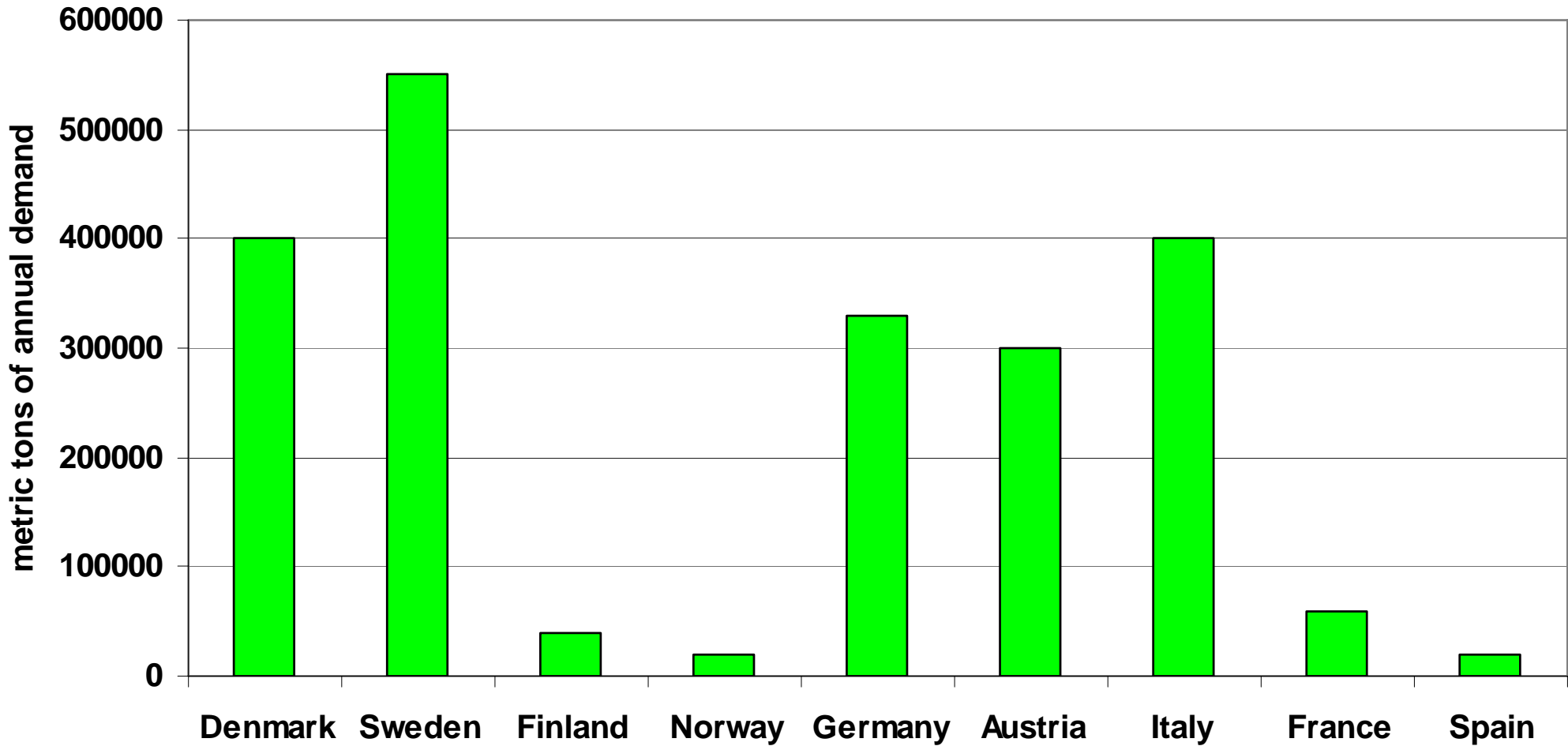


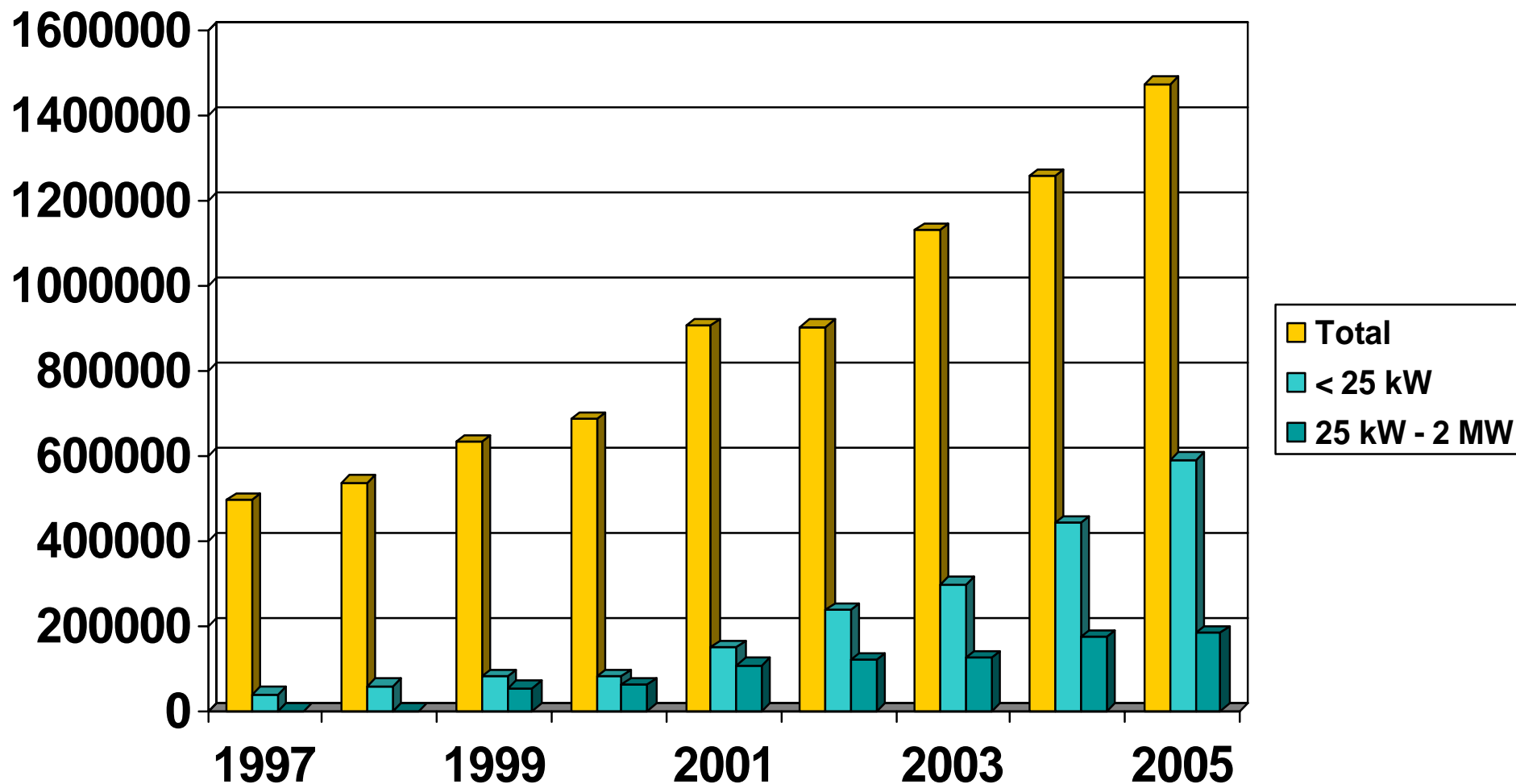
# **European pellet markets – recent developements & policy issues**

Christian Rakos: proPellets Austria

## European markets for residential pellet heating

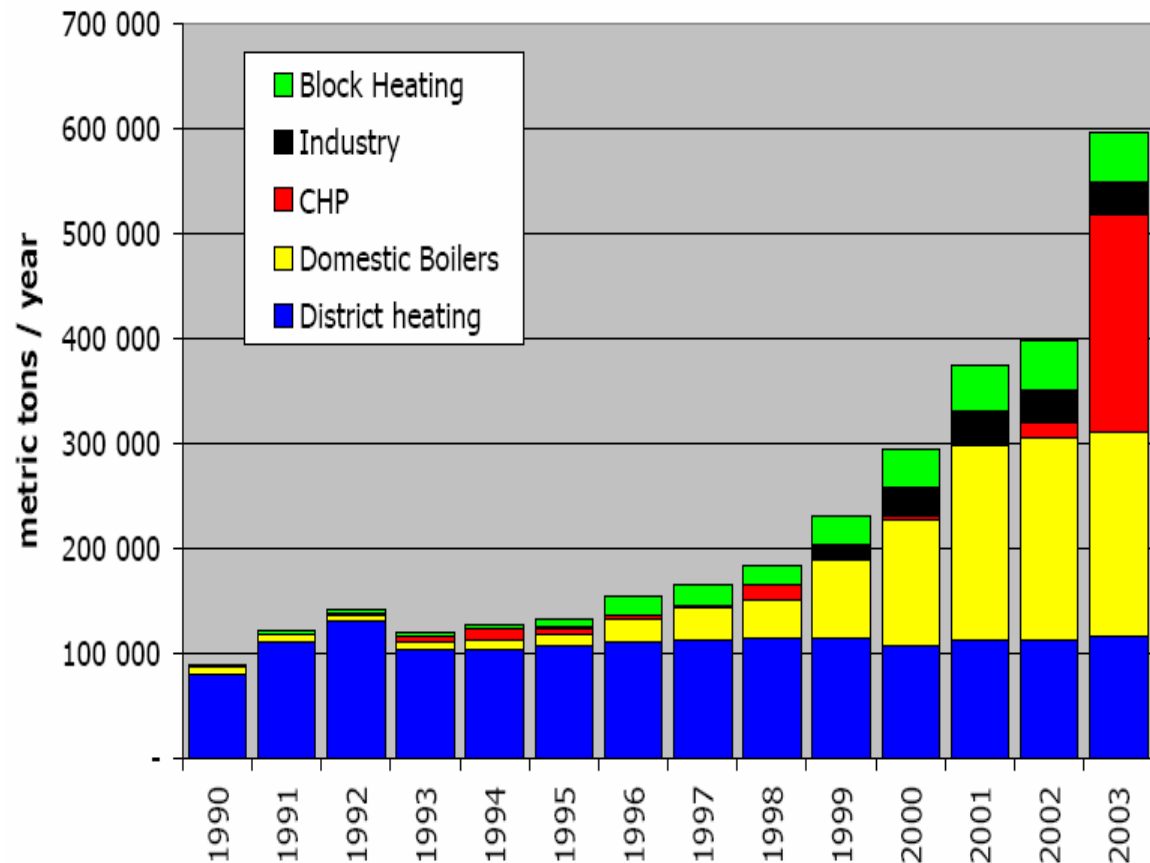


## Pellet sales in Sweden (t)



## The Danish market

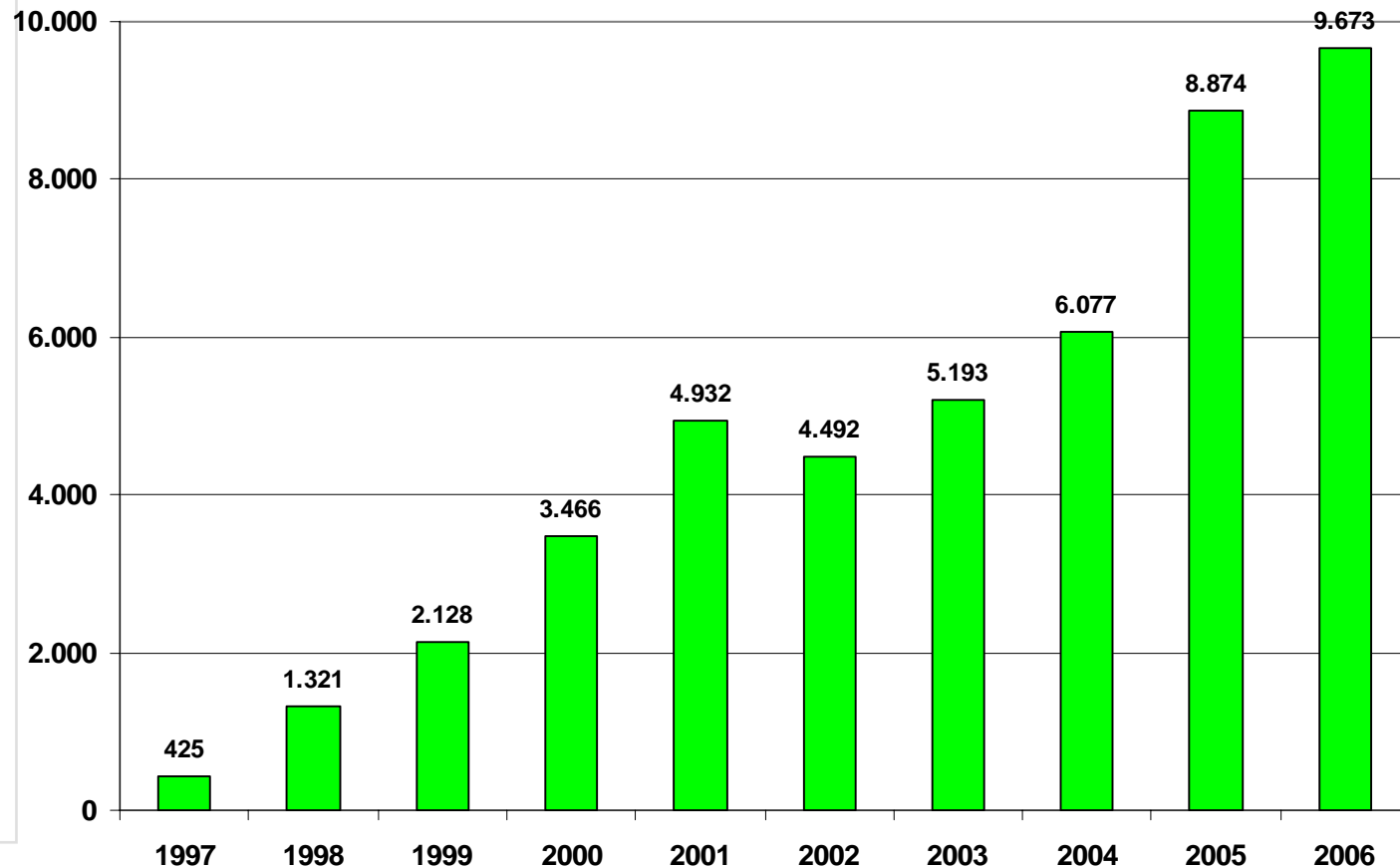
- » Significant pellet demand in small and medium scale district heating systems
- » Market growth of domestic boilers interrupted by adverse policies (discontinued investment support)



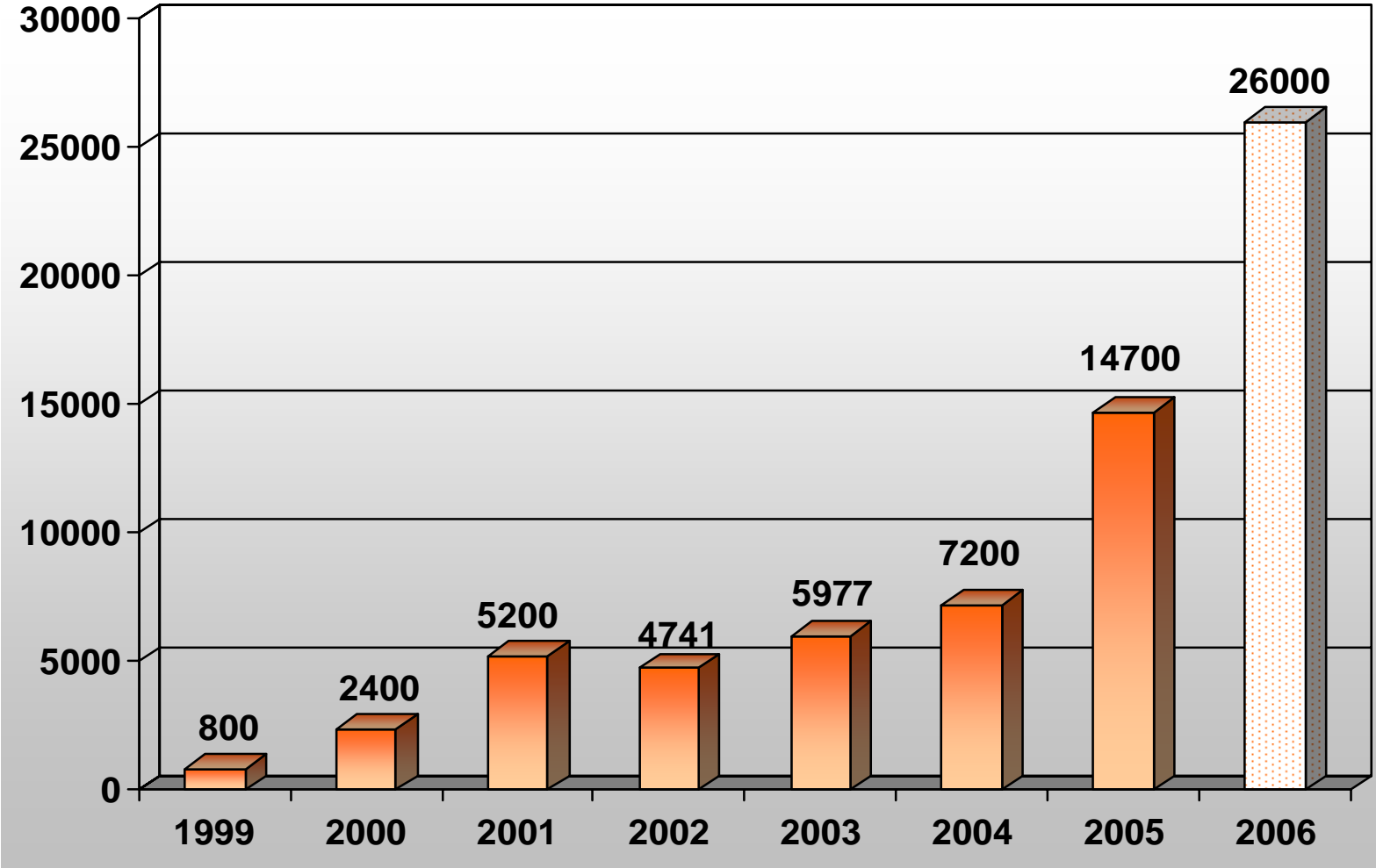
## The Austrian pellet market

- » Pioneering role and market leadership in residential pellet boilers
- » Pellet boiler sales exceeded oil boiler sales in 2005
- » Growing sales of pellet stoves and pellet central heating stoves

Annually installed Pelletboilers in Austria



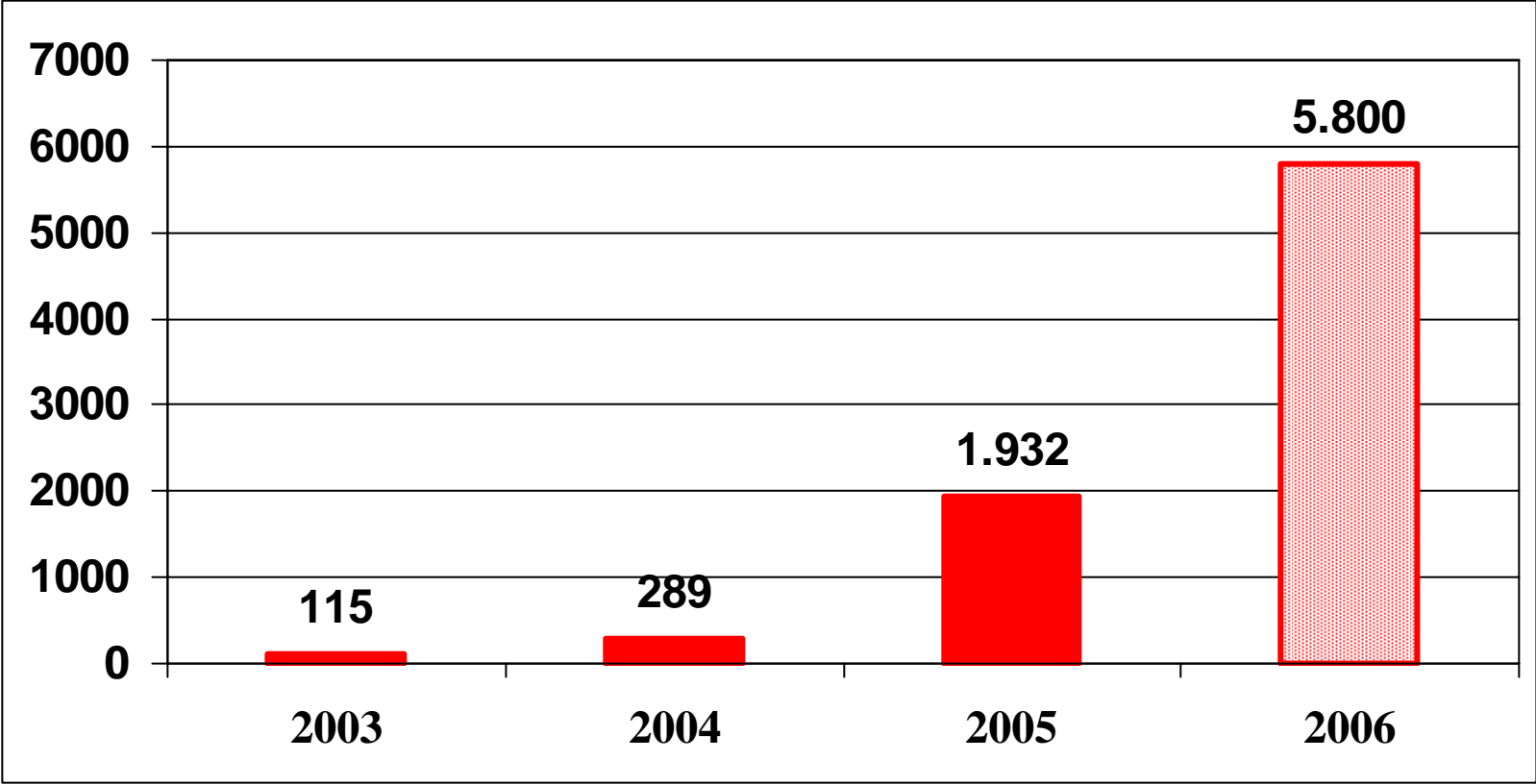
# Pellet boiler sales in Germany



## The Italian market

- »» The largest pellet stove market in Europe
- »» Estimated sales 2006: 100.000 pellet stoves
- »» Trend towards pellet central heating stoves
- »» Small domestic pellet production – significant pellet imports

# Pellet boiler sales in France

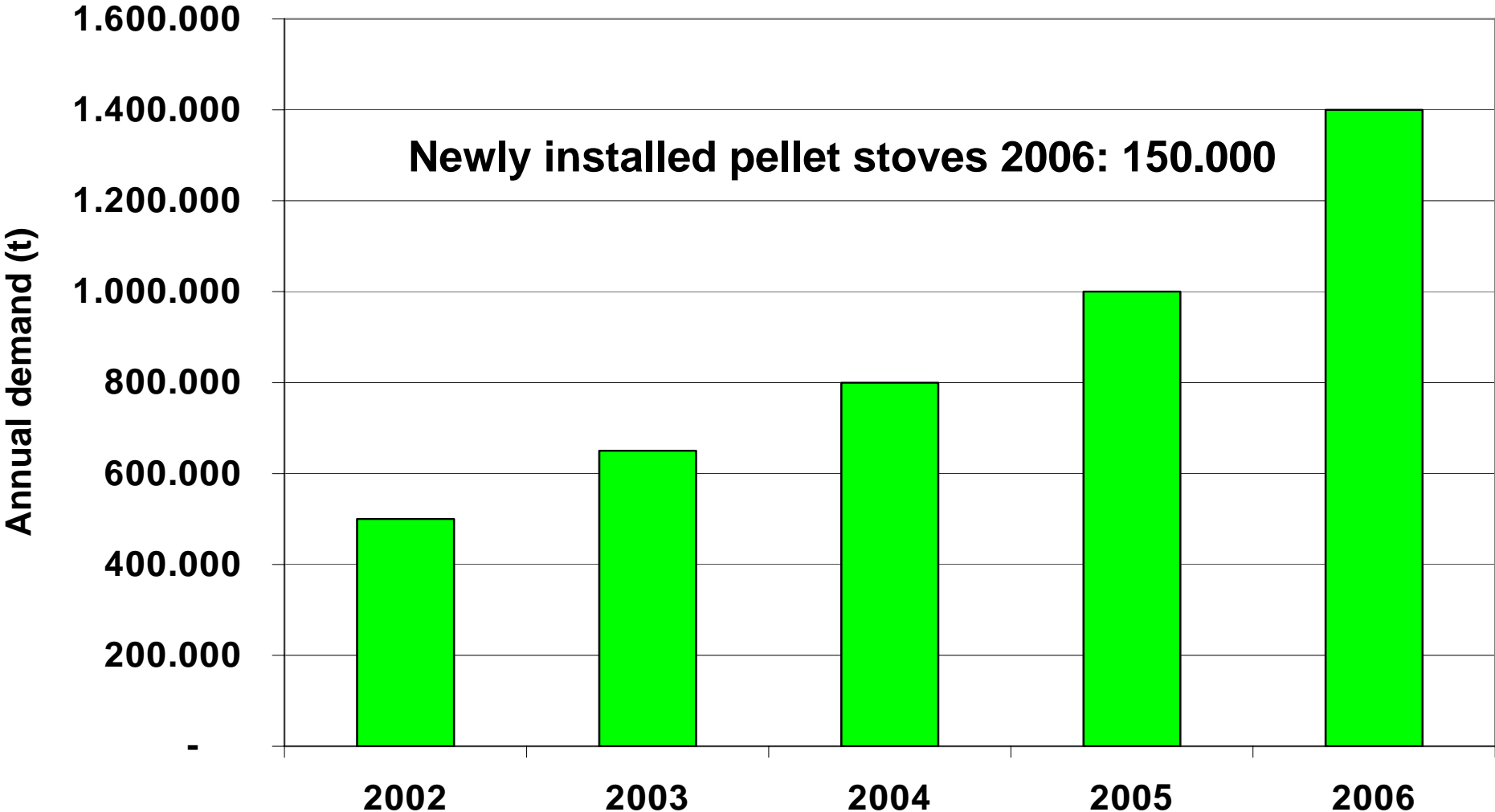


Source: Rhone-Alp Energie

## France – an excellent example for comprehensive political support

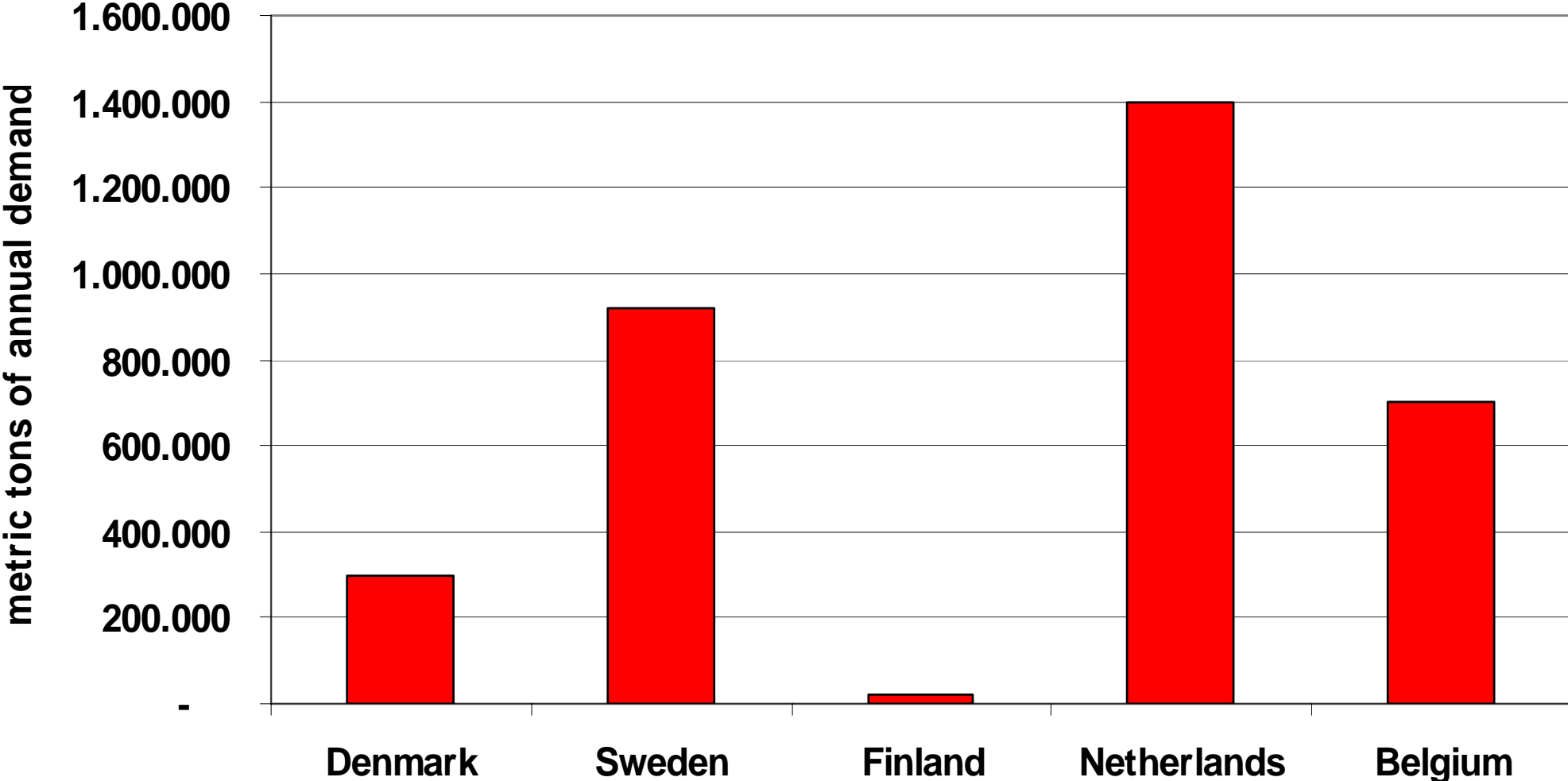
- » Reduced VAT rate for wood fuel 5,5% instead of 19,4%
- » Reduced VAT 5,5% rate for district heat (biomass) and for biomass boilers
- » Income tax refund for investment: 50% of investment costs
- » Installer qualification & certification scheme „Qualibois“ starting nationwide 2007
- » Public relations campaigns
- » Efficient program management by natl. Energy Agency ADEME

# Development of US Pellet demand



Quelle: Stan Elliot, Jönköping 2006

# Pellet use in power plants in Europe

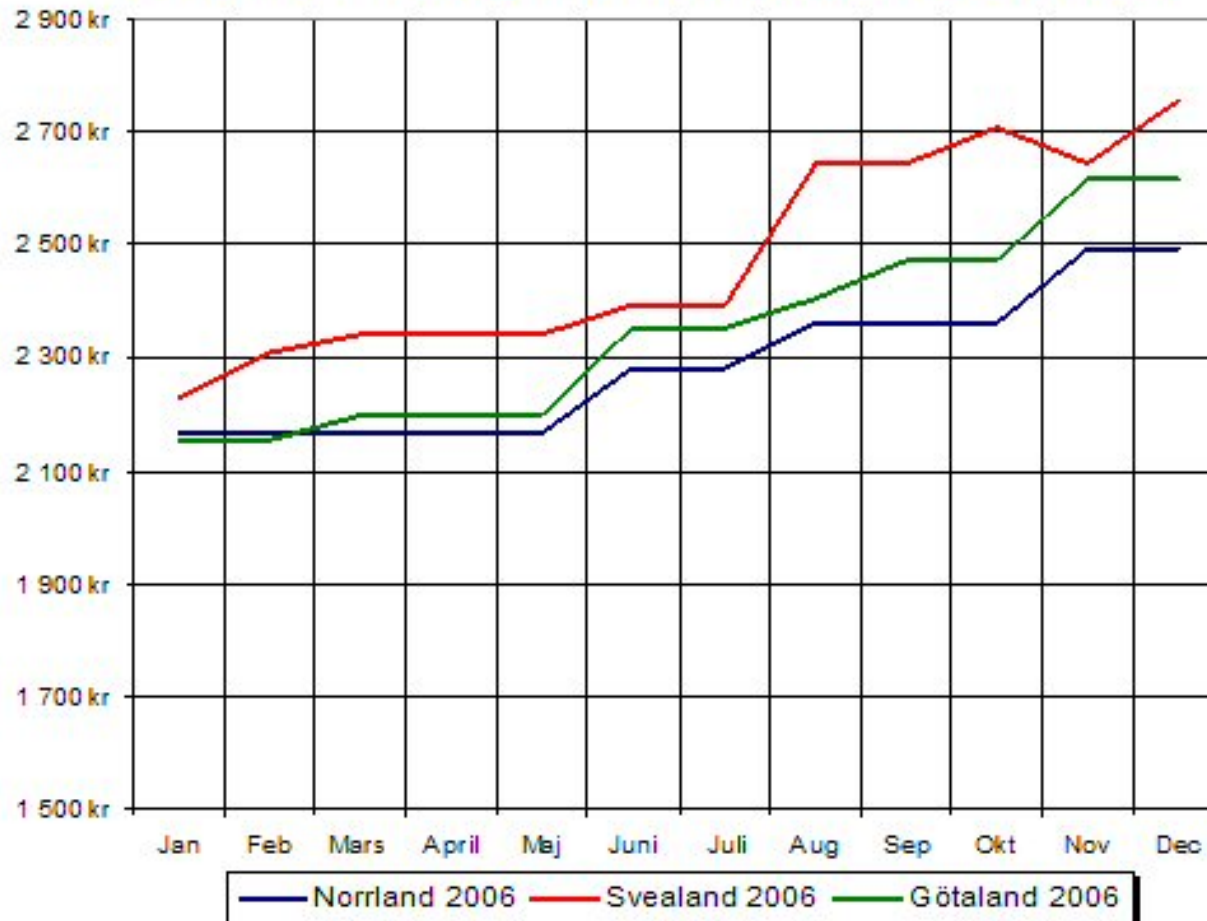


# Pellet price development in 2006 and its implications

# Pellet prices 2006 in Sweden

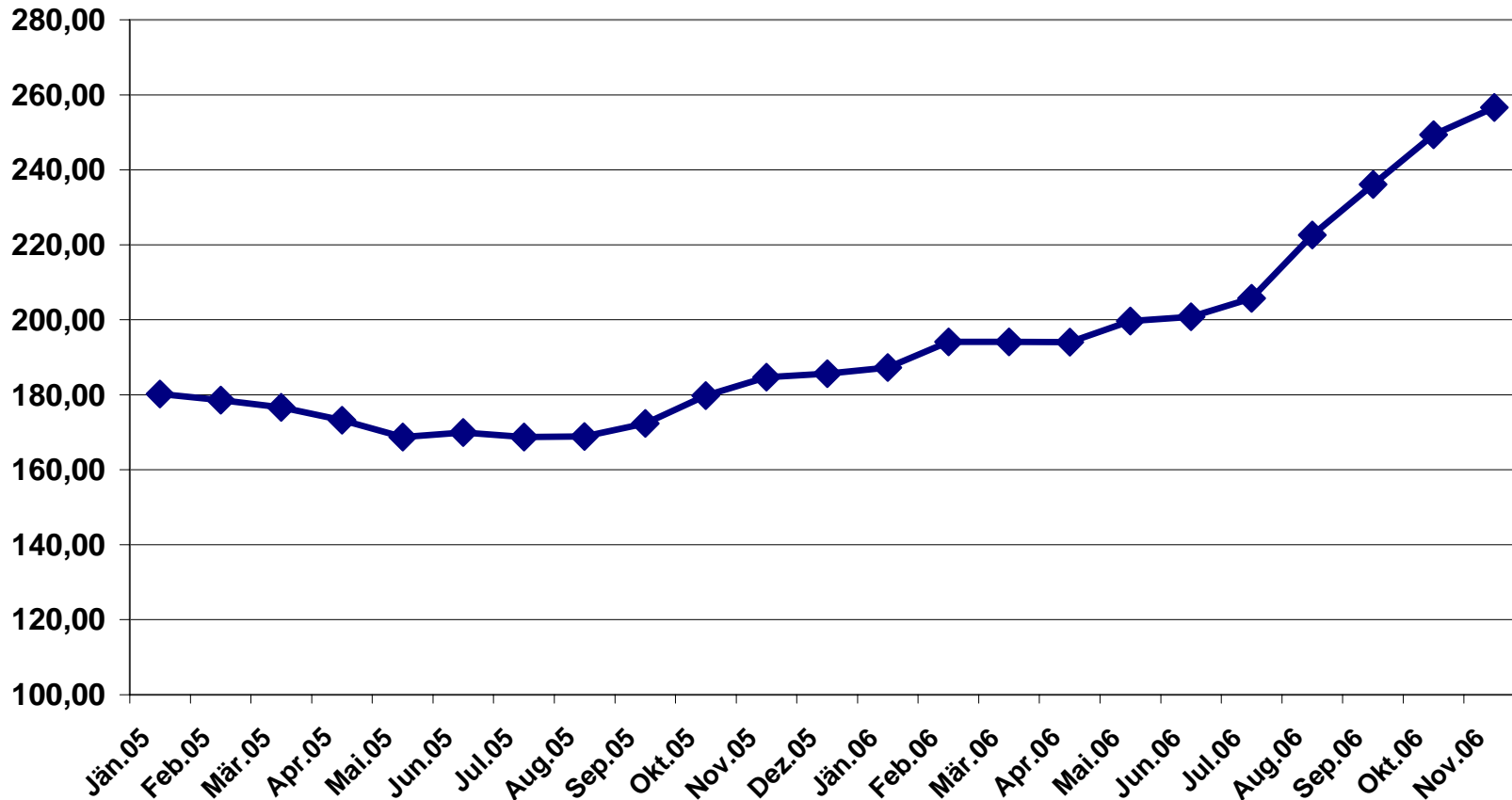
## Prisutveckling pellets i Småsäckar

Priset baserat på "småsäck" ( 3 - ton ) \*genomsnitt av 3 tillverkare per region



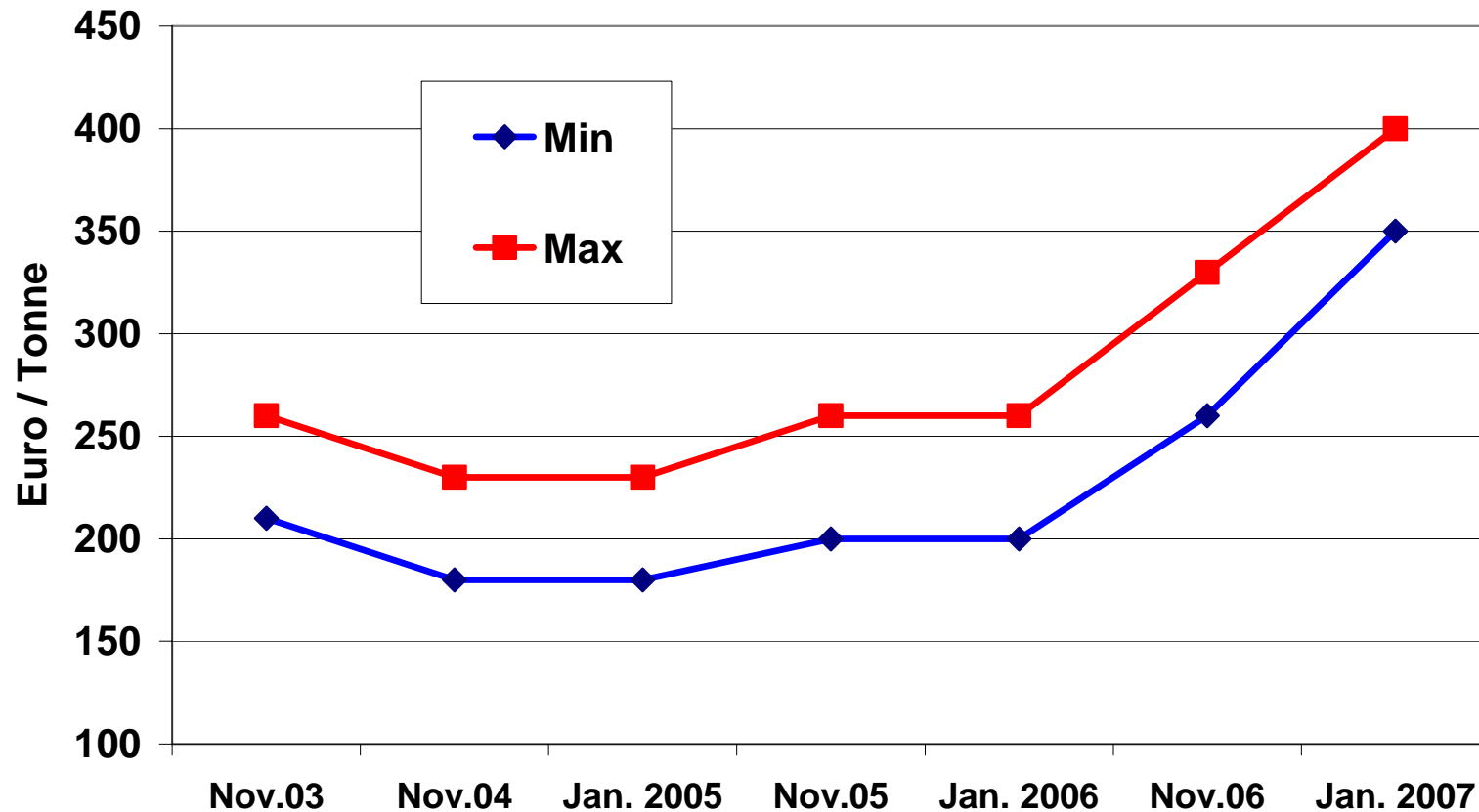
## Pellet prices 2006 in Germany (bulk pellets)

### Pelletpreisentwicklung in Deutschland

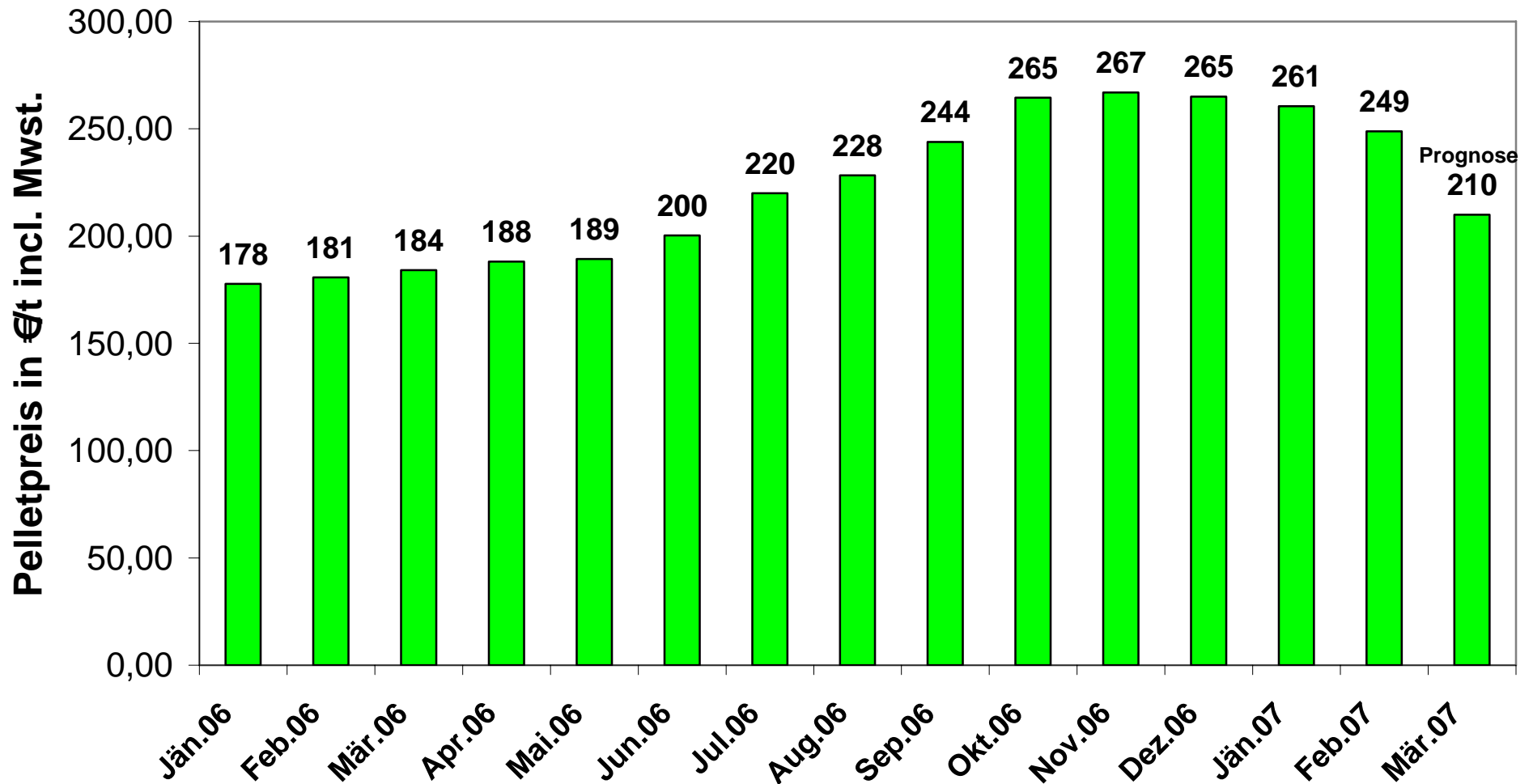


## Pellet prices in 2006 Italy (bagged pellets)

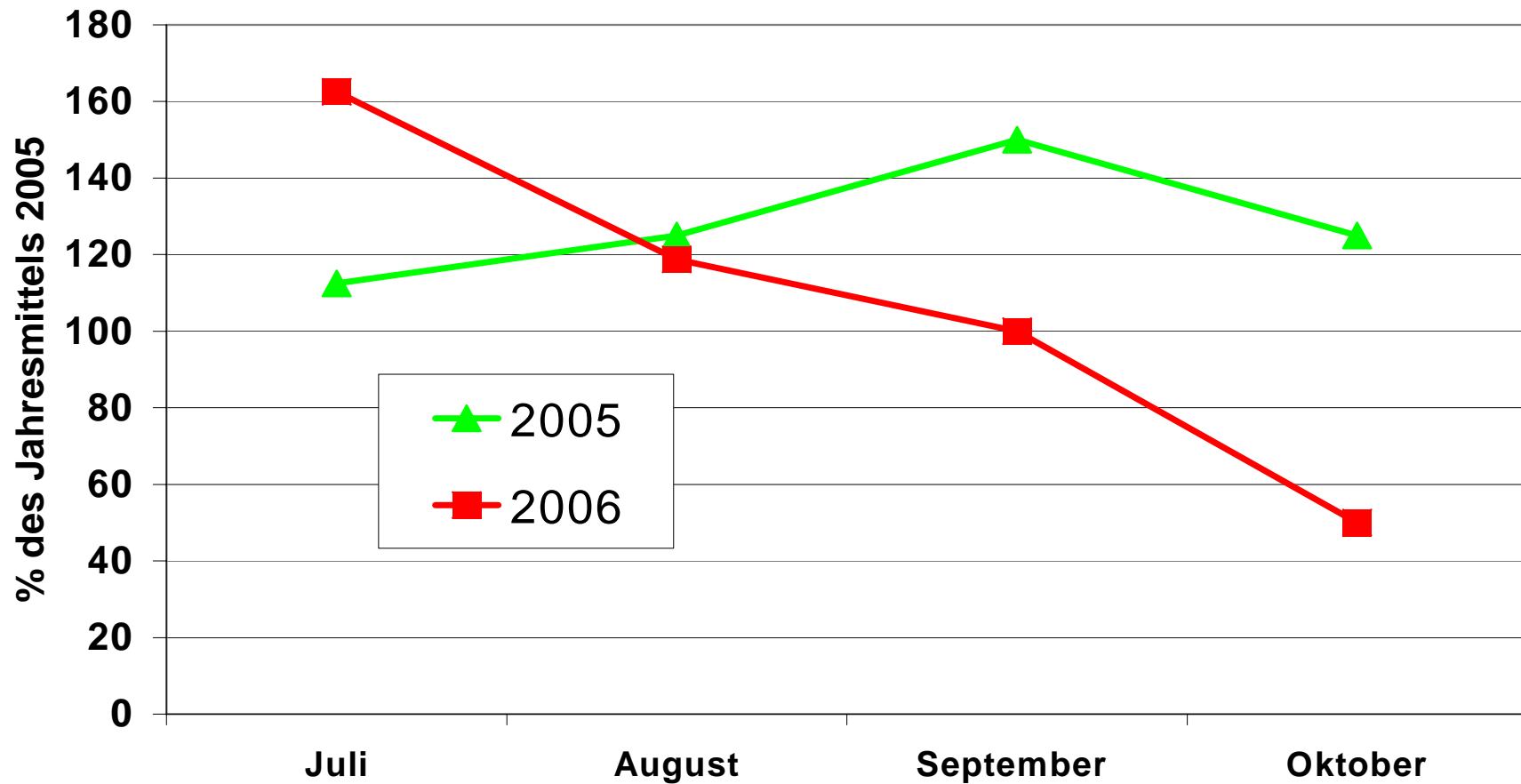
### Pelletpreise in Italien (Sackware 15 kg)



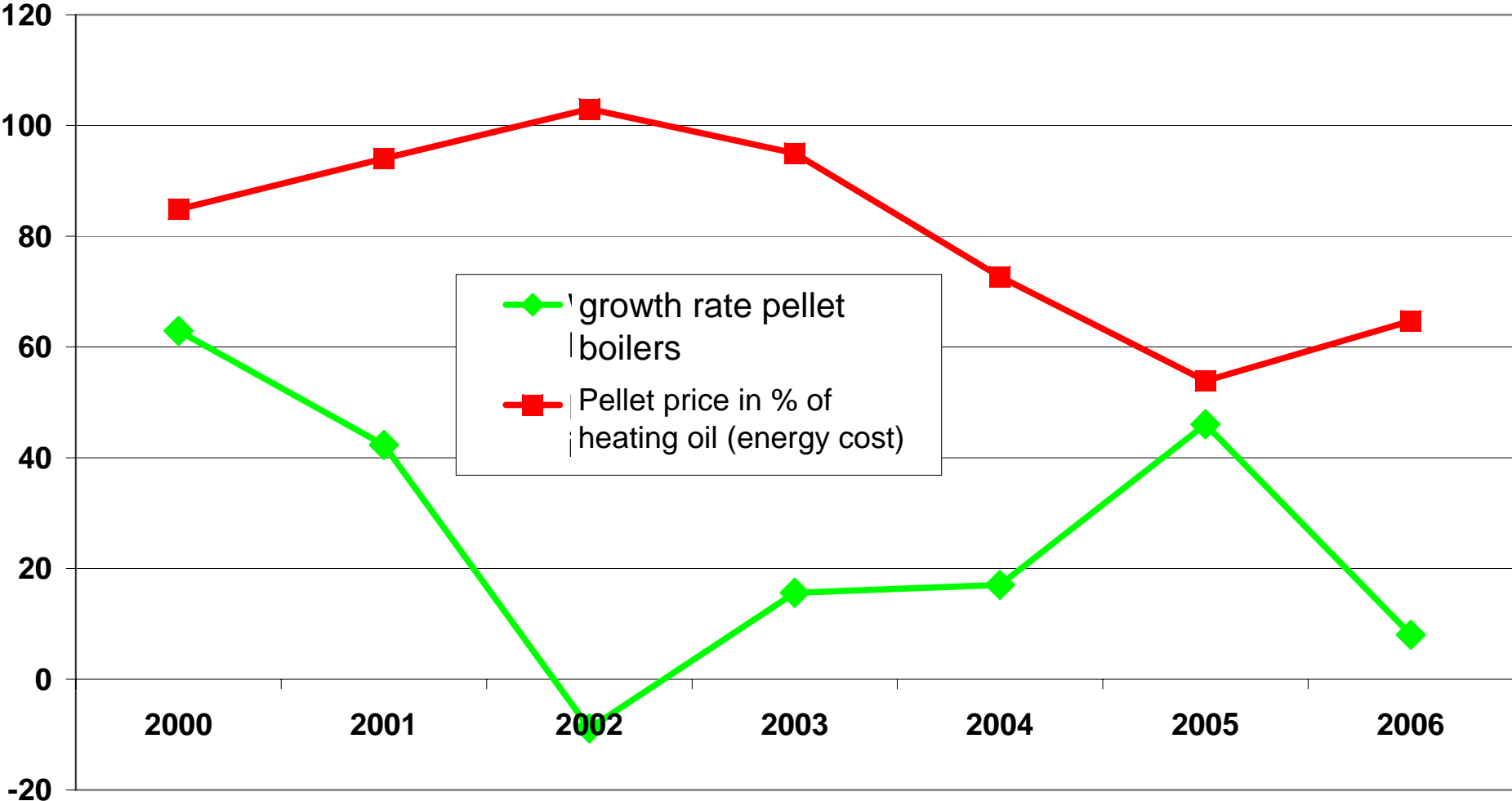
## Austrian pellet prices (6t bulk delivered incl. 10% VAT)



## Development of pellet boiler sales in Austria



# Growth rates of boiler sales and competitiveness of pellets in Austria



Quelle: proPellets Austria, Jan. 2007

## Public perception changes in Austria

- » Massive loss of image due to sharp price increases & supply problems
- » Consumers cautious / reluctant to buy pellet boilers
- » Politics concerned as they were highly supportive
- » Massive dirty campaigning of competing industries (fine dust as topic)

## Expectations for 2007

- » Boiler sales lower than 2006
- » Massive oversupply of pellets (also due to warm winter)
- » Pellet prices: declining but how far? 199€ incl. VAT delivered is today reality
- » Key issue: sawdust price – will it stay up? (presently 12-14€/m<sup>3</sup>)
- » What will oil do? 80\$/bbl can quickly change expectations for the pellet market!

## Conclusion

- » It is not so easy to establish a balanced growth of pellet demand & supply – important role of large consumers (power plants)
- » Supply security and relative price stability are key issues that need to be solved
- » This is particularly difficult in an early phase of market development

## What is happening in the business world ?

- » Very large players are entering the scene
- » e.g. large German boiler producers (e.g. Vissmann, Buderus etc.)
- » Large LPG companies (e.g. SHV)
- » Large oil traders (e.g. GEE)
- » General trend to increased role of wholesale dealers
- » The result: more professional practices in the market – we need that!

## Policies as potential threat

- » A significant threat is coming from air pollution policies: fine dust and NO<sub>x</sub> are issues that can become major obstacles
- » Fine dust is of very limited relevance in absolute terms (0,1% of Austrian fine dust emissions)
- » NO<sub>x</sub> is very difficult / impossible to reduce by primary measures
- » Suggestion of environmental policies: exclude wood from broad leaved trees as raw material for pellets do to higher N content

## Policies as potential support

- » France is a show case for best practice policies
- » Can policies contribute to supply security? E.g. by obligatory storage – do we want this?
- » Can policies contribute to price stability? No
- » Pellet quality – an important issue for smooth market development – an issue for publicly supported initiatives
- » Pellet stove & boiler quality & **security**: policy issues!
- » Quality requirements as preconditions for subsidies – most powerful tool! Can also be misused

## How far can we go - what is the potential for pellet production in Europe?

- »» There is no meaningful answer to this !
- »» Key issue is competition for raw materials and agricultural cropland
- »» The question is: in which direction will policies drive biomass: fuels, electricity or heat?
- »» The long term potential for pellet use is significantly larger than the biomass available in Europe

**At present policies are driving biomass towards electricity and fuels**

- » Subsidy requirement for renewable heat: e.g. 3000€ investment support for pellet boiler
- » Produced energy in 15 years: 450 MWh
- » **Subsidy : 6 €/ MWh**
- » **NO CARBON CREDIT**

- » Subsidy requirement for renewable electricity: **60 – 100€/MWh** depending on country & technology
- » Plus CARBON CREDIT **8 €/MWh** (assuming 10€/t CO<sub>2</sub>)
- » Subsidy for Biodiesel: approx. **50 €/MWh**

## Overall efficiency of different bioenergy paths

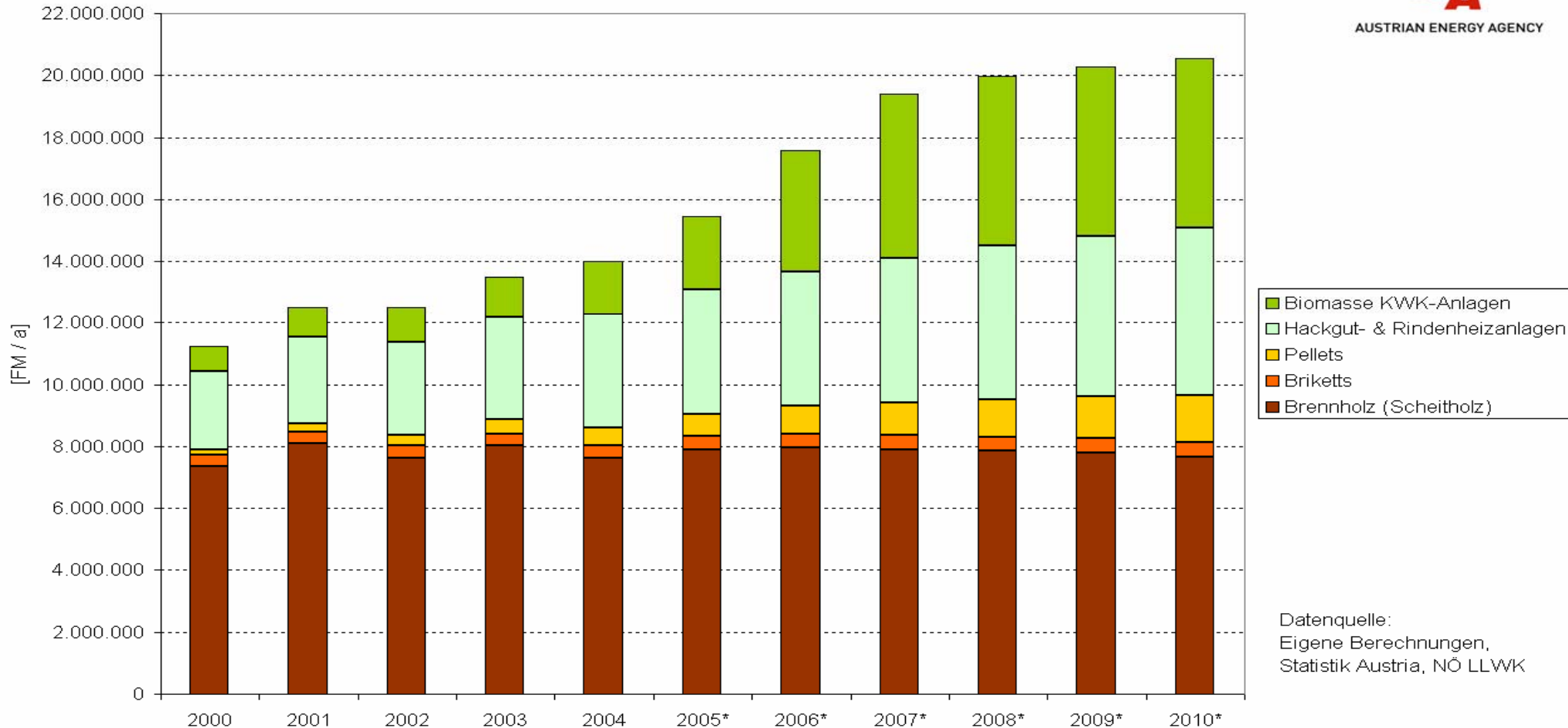
### »» Example energy yield per ha:

- SRC, Miscanthus to heat : 50.000 kWh / ha
- SRC BTL: 20.000 kWh (?)
- Biodiesel from rapeseed: 15.000 kWh per year
- SRC to electricity: 10.000 – 20.000 kWh /ha

### »» Are policies driving biomass into the right direction?

# Demand for wood fuels in Austria

Abschätzung des Holzbedarfs für die energetische Verwertung in Österreich  
 (\* Prognose 2005 bis 2010)



Datenquelle:  
 Eigene Berechnungen,  
 Statistik Austria, NÖ LLWK

## Final points

- » Pellet use in the heat sector has a very large potential in Europe and is a very economic option
- » Fluctuations of prices and supply problems can have significant impact on wheater this potential can be realised
- » Policies have a very significant impact on market development
- » The raw material issue will become an ever more important question
- » Trade will gain in importance – quality of pellets will be a key issue for residential use pellets