Woodpellets – international market development and trade

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Worldwide pellet production (Mio.t)

Source: EPC survey, 2017; IEA Bioenergy Task 40; FAO; CREIA

All graphics in this presentation are from the AEBIOM statistical report 2017
Why are pellets so successful?

- Pelletizing is the cheapest and most energy efficient way of converting biomass into a standardized high quality renewable fuel.
- Very flexible use for every scale of application.
- Clean combustion.
- Competitive fuel.
Distribution of production

- China: 20%
- EU28: 39%
- North America: 27%
- Russia & CIS: 5%
- Other Europe: 2%
- Rest of Asia: 6%
- Rest of world: 1%

Source: EPC survey, 2017; IEA Bioenergy Task 40; FAO; CREIA
Use of pellets for different energy markets

Sources: EPC survey, 2017; Hawkins Wright
Note: Asia does not include China
Raw material used for European Pellet production

- Wood pellets: 90%
- Non-wood pellets: 10%
Evolution of agricultural pellet production in Europe (Mio.t)
European/EU-28 wood pellet production
(in 2016, tonnes, %)

European production
16,6 million tonnes in 2016

EU-28 production
14,0 million tonnes in 2016

Actual production
(in tonnes)
- > 1,500,000
- > 1,000,000
- > 600,000
- < 600,000
- < 300,000
- < 99,999

Source: EPC Survey

Production in top 5 EU-28 countries in 2016

Germany: 1,9 million tonnes, -3,5%
Sweden: 1,7 million tonnes, <0,1%
Latvia: 1,4 million tonnes, -8,8%
Estonia: 1,2 million tonnes, -10,8%
France: 1,2 million tonnes, +21,0%

annual growth (%)
2015-2016
EU-28 wood pellet consumption for heating
(in 2016, tonnes, %)

EU-28 consumption 13,4 million tonnes in 2016

EU-28 pellet consumption for heating increased by 9.5% between 2015 and 2016.

Actual consumption (in tonnes)
- > 1,000,000
- < 1,000,000
- < 600,000
- < 300,000
- < 100,000

Source: EPC Survey

Consumption in top 5 EU-28 countries in 2015
- Residential heating:
  - Italy: 3.2 million
  - Germany: 2.0 million
  - Denmark: 1.8 million
  - Sweden: 1.4 million
  - France: 1.1 million

- Commercial heating:
  - Italy: 91%
  - Germany: 33%
  - Denmark: 55%
  - Sweden: 30%
  - France: 7%

- CHP heat:
  - Italy: 9%
  - Germany: 7%
  - Denmark: 5%
  - Sweden: 31%
  - France: 93%

Sources: EPC survey, 2017, Hawkins Wright
EU-28 consumption
8,3 million tonnes in 2016

EU-28 pellet consumption for power generation increased by -3.1% between 2015 and 2016.

Actual consumption (in tonnes)
- Blue: > 1,000,000
- Turquoise: < 1,000,000
- Green: < 500,000
- Light blue: < 100,000

Source: EPC Survey

Consumption in top 5 EU-28 countries in 2016
- Power only plant: -6%
- CHP power: 0.0%
- Annual growth (%): -3.3%

- United Kingdom: 8.4 million tonnes
- Belgium: 1.0 million tonnes
- Denmark: 0.6 million tonnes
Currently international trade is focused on pellets for use in power plants.

“Premium pellets” used for domestic and commercial heating are mostly supplied locally but trade is gaining importance.

Pellet quality is a key issue for trade. For premium quality the ENplus certification is a precondition for tradeability of pellets.
Which trade routes will gain importance?

- North America to Asia: Canada has increased production in 18 months by 50% - new capacity goes to Korea and Japan
- Russia to Asia: Russia has huge forest resources and will probably also deliver large volumes to China
- Brazil to Europe: bagasse (sugar cane)
- Russia and Eastern Europe to central Europe
Most recent developments

- Industrial pellet use will almost double in Europe within the next 5 years.

- The use of pellets for residential heating is advancing very fast in several countries of Eastern Europe such as Poland, Czech Republic, and several Balkan countries.

- Very rapid increase of bioenergy use in Ukraine (mainly based on agricultural residues).

- Very rapid development of pellet use in China.
Other important trends

- As demand for pellets is growing fast power plants and industrial users will start to use non wood pellets more extensively.

- Wood pellets will be increasingly used for residential heating.

- The increased use of agricultural raw materials will require significant research in combustion technology and flue gas treatment – Austria offers partnership!
Thank you for your attention!