

Trends in the European electricity sector and outlook on the Greek market



European Federation of Energy Traders

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“Energy and Development 2014”

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Secretary General



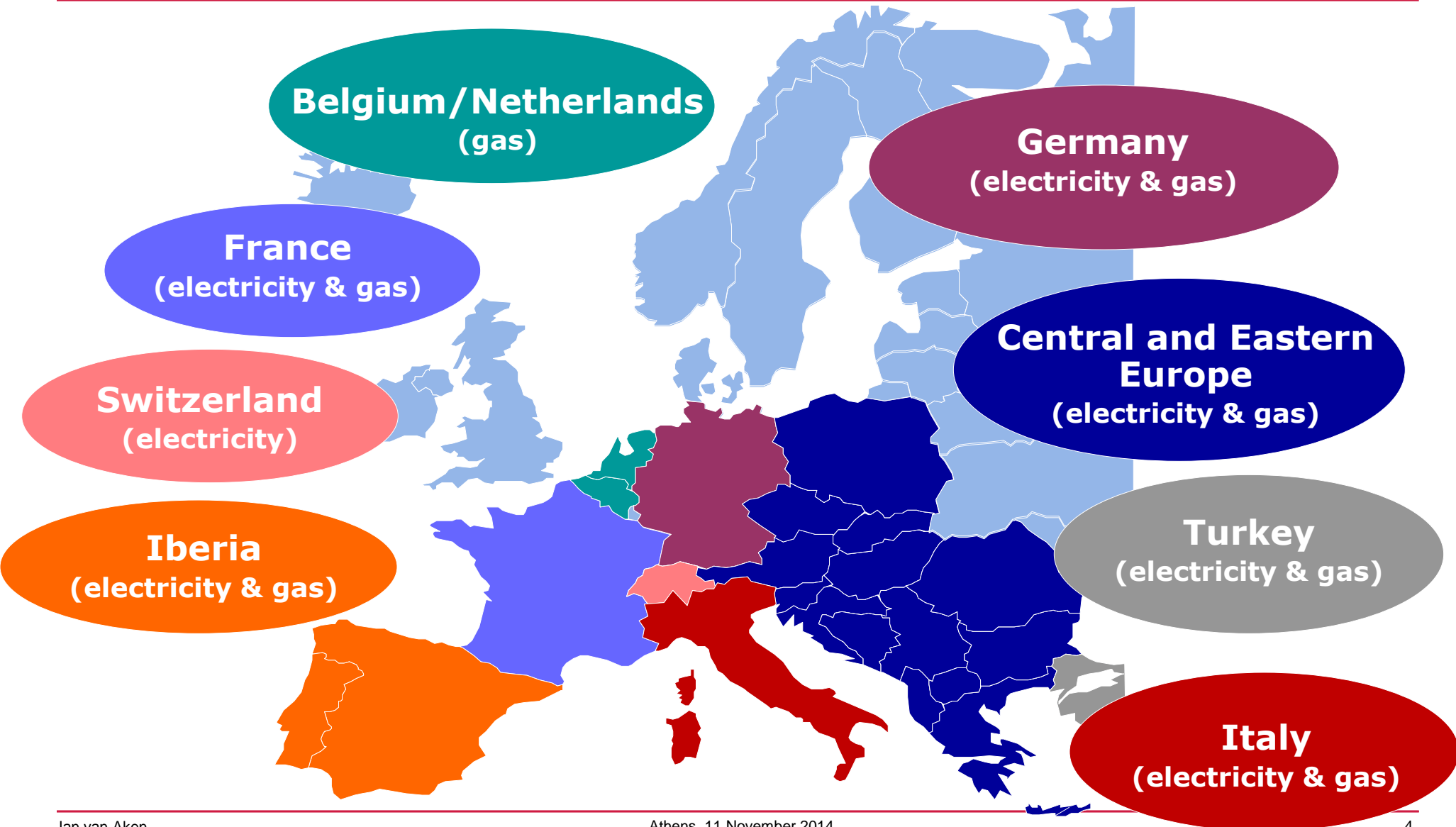
EFET: A wide variety of Member Companies.....



... all committed to the European single energy market



National/ Regional Task Forces



- A liquid wholesale electricity market delivers benefits
- Rare price spikes occur without affecting market confidence
- The OTC market remains a driver for competition
- An open market has not led to blackouts or any insecurity
- Wholesale prices are not responsible for rising customer bills

Greek Market

- Centralised mandatory pool
- Units bidding
- Low price cap (150€/MWh)
- Cost recovery mechanism
- “Day-Ahead balancing market”
- No futures or OTC forward market

EU Target model

- Decentralised, voluntary market
- Portfolio bidding
- No or high price caps
- Marginal price
- Distinct intraday and balancing markets
- Hedging opportunities through futures and forwards

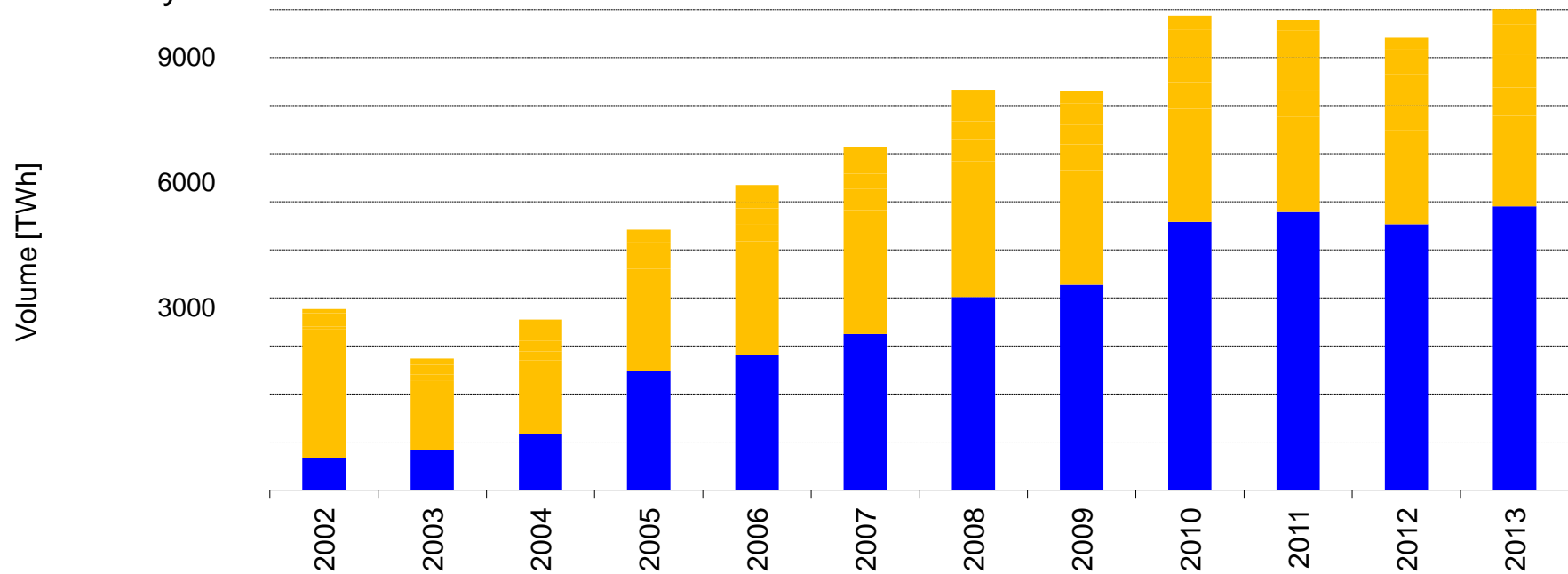
- Generators, suppliers and consumers as market participants can **adjust their volume** and price positions near real time
- All market participants are able to **hedge their forward exposures** as needed by trading futures and options
- New market participants face **low barriers to entry**
- The market delivers **robust price and investment signals**
- Market participants are not squeezed and **security is assured**

Continental European markets remain liquid in spite of the economic downturn since 2008



- Increasing trading volumes until 2010
- Range-bound trading volumes from 2011 - 2013

■ Rest of Continental Europe
■ Germany



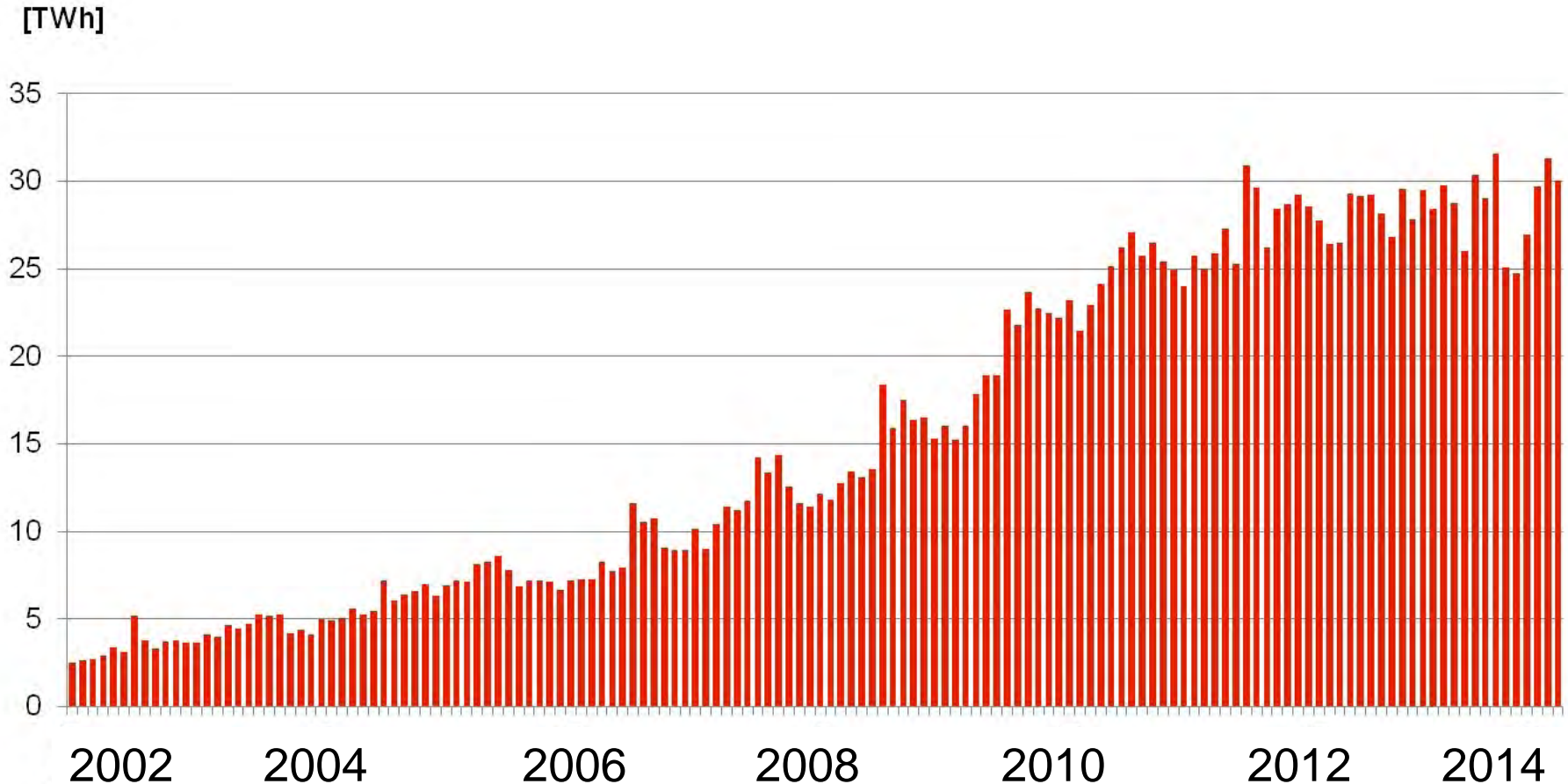
Source: RWE Supply & Trading

* Figures are based on quantifiable trading volumes from exchanges and electronic OTC platforms. Bilateral or „voice“ OTC trades are not considered.

An attractive spot market depends on:

- Transparency of bids and offers and price fixings, leading to an efficient price discovery mechanism
- Non-discrimination between participants
- The participation of even the largest and vertically integrated generators and suppliers
- Transparency about the availability and use of underlying infrastructure
- Objective rules regarding congestion management, re-dispatch, use of inside information and competition

Monthly volumes on EEX/ EPEX Spot 2002 - 14

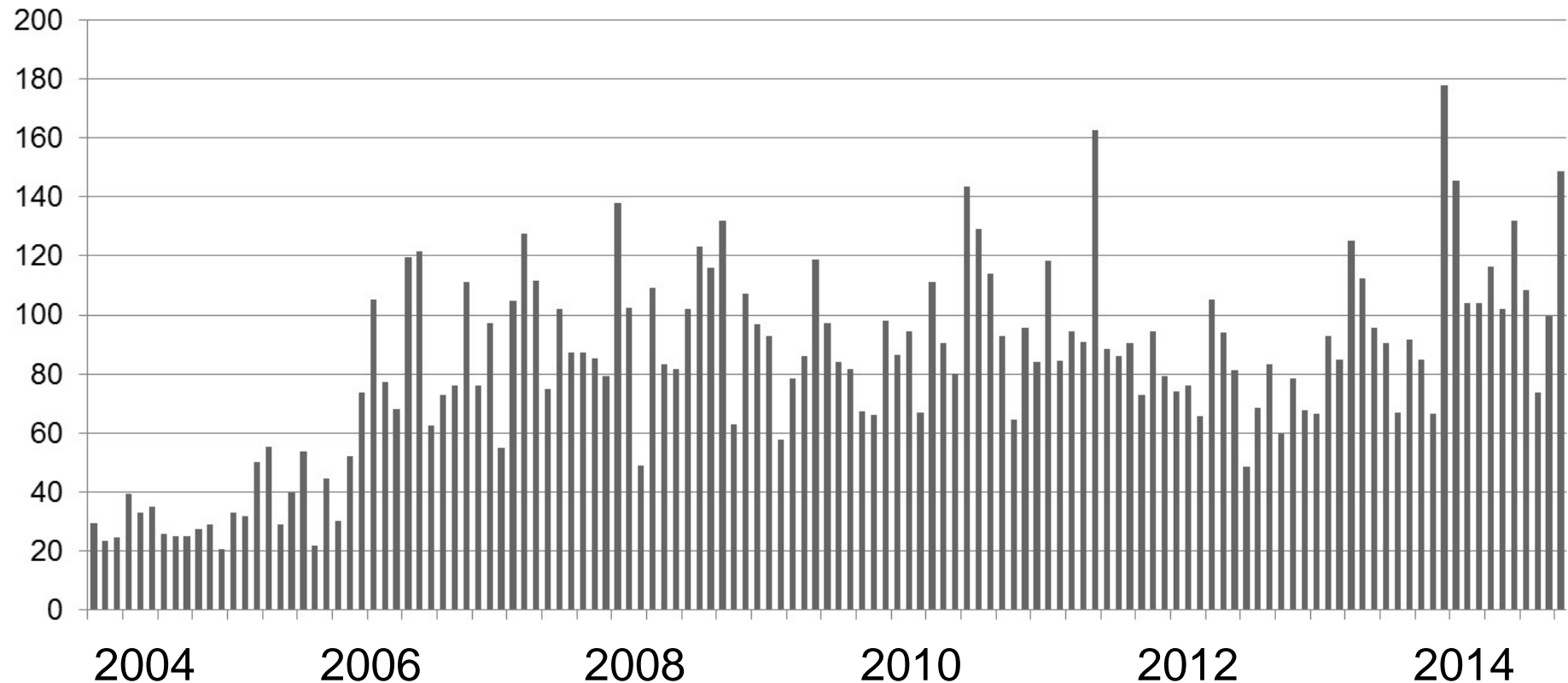


All price areas, but greatest volumes in Germany

Monthly volumes in EEX futures and options 2004 - 14



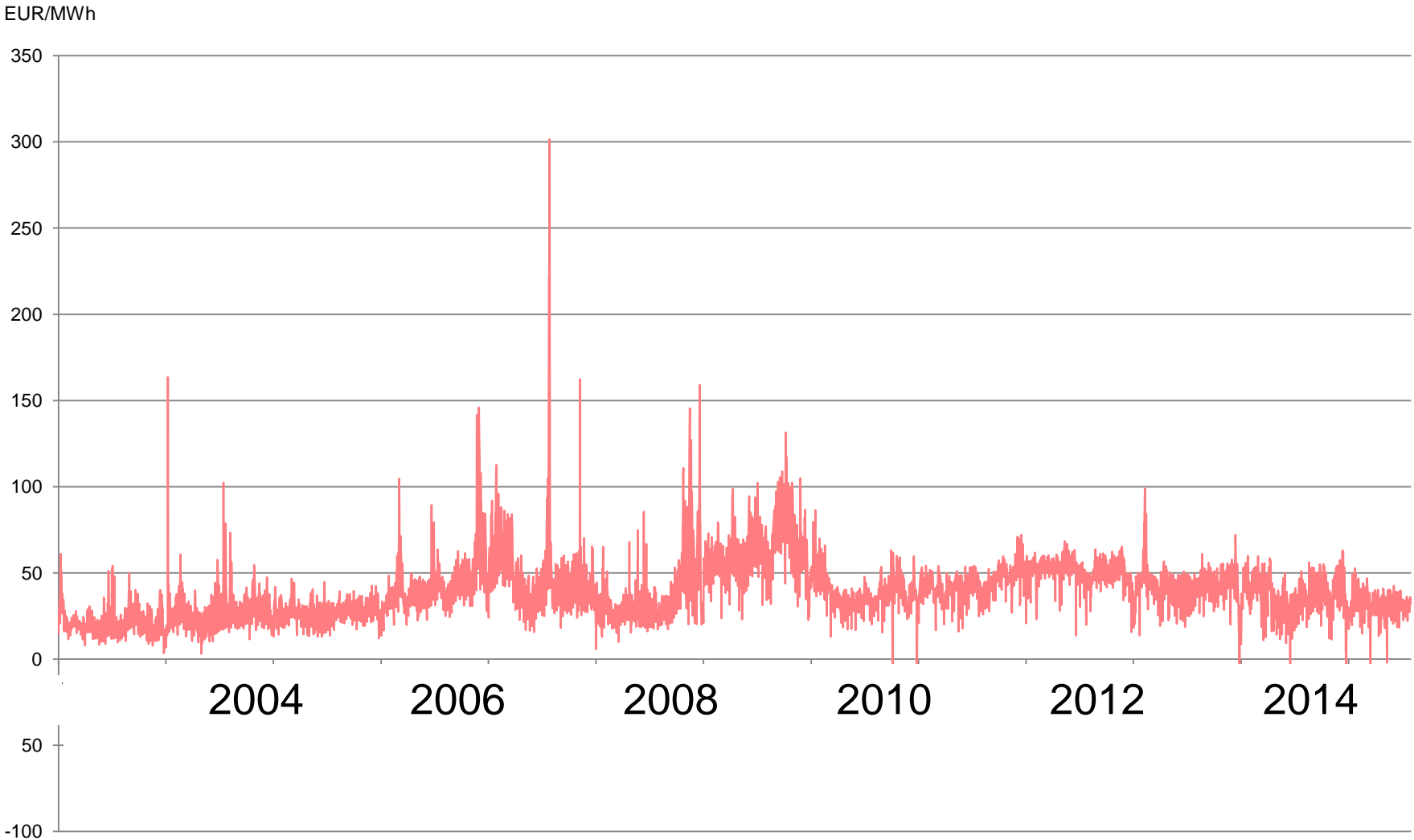
in TWh



The forward market can protect against volatility of daily spot price

- Volatility in European wholesale power prices and occasional price spikes **do not jeopardize liquidity** of the market nor confidence in the pricing mechanism
- Spikes are mostly caused by outages or exceptional events
- Occasional price spikes are **necessary signals** in a functioning market to identify supply and demand imbalances or problematic grid bottlenecks
- Market participants may **hedge their exposure** to varying spot prices (including spikes) using forwards and futures
- Regulatory intervention such as **price capping might lead to market distortion**

Power price development in the EEX/ EPEX Spot day ahead auction: German market area



— Phelix Day Base

Source: EEX

Frequency of price spikes (> 150 €/ MWh) EEX/ EPEX Spot 2000 - 13



Year	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Number of hours >150 €/MWh	1	30	20	37	0	101	64	79	87	2	0	0	8	0
Number of hours >1000 €/MWh				1			3							



Highest price: **2436.63 €/MWh**, 7th November 2006, 6.00 to 7.00 pm

The brokered OTC market remains an important driver of competition and liquidity



- Trading takes place at any time
- Low cost
- Concentrates trading liquidity in standard products
(double volumes traded from initial quotes on screen)
- Efficient and continuous price discovery mechanism which can respond to new information
- Ability to tailor transactions to needs
- Especially useful for forward transactions

Good market design allows for OTC and exchange-based trading

OTC & exchange-based trading countries

- GERMANY
- FRANCE
- CZECH R.
- HUNGARY
- SLOVAKIA

Exchange-based trading countries

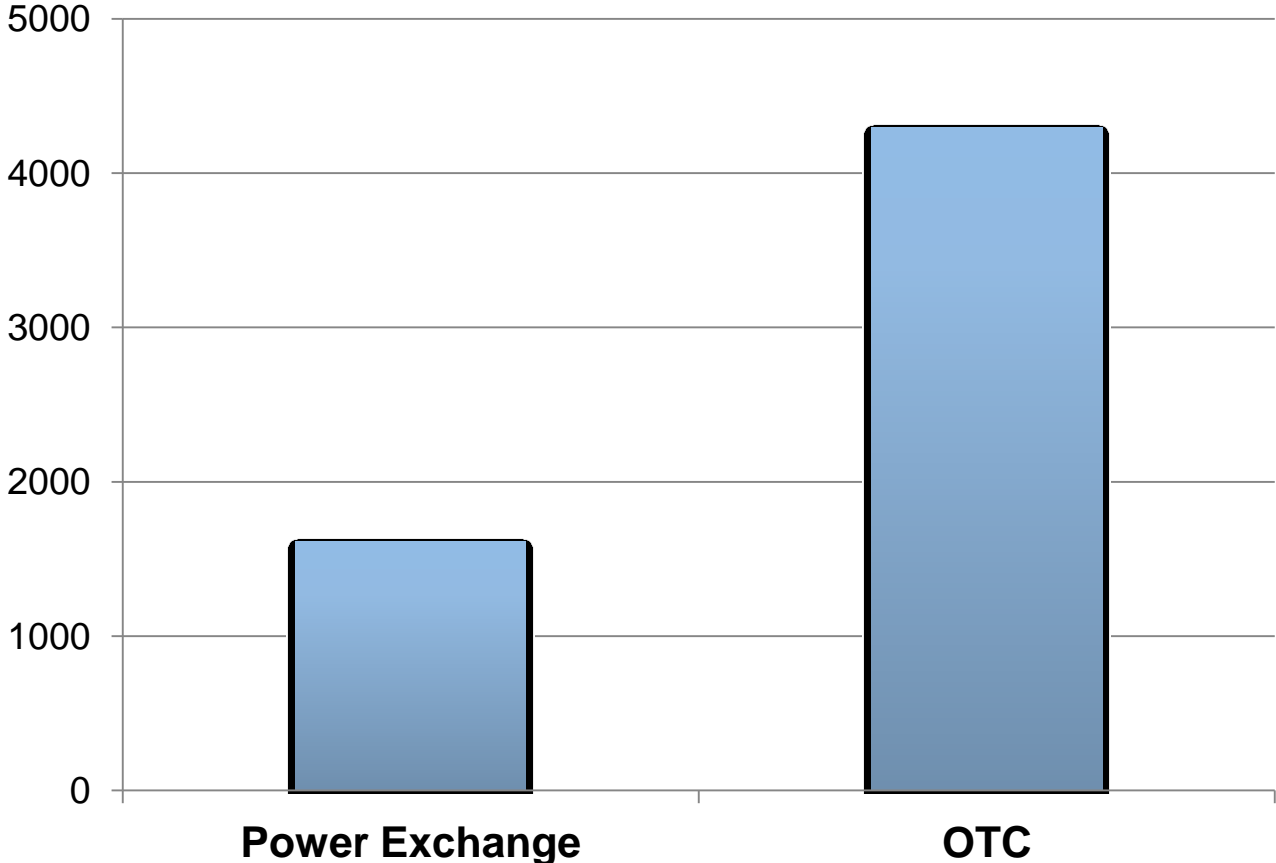
- GREECE
- ITALY
- SPAIN
- POLAND
- ROMANIA?!

OTC trading countries

- BULGARIA
- SERBIA
- CROATIA
- ALBANIA
- BIH



2013 power trading volumes for Germany in TWh



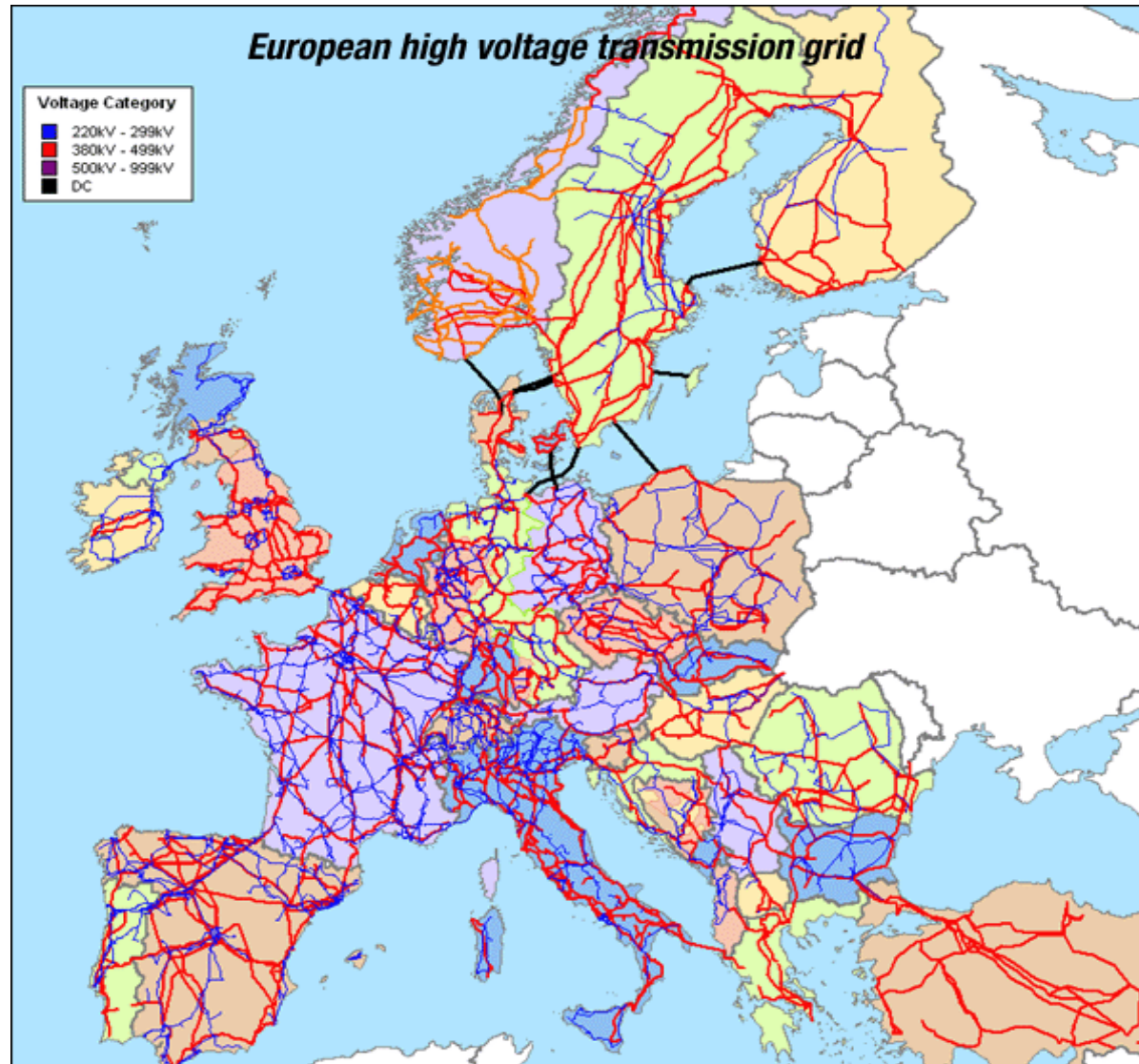
Source: RWE Supply & Trading

A well-functioning market underpins security of supply and appropriate investments



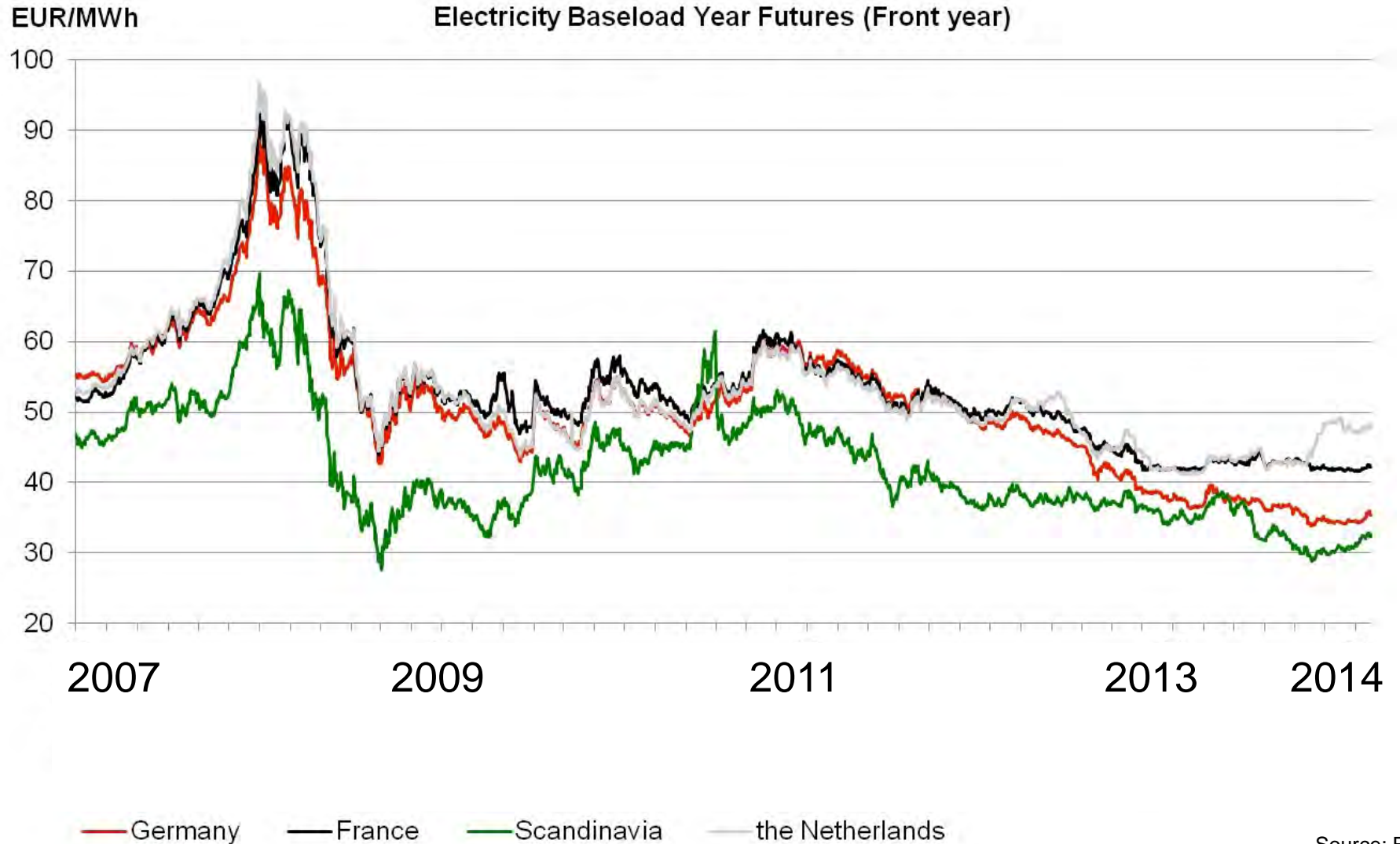
- In spite of declining wholesale prices in Europe since 2008, investment in generation capacity and the high voltage grid has remained sufficient to avoid all but the rarest blackouts or brownouts
- Investments in conventional generation and merchant interconnections only happen when trust is established in the transparency, fairness and liquidity of the market

The highly meshed European high voltage grid network helps limit risks of blackouts/ brownouts



Source: ENTSO-E

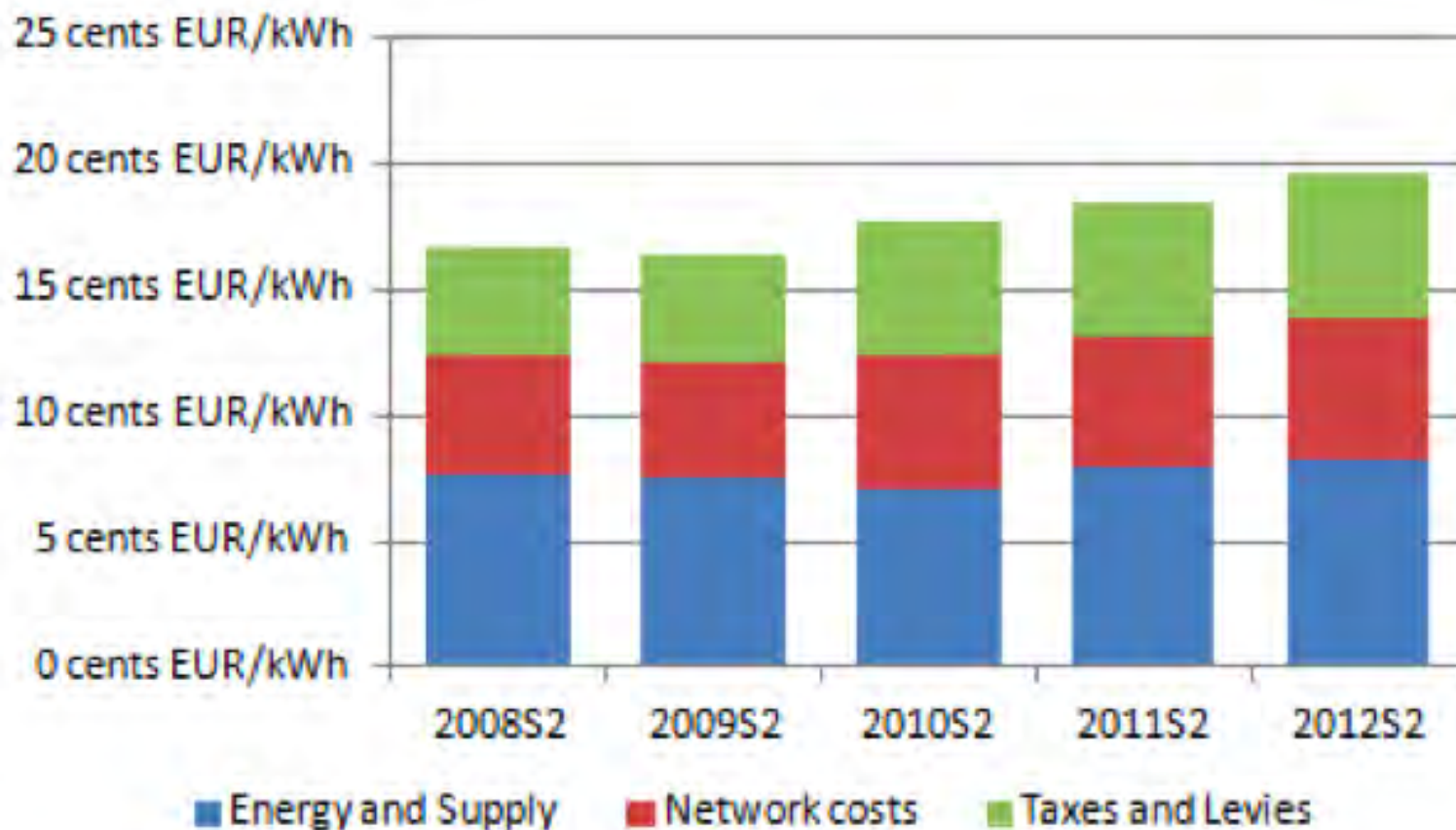
Forward power prices have been decreasing



Source: EEX

Rising energy bills are not caused by wholesale power prices

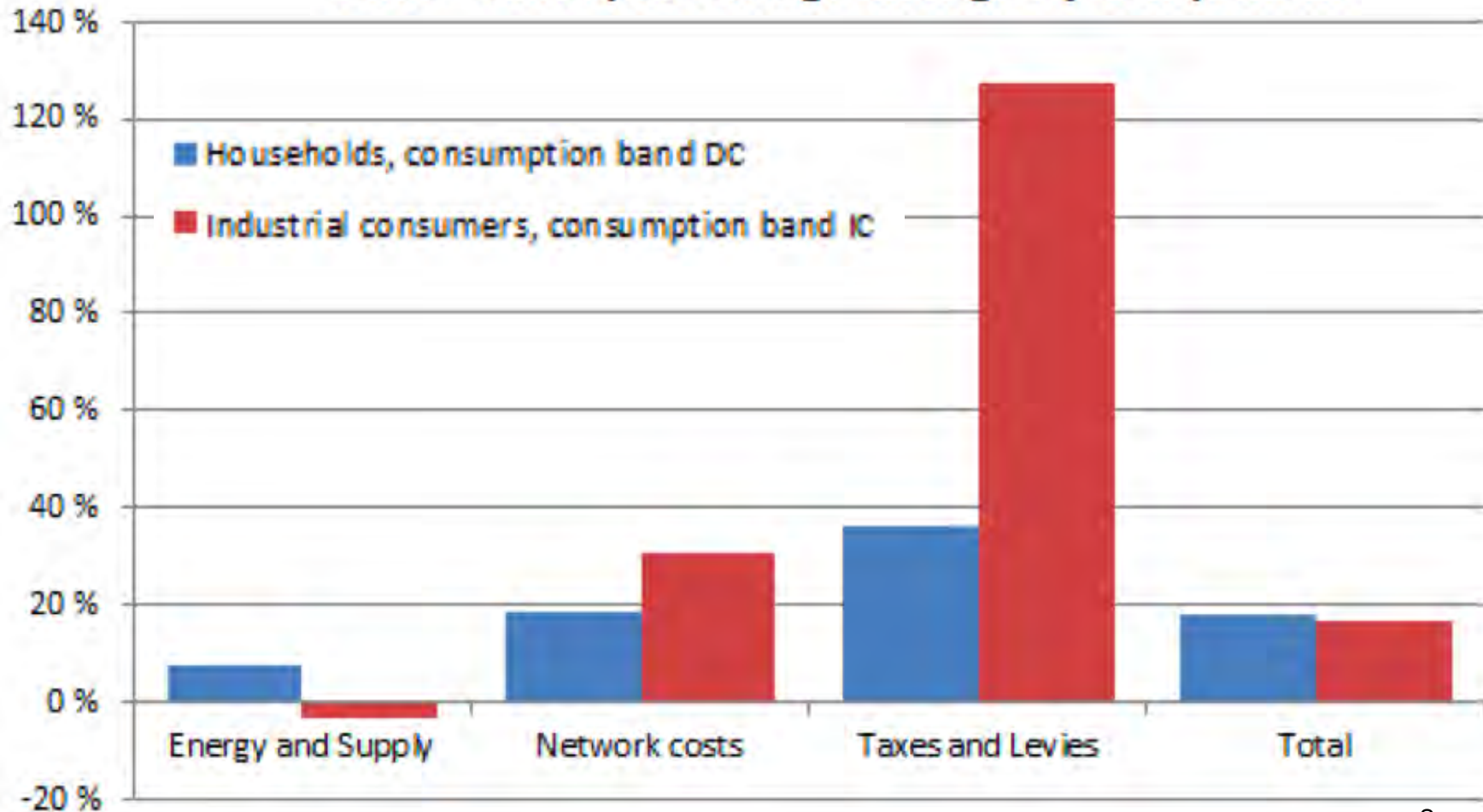
- Wholesale energy costs in Europe now represent less than half of household consumer bills



Source: Eurostat, EC

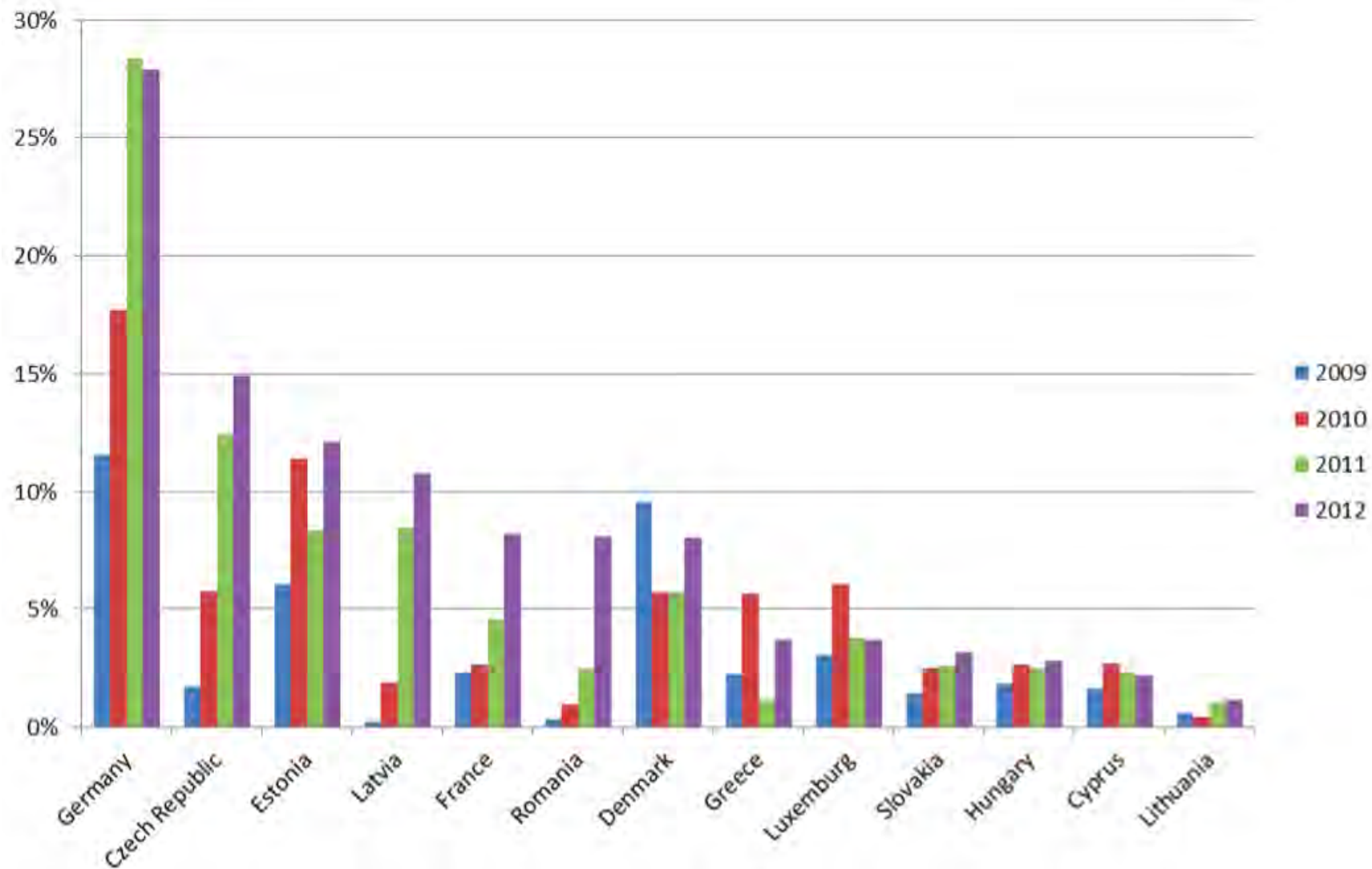
Taxes and levies are now the main driver for power consumer prices in Europe

**EU 28 wtd avg retail electricity prices,
2008 - 2012 percentage change by component**



Source: Eurostat, EC

RES-E levies steadily increase, now represent 26% of industrial customer bills in Germany



Greece should pursue reforms towards an EU-compliant market

- New market participants will face lower barriers to entry
- Market participants will be able to adjust their volume and price positions in all timeframes, until near real time
- Forwards and futures will allow market participants to hedge their exposures sufficiently in advance
- Robust prices including occasional spikes will guide investment
- System security and security of supply will remain assured

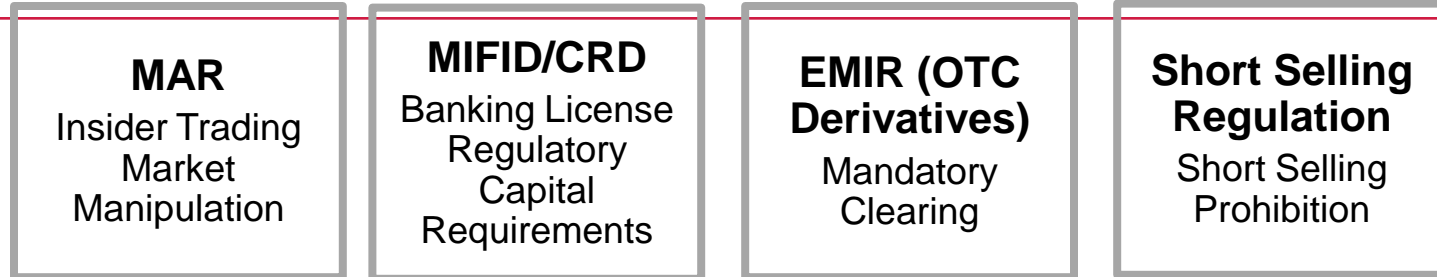
Energy Transition

- Renewables (increasing supply; not part of market)
- Less economic activities > less energy demand
- Shift from central to de-central generation

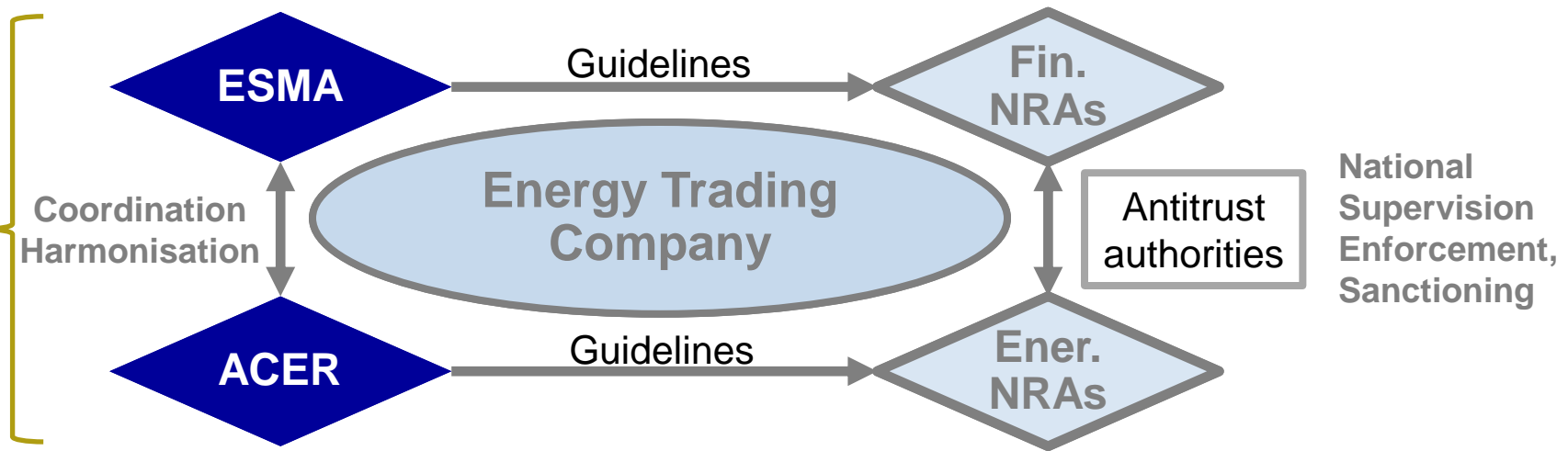
- Shale gas in USA > coal cheaper (in Europe), Energy cheaper in USA, competitive advantage. Geopolitical consequences.
- A lot of bureaucracy, undermining European competitiveness
- More uncoordinated National energy policies
 - Nuclear decommissioning in Germany and new installation in UK (2x market price!)
 - Capacity markets
 - RES market
- Financial regulation (EMIR, REMIT, MiFID, MAD, CRD)

How regulation appears to compliancy experts...

European
Financial
Legislation



Authorities



European
Energy
Legislation



- ✓ Portfolio Calculation
- ✓ Risk Mitigation Measures
- ✓ Reporting
- ✓ Clearing Obligation

- ✓ Risk Mitigation Measures
 - ✓ Portfolio reconciliation
 - ✓ Dispute resolution
 - ✓ Portfolio Compression
- ✓ Reporting
- ✓ Clearing Obligation

Reporting obligations

- ✓ Publication of pre-trade inside information
- ✓ Provision of post-trade transactional for the purpose of market monitoring (all trade data !)

- EFET Lobby for changes in Financial regulations
- EFETnet BV assist with data reporting requirements

Thanks for your attention



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