

## **Séminaire “Le coût-vérité de l’énergie”**

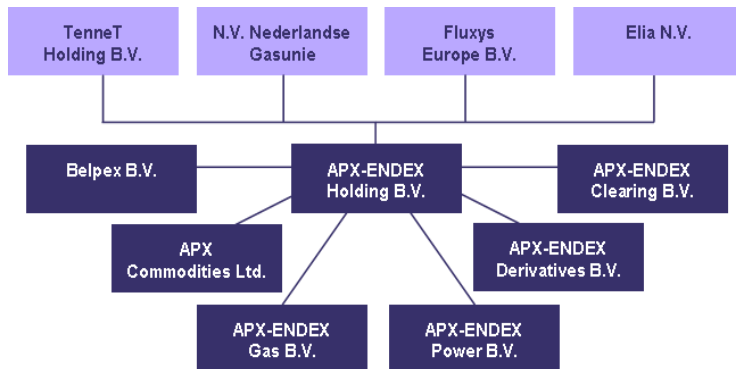
### ***Fonctionnement de la bourse d'électricité belge et perspectives pour le futur***

James Matthys-Donnadieu  
Brussels, 25-10-2012

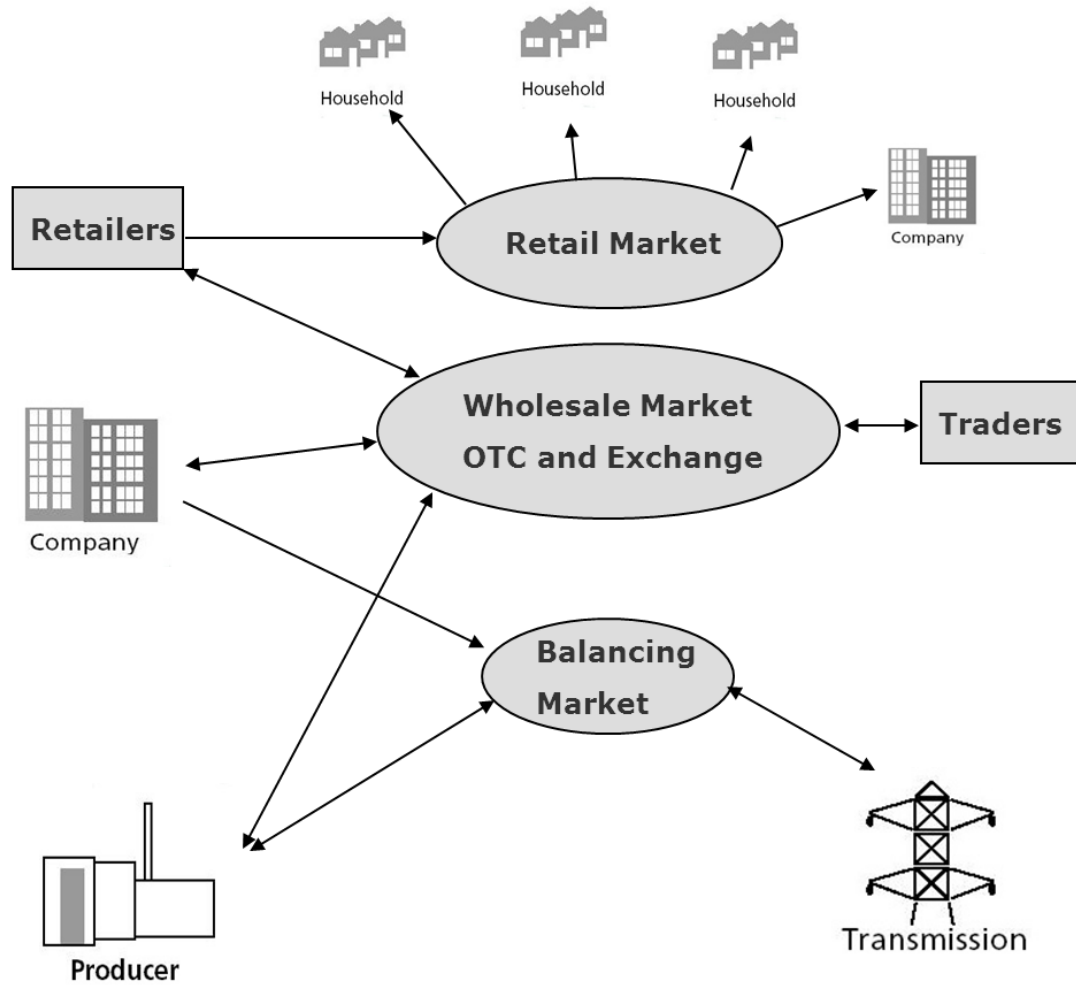
1. Belpex, part of APX-ENDEX
2. Markets, trading venues, clearing
3. Market segments: DAM & CIM
  - Day-ahead market
  - Intraday market
4. Governance and regulation
5. Recent evolutions & upcoming changes

# 1. Belpex, part of APX-ENDEX

- APX-ENDEX operating markets in NL, BE, UK
- Gas & Power
- Spot and Futures
- Belpex is a 100% affiliate of APX-ENDEX, licensed to operate the Belgian spot electricity market

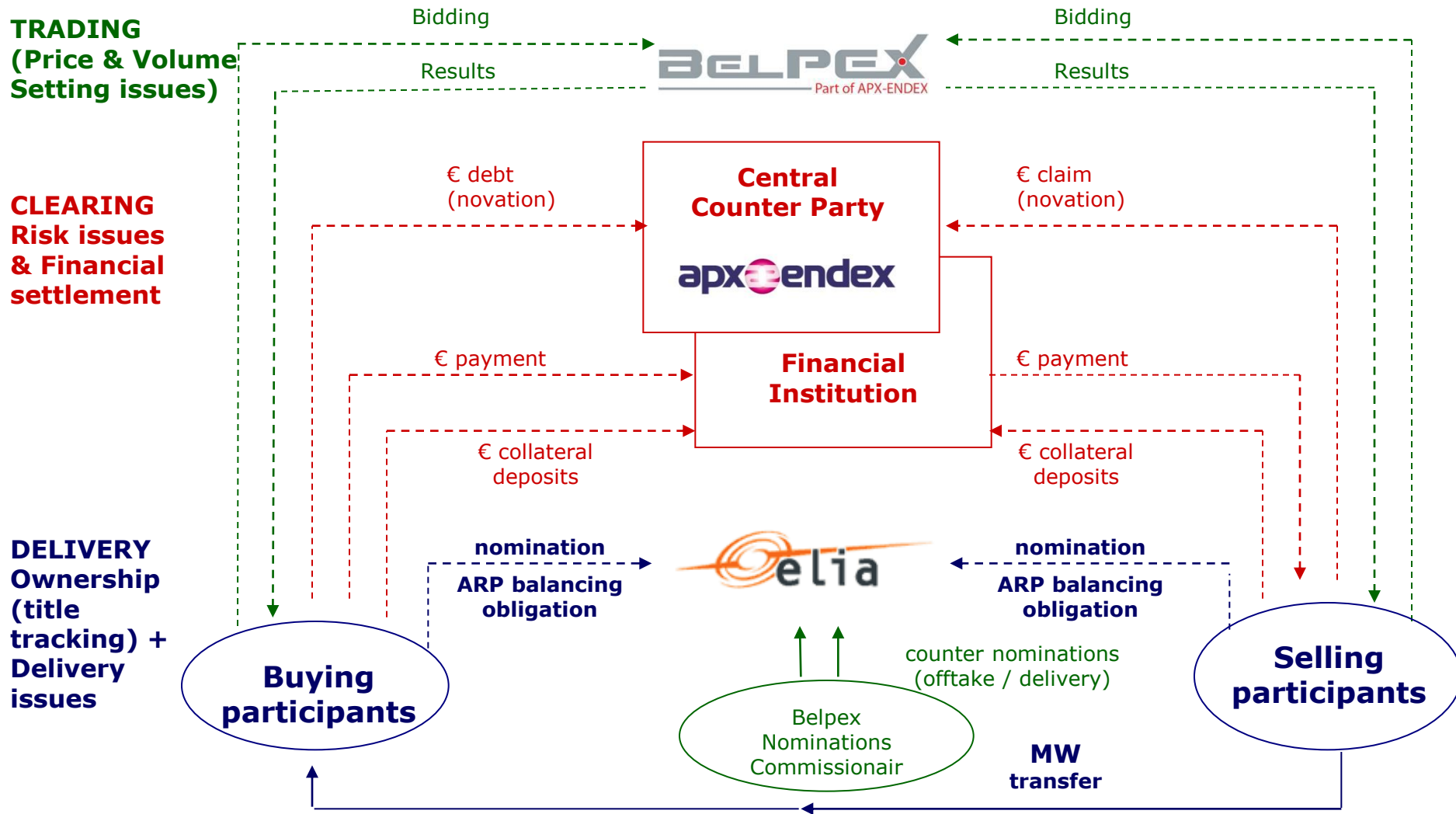


## 2. Markets, trading venues, clearing

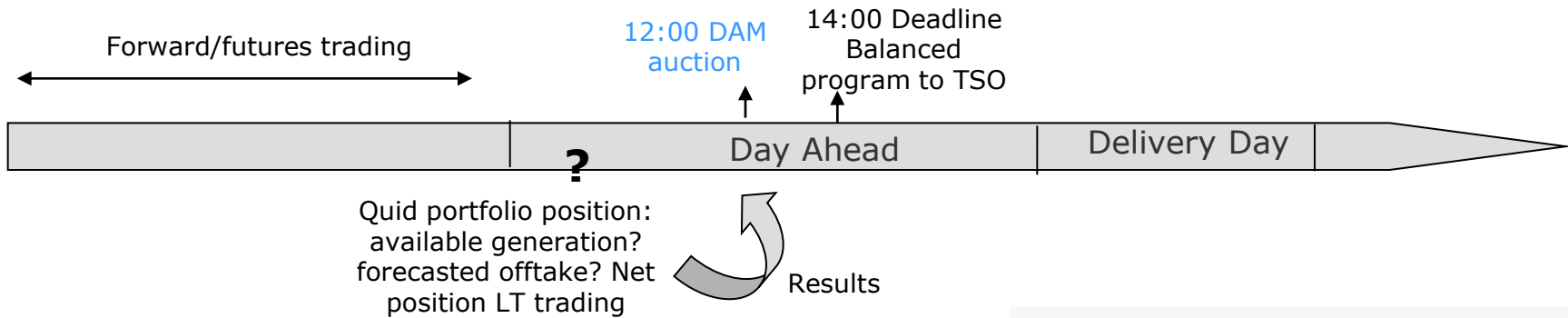


		<b>OTC</b>	<b>Exchange</b>
<b>Characteristics</b>		<ul style="list-style-type: none"> <li>▪ Bilateral</li> <li>▪ Not anonymous</li> <li>▪ Standard &amp; Customized Products</li> </ul>	<ul style="list-style-type: none"> <li>▪ Multilateral</li> <li>▪ <b>Anonymous</b></li> <li>▪ Standard products</li> <li>▪ Clearing and Settlement</li> <li>▪ Taking over counterparty risk</li> </ul>
<b>Products</b>	Long term	Forwards	Futures (Endex Power BE)
	Short term	Spot OTC contracts	

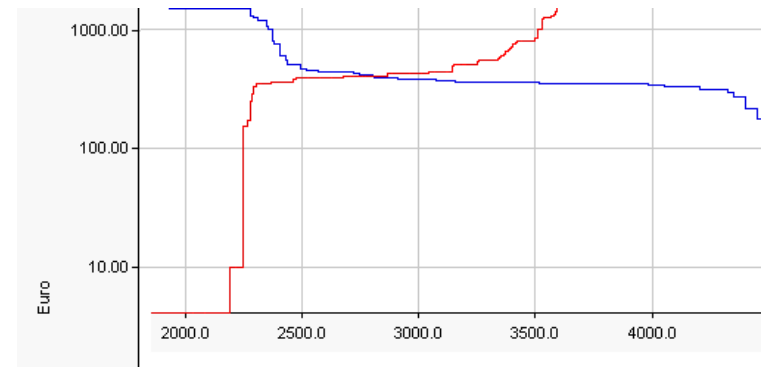
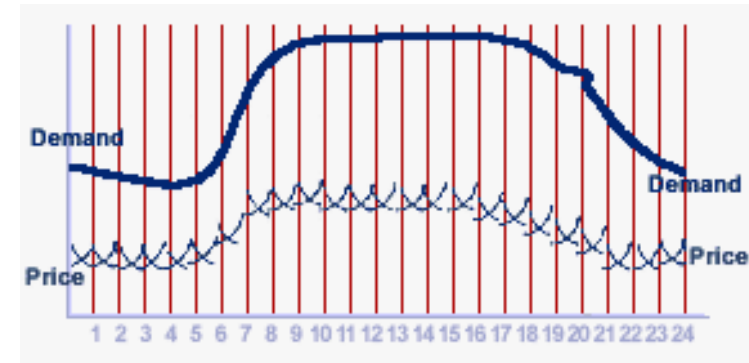
## 2. Markets, trading venues, clearing



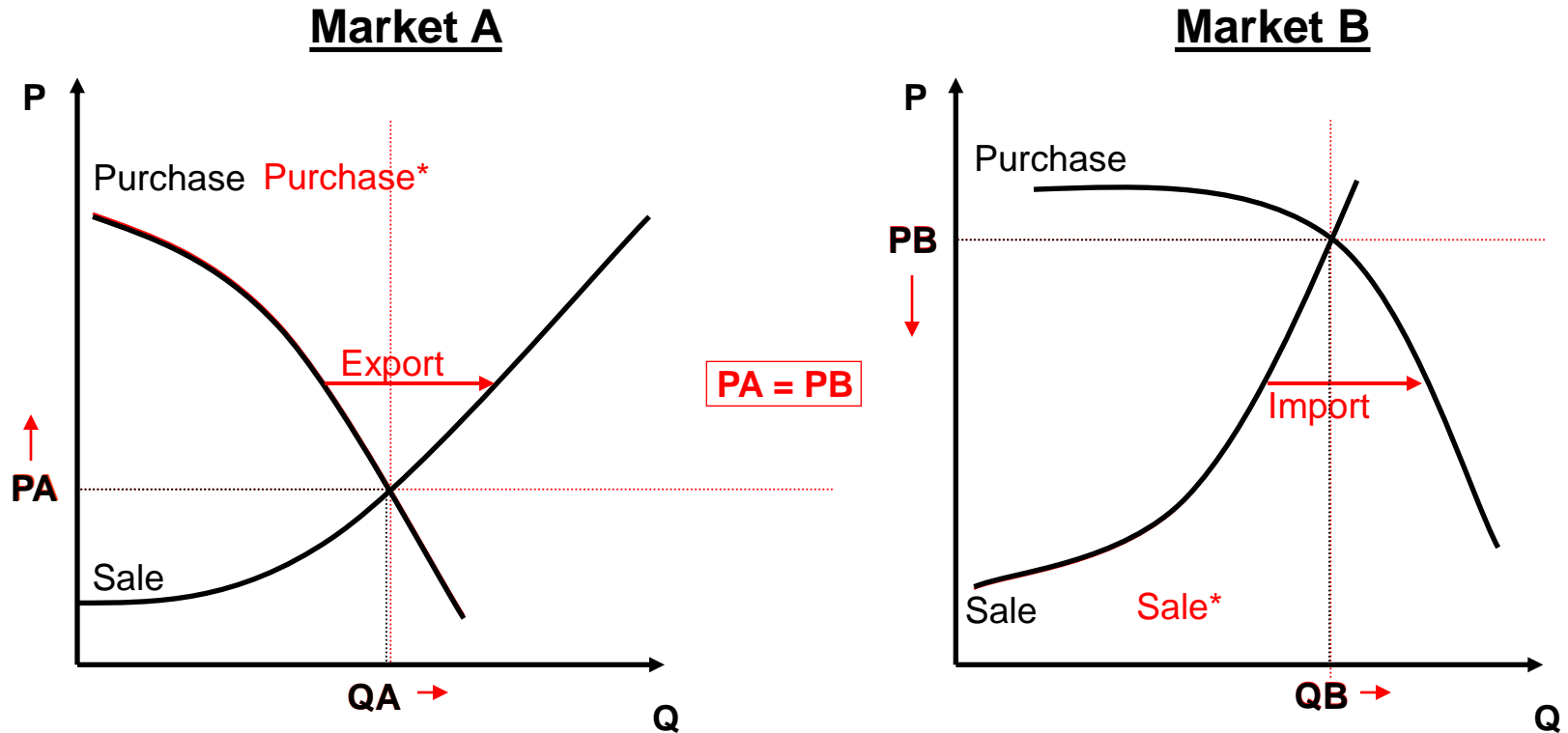
### 3. Market segments: DAM & CIM



- Starts at 12:00 a.m.
- Aggregate all Purchase and Sales per hour
- Balancing of portfolio before DA nomination to TSO
- Elements of the fixing process
  - Limit Orders & Block Orders
  - Orders from other DAM markets: Belpex, EPEX (FR & DE), Scandinavian Market (**Market Coupling**)
  - Available cross-border capacity (ATC)
- Results of fixing process
  - **Market Clearing Price** (can differ per country)
  - **Market Clearing Volume**



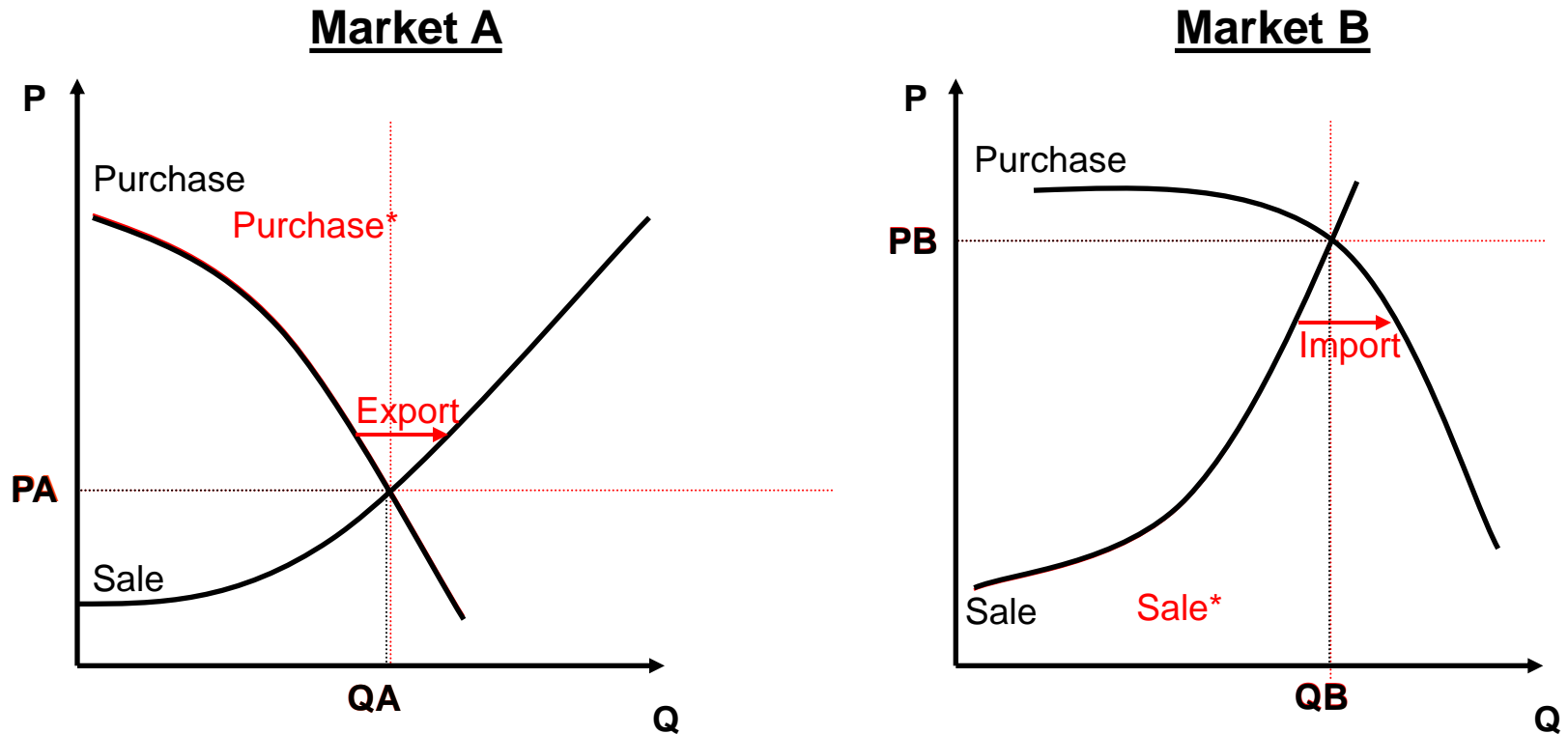
#### Market coupling – unconstrained case



- Isolated price Market A < isolated Price Market B
- Market A can export to market B (purchase and sale curves shift)
- Prices market A and B converge till price market A = price market B
- Export = Import < ATC ; no congestion revenue



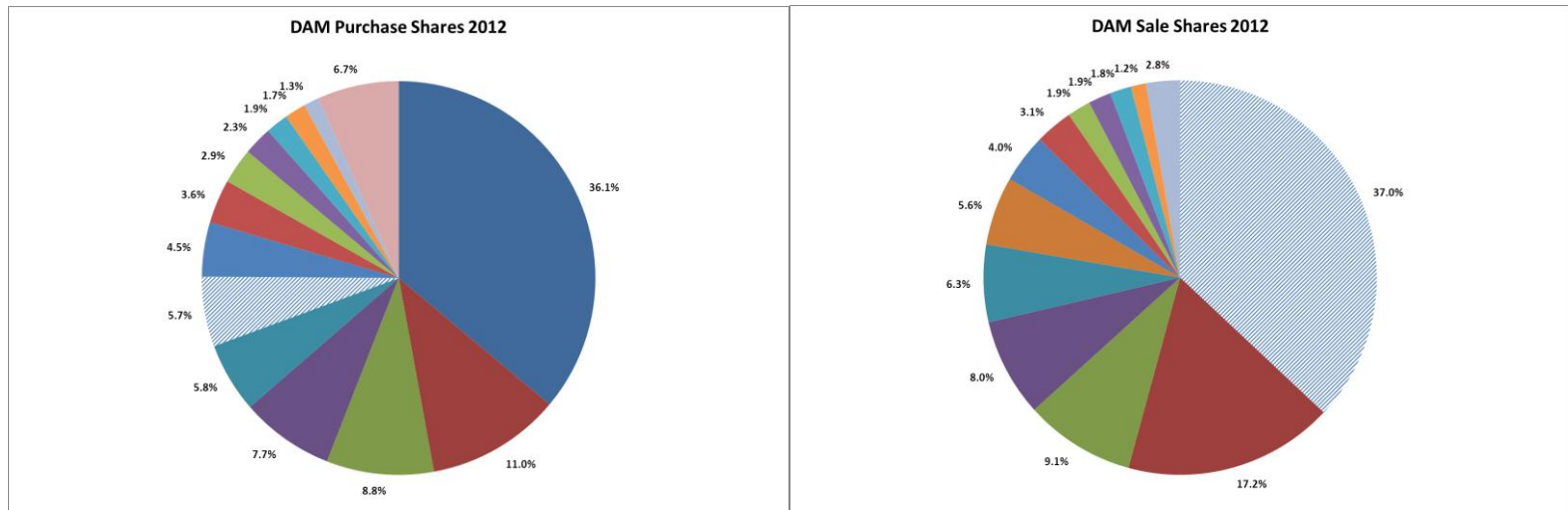
#### Market coupling – constrained case



- Isolated price Market A > isolated Price Market B
- Market A can export to market B (purchase- and sale curve shift)
- The export (and therefore price convergence) is limited by the availability of the cross border capacity
- Export = Import = ATC ; congestion revenue =  $(P_B - P_A) \times \text{Export}$

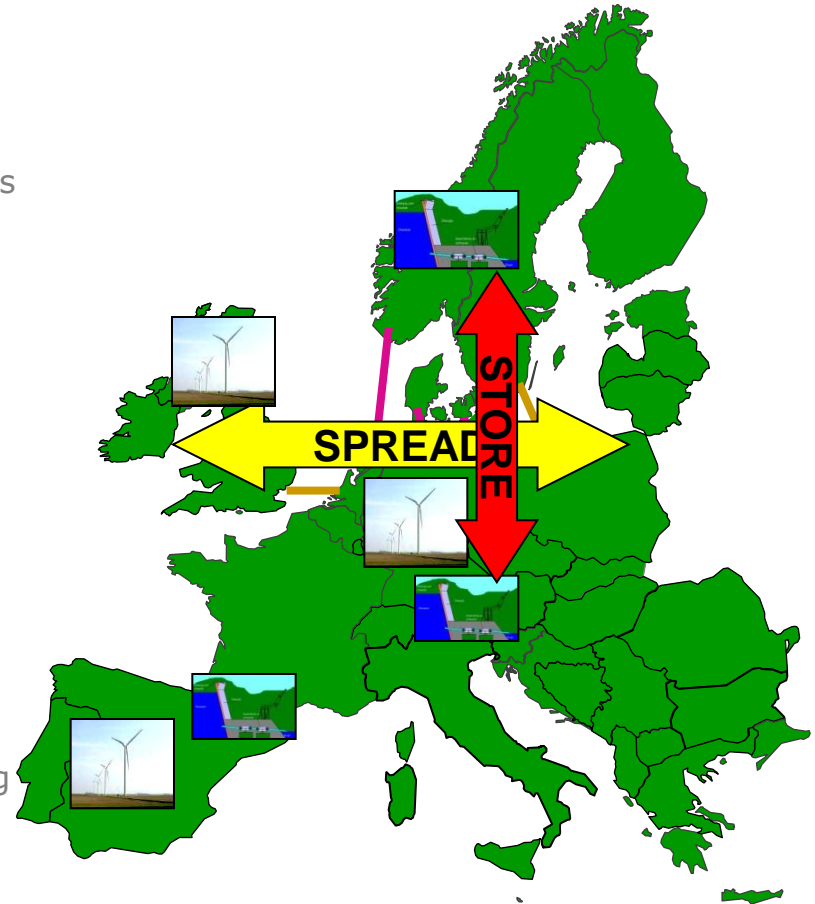
### DAM main characteristics

- Daily auction where prices are fixed for the 24 hours of the next day, taking into account orders of neighboring exchanges
- Price signal used for cross-border capacity allocation through the Market Coupling mechanism
- Transparent, reliable price reference for portfolio optimization and contract indexation, reflecting real offer and demand
- Best available estimation at day-ahead stage of market situation (e.g. negative prices signaling excess of production)



### Main benefits of Market Coupling

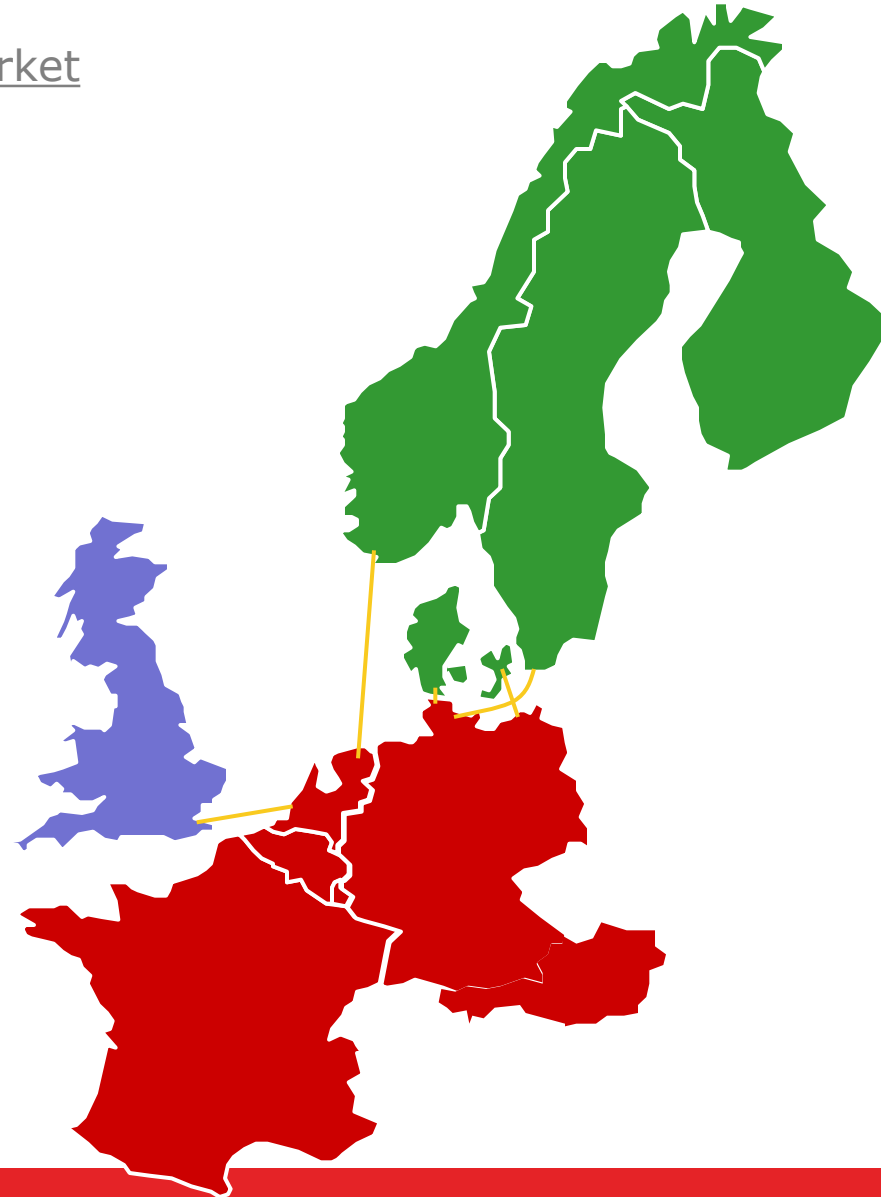
- Facilitates development of liquid commodity markets and fosters competition
- Removal risk of trading transmission and energy separately and reduction risk of market abuse since transmission capacity cannot be hoarded
- Market prices convergence, ultimately towards a single market price if sufficient capacity is available
- Optimum use of cross-border capacity and optimization of the use of the generation global portfolio. The more differences in local production mixes, the larger the social welfare increase resulting from such optimization
- Mitigation of price volatility by 'absorbing' local variations in production thanks to the activation of flexible means in other areas, which contributes to SoS and will be of increasing importance with the development of intermittent RES



**Consistency of energy policies is important**

### Towards an integrated EU Day Ahead market

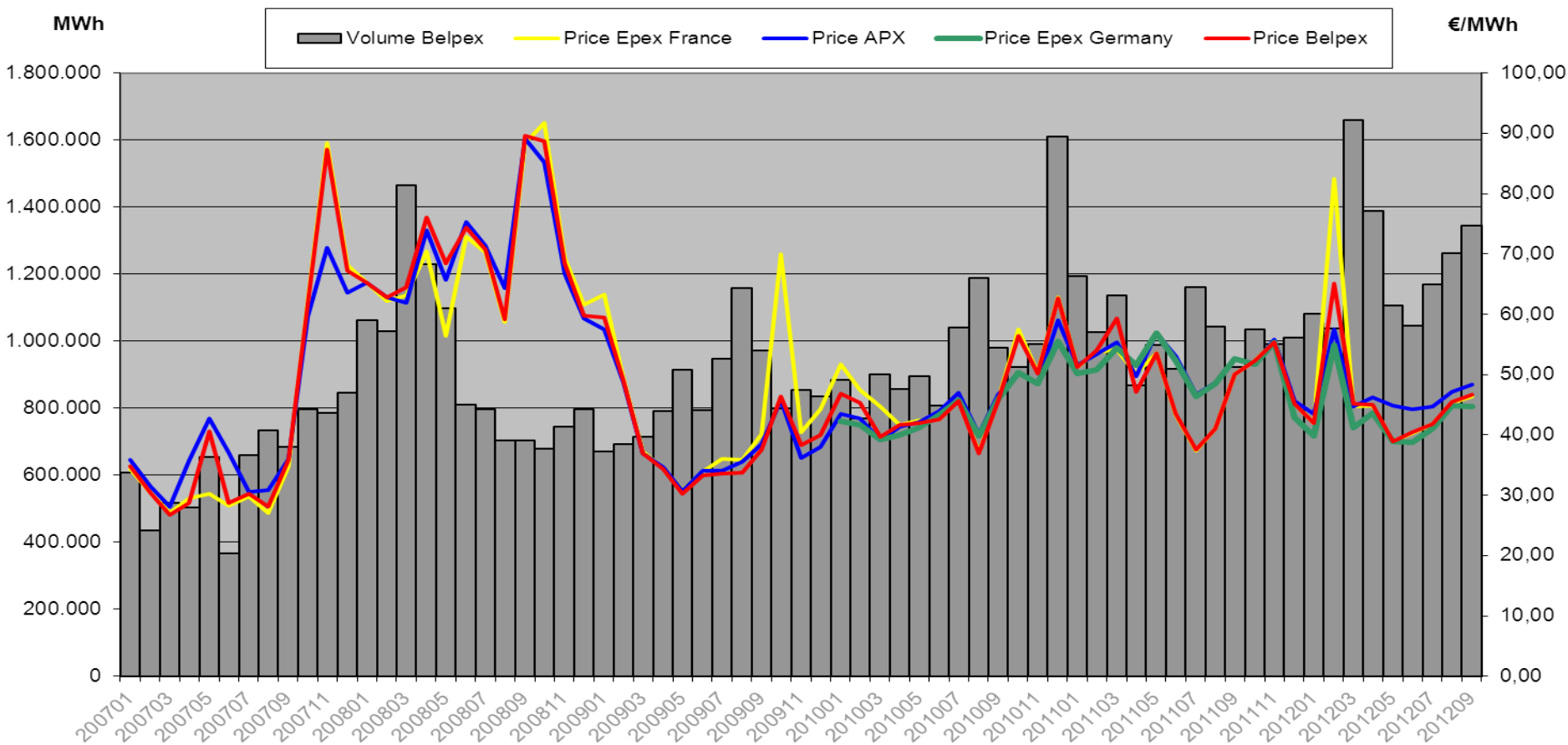
- Nov 2006: Price coupling BE-FR-NL
- Nov 2010: CWE price coupling together with ITVC linking CWE and Nordic region (+ NorNed in Apr 2011)
- Apr 2011: BritNed embedded solution (couples APX UK market with CWE)
- **By Q2 2013: price coupling of the NWE region (PCR regional implementation)**
- **By end 2014: price coupling of Europe day-ahead markets with PCR**





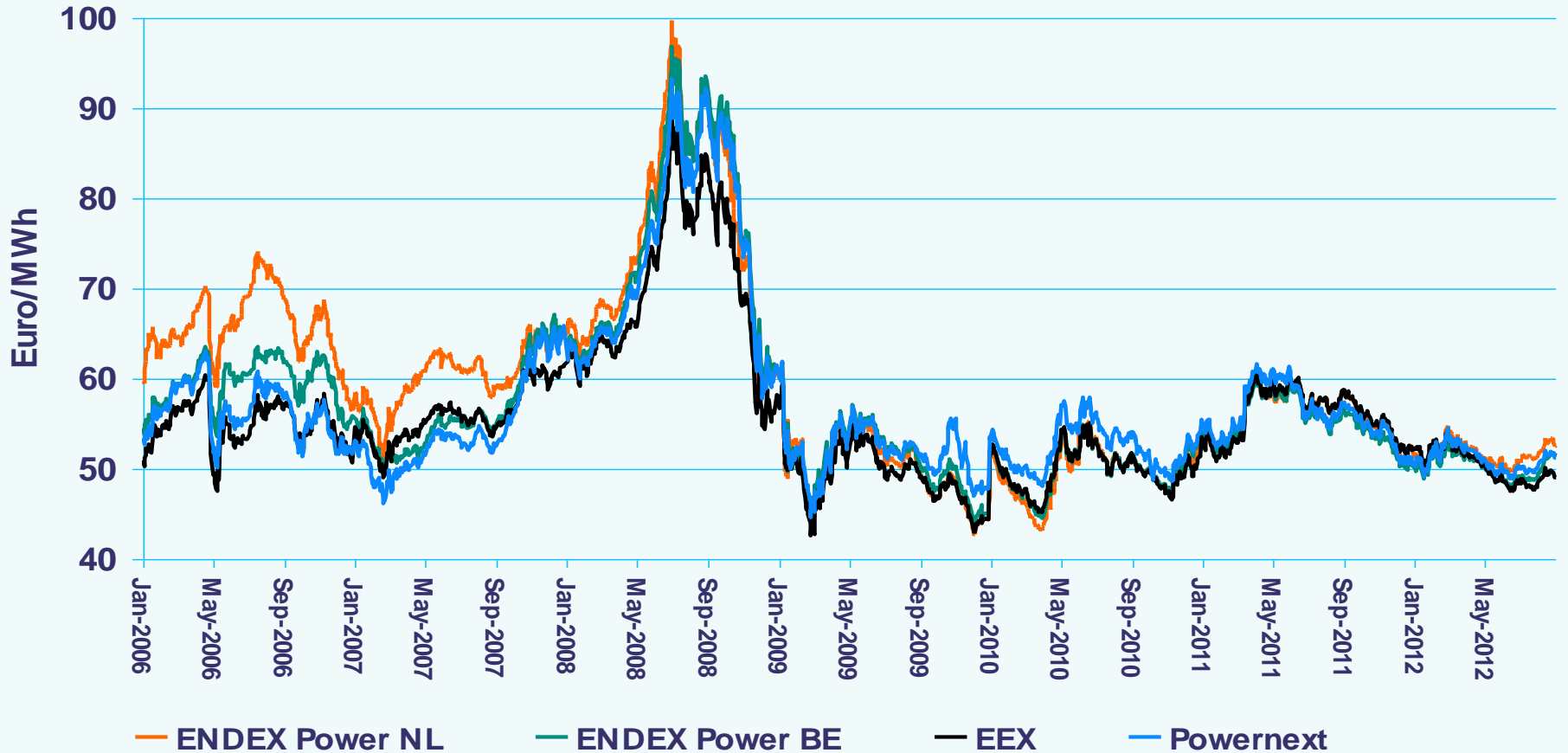
## Belpex DAM: Price evolution compared to other CWE markets

Volumes & Prices -BELPEX-APX-EPEX France-EPEX Germany DAM Baseload (Month)

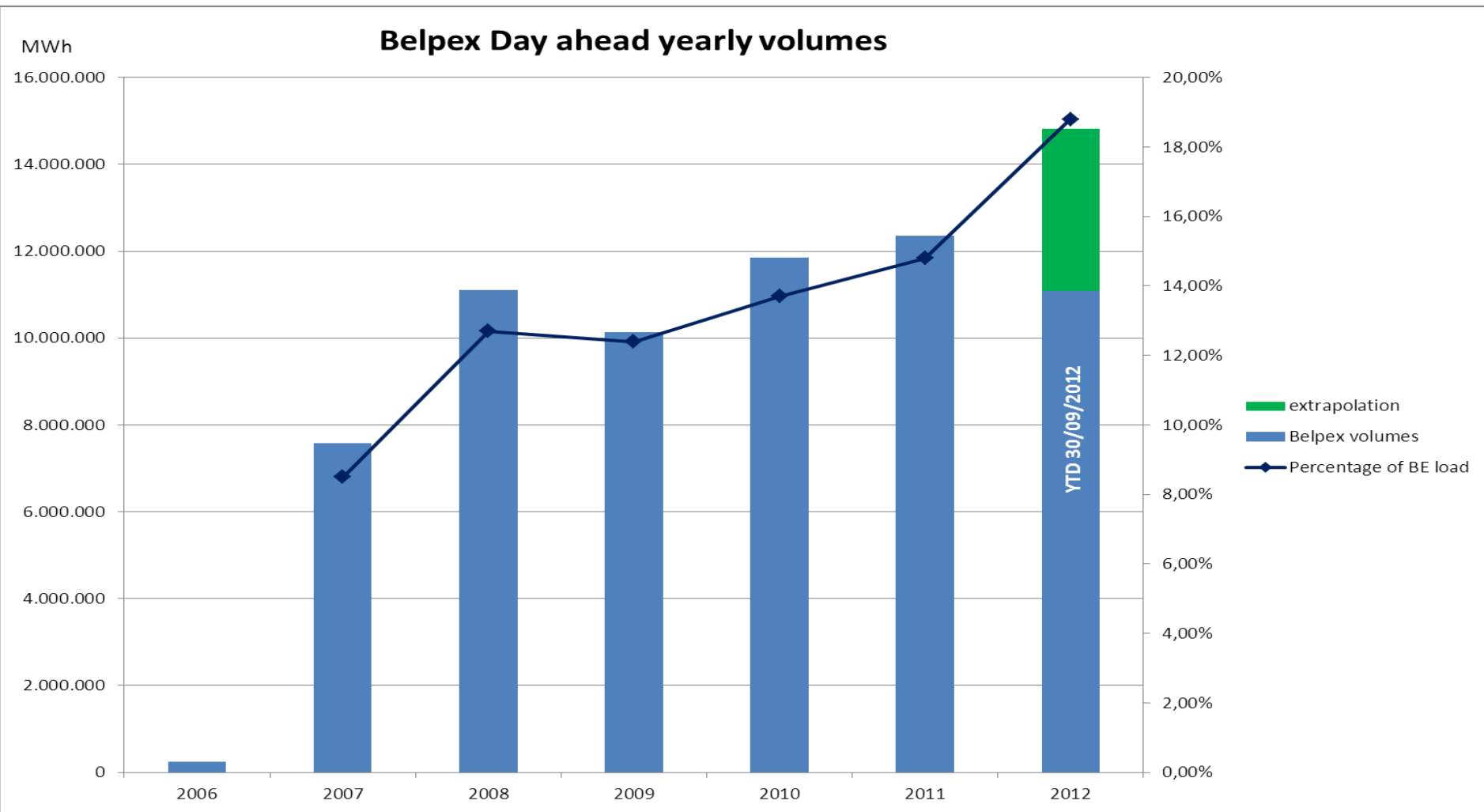


Converging DAM prices lead to converging forward prices

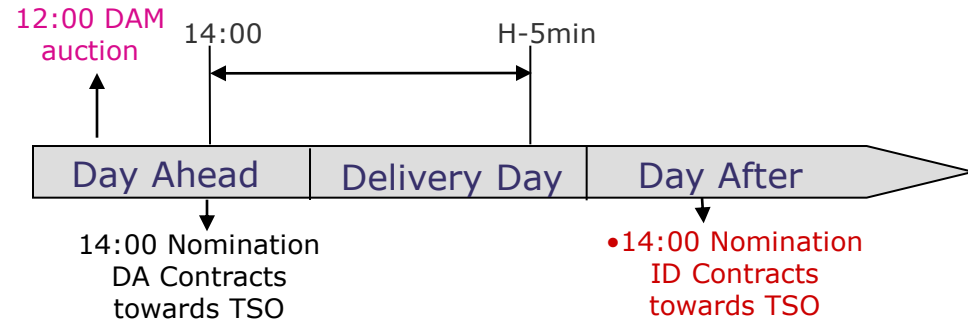
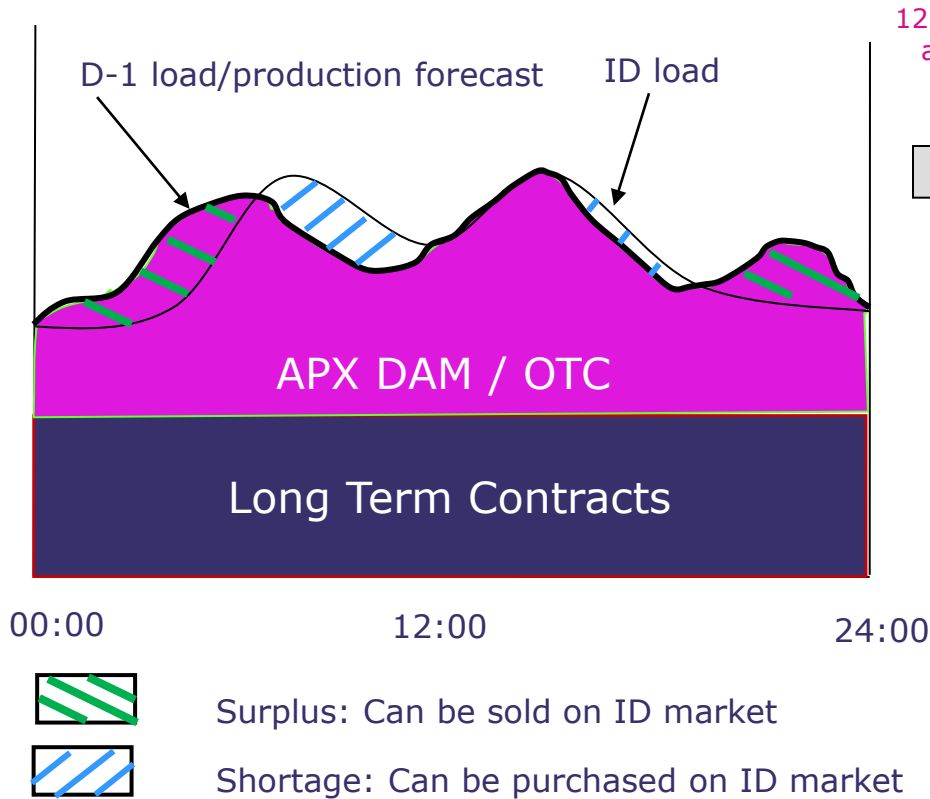
**Future Reference Prices Baseload Power - Calendar + 1 Contract  
2006 to August 2012**



## Belpex DAM: Volumes evolution





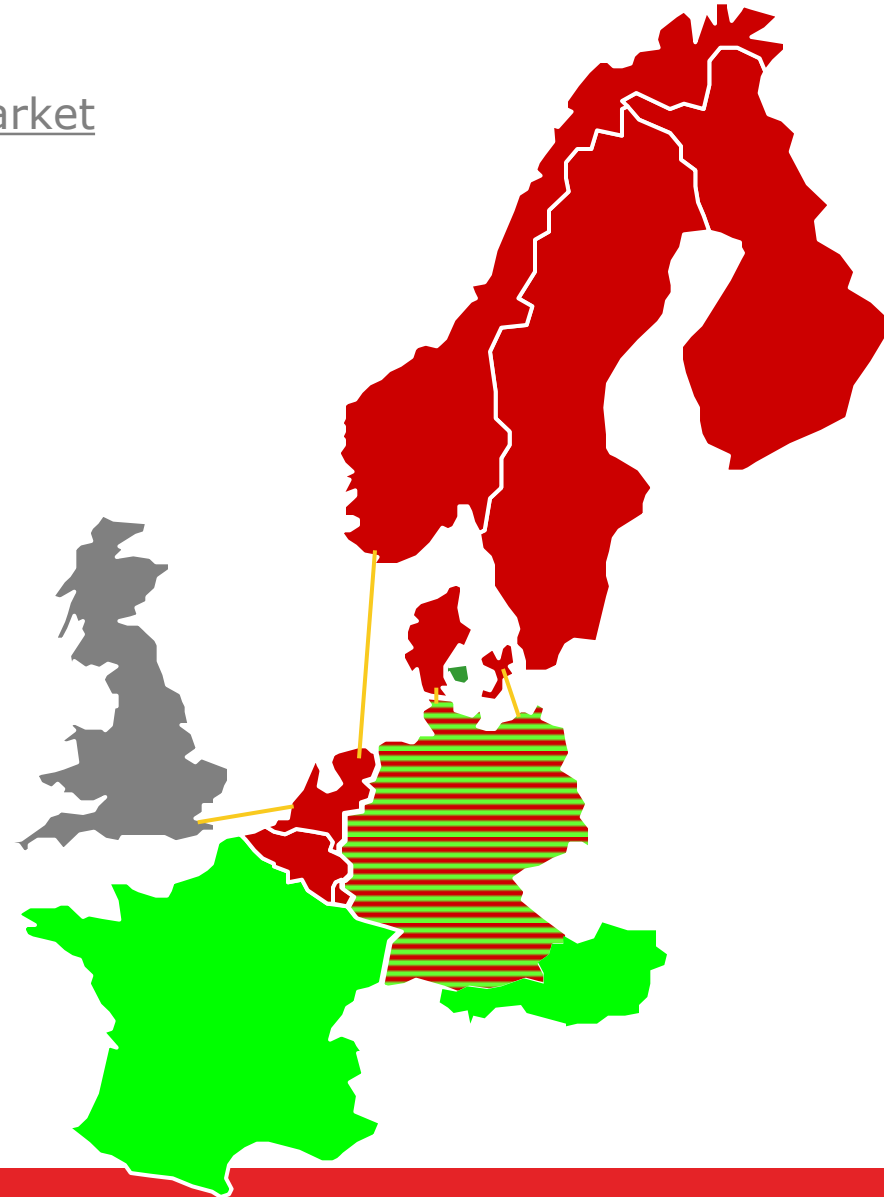


- Context
  - More intermittent production
  - More big consumer want to manage energy supply themselves
  - No real market for managing close to real time balances

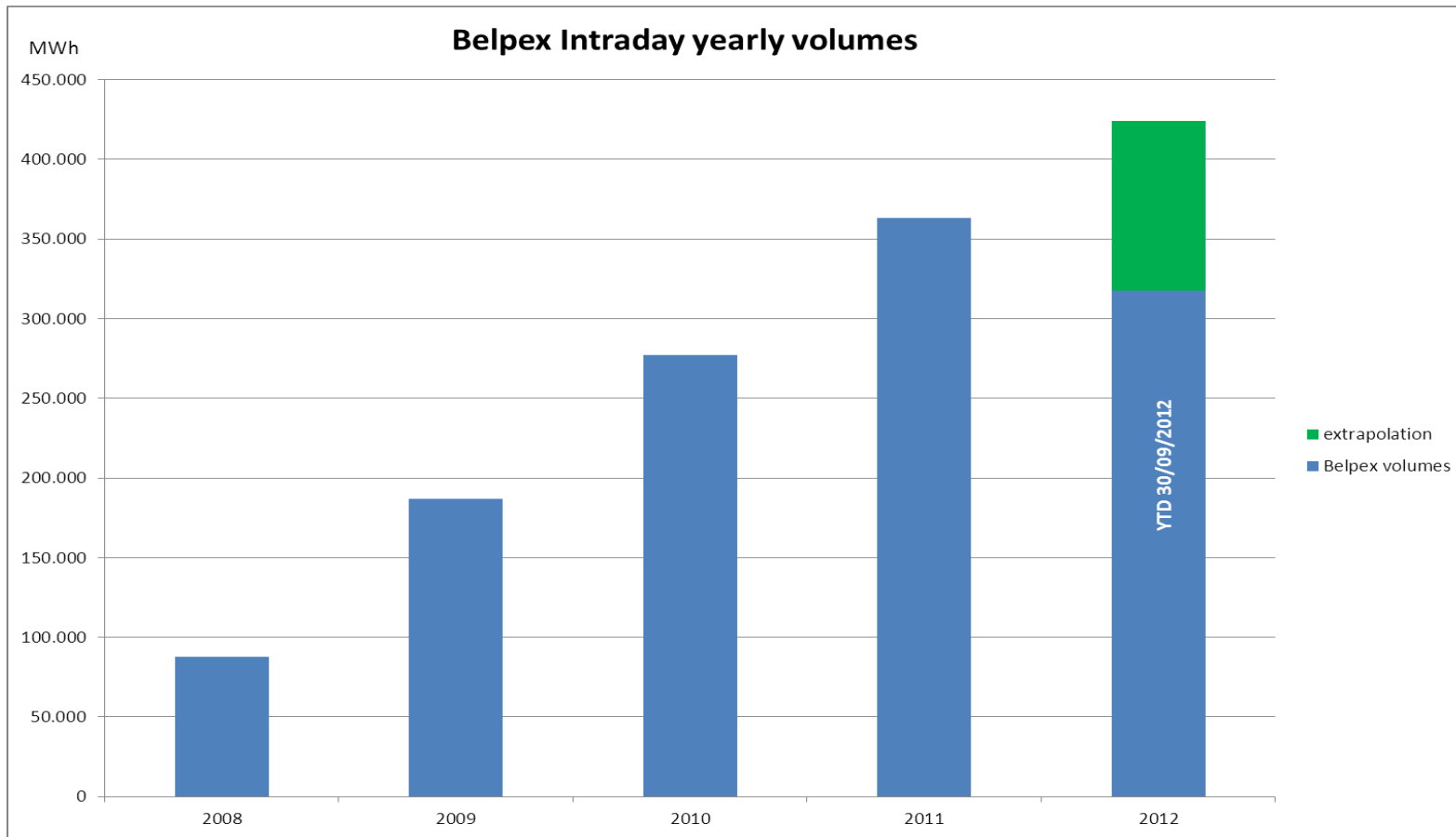
- Advantages for market
  - Manage close to real time balances and avoid balancing charges
  - Reduces market entry barrier / allow to trade with new entrants
  - Create more transparency and price signals

### Towards an integrated EU Intraday market

- Mar 2008: Launch of Belpex CIM
- Feb 2011: coupling BE-NL
- Mar 2012: coupling BE-NL-Nordic region (through NorNed)
- Integrated NWE intraday market (target 2013)
- By end 2014: coupling of all European intraday markets (target model)



#### Belpex CIM: Volumes evolution



### Market Participants

- 36 Participants, covering a broad range in terms of
  - *Profile*: suppliers, traders, producers, utilities, industrial end users
  - *Nationality*: 10 different countries (BE, DE, NL, CH, UK, FR, ...)
  - *Size*: small niche players as well as large utilities

Shell	Merrill Lynch Commodities (Europe)	Enel Trade
Electrabel	Delta Energy	Iberdrola Generación
Morgan Stanley	Barclays Capital	Scholt Energy Control N.V.
EDF Trading	Vattenfall Energy Trading GmbH	J.P. Morgan Securities
EGL	Ezpada s.r.o	Greenchoice
EDF Luminus NV	Deutsche Bank AG	Electrawinds Distributie NV
Vattenfall Energy Trading Netherlands	Endesa Trading	INEOS ChlorVinyls Belgium NV
RWE Supply & Trading Netherlands	Lampiris NV	Mercuria Energy Trading SA
RWE Supply & Trading GmbH	Centrica Energy Limited	Trianel GmbH
Eneco	Danske Commodities	Anode Energie
EON Energy Trading	Total Gas and Power Limited	Gazprom Marketing & Trading Ltd
Statkraft Markets	GDF Suez Trading	ENI SpA

- Exchange of physical energy blocks is subject to specific regulatory requirements set in Royal Decree (2005)
  - Guaranteeing independence of Market Operator from production and supply activities
  - General principles on the organization of a fair and orderly market
  - Assuring transparency and legal certainty through approval of market rules (functioning of the market, non discriminatory access,...) but also allowing for flexibility through market procedures established by the MO
- License as Market Operator and Market Rules since 2006
- Regulatory oversight by Minister, CREG and FSMA
- Dialog with stakeholders through Users Group
- Promotion of transparency (free daily information, reports,...)

**Change is driven by our aiming for better market integration, lowering of entry barriers, improvement of product offering**

Market	What	Done	Expected
All	Start-up incentive	Nov 2012	
	Clearing consolidation Spot BE/NL	Jun 2011	
	Fee reduction	Mar 2012	
DAM	Profiled blocks	Nov 2011	
	Linked & exclusive blocks		Q2 2013
	Storage orders		NA
	Relaxing block volumes limitations	Nov 2011	Nov 2012
	NWE price coupling		Q2 2013
	CWE flow based		Q4 2013
CIM	Elbas performance upgrade	Jul 2012	
	Elbas user interface improvement		Nov 2012
	Integrated NWE Intraday market		2013
	COSMIX		NA

**Thank you for your attention**