

## **Control energy market at the EEX and at the OTC market**

**EEX Trader Workshop Gas – Control Energy Market Gas II**

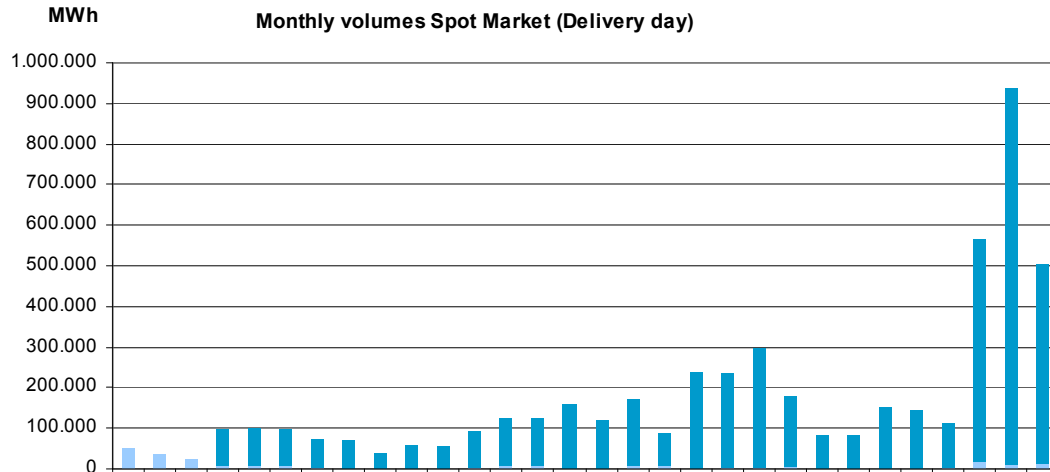
Sirko Beidatsch, EEX AG

Update: Latest developments at the EEX

Control energy trading at the EEX and at the OTC market

Market and balancing energy prices versus GABi Gas

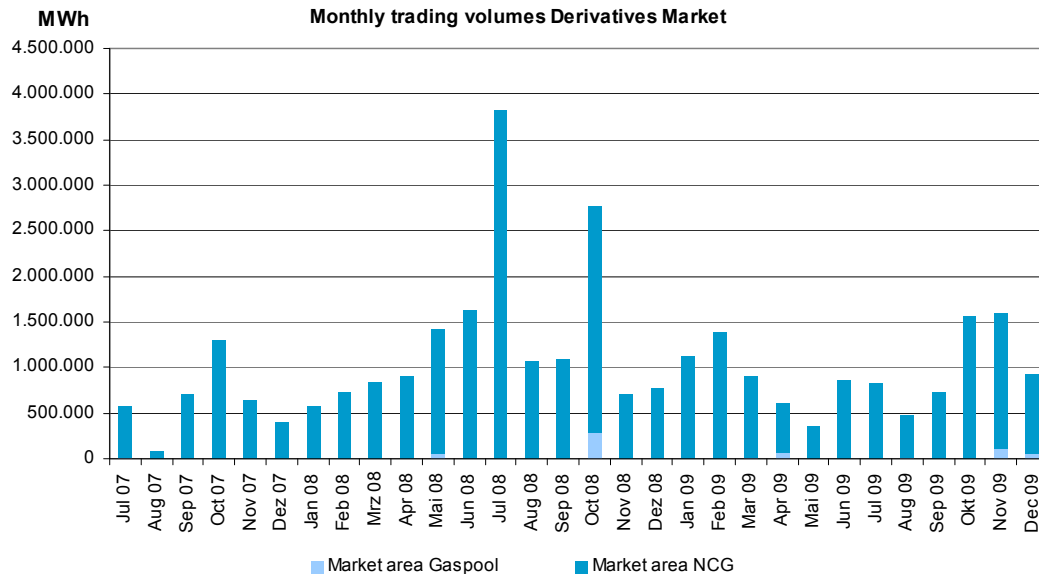
# Traded volumes at EEX



- Spot volume driven by seasonal effects
- Spot volume driven by control energy
- Market area NCG dominates traded volume at the EEX
- Increasing volumes in GASPOOL area

## Volume since exchange start

5.098.609 MWh

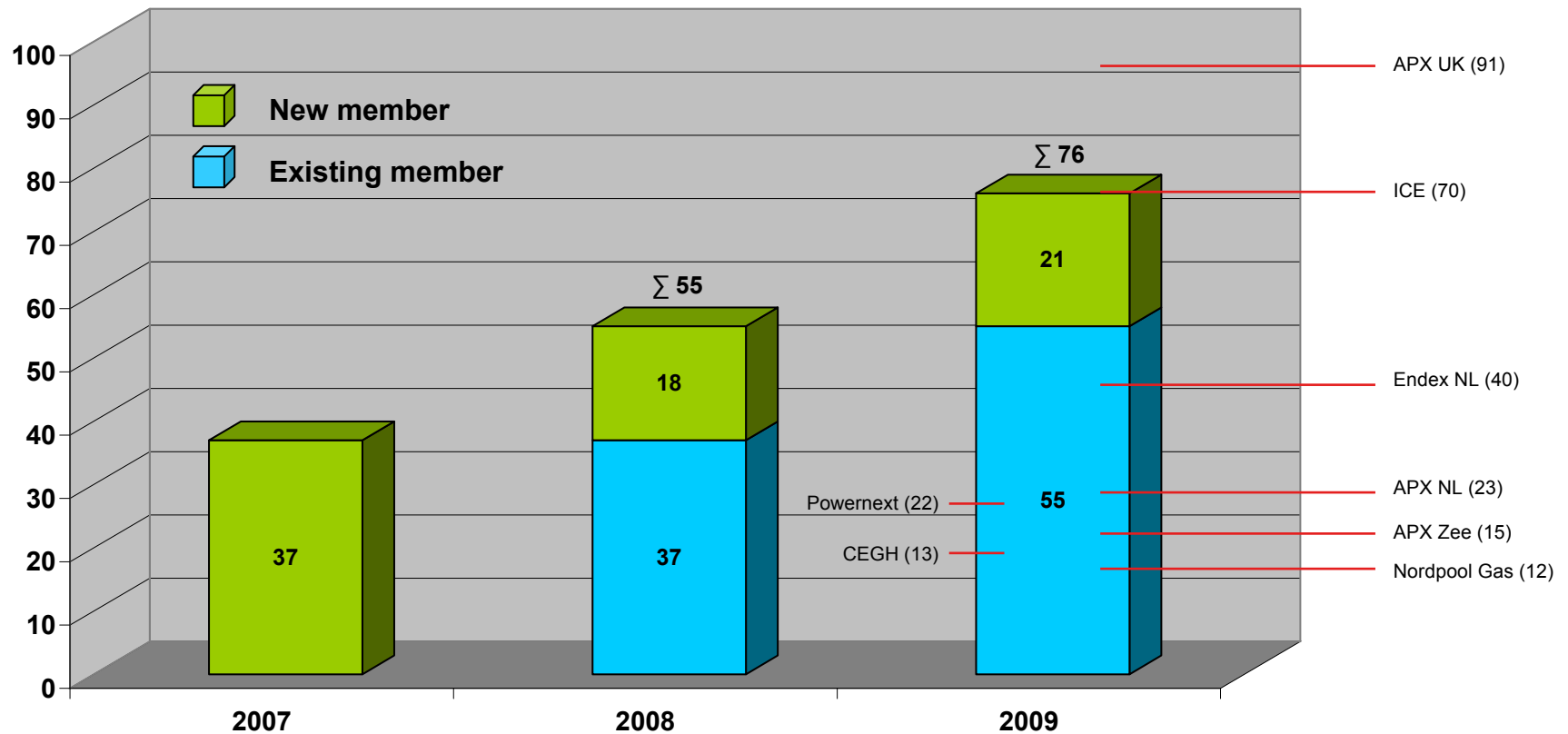


- Trading depends on oil price
- Market area NCG dominates traded volume at the EEX
- Liquid spot market creates trust in derivatives market

## Volume since exchange start

31.399.766 MWh

Increase of trading participants at the EEX gas market



## Netconnect Germany

advanced energy trading GmbH  
Barclays Bank PLC  
BG International Limited  
CEZ a.s.  
DREWAG Stadtwerke Dresden GmbH  
EconGas GmbH  
Energie AG Oberösterreich Trading GmbH  
Energiehandelsgesellschaft West mbH  
ENOI S.p.A.  
Gazprom Marketing & Trading Limited  
Lumius spol s.r.o.  
Macquarie Bank Limited  
NetConnect Germany GmbH & Co. KG  
Nexen Energy Marketing London Limited  
Enovos Deutschland AG  
Salzburg AG für Energie, Verkehr & Telekommunikation  
Stadtwerke Flensburg GmbH  
Stadtwerke Karlsruhe GmbH  
Stadtwerke München GmbH  
Südwestdeutsche Stromhandels GmbH

Σ 20

## NCG + GASPOOL

24/7 Trading GmbH	KOM-Strom AG
Actogas GmbH	Louis Dreyfus Energy Services
BKW FMB Energie AG	Mercuria Energy Trading S.A.
Danske Commodities A/S	Morgan Stanley & Co. International Limited
DB Energie GmbH	Optimization Engineers GmbH
Deutsche Bank AG	Österreichische Elektrizitätswirtschafts-AG
DONG Naturgas A/S	PCC Energie GmbH
E.ON Energy Trading AG	Pfzwerke AG
EDF Trading Limited	RWE Supply & Trading GmbH
EHA Energie-Handelsgesellschaft	Shell Energy Europe Limited
Electrabel S.A.	Spectron Energy Services
EnBW Trading GmbH	Stadtwerke Hannover AG
EnergieFinanz GmbH	Stadtwerke Leipzig GmbH
Energieunion AG	Stadtwerke Viernheim GmbH
ENLOGS Energy Logistics & Services GmbH	Statkraft Energi AS
Essent Trading International SA	Statkraft Markets GmbH
EWE AG	SYNECO Trading GmbH
Gasag Berliner Gaswerke AG	Technische Werke Ludwigshafen am Rhein AG
Gaselys S.A.	The Royal Bank of Scotland plc.
Getec Energie AG	Total Gas & Power Limited
GFI Securities Limited	Trianel European Energy Trading
ICAP Energy A/S	UBS AG
KES Kommunale Energiedienstleistungsgesellschaft Südsachsen mbH	Vattenfall Energy Trading Netherlands N.V.
Energy & More Energiebroker	Vattenfall Trading Services
KOM Solution GmbH	Vitol S.A.
	VNG Verbundnetz Gas AG
	WINGAS GmbH

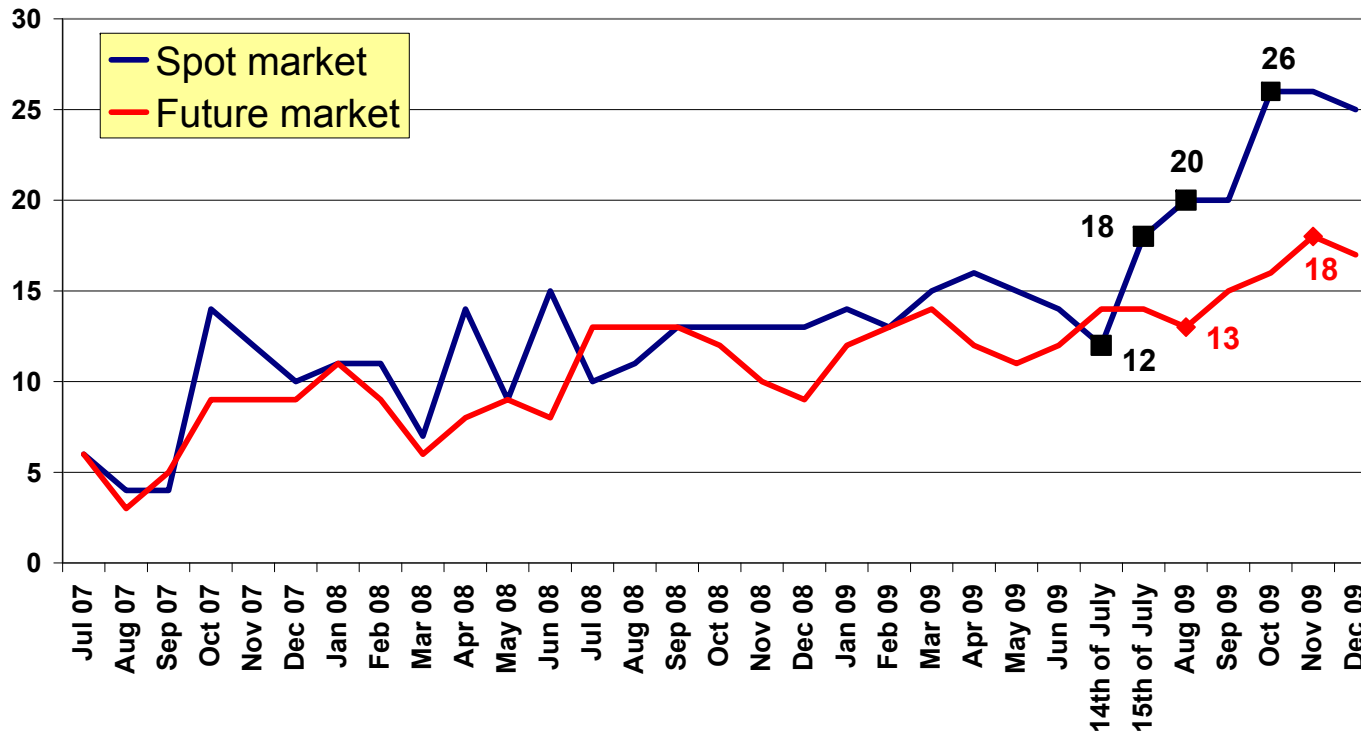
## GASPOOL

Becomac GmbH  
envia Mitteldeutsche Energie AG  
Innovative Energy GmbH  
SWB Vertrieb Bremen GmbH

Σ 4

Σ 52

## Active members per month



### Milestones 2009

- 04th of May - Introduction of Seasons (25% of futures trading volume)
- 15th of July – Start of gas auction with min. contract size 1 MW (already 24 active participants)
- 01th of October - Start of control energy trading in NCG at the EEX (>1 TWh)

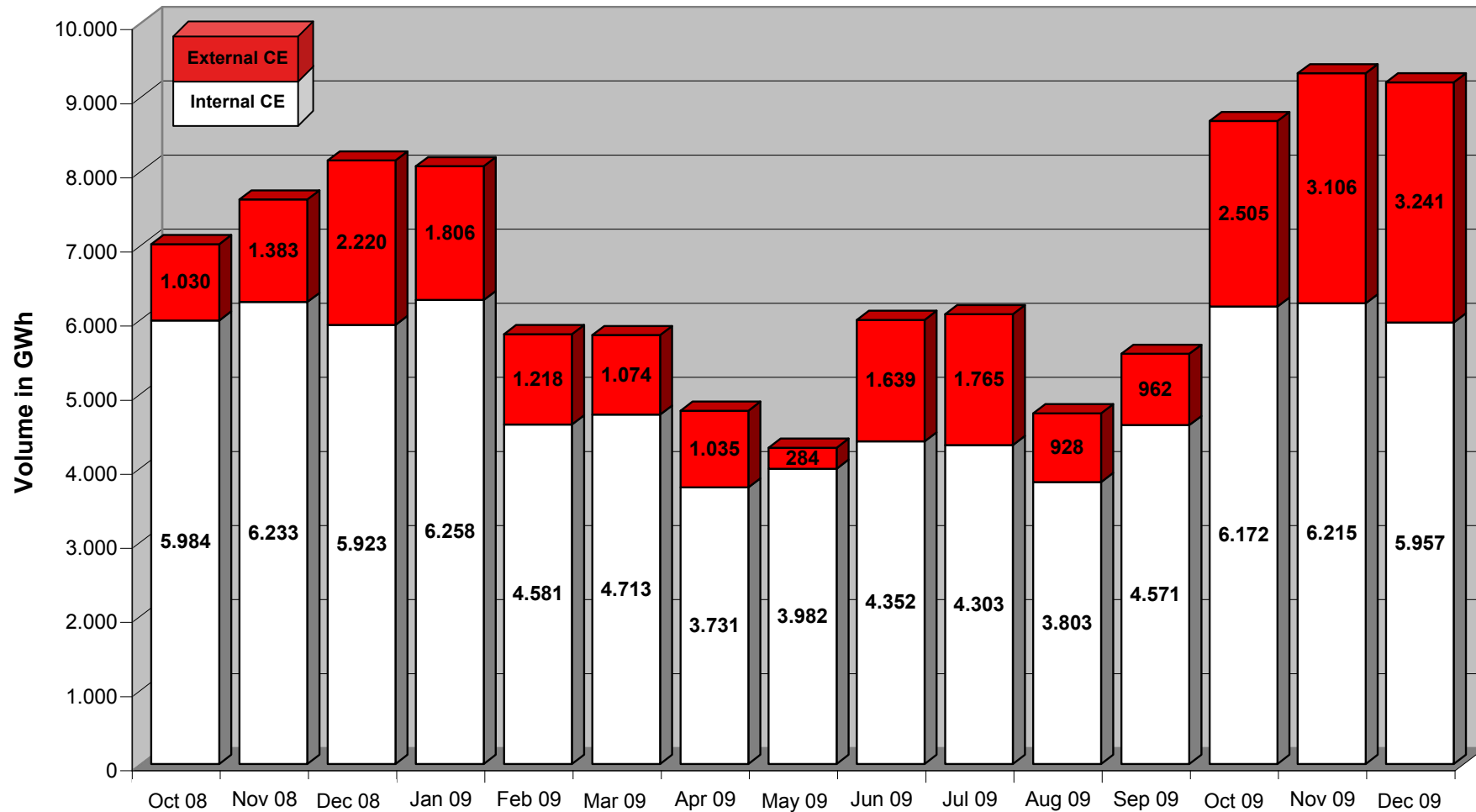
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Control energy trading at the EEX and at the OTC market

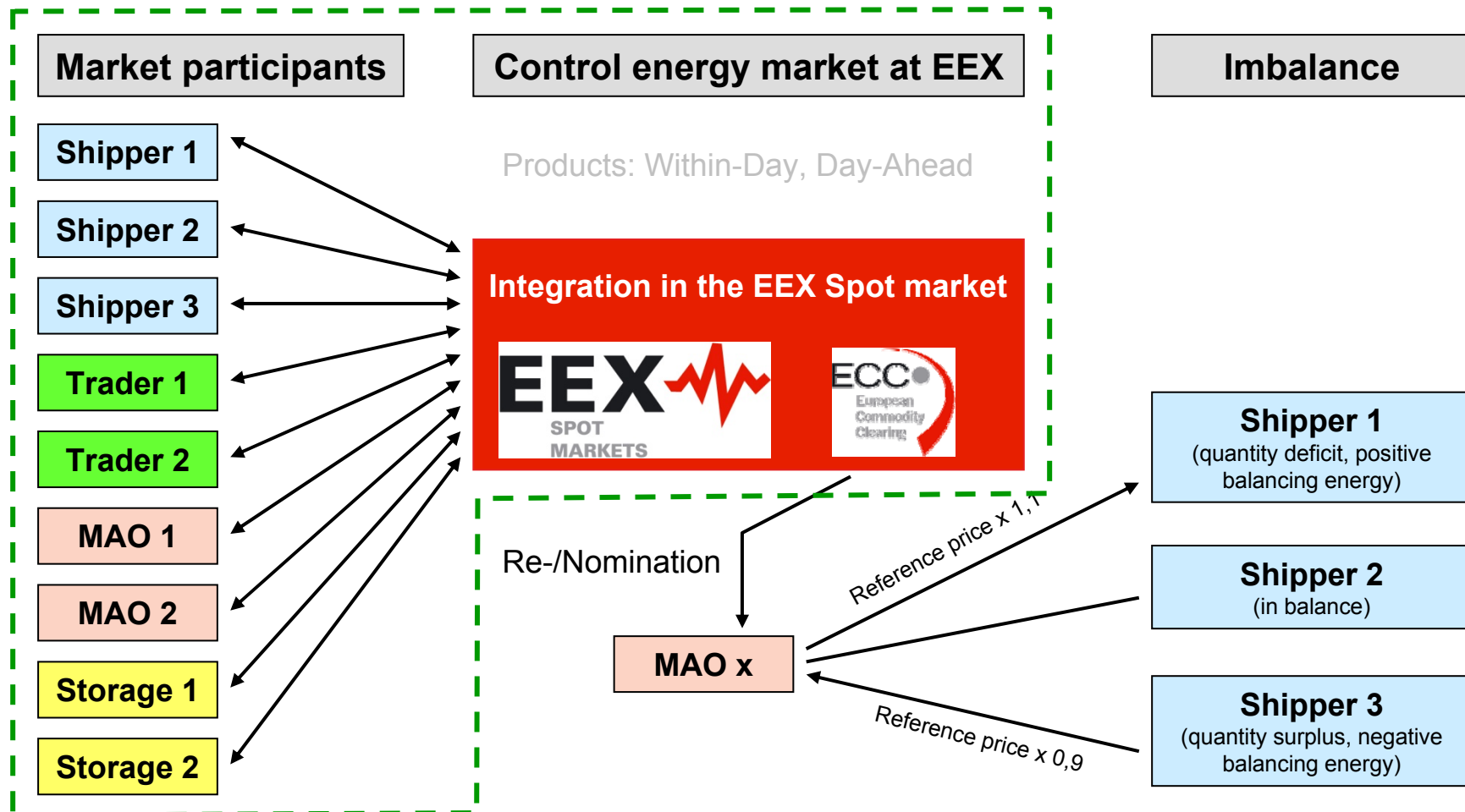
Market and balancing energy prices versus GABi Gas

# Usage of control energy since October 08

Usage of control energy by NCG and GASPOOL



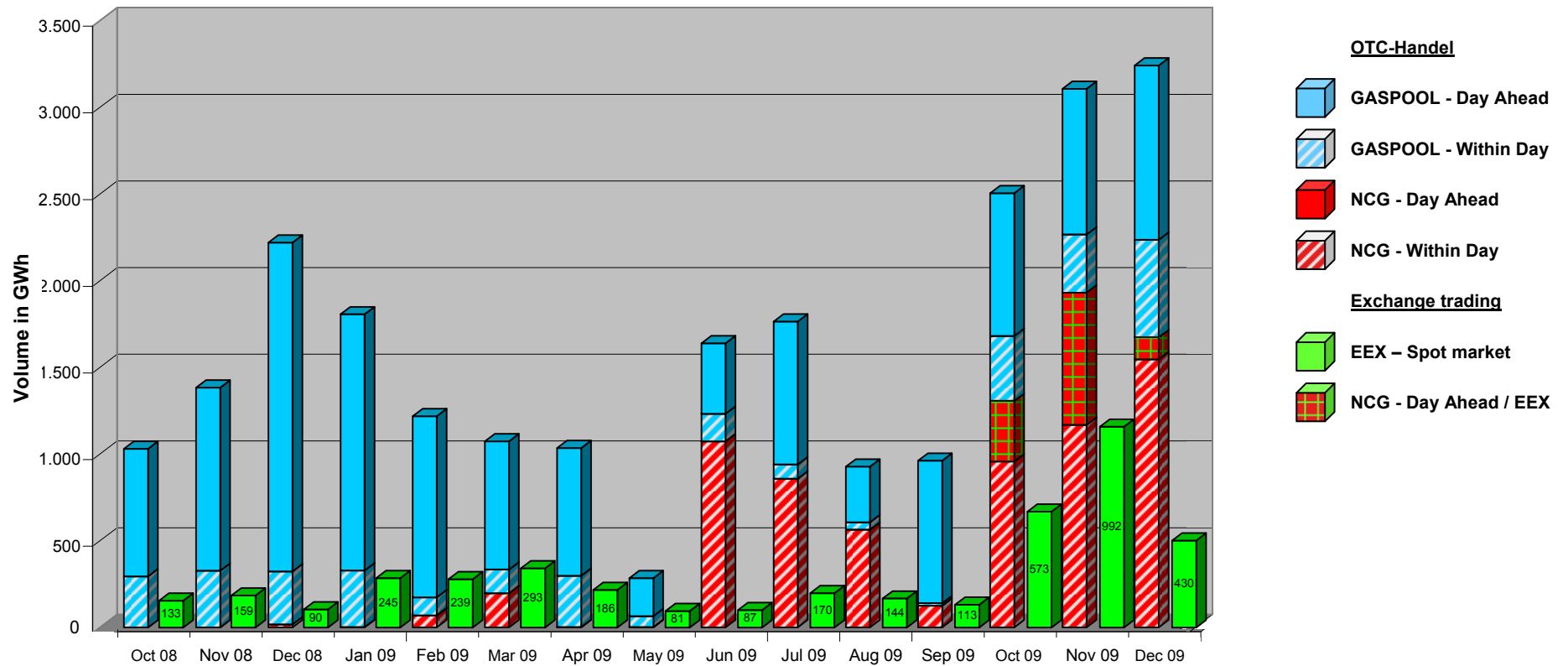
# Integration of the control energy market at the EEX



**Balancing energy prices for imbalances are based on “Day-Ahead” reference prices:**

Reference prices result from the second highest and -lowest market price of NBP, Zeebrugge, TTF and VTP NCG

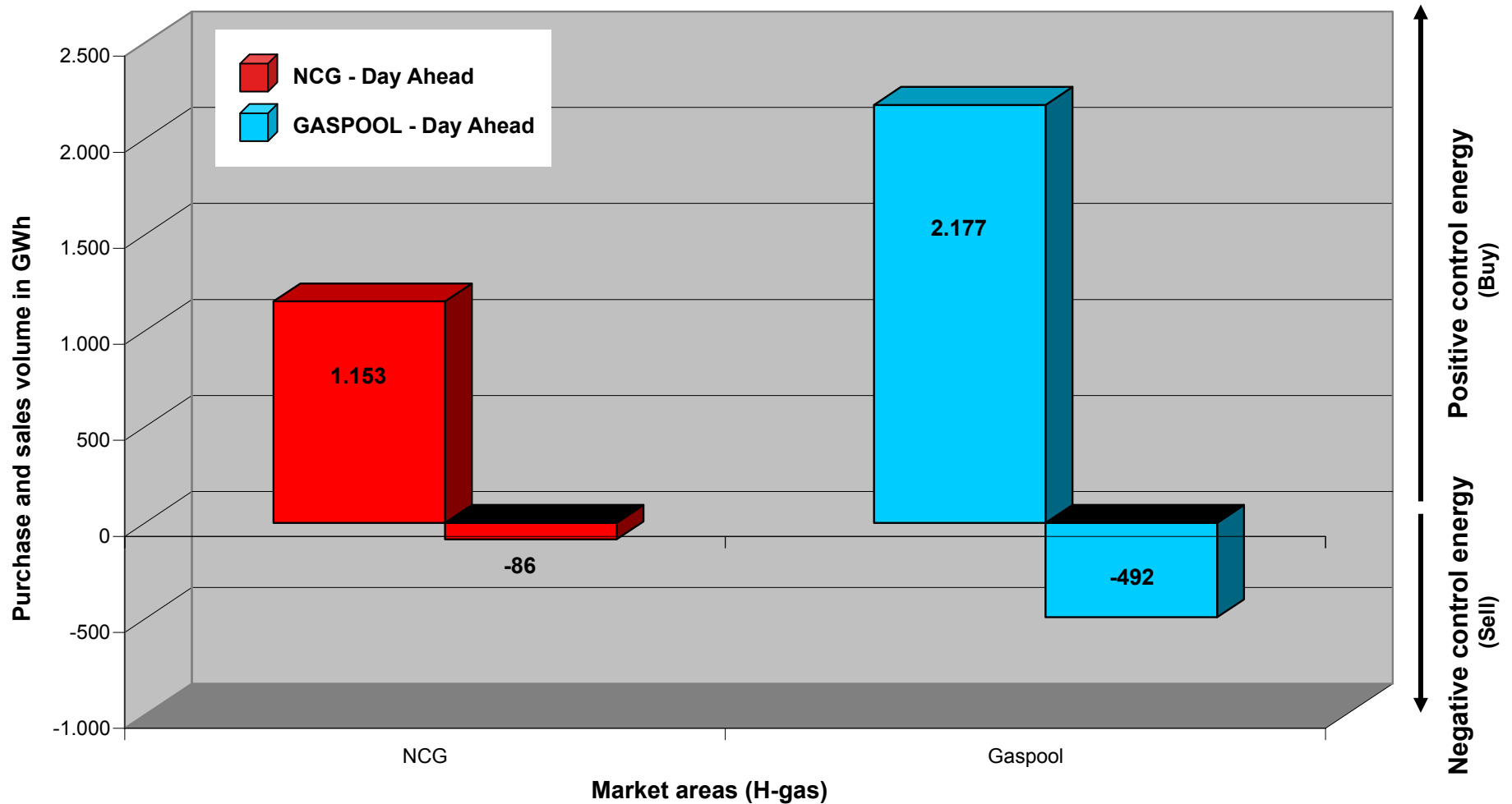
Control energy trade in NCG and GASPOOL area since October 08



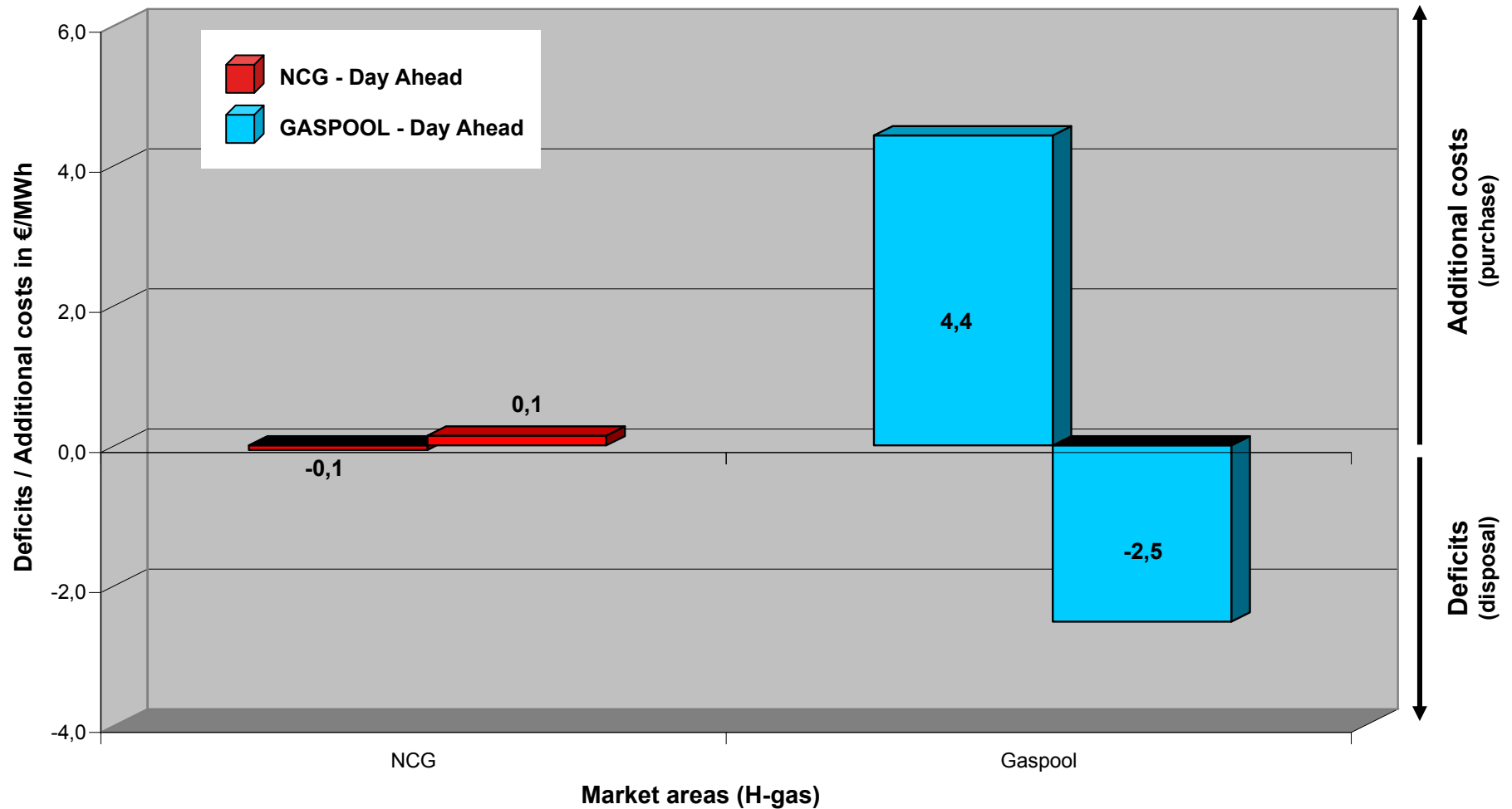
- Statistical analysis since October 08
- Substitution between WD und DA possible
- NCG trades control energy DA at EEX since Oct. 09

Volume in GWh	Within-Day	Day-Ahead	Sum
<b>NCG</b>	8.016	1.285	<b>7.825</b>
<b>GASPOOL</b>	3.937	16.456	<b>16.372</b>
<b>EEX</b>		3.934	<b>3.934</b>

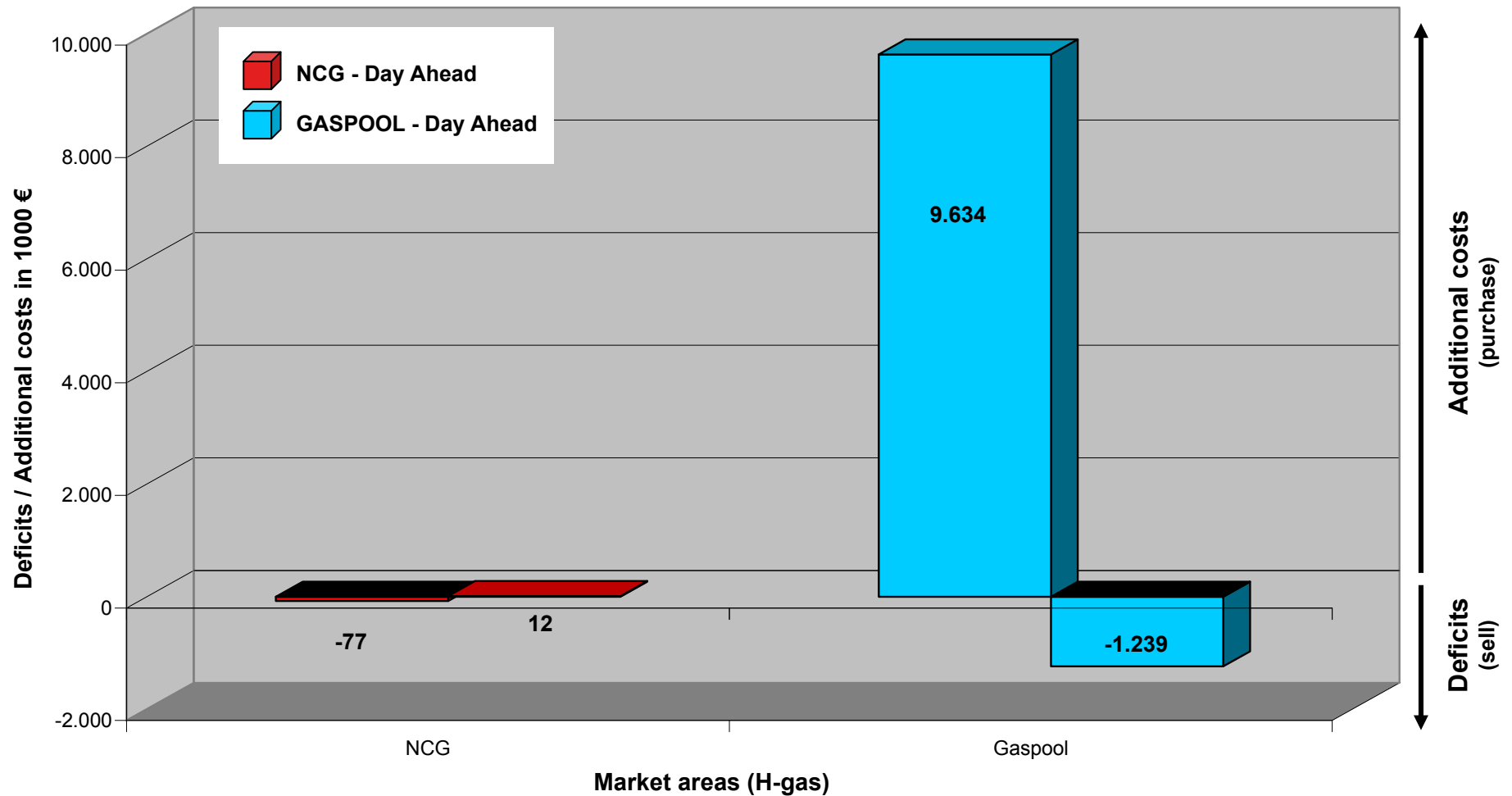
Purchase and sales volume in Day-Ahead products in GY 09/10



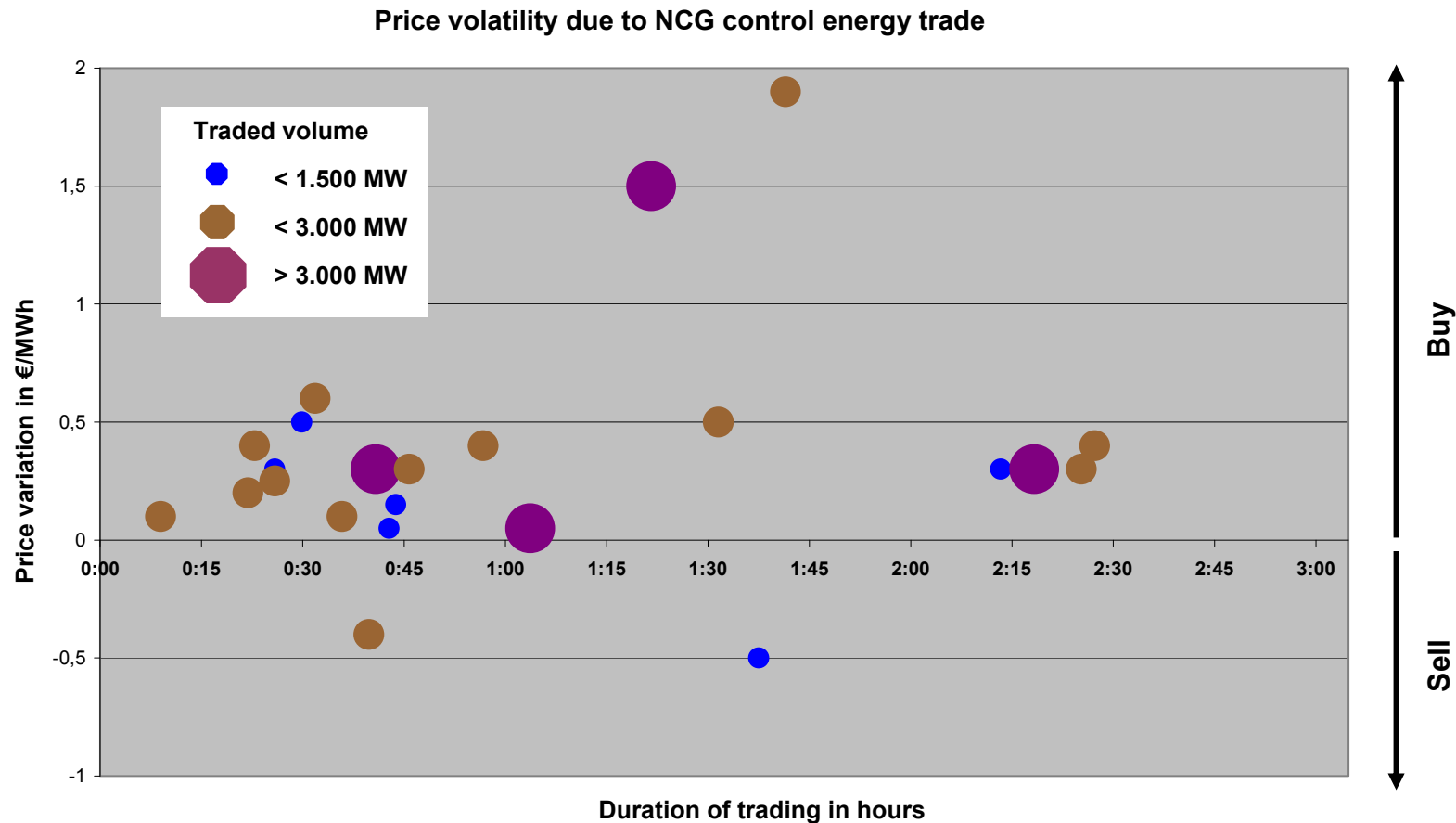
Differences to the EEX settlement price for Day-Ahead trading in GY 09/10



Benefits of exchange trading vs. call for tenders in GY 09/10 - DA



# Volatility due to control energy trading



Volatility of control energy trading at the EEX independent from:

- Volume of control energy
- Duration of control energy trading

## Trading participants

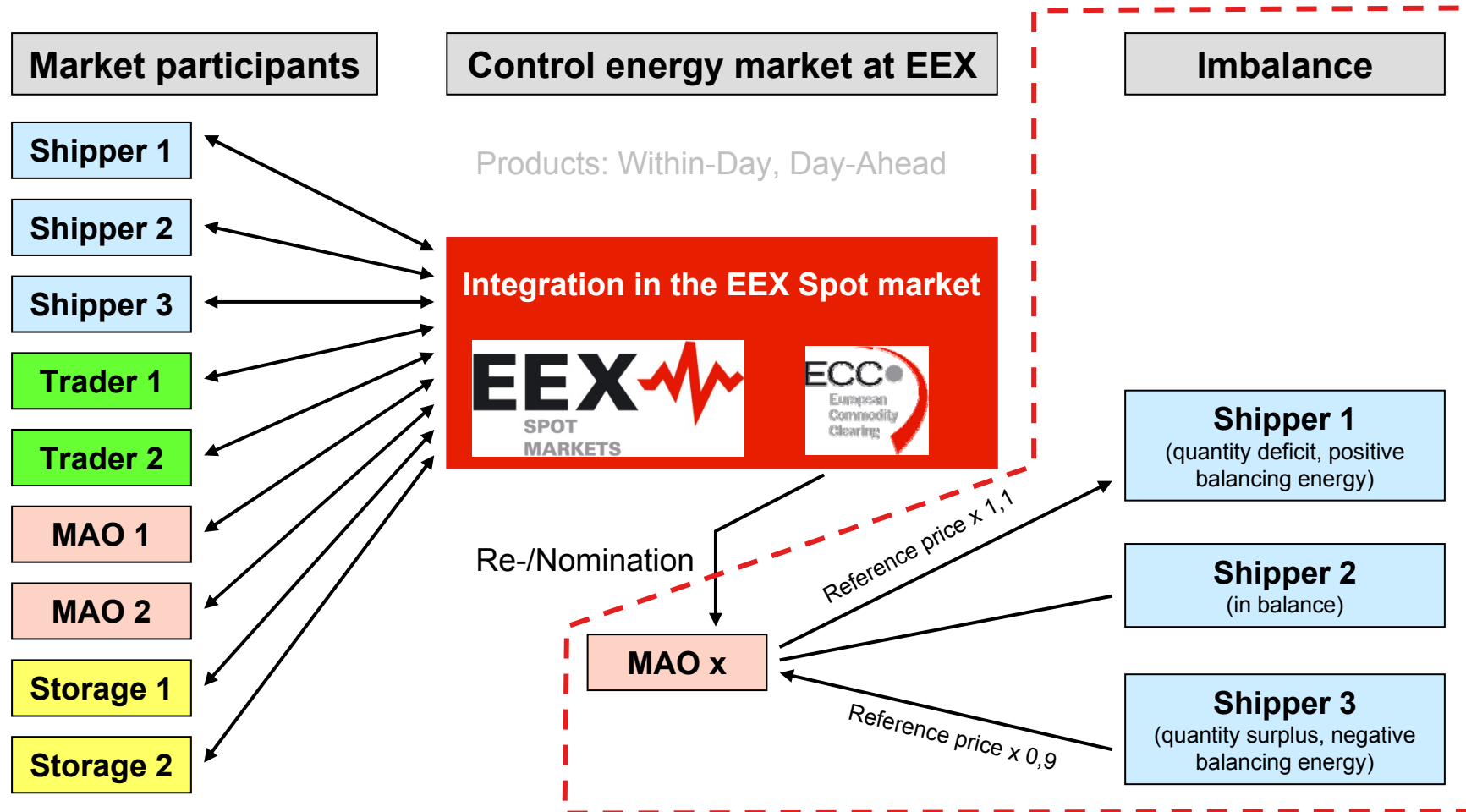
- So far more than 15 members have traded control energy at EEX
- Positively surprised by the high trading volume (in the past volume seen only OTC)
- Strong interest from established trading companies
- Activation of new members
- Reactivation of existing members
- Movement towards transparent exchange market
- Arbitrage possibilities between EEX and OTC-Market due to different market prices on several trading screens
- Speculation for increased market prices because of control energy trading eliminated
  - Absorption of control energy by various members at EEX

Update: Latest developments at the EEX

Control energy trading at the EEX and at the OTC market

Market and balancing energy prices versus GABi Gas

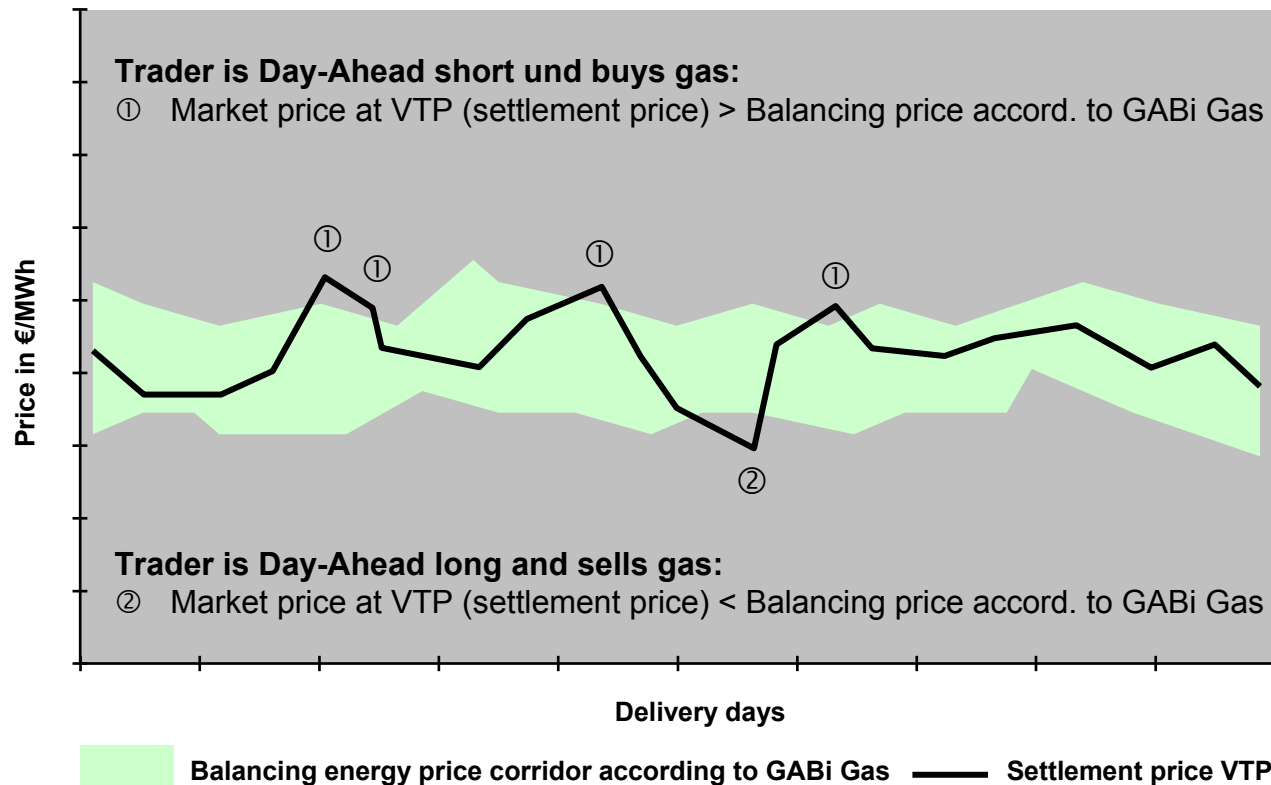
# Balancing energy prices and GABi Gas



Balancing energy prices for imbalances are based on "Day-Ahead" reference prices:

Reference prices result from the second highest and -lowest market price of the markets NBP, Zeebrugge, TTF and VTP NCG

## Theory



## Praxis

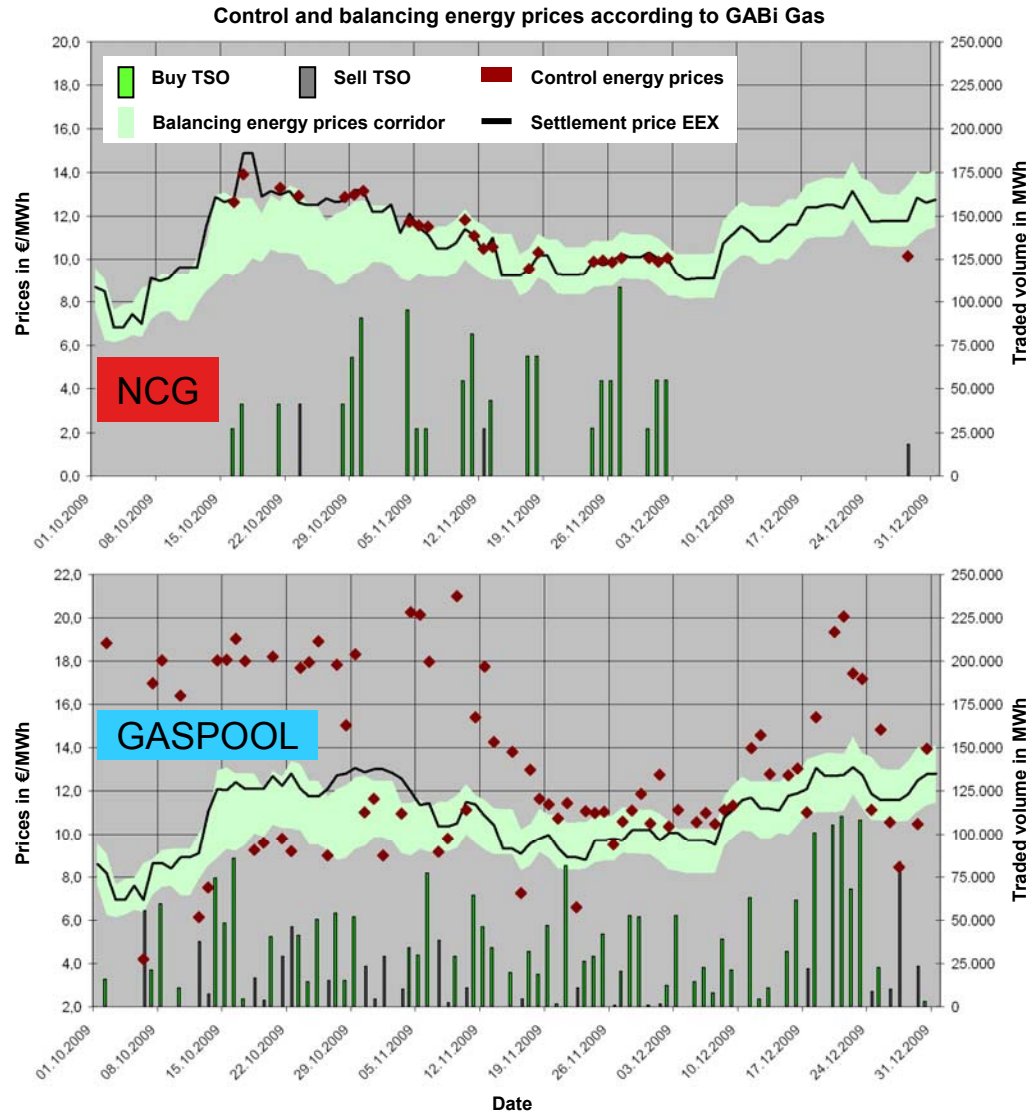
Arbitrage possibilities DA versus GABi Gas in Q4/09 with APX prices in the basket		
# days for	NCG	GASPOOL
Delivery	92	92
Arbitrage ①	18	12
Arbitrage ②	0	0

Arbitrage possibilities DA versus GABi Gas in Q4/09 with only EEX prices in the basket, EEX-basket NCG/GPL (50:50)		
# days for	NCG	GASPOOL
Delivery	92	92
Arbitrage ①	2	0
Arbitrage ②	0	2

### Preconditions for the nearly risk-free arbitrage:

- Trader is aware of Day-Ahead market prices at NCG, TTF, Zee und NBP
- Requirement fulfilled, because brokers and exchanges offer real-time market prices

# Control energy trading EEX vs. OTC in Q4/09



NCG trades control energy at **EEX** at transparent market prices

- Control energy prices often outside the balancing energy price corridor according to GABi Gas
- Price difference between control- and balancing energy may increase general contribution to control energy

**GASPOOL** trades control energy currently **OTC**

- Faraway from exchange prices
- Outside the balancing energy price corridor according to GABi Gas
- Price difference between control- and balancing energy can increase general contribution to control energy

## Status quo

- Control energy trading according to GABi Gas at the EEX
  - Increased liquidity at the exchange and improved transparency
  - Increased interest from the new members and reactivation of existing members
  - Could decrease general contribution to control energy from the trading side
  - Avoids extreme price volatilities through liquidity and big number of EEX-members
- Settlement of balancing energy according to GABi Gas with current price basket
  - Enables arbitrage and may offset the penalties through asymmetric balancing energy prices, if:
    - Positive balancing energy is cheaper than procurement at the VTP
    - Negative balancing energy is more expensive than disposal at the VTP
  - and could increase general contribution to control energy, if:
    - Positive balancing energy is cheaper than procurement of control energy at the VTP
    - Negative balancing energy is more expensive than disposal of control energy at the VTP

## Potential effective short term solution

- Switch of price basket to EEX settlement prices of NCG and GASPOOL

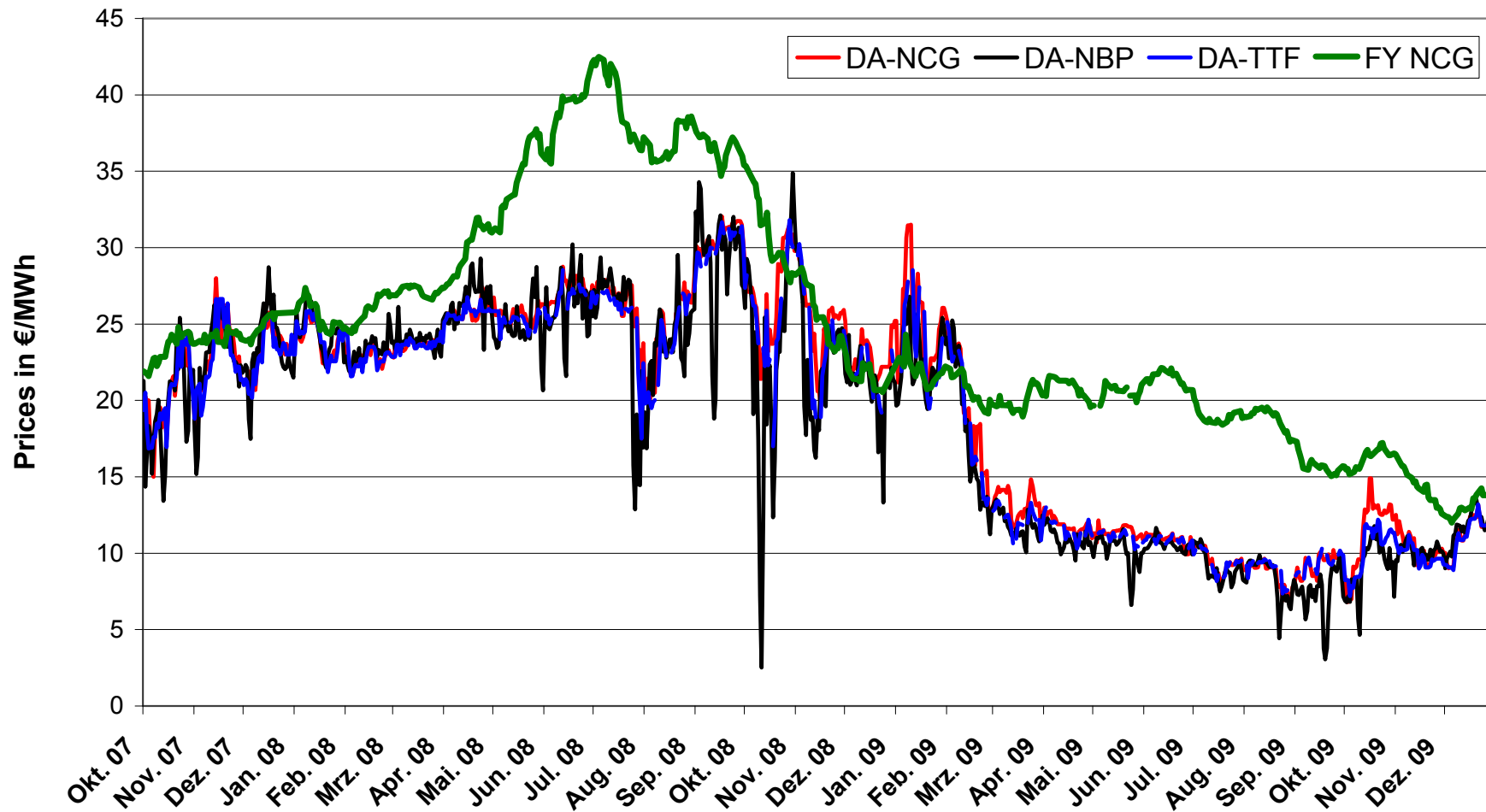


connecting markets

**Thank you for your attention**

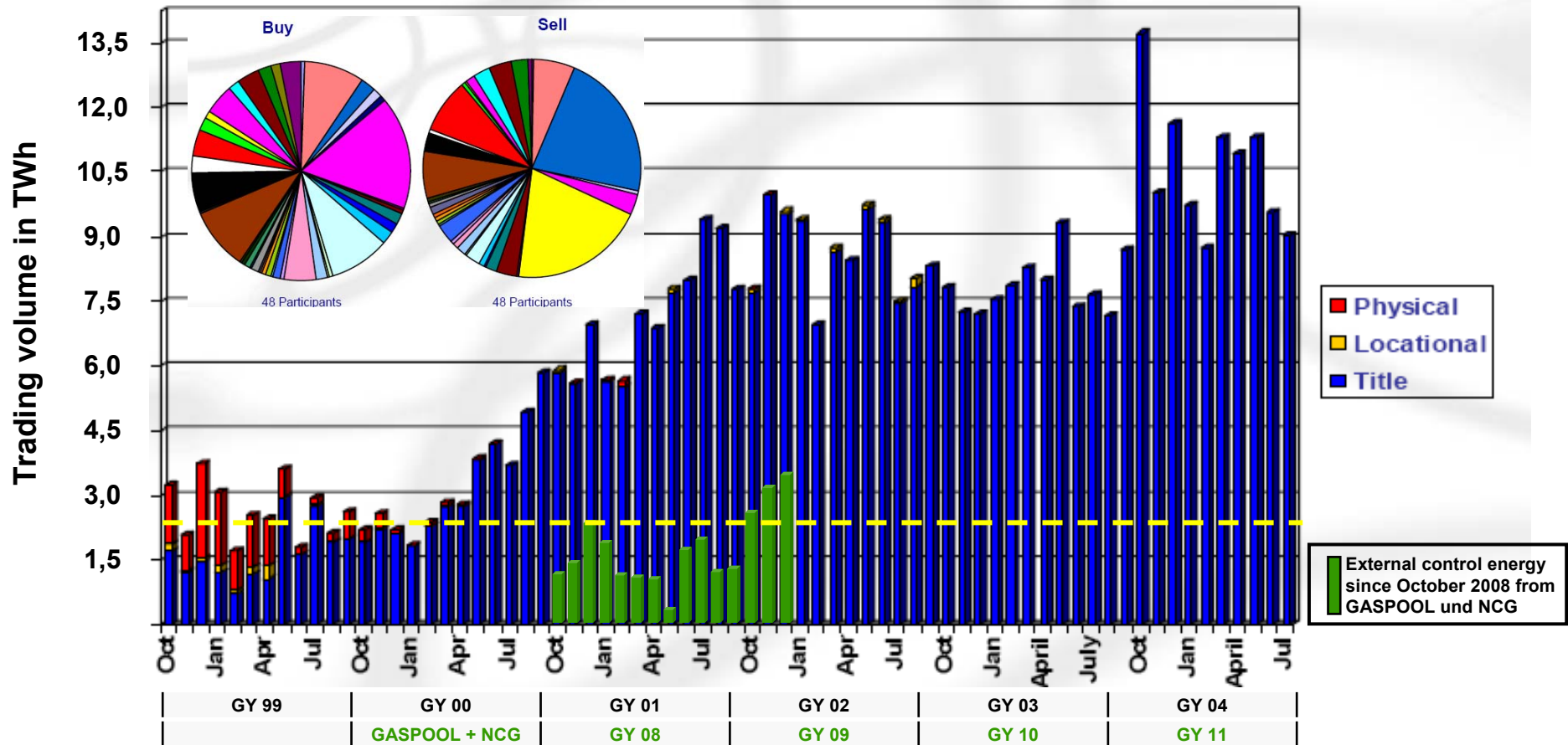
EEX AG; Sirko Beidatsch; [Sirko.Beidatsch@eex.com](mailto:Sirko.Beidatsch@eex.com); +49 (0) 341 2156-223

Comparison of the gas market prices



Sources: EEX AG, APX Group

# Excursus: Development of the OCM NBP



Start OCM in Oct. 1999

Minimum contract size : 4.000 therm/d circa 5 MWh/h

Datenquelle: <http://www.ofgem.gov.uk/Markets/WhIMkts/CustandIndustry/DemSideWG/Documents1/11526-EnEx%20%20OCM%20Overview.pdf>