



# **E-CONTROL**

## **Ranking workable solutions:**

**What pragmatic solutions exist to market design problems?**

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**Director Competition & Regulation**

# The Main Issues (1)

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- Market Design
  - ◆ Pool vs Bilateral OTC-Markets (or organized Power Exchanges)
- Balancing Energy
  - ◆ Auctions vs Daily Markets
- Capacity
  - ◆ Capacity Payments, Capacity Markets vs Energy Only
- Capacity Allocation
  - ◆ Market Solutions vs. Pro Rata
- Prices
  - ◆ Price Caps at VOLL or Free Prices
- Transparency
  - ◆ Confidentiality vs. Marketinformation

# The Main Issues (2)

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- Tariffication
  - ◆ G&L Components, Locational
  - ◆ ROR vs Incentive Regulation or Benchmarking without Incentives
  - ◆ Social and Environmental Elements
    - + Two Part Tariffs
    - + Off Peak or Interruptible Tariffs (for special uses)

# What are workable solutions?

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- Market Criteria
- Efficiency Criteria
- SoS Criteria
- Environmental Criteria

# How do regulators choose between alternatives?

- First Idea → look into the law!

	Security of supply, Sustainable development	Quality, Efficiency, Safety (Distribution and Generation)	Reasonable Prices	Environment	Protection of household costumers
Austria		X	X		
Latvia	X	X	X		
France	X	X		X	
Hungary	X	X		X	X
Estonia	X	X		X	
Spain	X	X		X	
Italy	X	X		X	X
Norway	X				
Poland	X	X		X	
Belgium		X		X	X
Slovakia	X	X		X	X

# Additional legal targets

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- SMEs
- Life and health
- Defence and public order
- Technological progress

**Multi Targeted!!**

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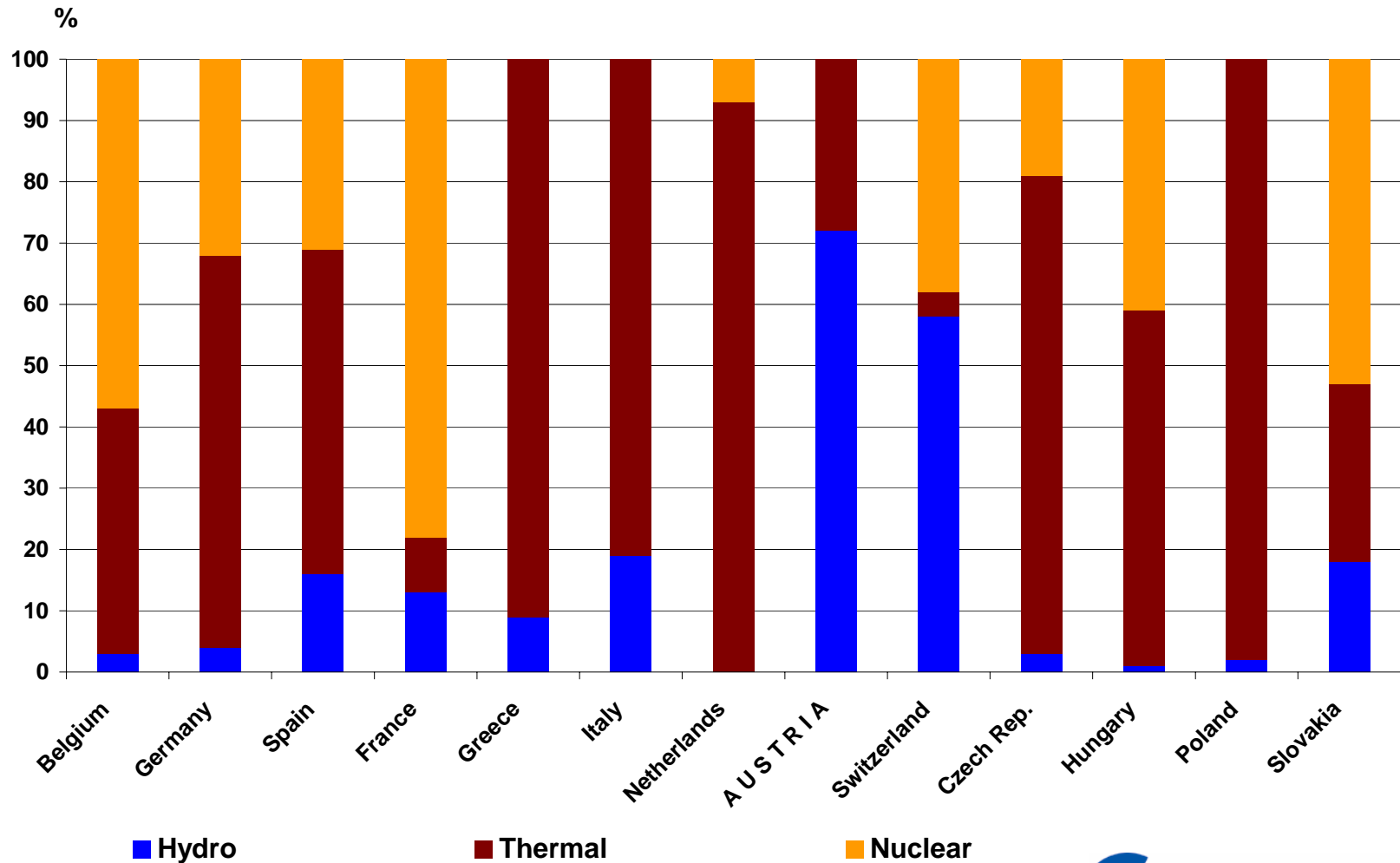
# The Austrian Experience

# The Austrian Power System

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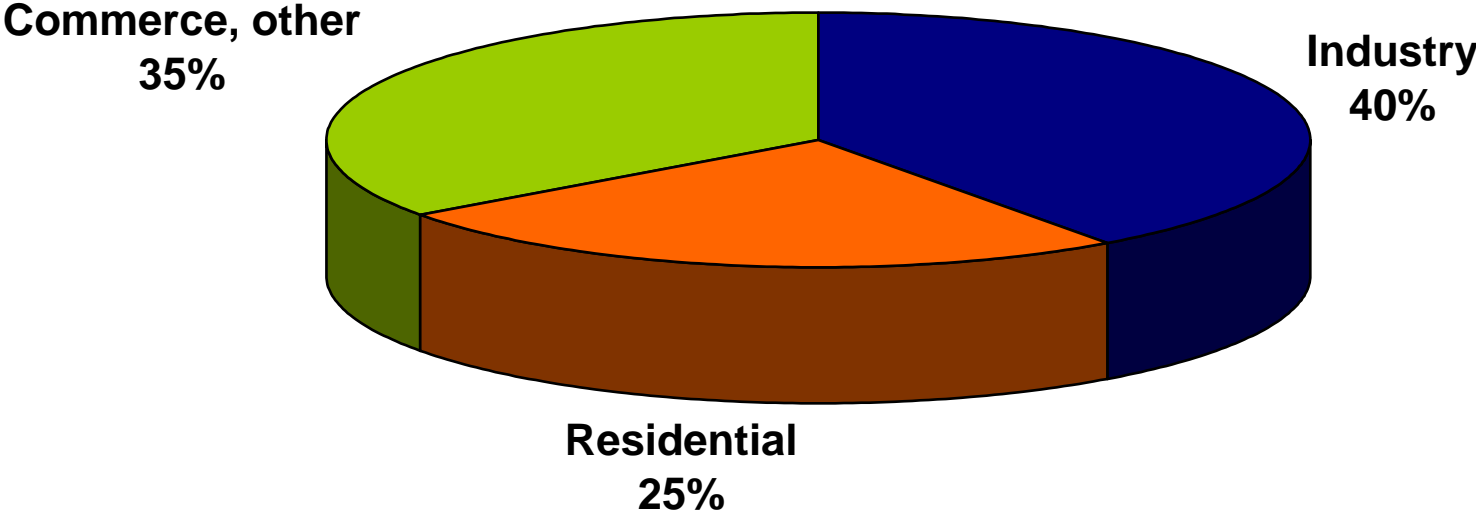
- Total installed power: 17.000 MW
- Total consumption p.a.: 60 TWh
- 3 control areas → Control Area Managers
  - ◆ „Austrian Power Grid“ – APG, also control block
  - ◆ „Tiroler Wasserkraftwerke AG“ – TIWAG, part of the German control block
  - ◆ „Vorarlberger Kraftwerke AG“ – VKW, part of the German control block
- 140 Distribution network operators

# Power Generation in Austria vs. Europe



# Power Consumption in Austria

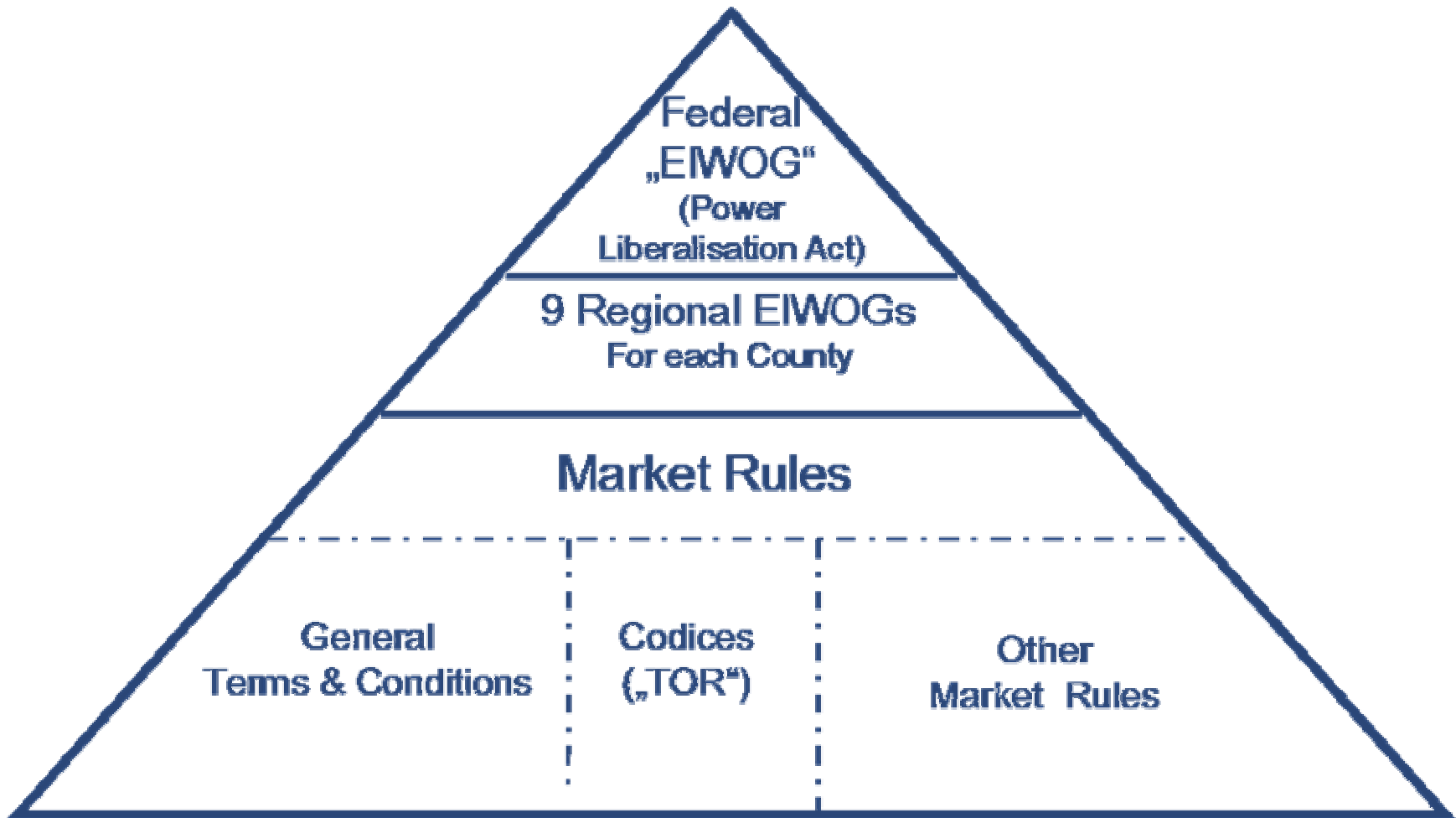
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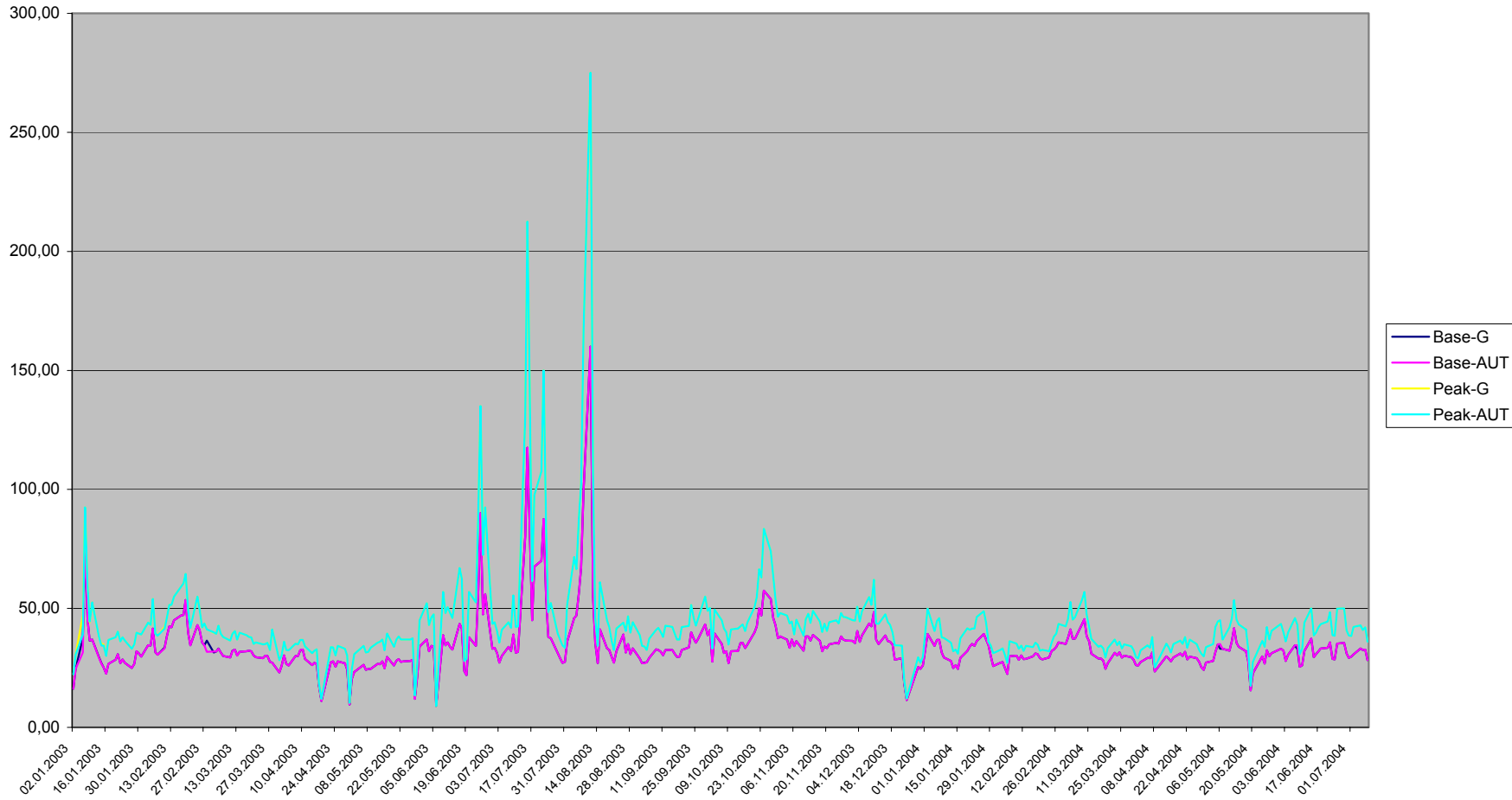


# Power Liberalisation in Austria - Structure of Rules and Regulations

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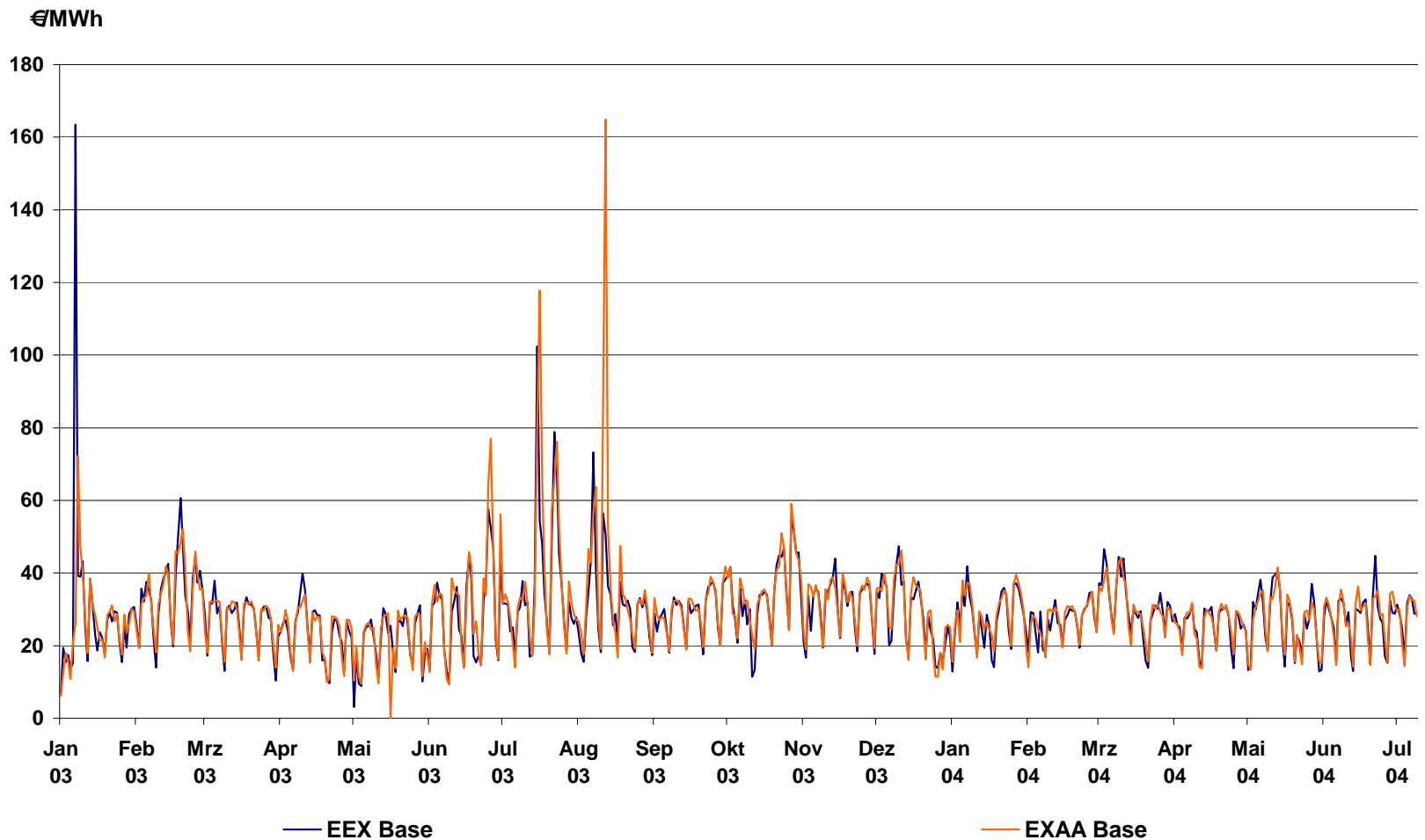
# Convergence between OTC wholesale markets Austria and Germany (Day-ahead Base and Peak )



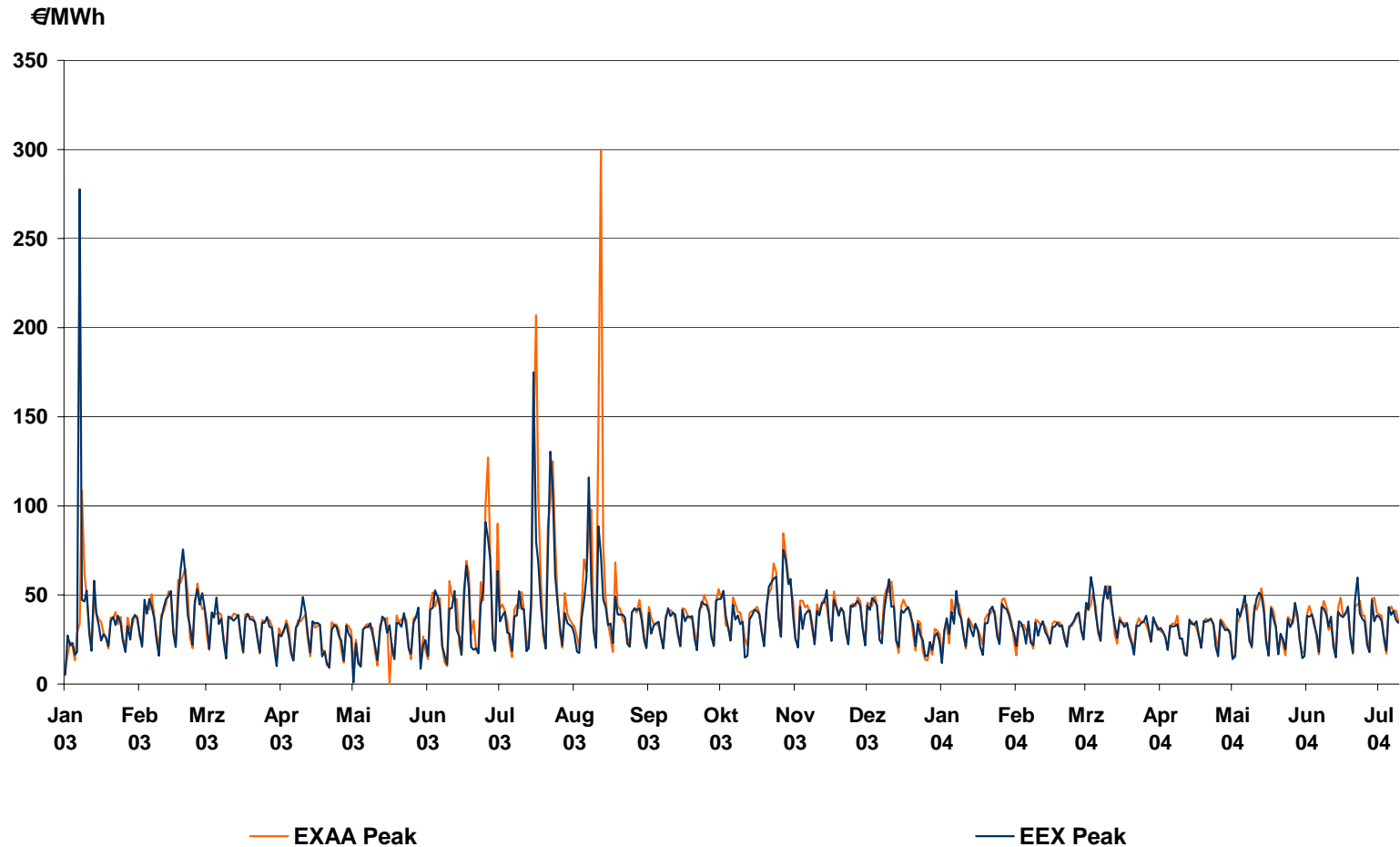
Platts Assessment



# High correlation at standardized markets



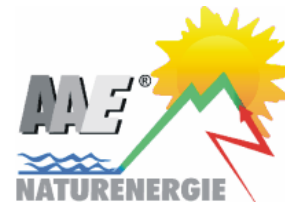
# But limited liquidity and gate closure effects



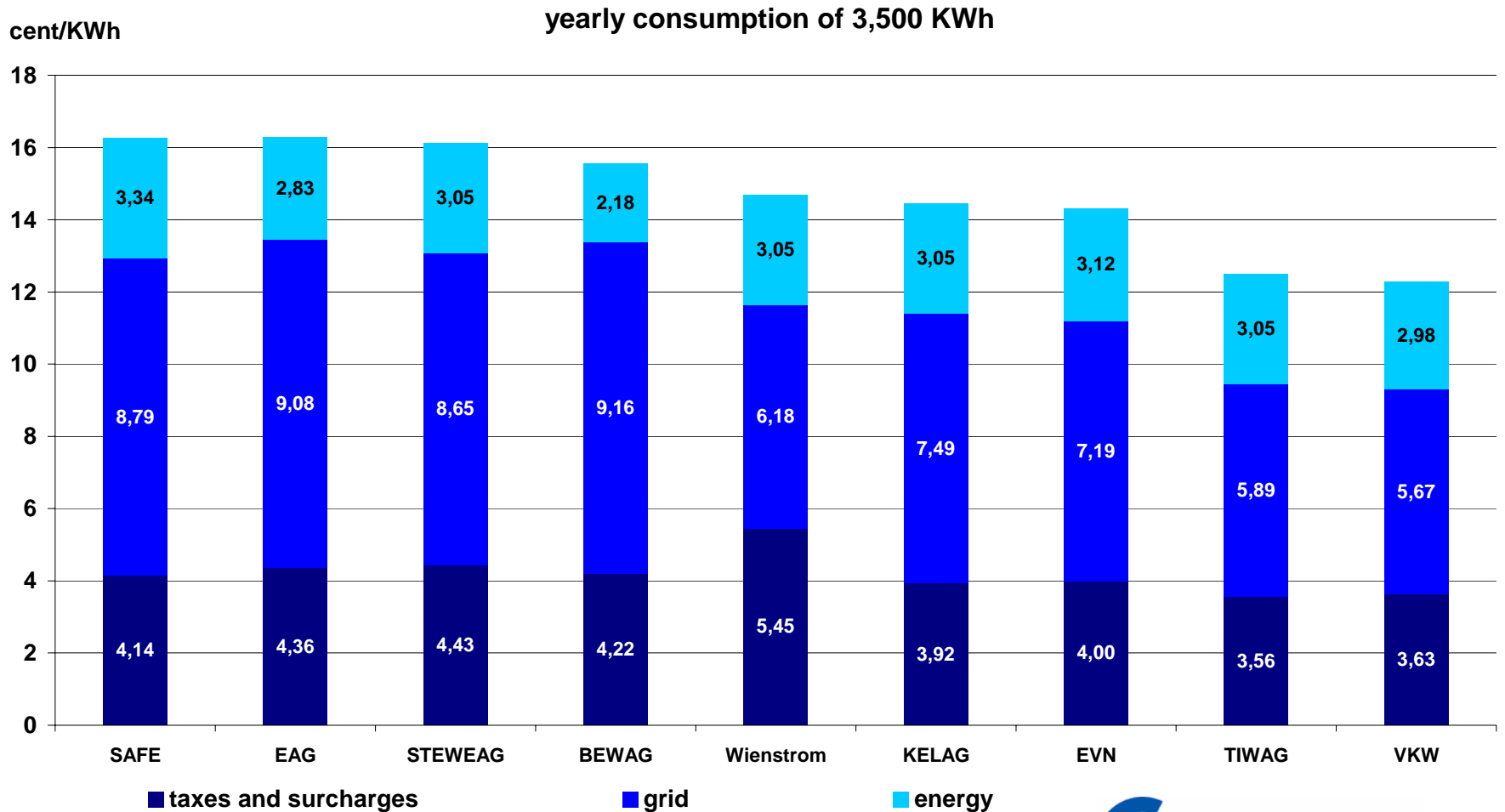
# Competition on retail markets

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- Simple switching process
- New retail brands
- strong local players
- Relatively low margins
- Modest switching behaviour
  - ◆ 100,000 customers with new supplier
  - ◆ Switching rate:
    - + 2 % of residential customers
    - + 6% of businesses



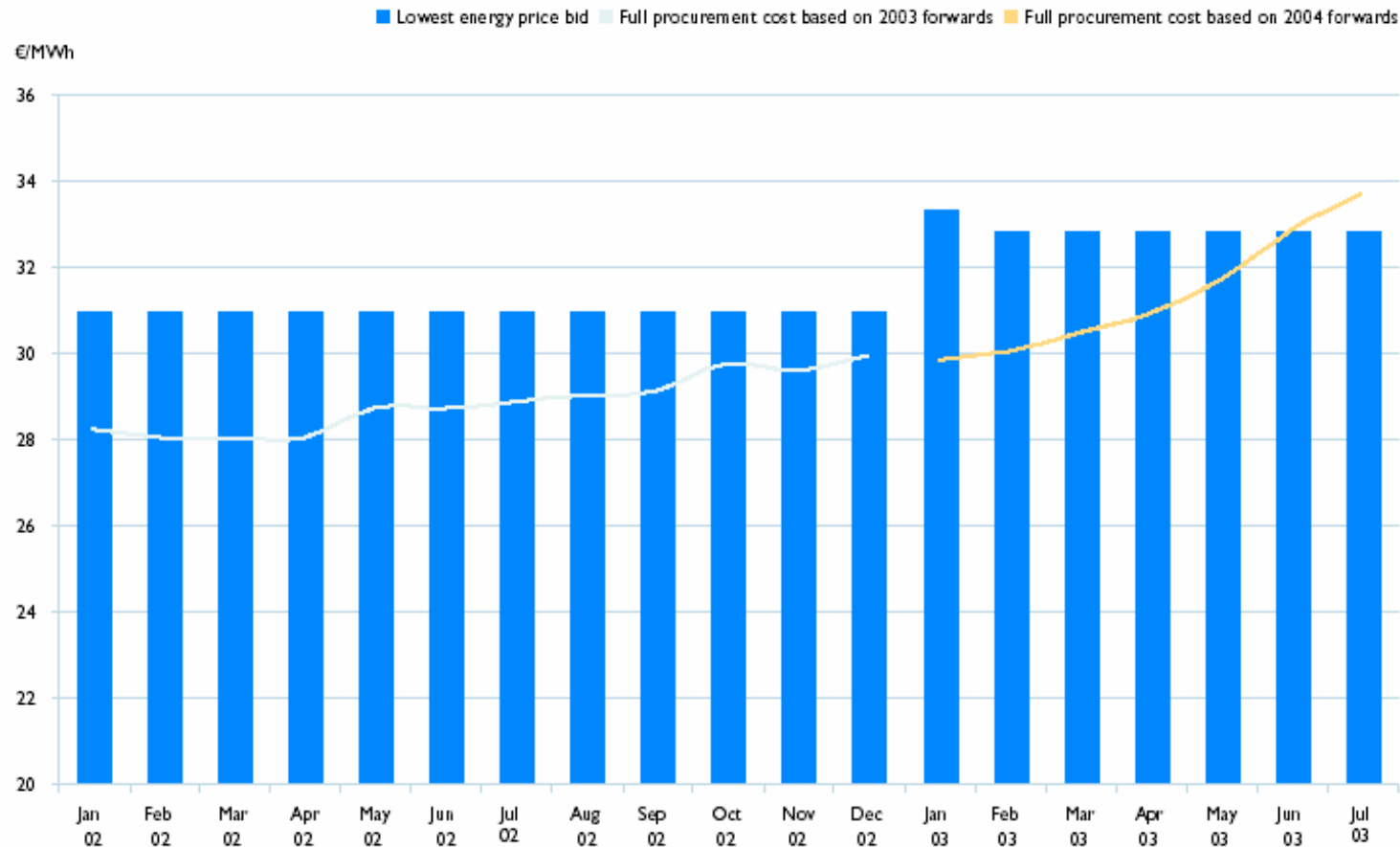
# Components of Domestic Prices



# Partly negative margins

→ Wholesale prices and energy prices offered to residential consumers  
(3,500 kWh/y)

Figure 35

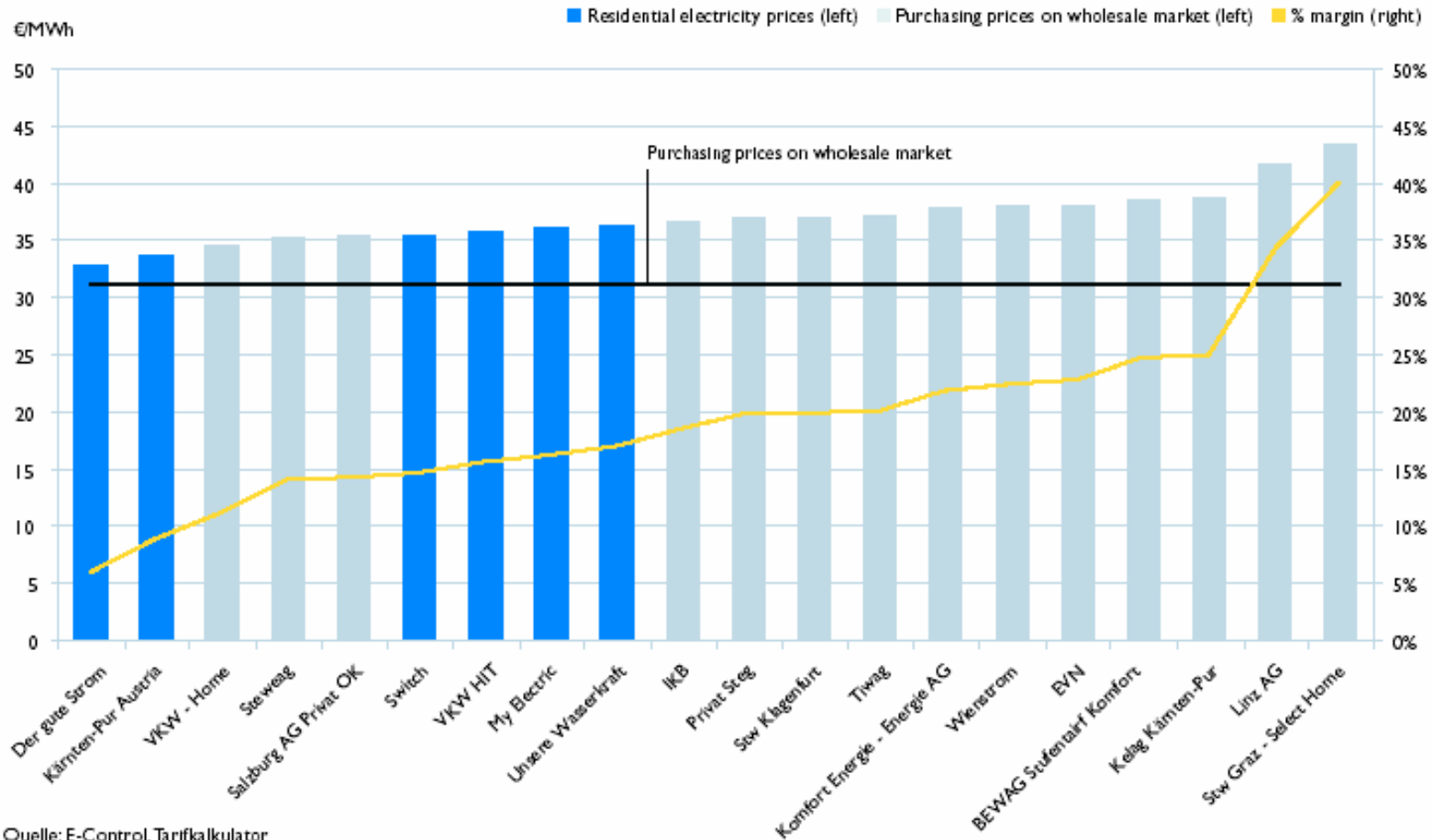


Source: E-Control

# High Divergence of Margins

→ Residential electricity prices and margins in July 2003 (pure energy prices excluding network charges and taxes; 3,500 kWh/y)

Figure 36



Quelle: E-Control, Tarifkalkulator

# Austrian Experience

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- **Upstream competition**
  - ◆ Distortions via subsidies for CHP, RES
  - ◆ Mergers
- **Wholesale Market**
  - ◆ Bilateral trading, organized balancing market
  - ◆ Power exchange – high correlation with German Power Exchange-EEX (no NTC defined)
  - ◆ Insufficient Transparency (clear advantage for incumbents)
- **Retailmarket**
  - ◆ (One of the) Lowest retail prices in Europe-> Cross subsidies from distribution business?!
  - ◆ Mergers
- **Transmission**
  - ◆ not very important – no dispatch function
- **Distribution**
  - ◆ Decisive for successful retail competition

# Evaluation

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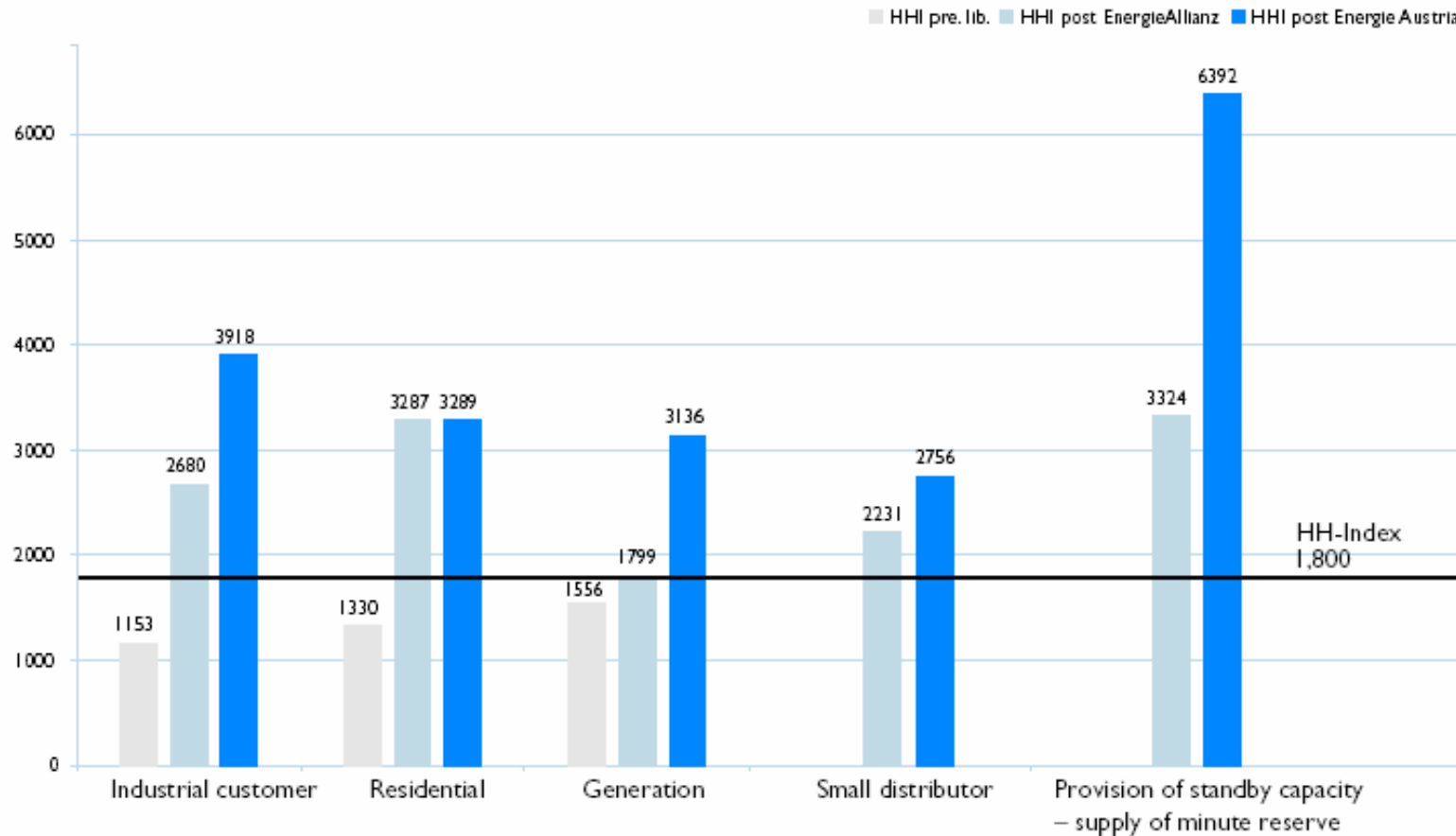
<b>Results of liberalisation</b>	<b>Electricity</b>
Downward pressure on prices, margins and costs	✓
Cost reduction programmes (e.g. workforce downsizing)	✓
Overcapacity reduction programmes (loss-making power stations)	✓
Transparent corporate structures (unbundling)	Partly
New Austrian suppliers	Few
New foreign suppliers (retail market)	I
Mergers and joint ventures	✓
Establishment of trading exchanges	✓
Increased price transparency	✓
Falling energy prices <sup>12</sup>	✓
Declining network charges	✓

Source: E-Control

# Mergers increased concentration dramatically

## → Concentration in the electricity market

Figure 9



Source: E-Control

# Hypotheses for Ranking Solutions

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1. Current market situation in Europe is dominated by high market shares on national level
2. Divestiture is not a feasible solution at the moment
3. Integration is the only way to achieve workable competition
4. There is a potential conflict between two approaches: top-down integration vs. bottom-up integration
5. Integration of national markets is only starting
6. There is a window of opportunity for bottom-up integration → if not successful EC will start top-down approach

# Conclusions on Ranking Solutions

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- Priority #1: Political Agreement on Extending the (wholesale-)Market
- Priority #2: Level Playing Field via
  - ◆ Transparency
  - ◆ Harmonization of Subsidy Mechanisms (Green energy, CHP,...)
  - ◆ Harmonization of G components
- Priority #3: Market Design
  - ◆ Efficiency of the market (efficient trade, volatility, allocation of interconnection capacity,...)
- Priority #4: Integration of Balancing Markets
- Priority #5: Integration of Retail Markets

# Contact

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