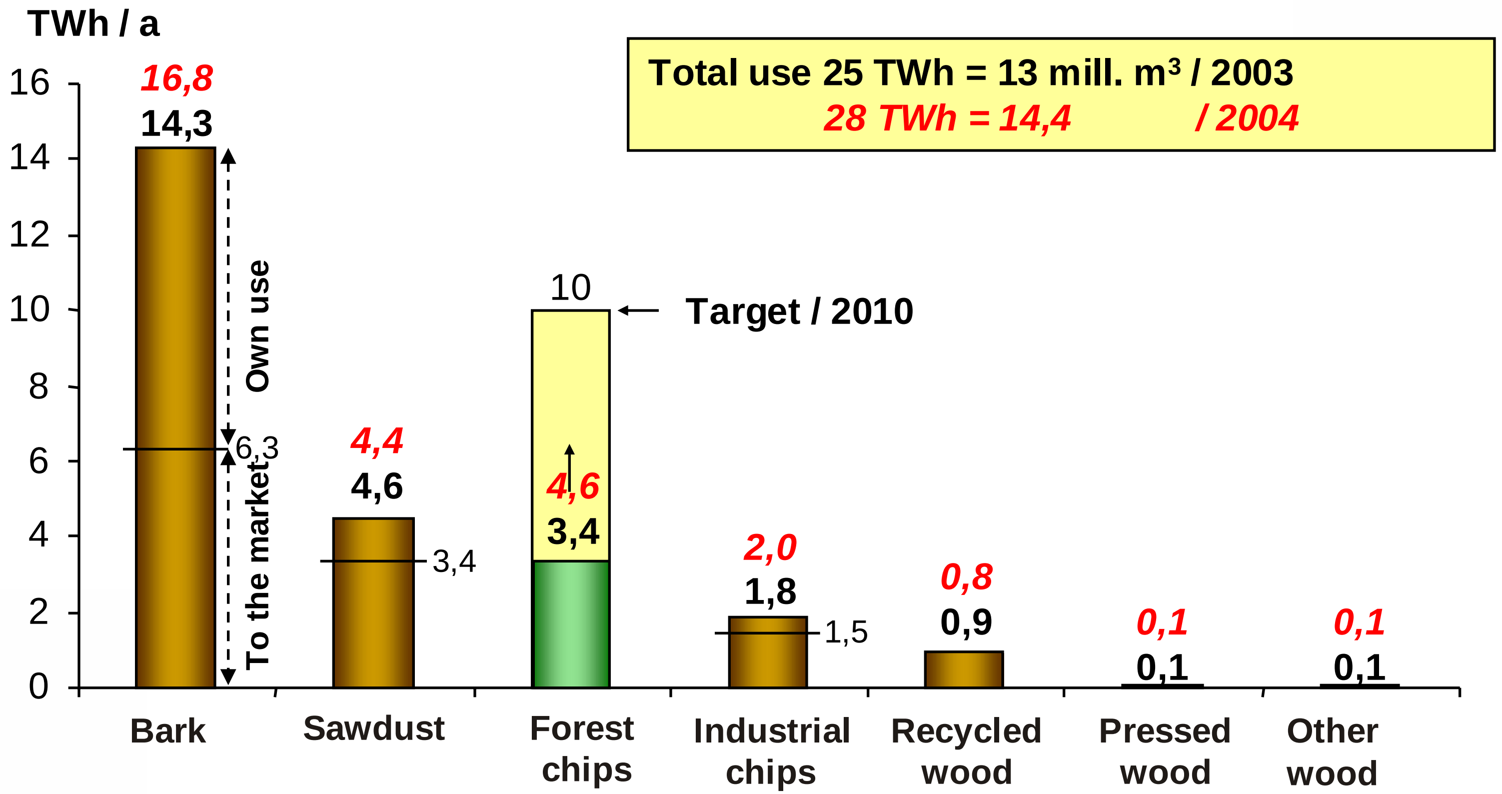
Source: Metla and

SOLID BIOFUELS AND PEAT UTILIZATION IN ENERGY PRODUCTION IN 2003



Use of solid wood fuels in 2003 and *2004*, own use separated from sales to the market

Small-scale use of households excluded, 12 TWh/a

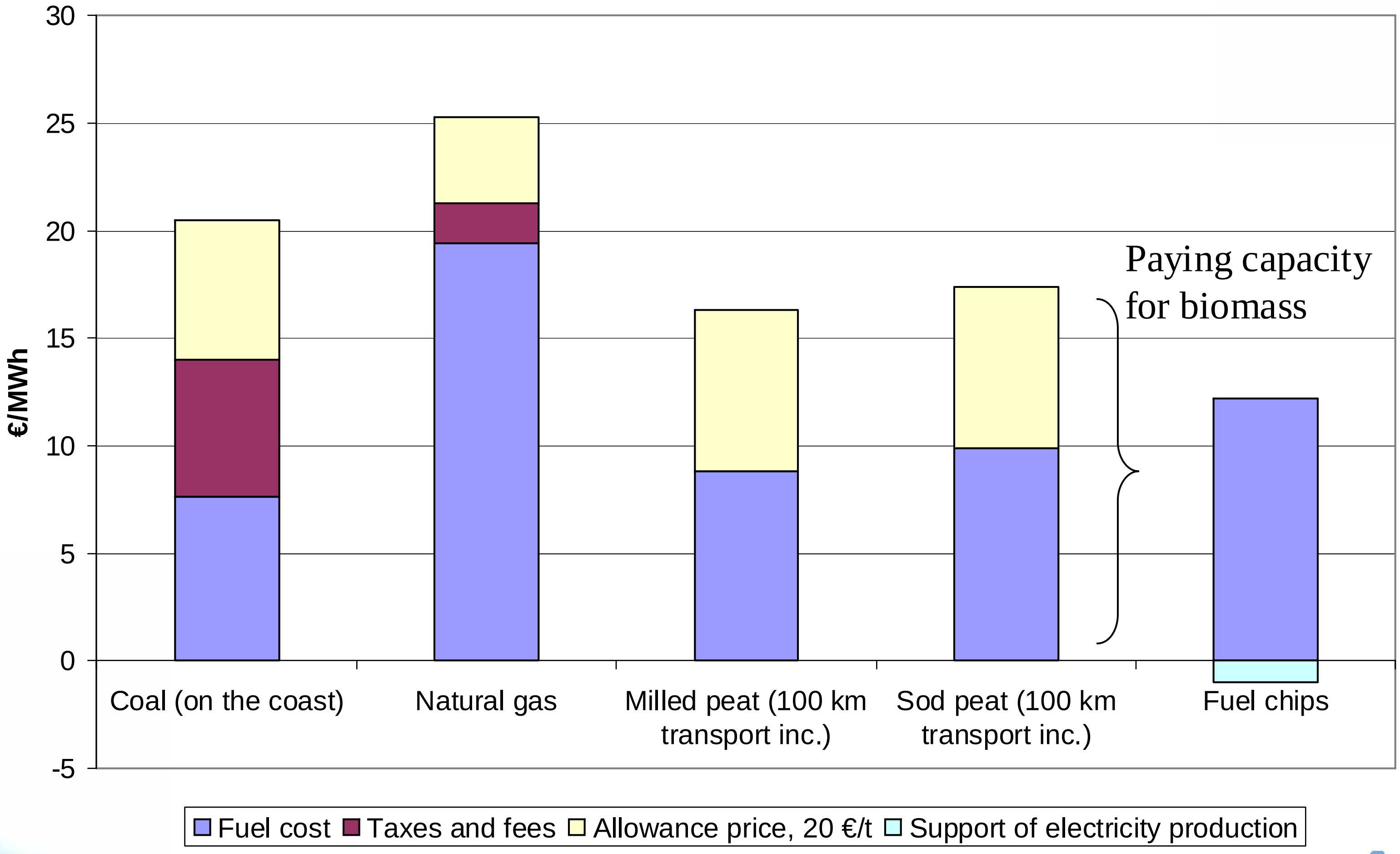


Sawdust for pulp production 3TWh and for board industry 1,5 TWh and cutter chips for pellets over 1TWh.

Source: Metla

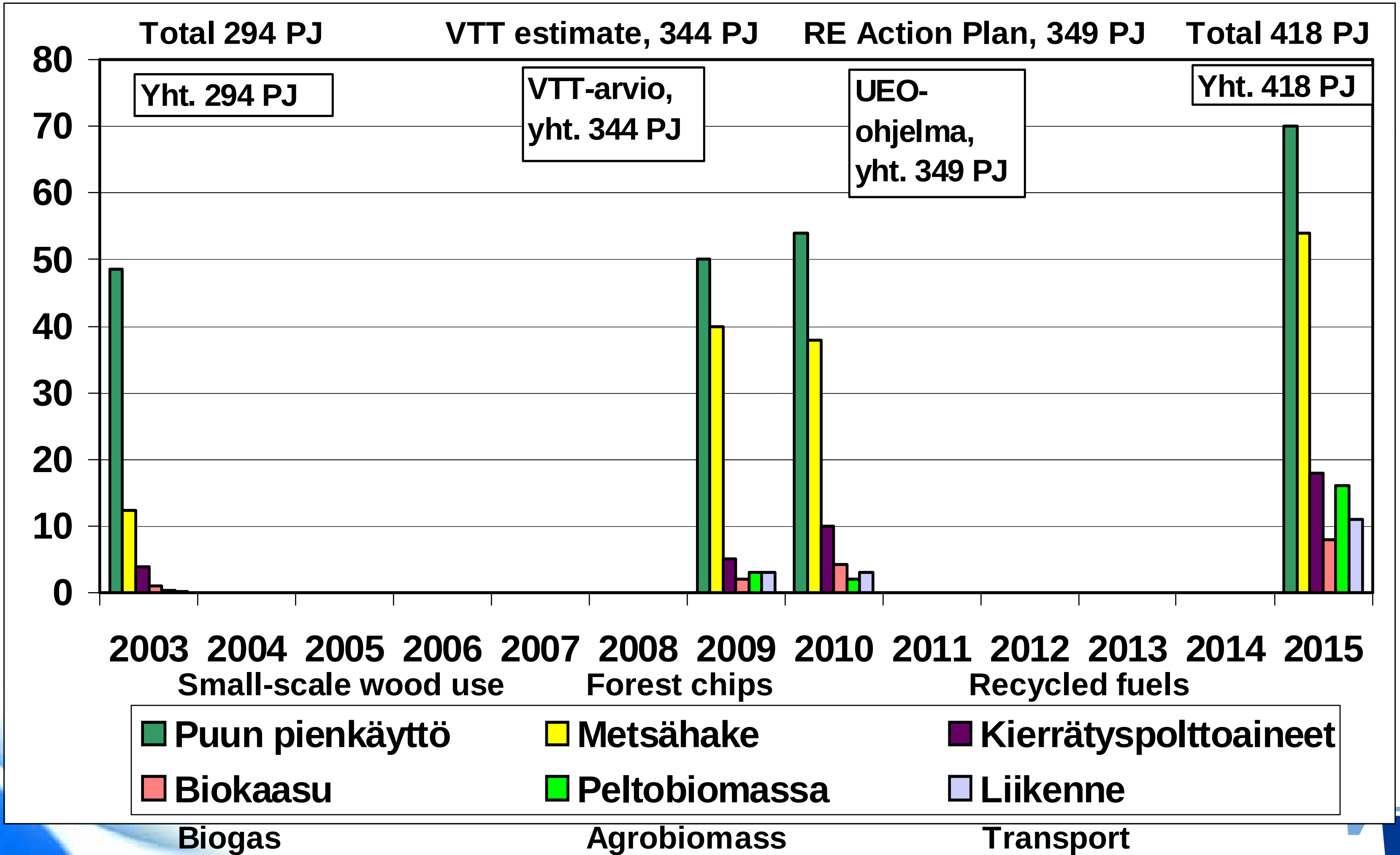
THE IMPACTS OF EMISSIONS TRADING AND TAXATION ON THE FUEL COSTS

- Example: Industrial CHP, fuel prices in December 2005 -



Data source: BioEnergia, Number 3, 2006

Bioenergy use by fuel (excl. forest industry by-products) in 2003, VTT estimate, target of the RE Action Plan for 2010 and estimated maximum realistic use in 2015



Source: Report for the MTI, May 2005, by JSP, JyU, VTT

CONCLUSIONS

- The demand of biomass fuels could increase more rapidly than the supply
  - It is not likely that the supply of by-products from forest industry would increase
  - The increased demand should be covered by the increased production of forest chips, agrobiomass and biogenic wastes
  - Paying ability of energy producers will increase
  - Pellet production increases, oil is replaced with pellets
- Other sectors, like transport and forest industry, would compete with the energy sector from the biomass raw material
- Due to the higher bioenergy supports in other European countries, part of Finnish biomass could be exported
- Peat would be needed in the future also to ensure the fuel supply and to lower the price risk

THANK YOU FOR YOUR ATTENTION!

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