

# Connecting European Energy Markets

Warsaw Power Ring , 5th December 2007

Maik Neubauer, COO - European Energy Exchange



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Introduction to EEX



2

The European Energy Market



3

Market coupling in practice



4

Energy Exchanges in Europe



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Introduction to EEX



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The European Energy Market



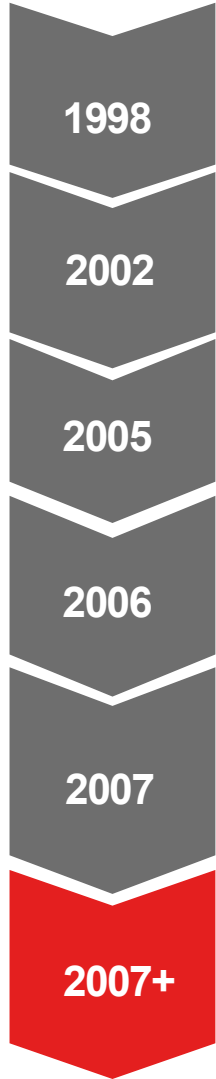
3

Market coupling in practice

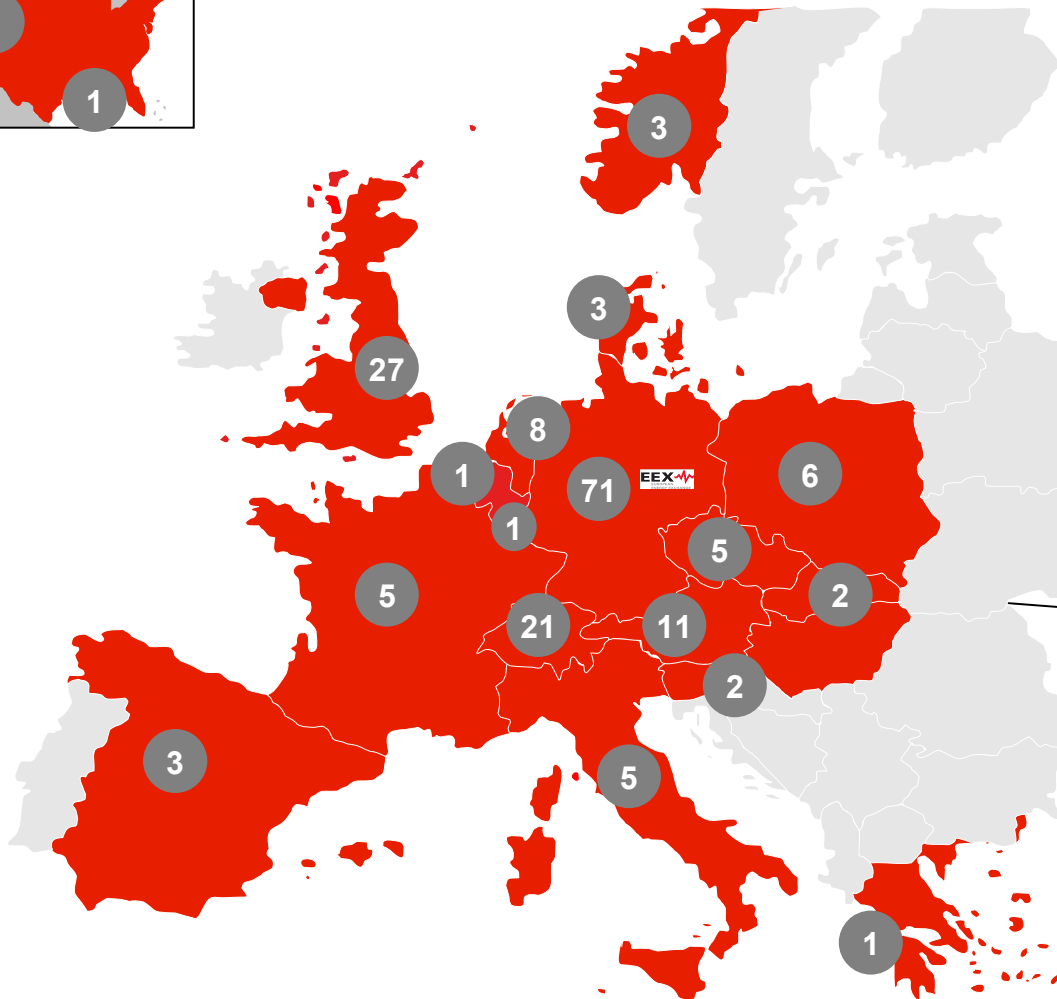
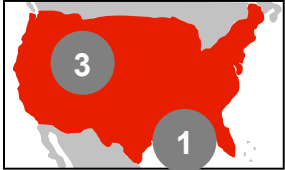


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Energy Exchanges in Europe



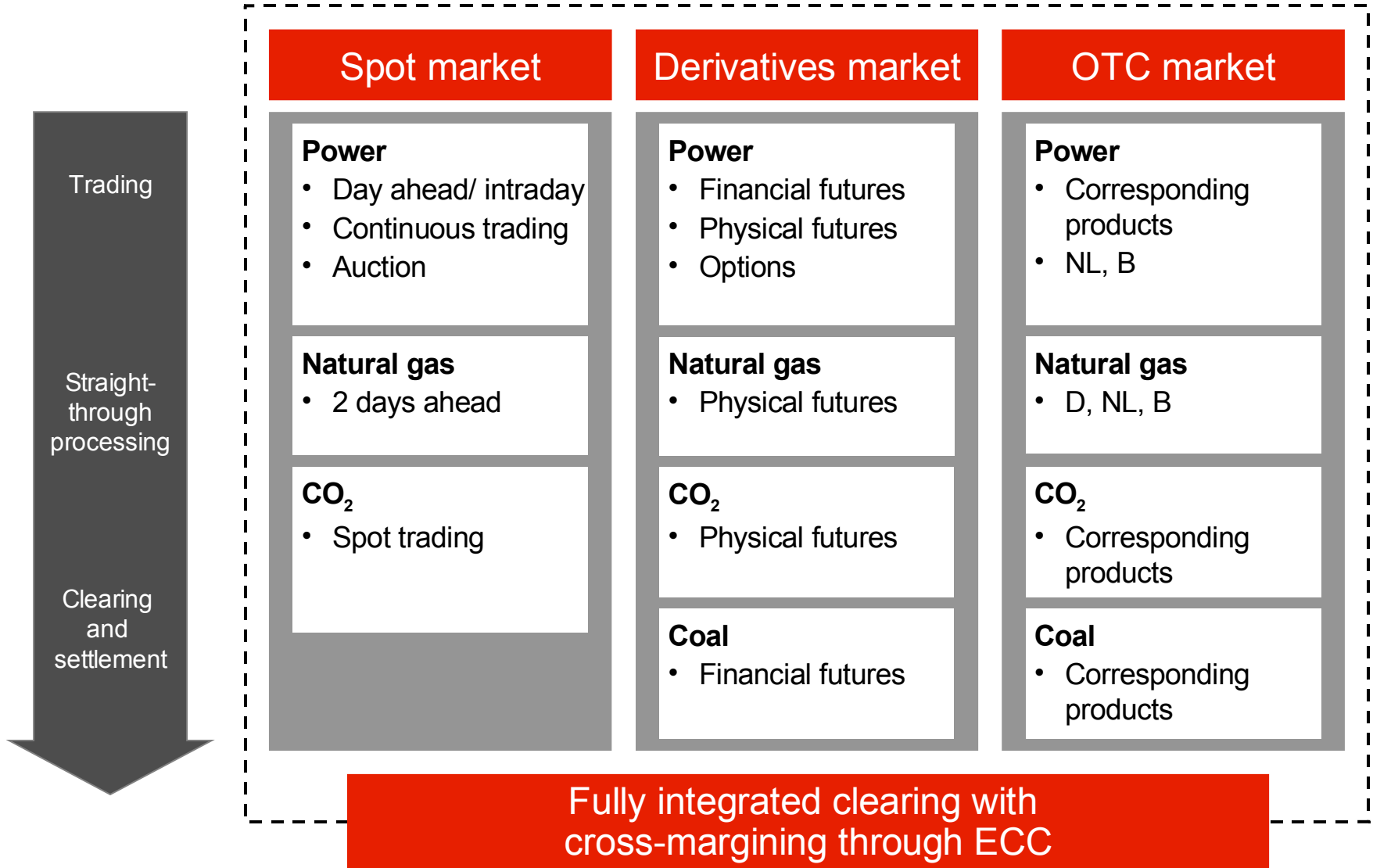
1998	Liberalization of the European Energy Markets in 1998	
2002	Merger of the former Leipzig Power Exchange LPX and the EEX, Frankfurt, to the European Energy Exchange AG	
2005	Start of Trading of Emission Allowances within the European Emission Trading System (EU ETS)	
2006	Spin-off of the EEX Clearing business into the subsidiary European Commodity Clearing AG	
2007	Launch of the German Gas Exchange at EEX	
2007+	<p>Further Spin-offs within the European Growth Strategy of EEX</p> <p><u>Spotmarket</u> : EEX Power Spot GmbH</p> <p><u>Futuresmarket</u> : EEX Derivatives Markets GmbH</p>	



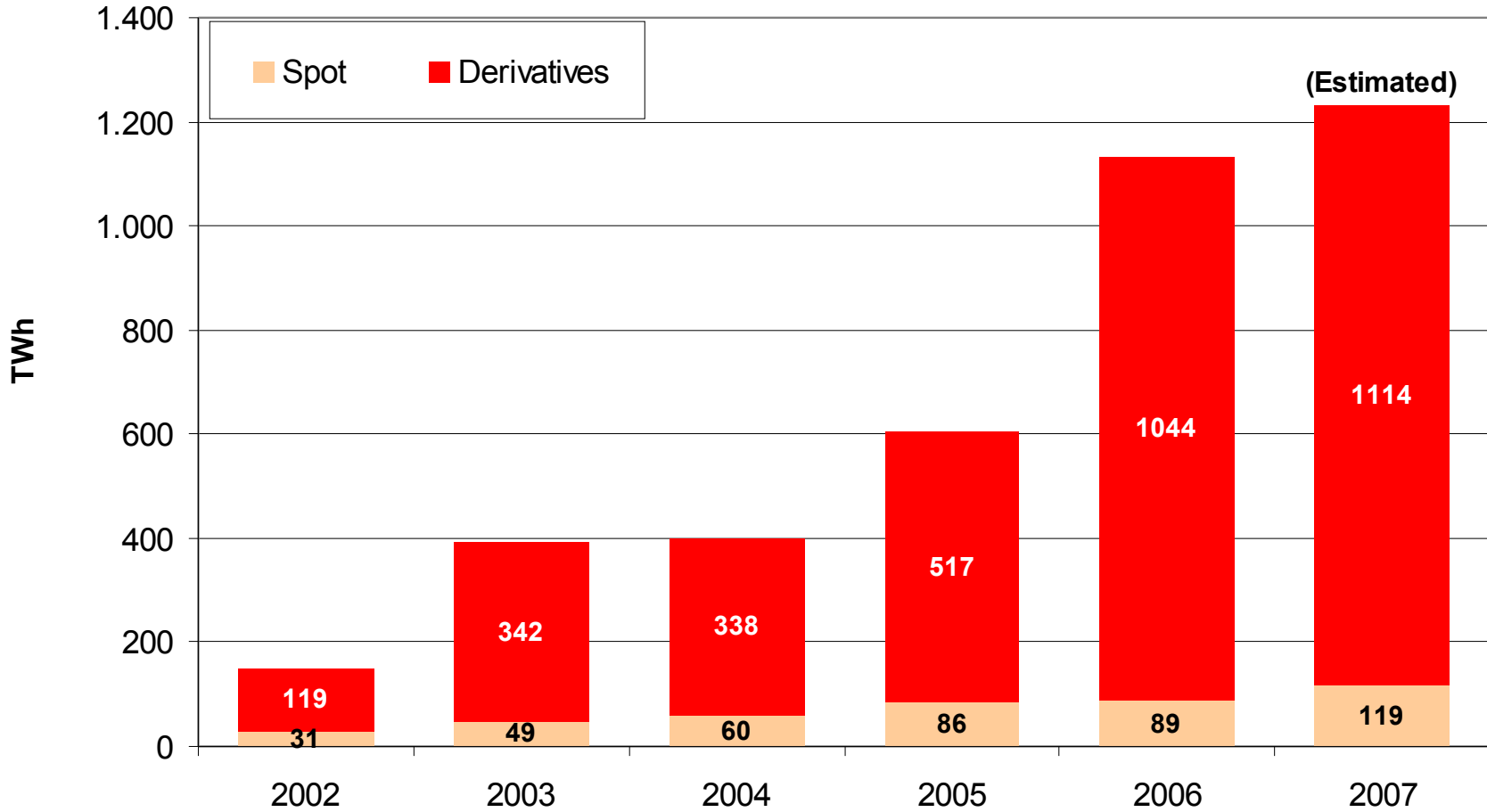
179 participants from  
19 countries

- 156 Spot market participants
- 97 Derivatives market participants
- 186 OTC clearing participants
- 15 General clearing members
- 7 Brokers
- 4 Market makers
- 7 Transmission system operators

as of 23 November 2007



# Power trading volumes are increasing steadily

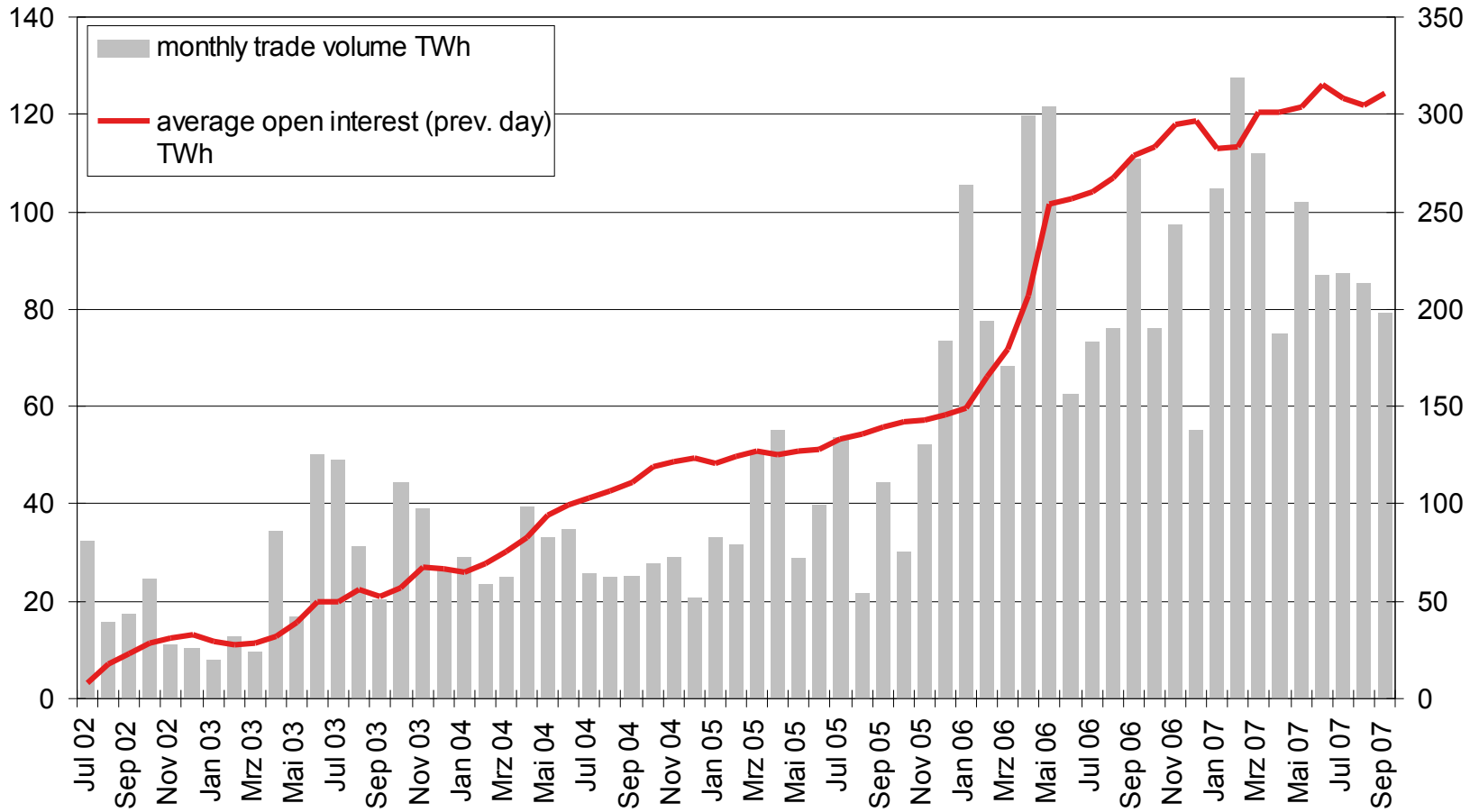


# Open interest is rising



TWh/month

open interest in TWh







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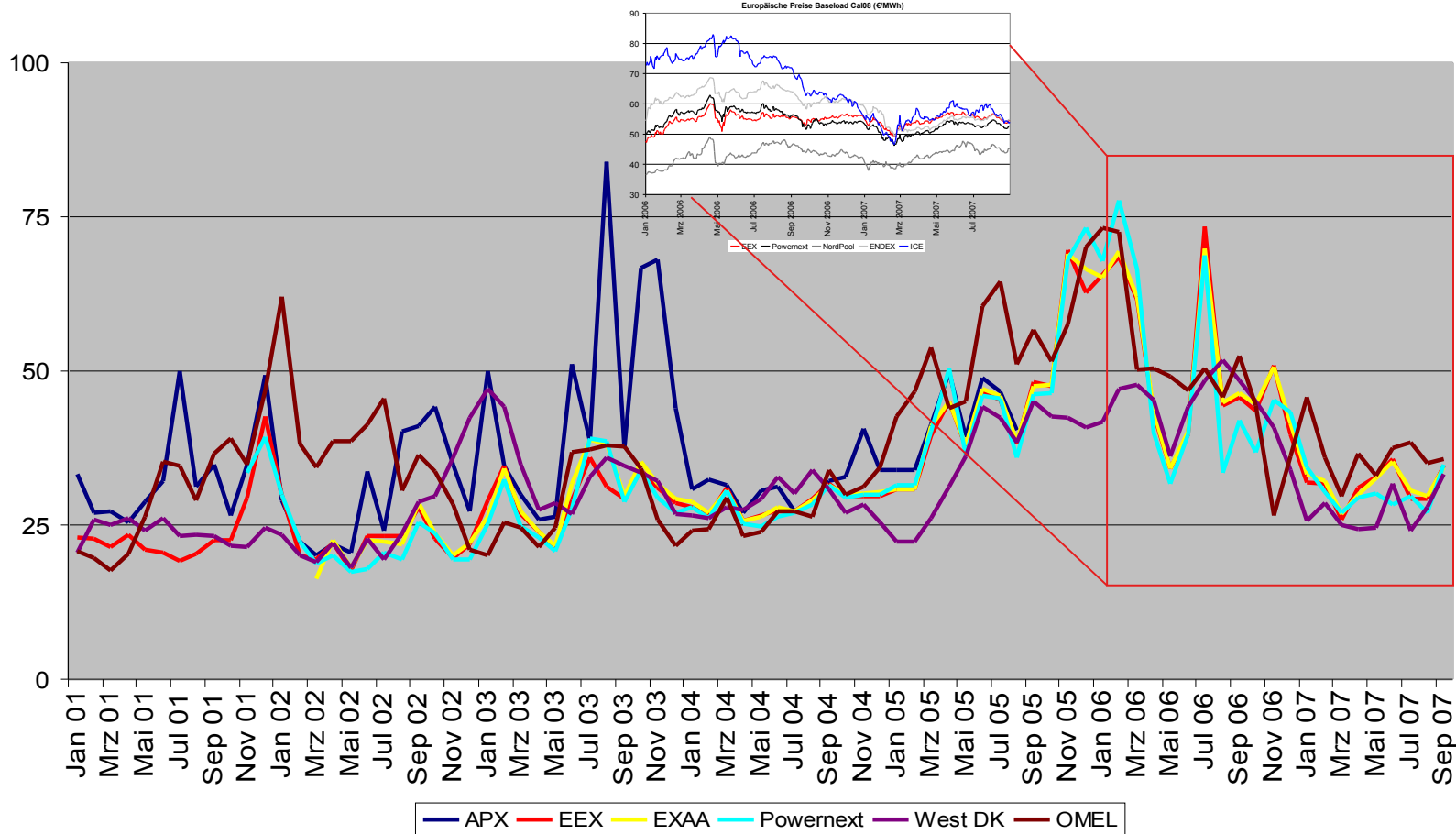
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Energy Exchanges in Europe

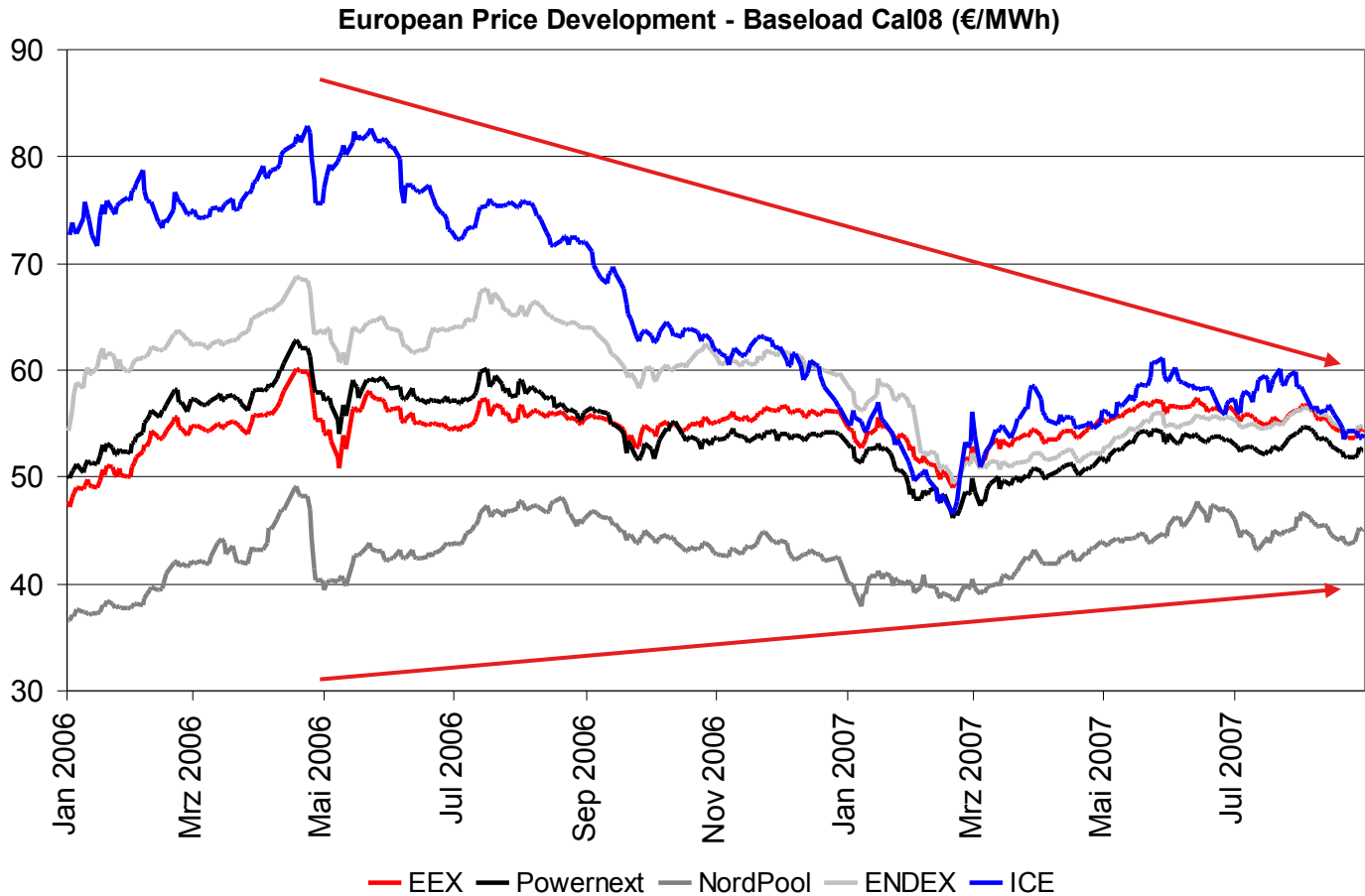


€/MWh

## Monthly average price for day-ahead Baseload



as of 30 September 2007



as of 30 September 2007

# The European Vision – One internal market for Energy



# The European Vision – One internal market for Energy

“

In order to achieve a single European network from the perspective of the network user, there is a need for appropriate harmonization of market design, especially regarding methods having an effect on cross border trade.

Action is needed, wherever current capacity is insufficient, to develop interconnector-capacity as a necessary condition for the development of competition and the integration of markets.

These aims can only be achieved through increased cooperation between national regulators inducing increased cooperation among TSOs across national borders within a well-defined procedural framework. ”

Excerpt from EU Sector Inquiry ,  
Summary Page 329, January 2007





- Study group „Open Market Coupling“ with the German regulator (“Bundesnetzagentur”)
- Participation of regulator, 4 German TSOs, EEX, VDN, VDEW, ViK & EFET
- Focus on comprehensive approach addressing technical, regulatory and economic questions.
- Support from external legal, technical and economical experts.
- 3 studies have been conducted:
  - Legal
  - Technical
  - Economical Impacts



## Economical study

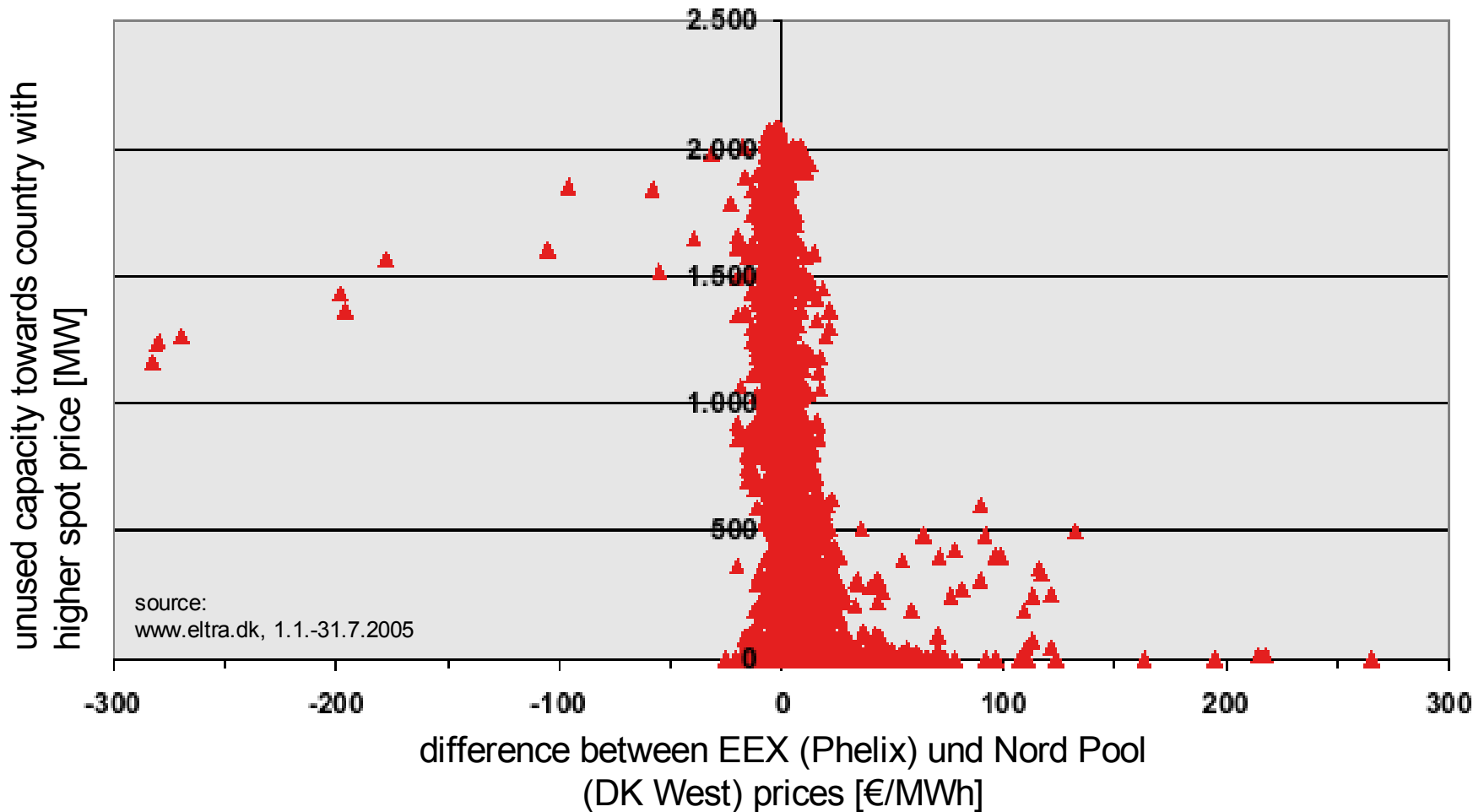
### Scope

- Criteria for evaluation: welfare
- Model: France (Powernext), Netherlands (APX) and Germany (EEX)
- Scenarios: a) explicit auction, b) implicit auctions
- Impact of intraday market on study results
- Impact of load flow on study result

▶ Additional welfare through market coupling:  
between **15** and **50 Mio. €/year**



Market coupling is particularly useful when price differences are rather small





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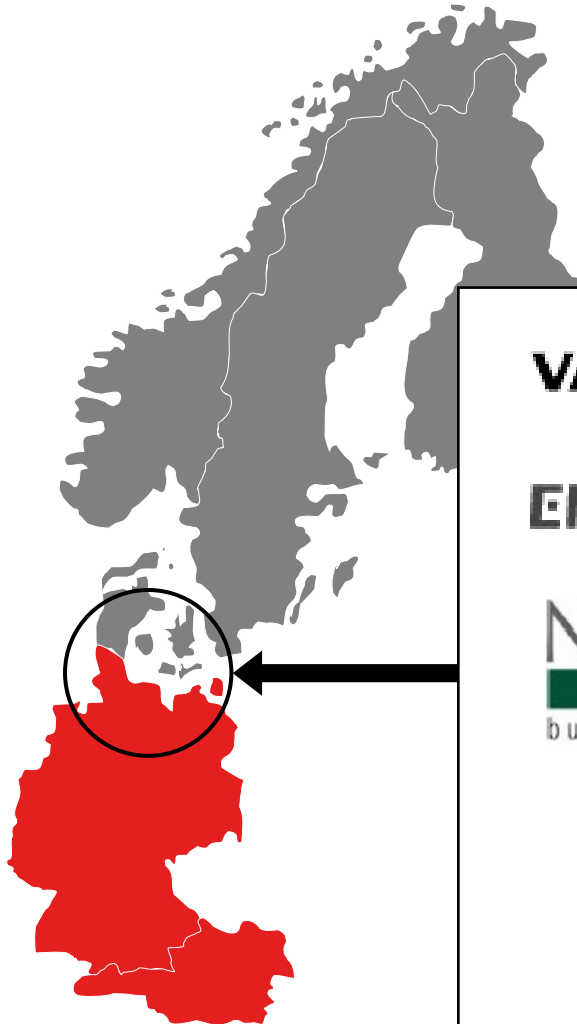
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**VATTENFALL** 

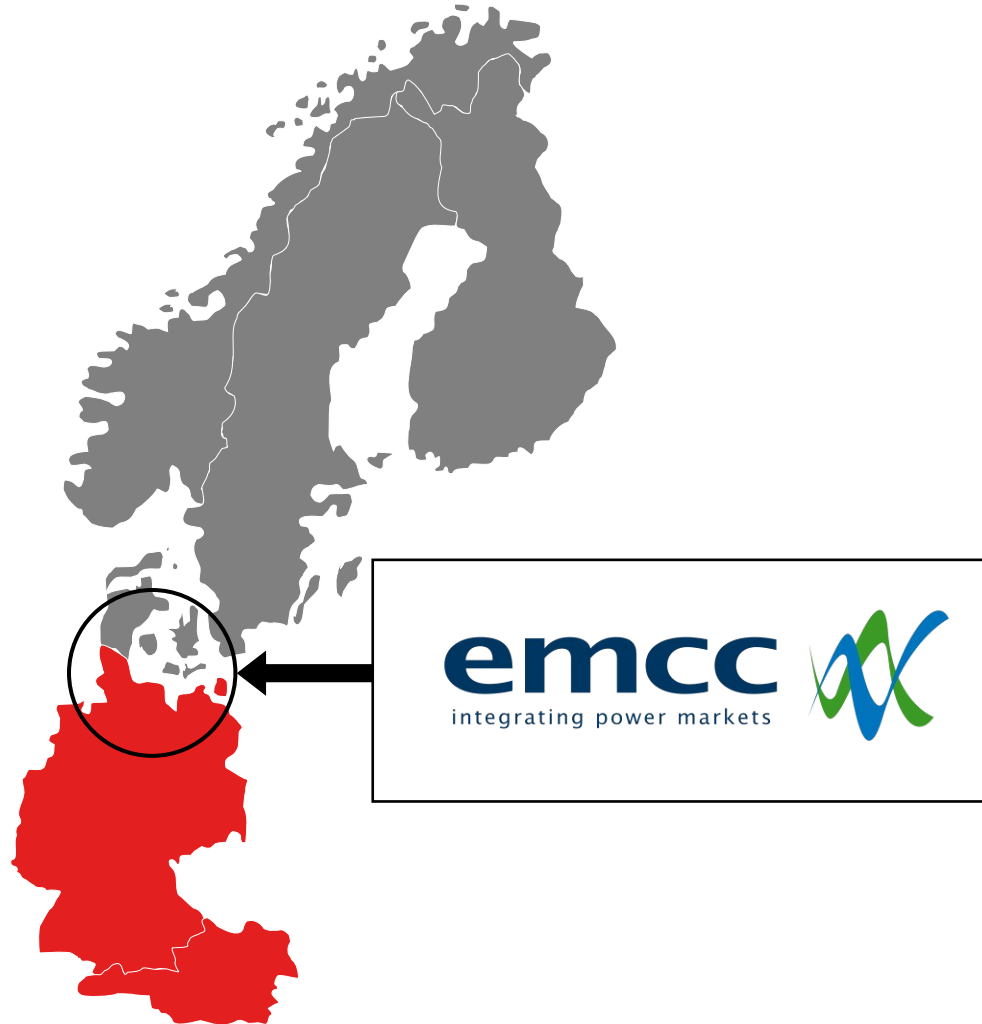
**ENERGINET/DK**

**NORD POOL**

**NORD POOL SPOT AS**  
building a secure market

**EEX**  
EUROPEAN  
ENERGY EXCHANGE

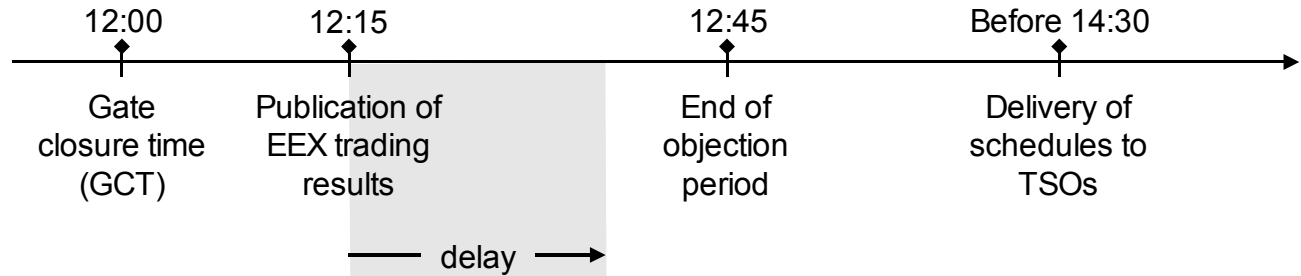
- In line with EU regulation 1228/2003/EC, the involved parties adopted a **Memorandum of Understanding** on 27 October 2006
- Aim is introduction of **implicit auctions** for daily cross-border capacity allocation for both interconnectors between **Germany and Denmark**
- Co-operation **open** to other TSOs and power exchanges according to predefined rules
- Introduction of **central auction office** for operational tasks



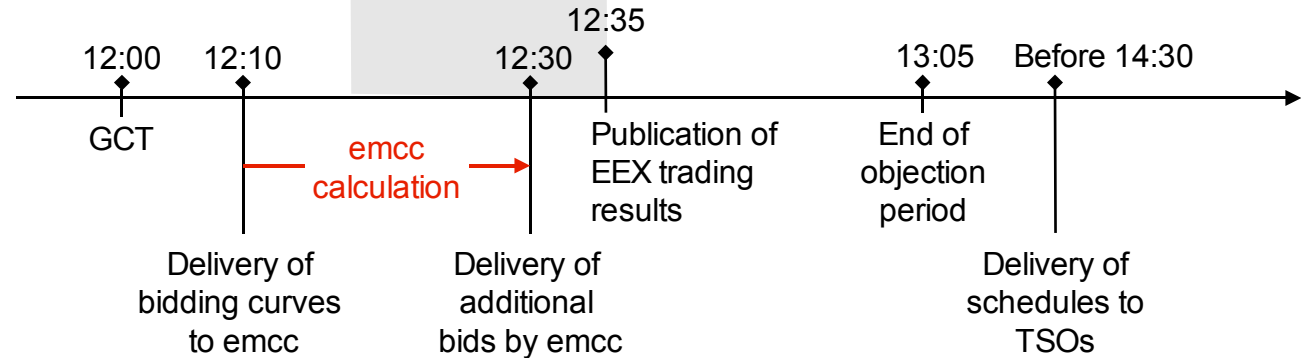
- emcc will perform volume coupling between Germany and Denmark
- emcc will be a regular company located in Hamburg
- emcc's clients will be TSOs and commercial capacity holders who provide their capacities for market coupling purposes
- emcc will be financed by a cost-based service fee
- emcc welcomes other capacity holders to use emcc services

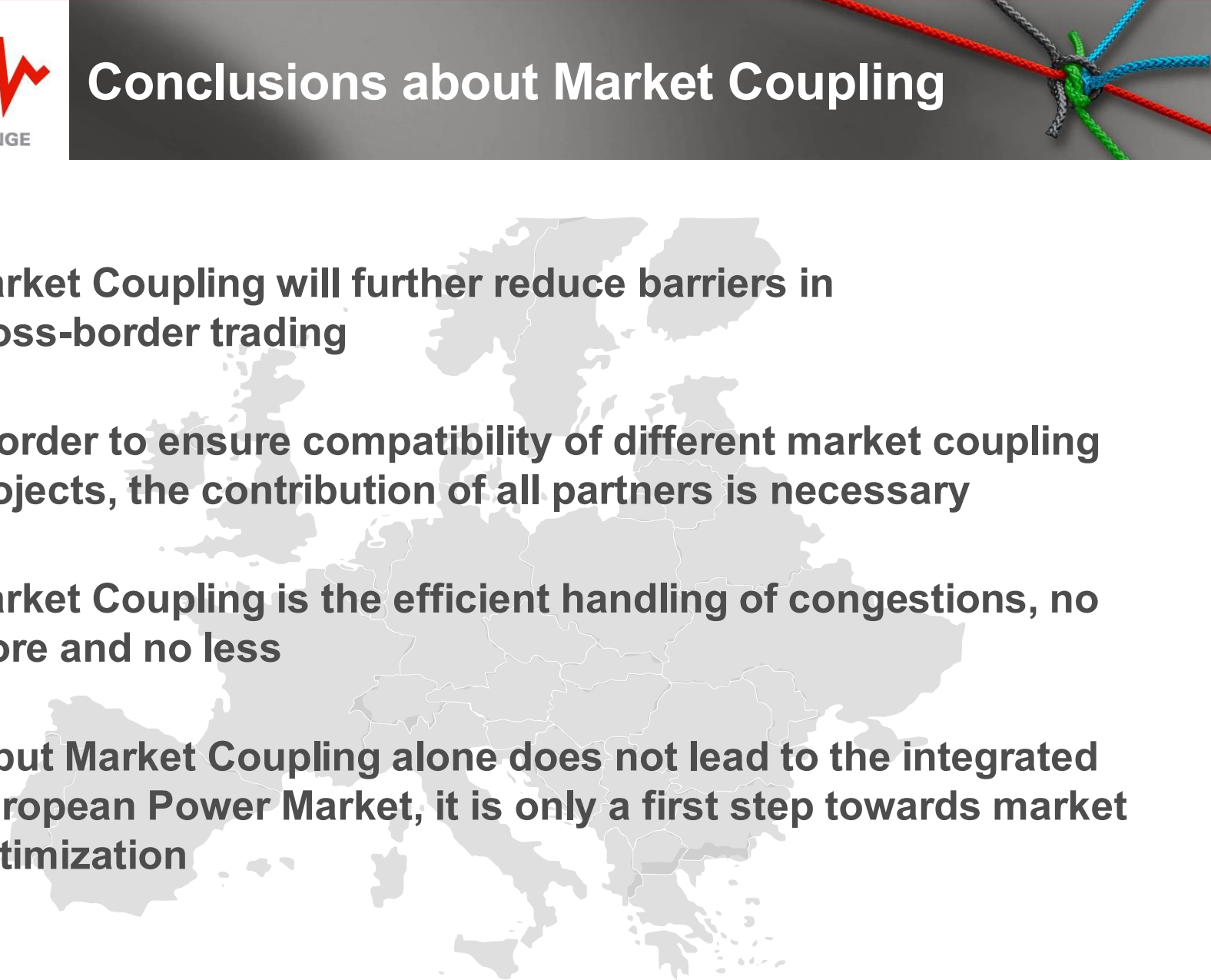


**EEX schedule today**



**EEX schedule with emcc market coupling**



- 
- 2. Market Coupling will further reduce barriers in cross-border trading**
  - 3. In order to ensure compatibility of different market coupling projects, the contribution of all partners is necessary**
  - 4. Market Coupling is the efficient handling of congestions, no more and no less**
  - 5. ...but Market Coupling alone does not lead to the integrated European Power Market, it is only a first step towards market optimization**

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# Energy Exchanges in Europe – Need for Consolidation ?

**IMAREX**

Intercontinental  
Exchange



Tender for establishing  
a power exchange in UK

ENDEX European Energy  
Derivatives Exchange N.V.



APX B.V.



Belpex SA



Powernext SA



Operador de Mercado  
Ibérico de Energia  
(Pólo Português), SA



Operador del Mercado  
Ibérico de Energía –  
Polo Español, S.A.



**BORSA ITALIANA** Borsa italiana

NORD PCOL



Nord Pool Spot  
Nord Pool ASA

European Energy  
Exchange AG

Towarowa Gielda  
Energii SA

Operátor trhu s elektrinou,  
a.s.

Energetická  
Burza Praha

EXAA Abwicklungsstelle  
für Energieprodukte AG

Operatorul Pietei de  
Energie Electrica  
OPCOM SA

Borzen, organizator trga  
z elektricno energijo, d.o.o.

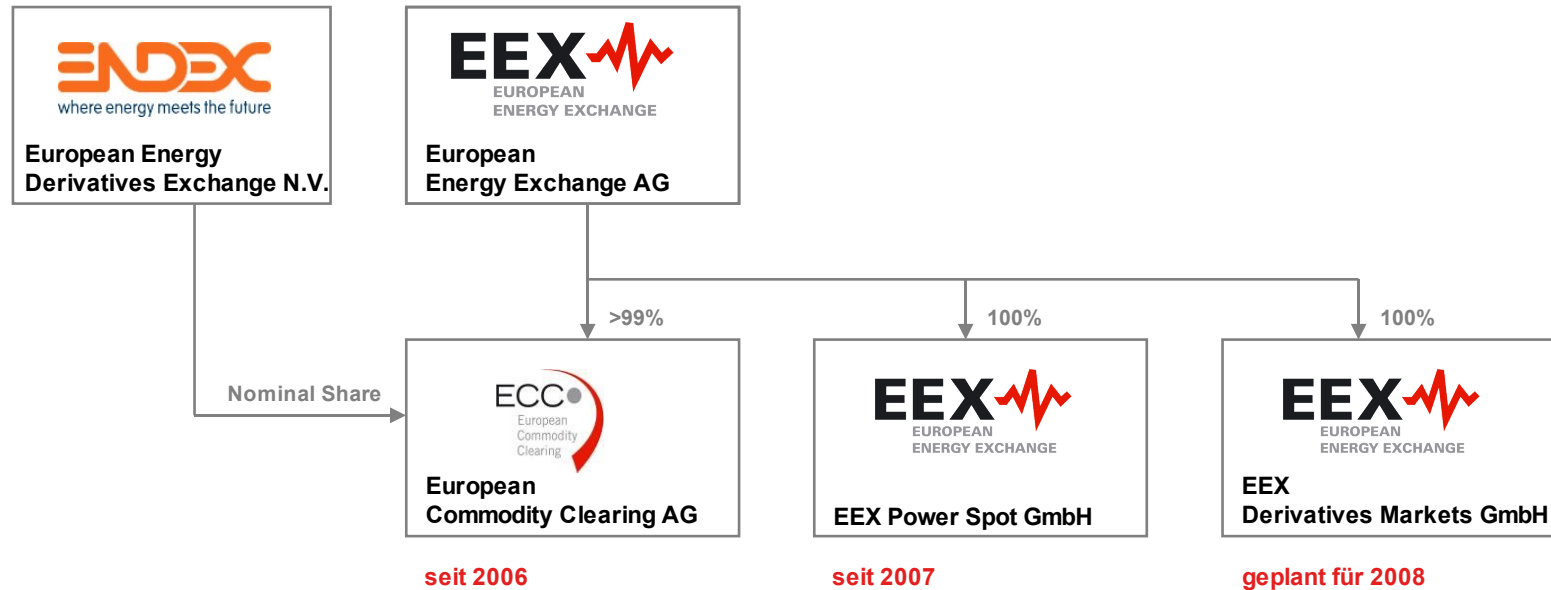
Gestore del mercato  
elettrico S.p.a.

TSO-initiative in Hungaria

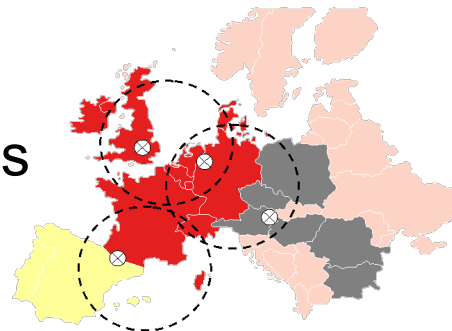


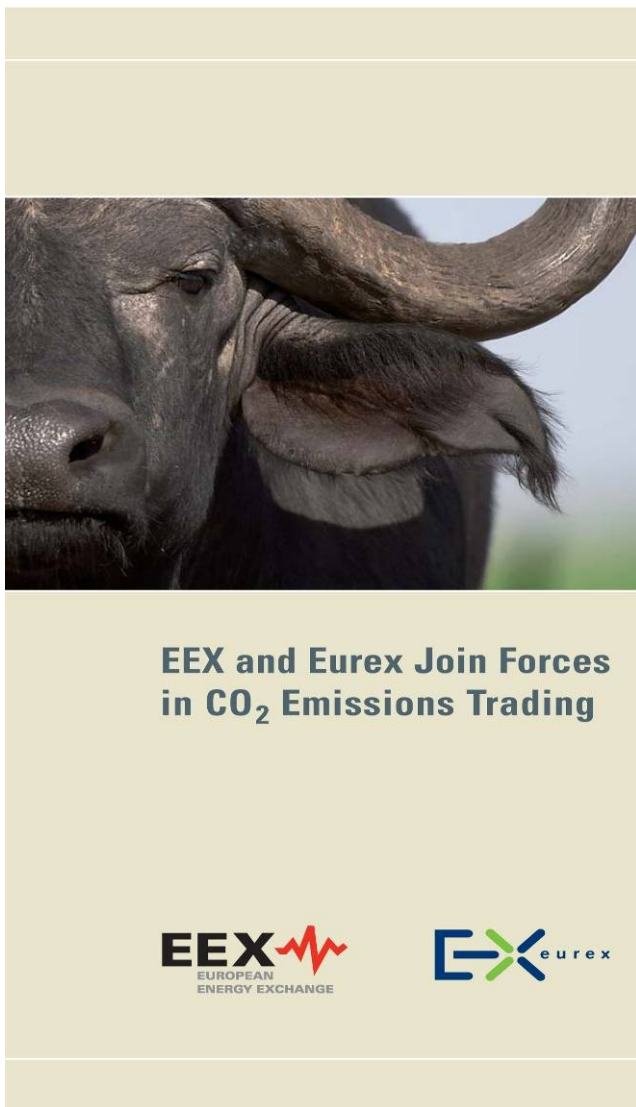
- Consolidation is in front of us
- Liquid Exchanges should deliver the price signals for the European OTC Markets
- ‚Coopetition‘ between Exchanges and Brokers
- Technology will be an important driver of efficient markets
- Professional Clearing Houses will be necessary for efficient and secure commodity markets
- Energy Markets will be regulated like the international Financial Markets in the near Future
- Energy Markets will be driven by Financial Markets Players which will insist on efficient, transparent and regulated Exchanges in Europe
- There will be room for 3-4 Energy/Commodity Exchanges in Europe to cover the different markets for
  - Oil / Coal / Natural Gas
  - Power / Emissions
  - Clearing & Settlement Services / Cross-Margining & Risk Services





Open for Cooperations





## Started Today:

# EEX and Eurex Product Cooperation in International Emissions Trading



Mr. Wulf Bernotat

„We would appreciate an integrated Exchange for Energy Products in Europe“

„EEX may be a good model for an integrated Energy Exchange in Europe. I would prefer an Exchange organization with multiple locations throughout Europe to create a pan-European and efficient Energy Market. “



Mr. Andris Piebalg