

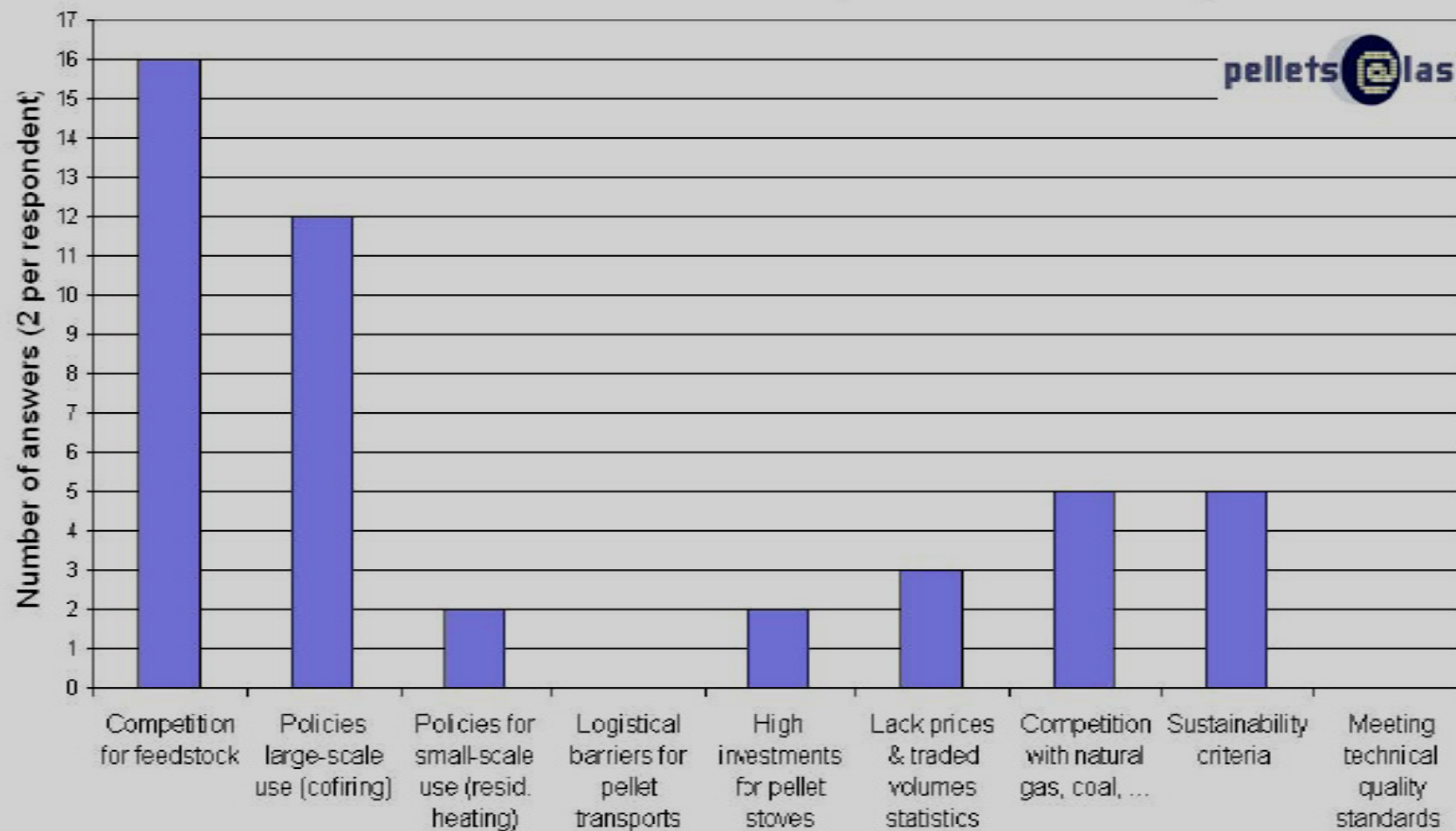
PELLETS MARKET

STATUS & POSSIBILITIES

HELLENIC PELLETS

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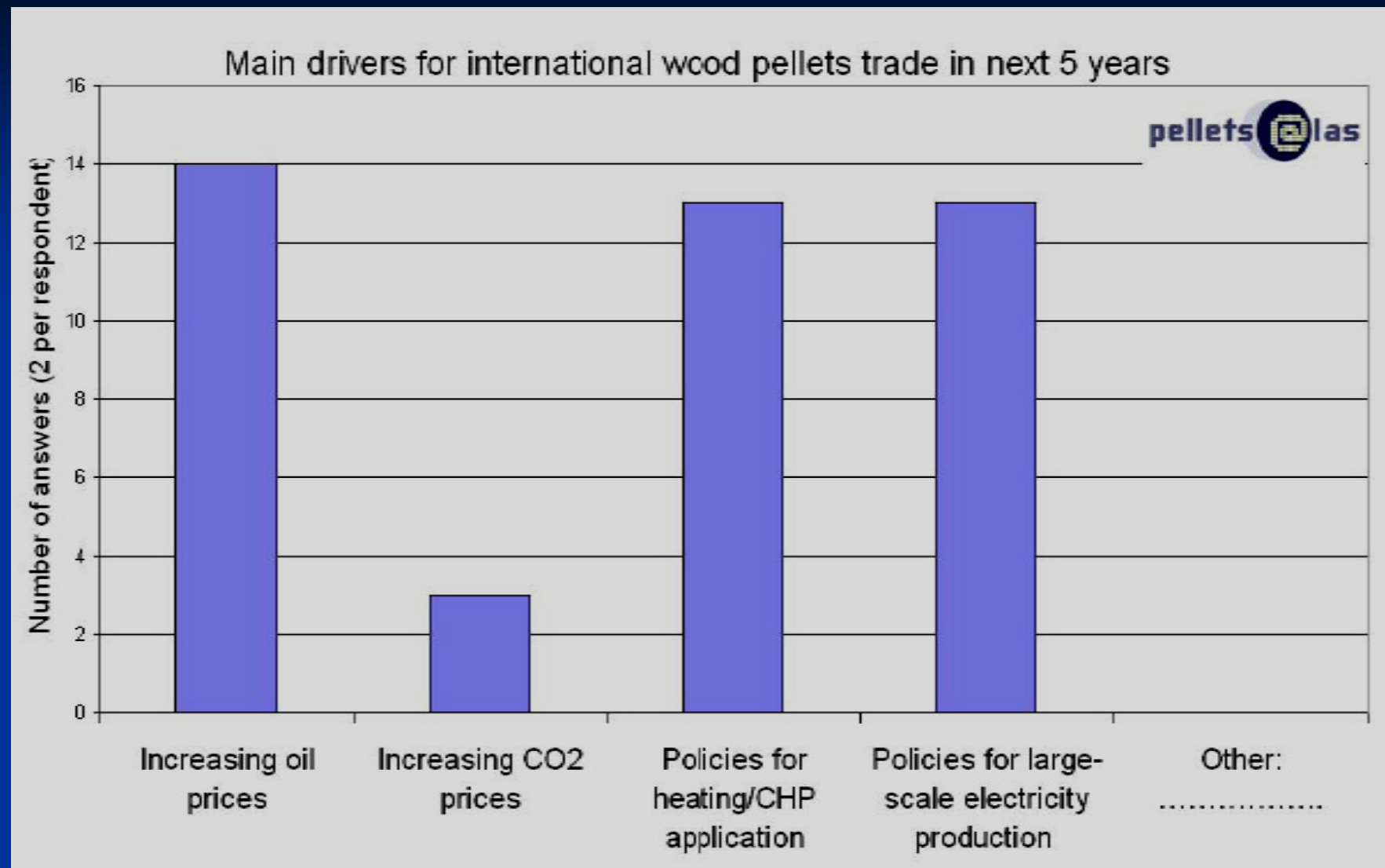
Main barriers for international wood pellets trade in next 5 years



- Source: European production, trade and consumption of wood pellets. First results from the pellets@las project

BARIERS

- Competition for feedstock
- Policies for large scale use
- High investments for pellet-burning devices
- Lack of prices and trade value statistics
- Competition with natural gas and coal
- Sustainability criteria



- Source: European production, trade and consumption of wood pellets. First results from the pellets@las project

DRIVERS

- Increasing oil prices
- Increasing CO₂ prices
- Policies for heating
- Policies for large scale electricity production

CONCLUSIONS

- Increasing scarcity of raw materials commonly used for the production of wood pellets (sawdust), will lead to the use of alternative woody and agricultural materials.
- Government support policies will be of great importance, even with further increasing of oil, natural gas and coal prices.

International wood pellet production (2006)

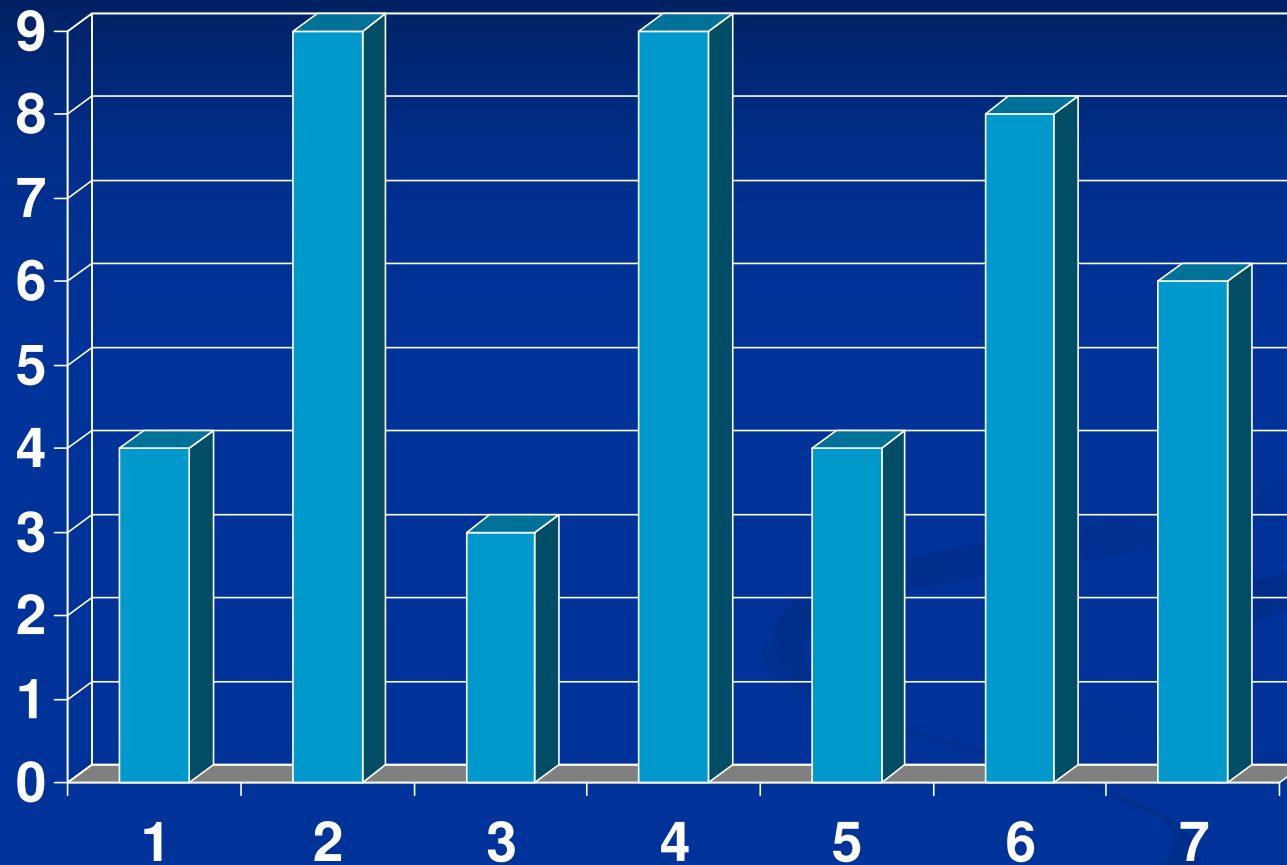


- Source. IEA Bioenergy Task 40 “Global Wood Pellets Markets and Industry: Policy Drivers, Market Status and Raw Material Potential”

MAIN PRODUCERS

- 1. Sweden, together with USA and Canada, are the
- world's largest producers of pellets with an annual
- production capacity exceeding 3,500,000 tonnes of
- wood pellets (about 16,5 TWh) in 2006.
- 2. A second group of countries is composed of several
- EU Member States with a production ranging from
- 200,000 to 600,000 tonnes, including Austria,
- Germany, Italy, Estonia, Latvia, Russia, Poland and
- Denmark
- 3. Other EU countries produce much lower amounts
- due to their now-starting to develop markets.

Regions with largest growth in pellet consumption / importers

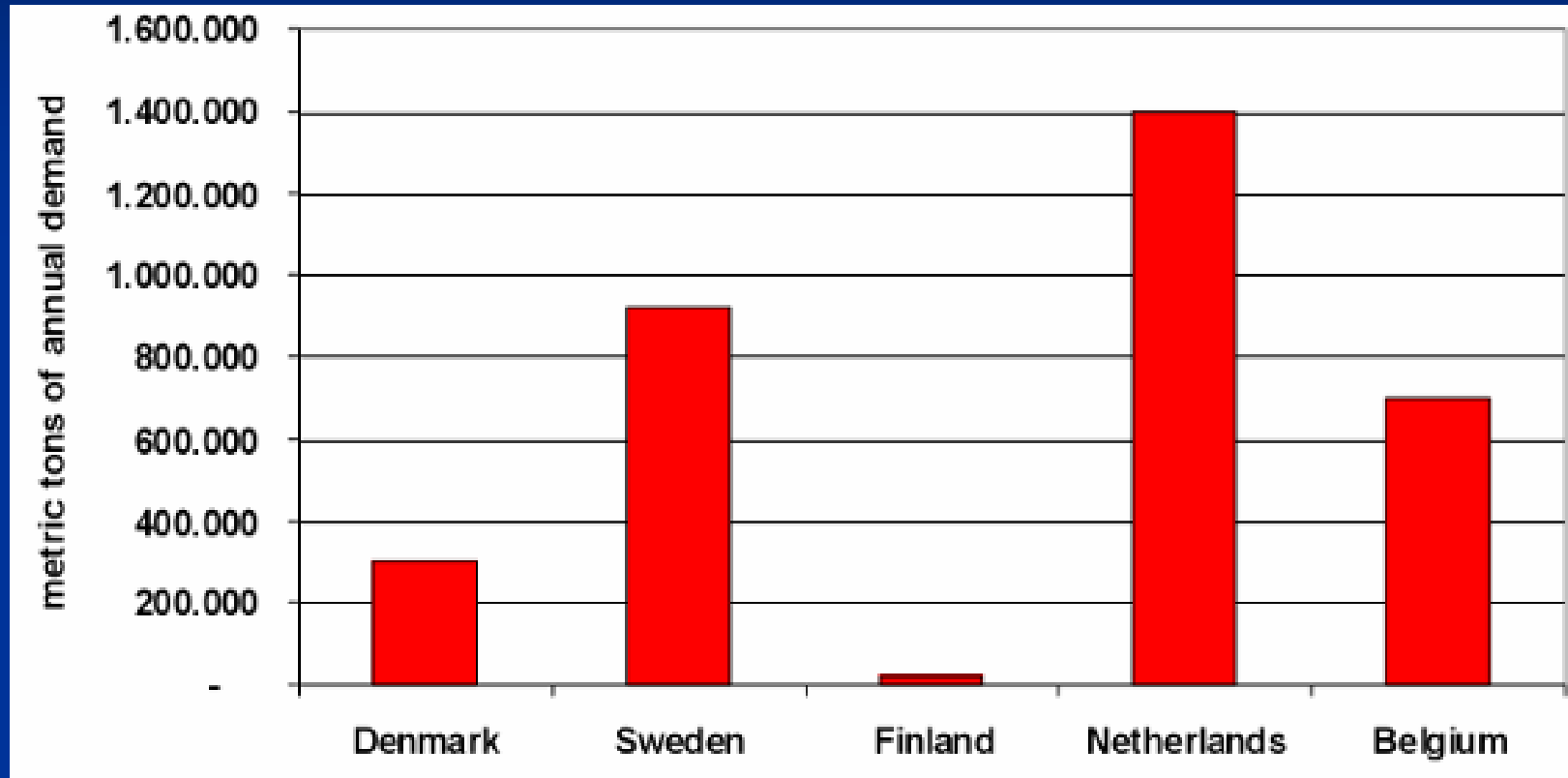


1. Belgium & Netherlands 2. Canada & USA 3. France, Italy and Greece 4. Germany and Austria 5. Scandinavia 6. United Kingdom & Ireland 7. China & SE Asia

MAIN CONSUMERS

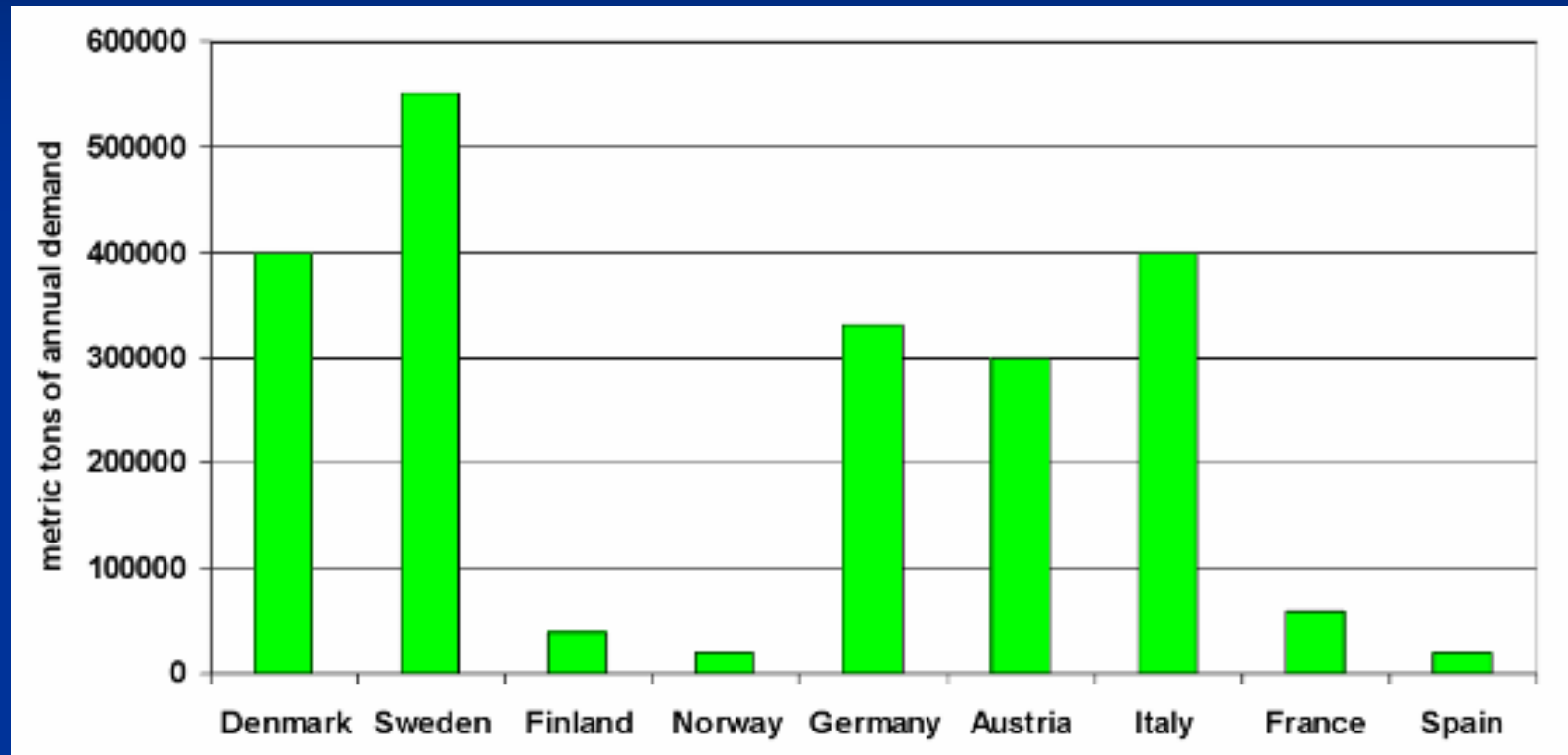
- 1. Sweden is the largest market so far, and trends show that Sweden will be still the leading market in Europe in the short term.
- 2. Other large markets include mainly central European countries, such as Austria, Italy, Germany, the Netherlands, Denmark and Belgium.
- 3. Smaller but increasing markets are the ones of Spain, Greece and East Europe countries.

Pellets use in the power plants in Europe in 2005



- Source: Propellets Austria, 2006

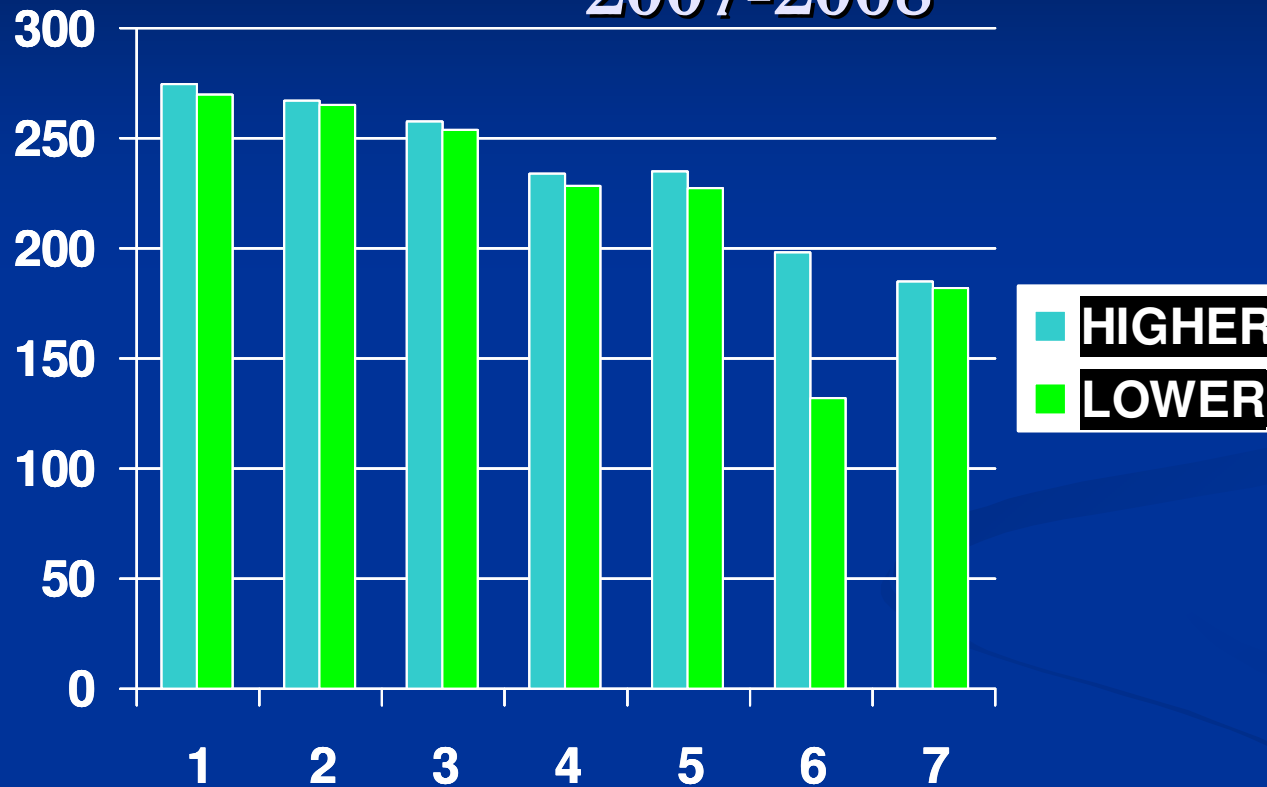
European markets for residential pellet heating in 2005



- Source : proPellets Austria

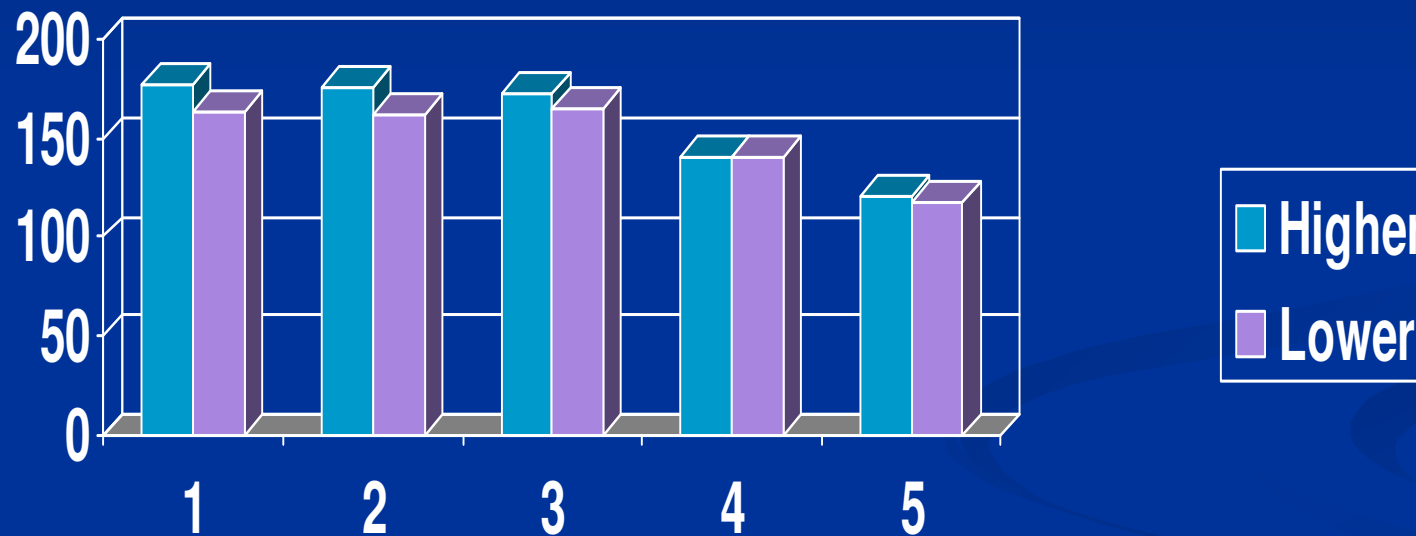
Higher / Lower prices (Developed European markets)

2007-2008



1. Denmark 2. Netherlands 3. Sweden 4. Great Britain 5. Italy 6. Austria
7. Germany

Higher / Lower prices (Southern Eastern European markets) 2007-2008



- 1. Poland 2. Greece 3. Lithuania 4. Estonia 5. Romania

CONCLUSIONS

- Wood pellet prices were quite stable, although with differences among European markets.
- Logistics and transportation problems create difficulties in the equalization of the prices even among neighboring countries.
- Prices in the developed markets are in higher levels from those under development.

MIXED BIOMASS PELLETS (MBP)

- Can be produced from mixtures using several types of materials with some wood added.
- Grass, leguminous plants, fruits e.c., exist in great numbers and can be used as feedstock.

BARRIERS

- Legal aspects and technical aspects for the heating-systems.
- Development of logistic systems for the production of agro-pellets.
- Not used in domestic applications (small scale).
- Small markets in Germany, UK and Poland and even fewer producers.

EUROPEAN MARKET

- The European Pellets market is in its infancy
- Heavily influenced by policies
- Forming 3 kinds of markets:
 - □ *Pellets for Power* markets: NL, BE, UK
 - □ *Pellets for Heat* markets: DE, AT, IT, Ireland
 - □ *Combined* markets: DK, S
- Has dynamic growth.
- Trade is not transparent.

FUTURE OF THE MARKET

- Clear signs of market recovery for pellets in the heat market.
- Sharp increase of pellet use in commercial applications must be expected.
- Further boom in residential use of pellets resulting from price advantage and stability against heating oil.
- Further temporary disequilibriums at pellets markets to be expected

Sources

- The pellets market in Europe Status 2008 targets for the future (Michael Wild EBES)
- **proPellets Austria**
- **IEA Bioenergy Task 40 “Global Wood Pellets Markets and Industry: Policy, Drivers, Market Status and Raw Material Potential”**
- European production, trade and consumption of wood pellets. First results from the pellets@las project

**THANK YOU VERY MUCH FOR YOUR
ATTENTION**