Biomass for heat or electricity?
Results of 4Biomass project

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48 months - Dec 2008 until Nov 2012

Fostering the Sustainable Usage of Renewable Energy Sources in Central Europe – Putting Biomass into Action!
Background

• Project 4Biomass was designed to assist the Central European Member States in the implementation of plans Renewable Energy Action Plans (nREAPs)

• In more than 3 years of project work, studies on potential and application of biomass, on political frameworks and trade have been completed
Findings

• Legal measures for promotion of RES implemented in all Central European countries

• Feed-in tariffs for electricity fed into the grid are legally established in AT, CZ, GE, HU, IT, SK and SL.

• Quota obligations for electricity are used only in PL, together with Green Certificates

• More legal acts support the use of biomass also for new or refurbished heating/cooling systems in public and residential buildings, for combined heat and power (CHP) plants and for refurbishment of district heating systems based on RES and co-generation

• The support of the heating/cooling e.g. CZ, GE, HU, PL from renewables is currently under revision
Current support schemes overview (an important example)

• In several countries (particularly in Poland), biomass is mainly used for electricity generation in co-firing with coal, which is heavily supported by public money.
• This is criticised by experts and environmentalists, because:
  ➢ *per saldo* it is very expensive and not optimal for reduction of CO₂ emissions
  ➢ causes severe transportation, technological and operational problems (eg. two big fire cases recently in Poland)
Criticism by experts and politicians

Eg: Dariusz Szwed (National Board of Polish Greens)  
February 29, 2012 at the Polish Parliament hearing:

„Energy companies received 1,7 bln PLN of subsidies for co-firing. We hope that this should be subject of investigation of special parliamentary commission.”

Currently the Polish government considers phasing out this support, which caused huge outcry of cofiring industry and their supporting lobbies
Present status

• In the draft law on RES more support will be given to small scale installations and support for large scale co-firing of biomass with coal will be gradually reduced.

• A conflict of interest between Ministry of Economy and the Ministry of the Treasury, which does not agree with new provisions.
4Biomass: Recommendations towards a sustainable bioenergy development

The Transnational Action Plan (TAP):

• is based on project results
• Gives suggestions to address the most important and urgent activities towards an independent, reliable, socially and environmentally responsible energy supply
• Addresses policy makers who develop programmes and strategies for sustainable and efficient biomass/bioenergy politics in Central Europe
Recommendations for biomass for heating and cooling

• Biomass is a limited resource that should be used as efficiently and economically as possible.

• National, regional and local governments should
  – Stimulate the heat and cold production from locally available biomass, if possible in cogeneration with electricity from biomass sourced within a radius not exceeding a stipulated number of kilometres.
  – Give heat production the same support as electricity generation.
  – Introduce feed-in tariffs or green certificates for heat
  – Continuously promote energy efficient bioenergy technologies and require fast socially acceptable and economically viable deployment
  – Withdraw support for co-firing biomass with fossil fuels
CASE OF POLAND:

Flat country - small hydro potential
Not much wind either

biomass (straw) is relatively abundant
Examples of local biomass heating:

**Trzcinanne**

- 20 kW for straw or waste wood
- House 100m²
- 4 years payback time

**Wichów**

- Instead of buying coal using own biomass
- 40 kW for 3 cubical straw bails 80x40x40 cm
- House 200m²
- 5-6 years payback time
Chrzelice 100 kW

- 6 cubical straw bails
- 80x40x40 cm
- 4 years payback time
- Water tank 6 m³ accumulating heat
- Total cost 7000 Euro
• Left: 400 kW,
• two cubical bails 1,7x1,7x1,2 m
• Right: 300 kW,
• one round straw bail 180cm diameter

• Heating of the school located in a palace and several public buildings in commune of Trzebiechow
• savings several thousand Euro per year depending of the winter
8MW thermal ONLY - DH station
Luban (south west Poland)

- Radius of delivery ≤30 km
Those examples show that biomass:

- Can be used in a sustainable way,
- Create local jobs (esp. in rural areas),
- Stimulate local (and national) economy,
- Decrease costs of heating,
- Prevent „thermal poverty„ (health impact).
4Biomass Stakeholders opinion survey

on a sample of 1221 biomass experts from:

Austria,
Czech Republic
Germany
Hungary
Italy
Poland
Slovakia
Slovenia
Conclusions:

Biomass should be used:

• Locally
• In small to medium units
• Preferably for local heat/cold
• First satisfy own local needs,
  export only surplus
More information available online

• Project studies and results are available for download
  • www.4biomass.eu
Thank you for your attention