

# BIOENERGY AND PEOPLE - WHY IS THIS SO IMPORTANT?

12 YEARS OF TASK 29 PROJECT

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ENERGETSKA AGENCIJA  
NORTH-WEST CROATIA  
SJEVEROZAPADNE HRVATSKE  
ENERGY AGENCY

**TV Energy**

# What is this all about?

<b>Social</b>	Increased Standard of Living (Environment, Health, Education) Social Cohesion and Stability (Migration, Development, Diversification)
<b>Economic Macro level</b>	Security of Supply, Regional Growth, Reduced Regional Trade Balance, Export Potential
<b>Economic Supply Side</b>	Increased productivity, Enhanced Competitiveness, Labour and Population Mobility, Improved Infrastructure
<b>Economic Demand Side</b>	Employment, Income and Wealth Creation, Induced Investment, Support of Related Industries

# Energy, bioenergy and people

- Economic growth needs energy
- Why not Bioenergy? Too expensive to buy at 5 sell at 120, too cheap to play at markets
- Price of useful energy? True price or true value? Are all the externalities internalised?
- Sustainable subsidies? Short-term problems vs. Long-term priorities?



# UK: Case Study - Wales

- Farmer co-operative with @100 members
- Current usage 1,079,802 litres of fuel oil per annum.

- Further 3,700 MWh of electricity per annum
- This releases 4,922 tonnes CO<sub>2</sub>
- 3MW system (simple combustion) to replace 3 oil boilers and 80% of current oil usage.
- Complex load profile



# UK: Results

Net Additional Labour Income (direct and indirect) after Deductions	£ 128,220
Net Additional Profit (direct and indirect) after Tax	£ 50,990
Share of Net Additional Incomes/Profit Spent in the Region	53%
Direct Jobs Generated	3,5
Indirect Jobs Generated	7,4
Induced Jobs Generated	4,9
Total Jobs Generated	15,7

# Biomass and bioenergy!

- Are the advantages really so obvious?
  - How many new jobs?
  - Security of energy supply?
  - Less pollution?
  - Global issues (climate, political,...)
- Why is the public perception of biomass sometimes so wrong?





Guys, that's what you get gas from, not electricity!

Felix



# Perception vs. Knowledge

- Dramatical difference in public perception
- Different levels in public support
- Confusing signals and incorrect messages
- Space for manipulations
- Wrong decisions with short-term and long-term effects
- Education as a unique answer





→ Task 29: IEA Bioenergy Network on Socio-economics

definition | technologies | sustainability | **environment** | economy | benefits | implementation

▶ expert login

tools

Here you can select and use various interactive tools.

how to learn more

Interested in learning more? We have a selection of scientific papers, reports and brochures, as well as a variety of useful links.

ask the experts

Have a question? You can ask the world leading experts in the field of biomass and bioenergy!

test

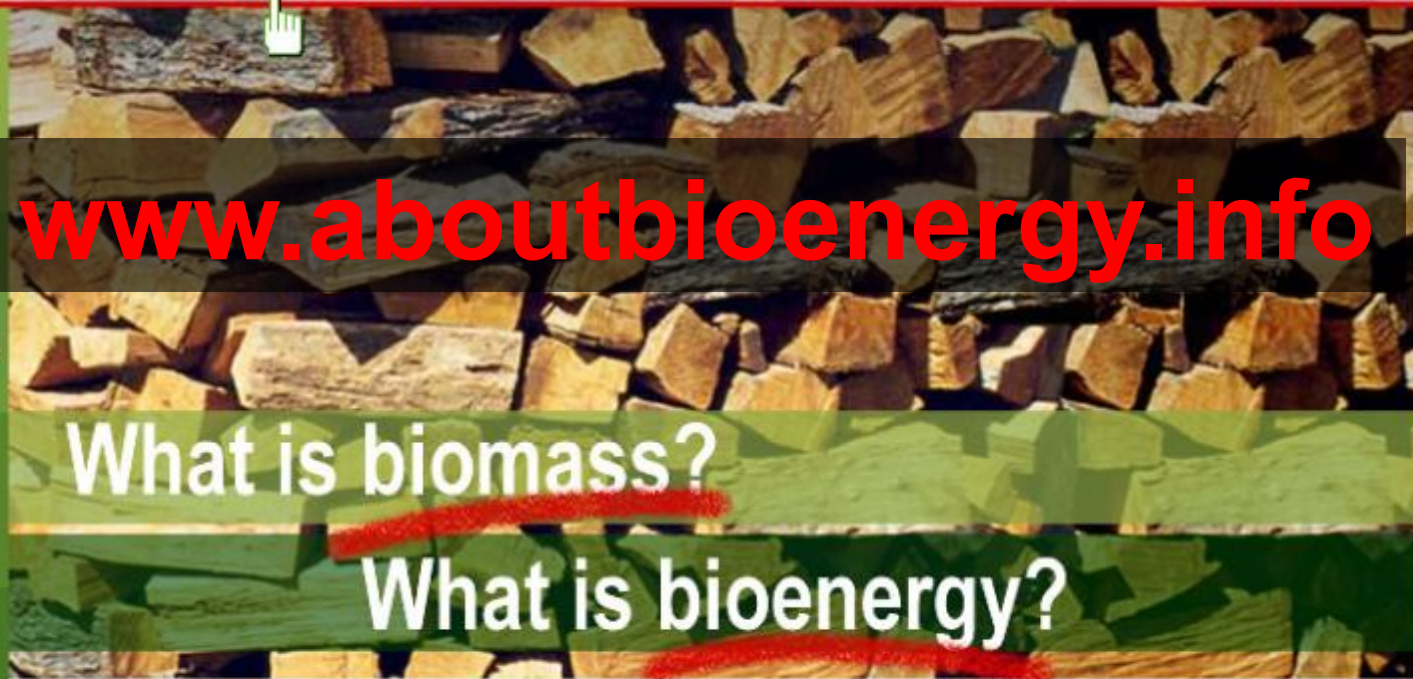
After reading the material, you can test your understanding and knowledge about biomass and bioenergy.

did you know...

< >

quick search

Can't find your answer and time is running late? You can always perform a quick search through our site!



This educational web site created by IEA Bioenergy Task 29 has the aim to inform you about the oldest source of energy used by men.

Inside you will learn about modern use of biomass in a wise, clean and sustainable manner.

Please select where you want to go from the menu above!

LET ME BE YOUR GUIDE THROUGH THE EXCITING WORLD OF BIOMASS AND BIOENERGY! CLICK ON ME FOR A GUIDED TOUR OR CHOOSE DIRECTLY FROM THE MENU ABOVE!





## Biomass Program

[About the Program](#) [Program Areas](#) [Information Resources](#) [Financial Opportunities](#) [Technologies](#) [Deployment](#) [Home](#)

### Information Resources

**For Industry**

**For Researchers**

**For Policymakers**

**For Consumers**

**For Students**

- ABC's of Biofuels
- ABC's of Biopower
- ABC's of Bioproducts
- Student Glossary

**State & Regional Resources**

**Publications**

**Photographs**

**Related Links**

### Resources for Students

Hey Students! We designed these pages specially to make it easier for you to learn about biomass. Whether you need to write a research paper or are just curious, this information may help you get started - it covers the basics, but also connects you to more advanced information.

- [ABC's of Biofuels](#)
- [ABC's of Biopower](#)
- [ABC's of Bioproducts](#)
- [Student Glossary](#): Biomass technology has its own vocabulary, so this glossary may help you better understand the information. The glossary for researchers is also available if you need more technical definitions.
- [Bioenergy Conversion Factors](#): A handy set of energy unit conversions and energy content values for biomass.

If you are in elementary or middle school, the following links may be helpful:

- [International Energy Agency Educational Web Site on Biomass and Bioenergy](#)
- [The Energy Information Administration's Kid's Page](#)
- [CANMET Energy Technology Center's Kid's Fun](#)
- [Energy Quest website by the California Energy Commission](#)

Information about biomass and bioenergy for the general public.

### Organisations

Complete the [Questionnaire](#) to add your organisation to this website

FRANCE



# Biomass in action!

## Williams Lake, Canada

The largest biomass fuelled power plant in North America is located in Williams Lake, British Columbia, Canada. The 65MW plant uses 600,000 tons of wood waste from nearby sawmills and sells electricity on to BC Hydro's grid. The plant opened in April 1993 and has significantly reduced particulate emissions in the area. The plant is owned by TransCanada Power and operated by TransCanada Energy Ltd.



# Biomass in action!



## Oslo Airport, Norway

The heating system for Oslo's new international airport at Gardermoen is based on a district heating network relying on heat produced from bioenergy. The initial planning of energy systems for Oslo's new international airport began in the early 1990's. A parliamentary resolution stated that the airport buildings should be as environmental friendly as possible. The biofuel plant (total output of 6 MW at 50 % fuel moisture) was the first large-scale plant to be used for only district heating in Norway.



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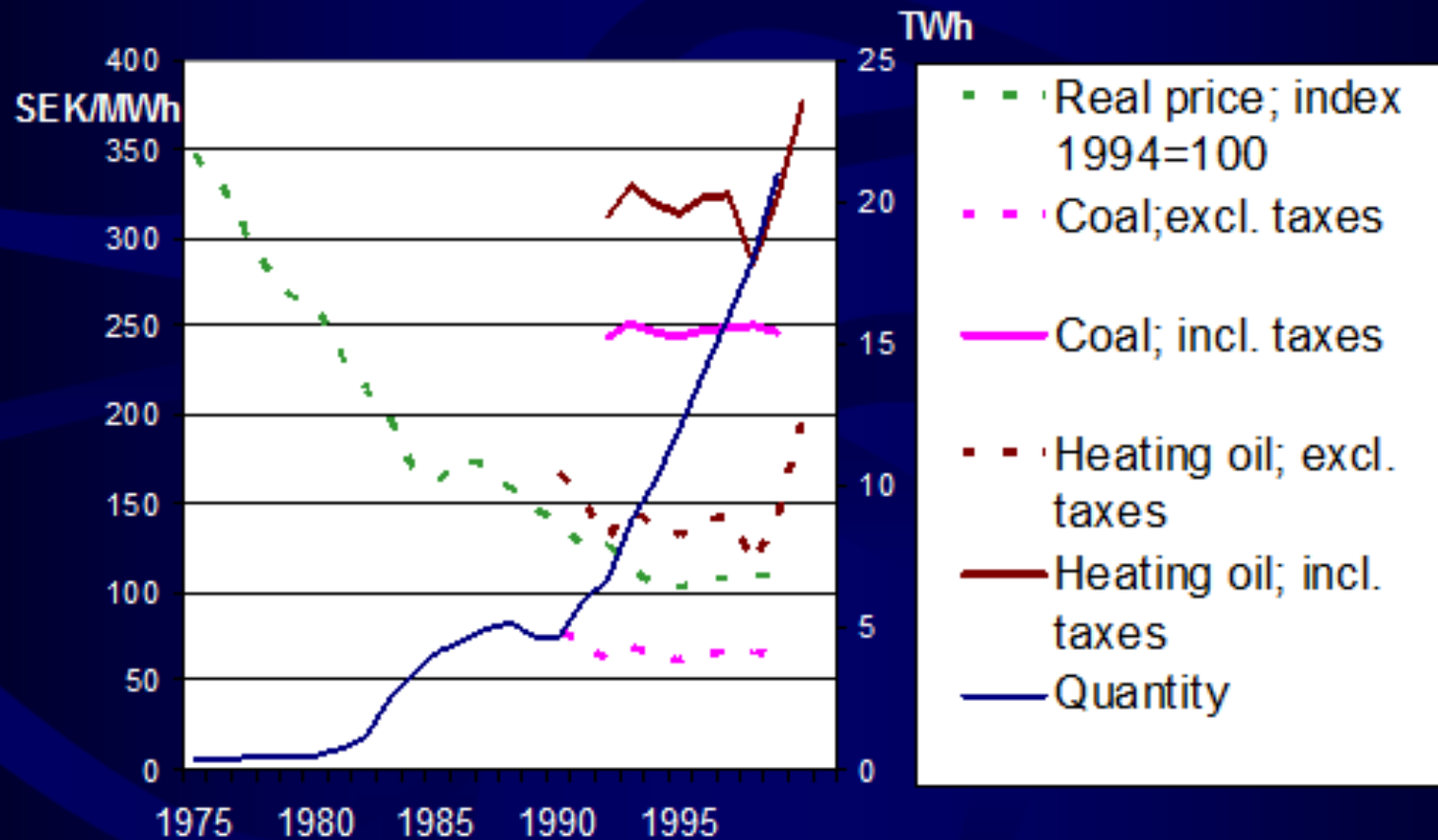
## City of Vienna, Austria

The municipal energy utility of Austria's capital city of Vienna and the Austrian Federal Forest company have recently signed a contract to jointly develop and operate one of the world's so far largest biomass cogeneration plants exclusively fired with forest residues. The installed total capacity of the plant will be 12 MWeI and 39 MWth, resulting in an investment volume of some EUR 52 million.

The plant will use about 600'000 m<sup>3</sup> of (loose) forestry residues, and generate electricity sufficient to meet the needs of some 45'000 and heat for some 12'000 urban households.

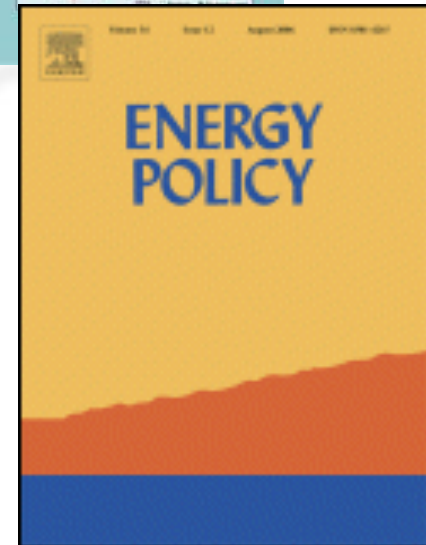
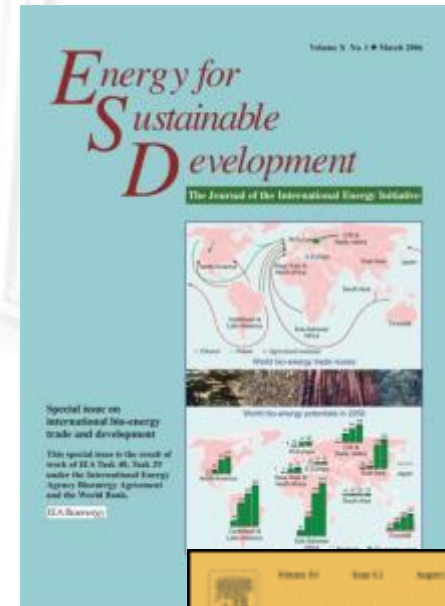


# Wood Fuel Price and Quantity - the Swedish District Heating System



# Our little piece...

- Energy for Sustainable Development Journal: ***International biomass trade*** (jointly with Task 40, March 2006)
- Energy Policy: ***Modelling Socio-Economic Aspects of Bioenergy Use*** (December 2007)







# Conclusions

- Task 29 - recognised 'horizontal' Task
- Complex and 'difficult-to handle' subject
- People and technology
- Socio-economics as a global trend, in line with many different projects and programmes
- New era already started: global biomass trade, green certificates, CDM,...
- Bioenergy - 'new energy' of 'poor man's fuel'



