



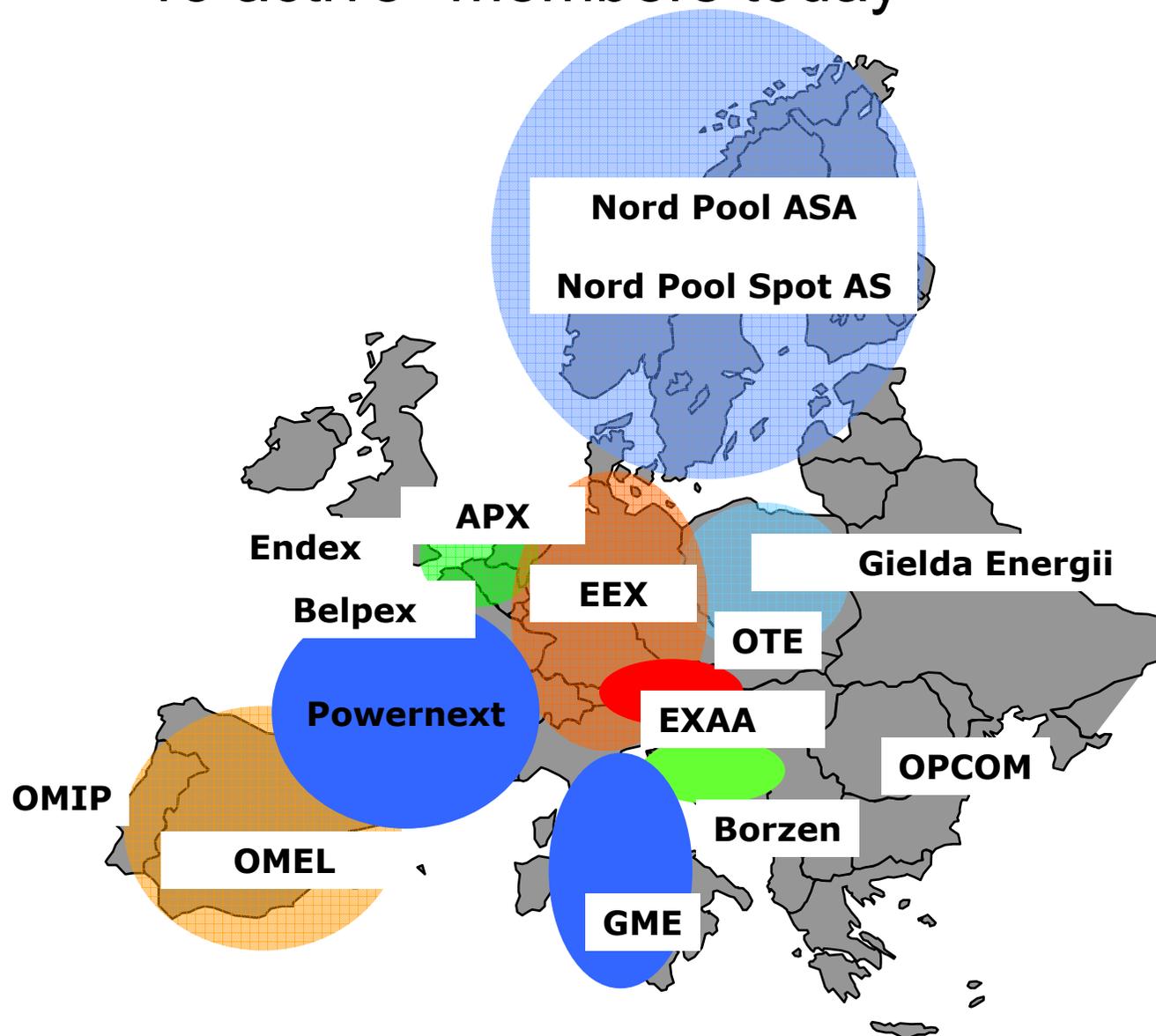
# **EuroPEX presentation**

***14<sup>th</sup> Florence Forum***

Florence, 24-25 September 2007

# EuroPEX - a growing association

15 active\* members today



Note: \*In addition, Nord Pool AB, which is not part of Steering Committee, thus a non-active member

- Current status of Cross-Border Congestion Management and Market coupling in Europe
  - Long term view
  - Short term view
- EuroPEX **vision** on congestion management in the Internal Electricity Market
  - Financial instruments for long term stage in the form of Financial Transmission Rights and/or standard derivatives (financial) contracts such as CfDs (plus Futures, Forwards & Options)
  - Implicit auctions for the day-ahead stage
  - Cross border intraday market short-term, before real-time balancing

# Implicit auctions for short-term congestion management



- Implicit auctions are the most efficient method for short-term congestion management because they
  - ensure full use of the available capacity when needed based on supply/demand
  - provide consistent price signals
  - automatically net the capacity requirements of energy flows in opposite directions
  - Promote liquidity in the participating (spot) market areas
  - Prevent hoarding of interconnection capacity
- EuroPEX has (2004) together with ETSO presented a vision of a Flow based Market Coupling

## Our vision for congestion management

- Financial Transmission Rights and/or electricity-based derivatives to enable market parties hedging of price risks, including cross-border differentials
  - Regulation and market forces in the different hub should determine which of these instruments best suits the local requirements
  - However, during a transitory period, congestion management solutions in some hubs may be characterised by explicit auctions of long-term (even short-term) PTRs, thus a step-by-step method to replace them with financial instruments may then be needed
- Day-ahead market coupling to allocate interconnection capacity and define prices for the different areas
- Cross-border intra-day trading via utilization of remaining capacity after day-ahead stage

# Market Coupling solution Netherlands-Belgium-France

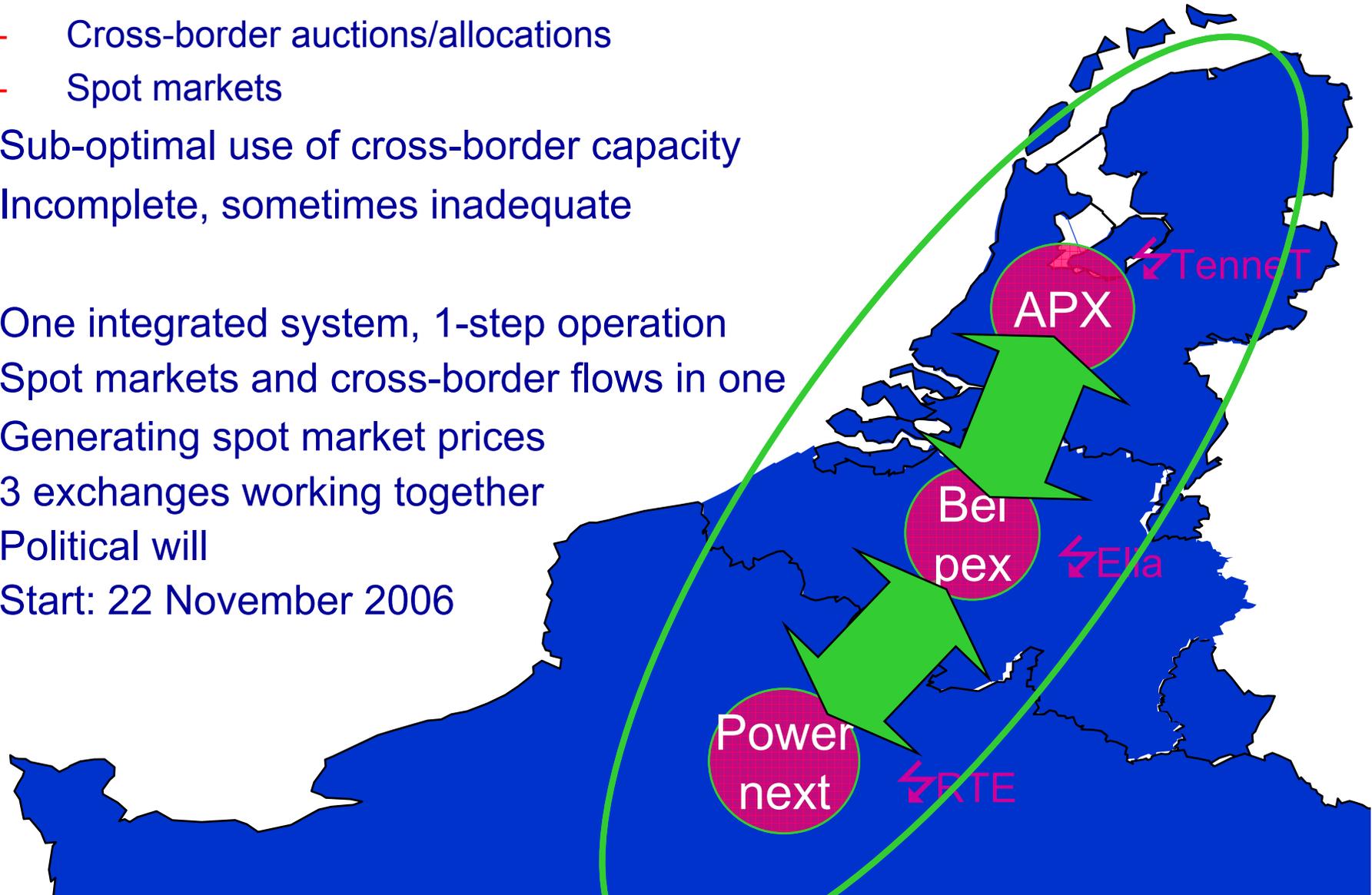


Before: separate operation of:

- Cross-border auctions/allocations
- Spot markets
- Sub-optimal use of cross-border capacity
- Incomplete, sometimes inadequate

After

- One integrated system, 1-step operation
- Spot markets and cross-border flows in one
- Generating spot market prices
- 3 exchanges working together
- Political will
- Start: 22 November 2006



# Better flows and price convergence TLC example



## Possible outcomes of TLC

1. BE-NL and FR-BE borders congested: 3 price areas



1.9%

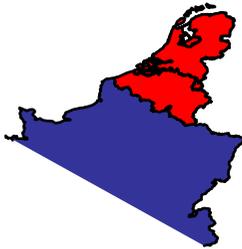
With the explicit auction :  
only outcome 1, even if  
there was enough  
transmission capacity to  
bring the prices together

2. BE-NL border congested: 2 price areas



30.3%

3. FR-BE border congested: 2 price areas



9.2%

Today, either prices will  
converge fully,  
or transmission capacity  
will be fully utilised

4. No congestion: 1 single market



58.6%

Results in  
TLC so far  
In % share

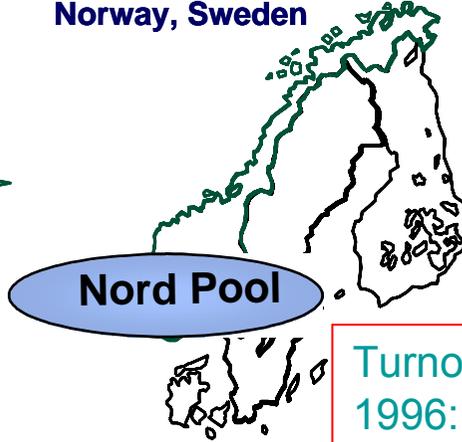
# Development of the Exchange Area for Elspot



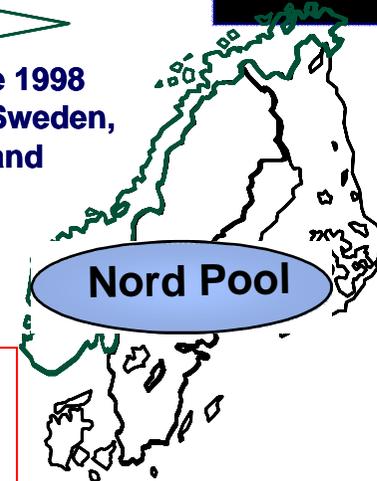
1993  
Norway



1996  
Norway, Sweden



15 June 1998  
Norway, Sweden,  
Finland

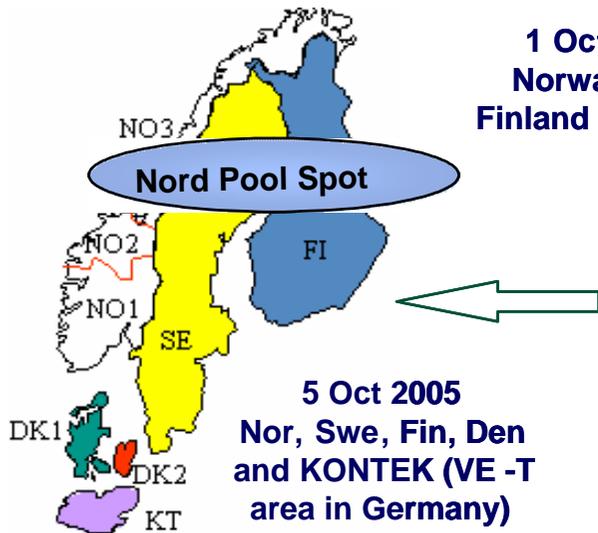


Turnover in Elspot  
1996: 40 TWh  
2006: 250 TWh  
2007: >270 TWh

1 October 2000  
Norway, Sweden  
Finland and Denmark



1 July 1999  
Norway, Sweden  
Finland, West Denmark

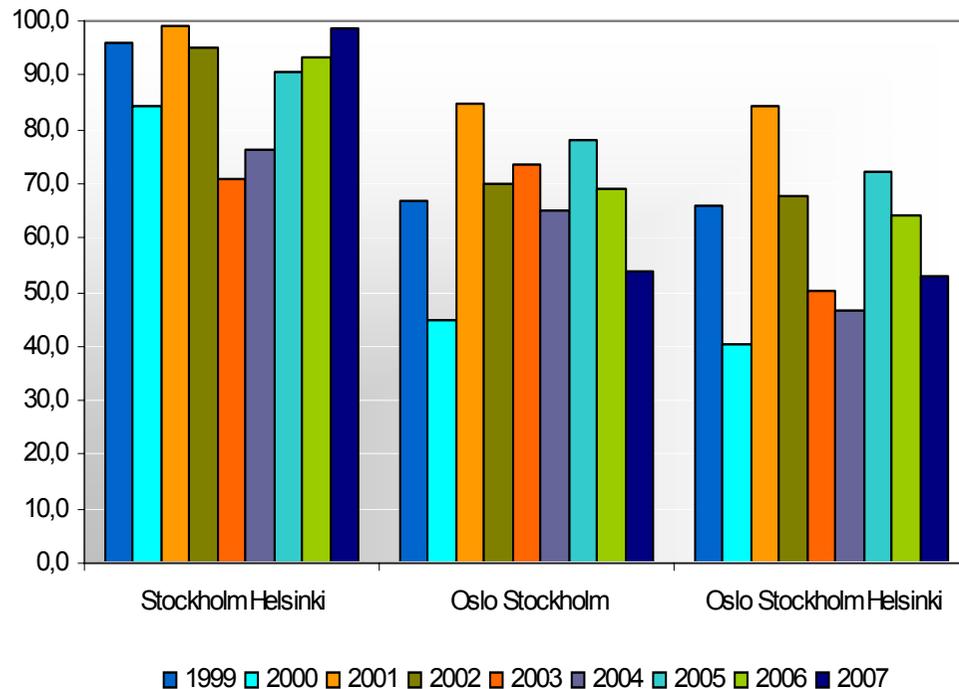


5 Oct 2005  
Nor, Swe, Fin, Den  
and KONTEK (VE -T  
area in Germany)

Now all the Nordic countries are part of Elspot, thus apply day-ahead Implicit Auction (Market Splitting), and hourly border trade towards the continent works more efficient than before!

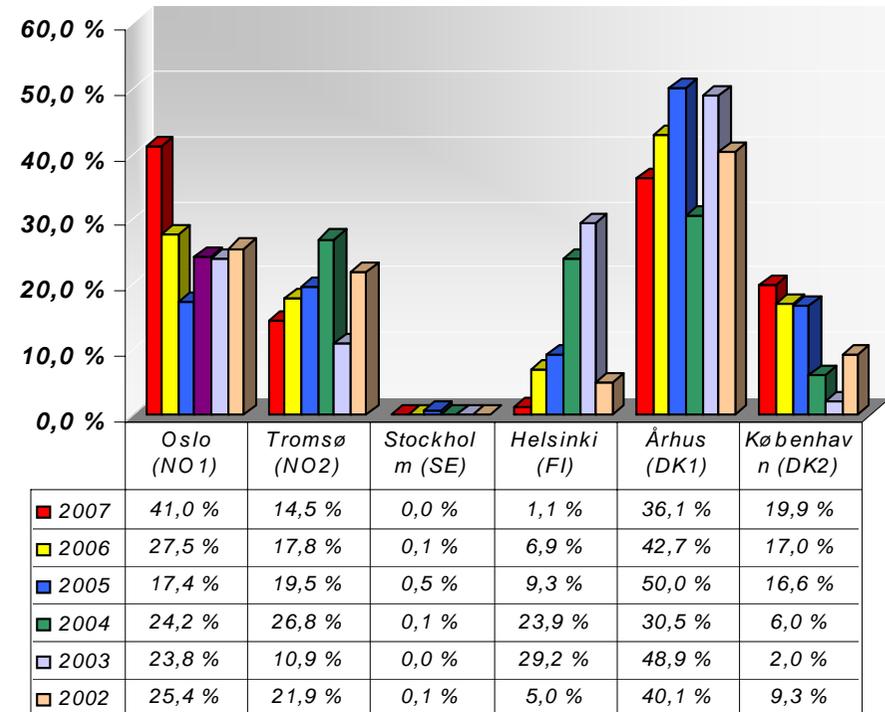
## Elspot -common price

in % through week 37-2007



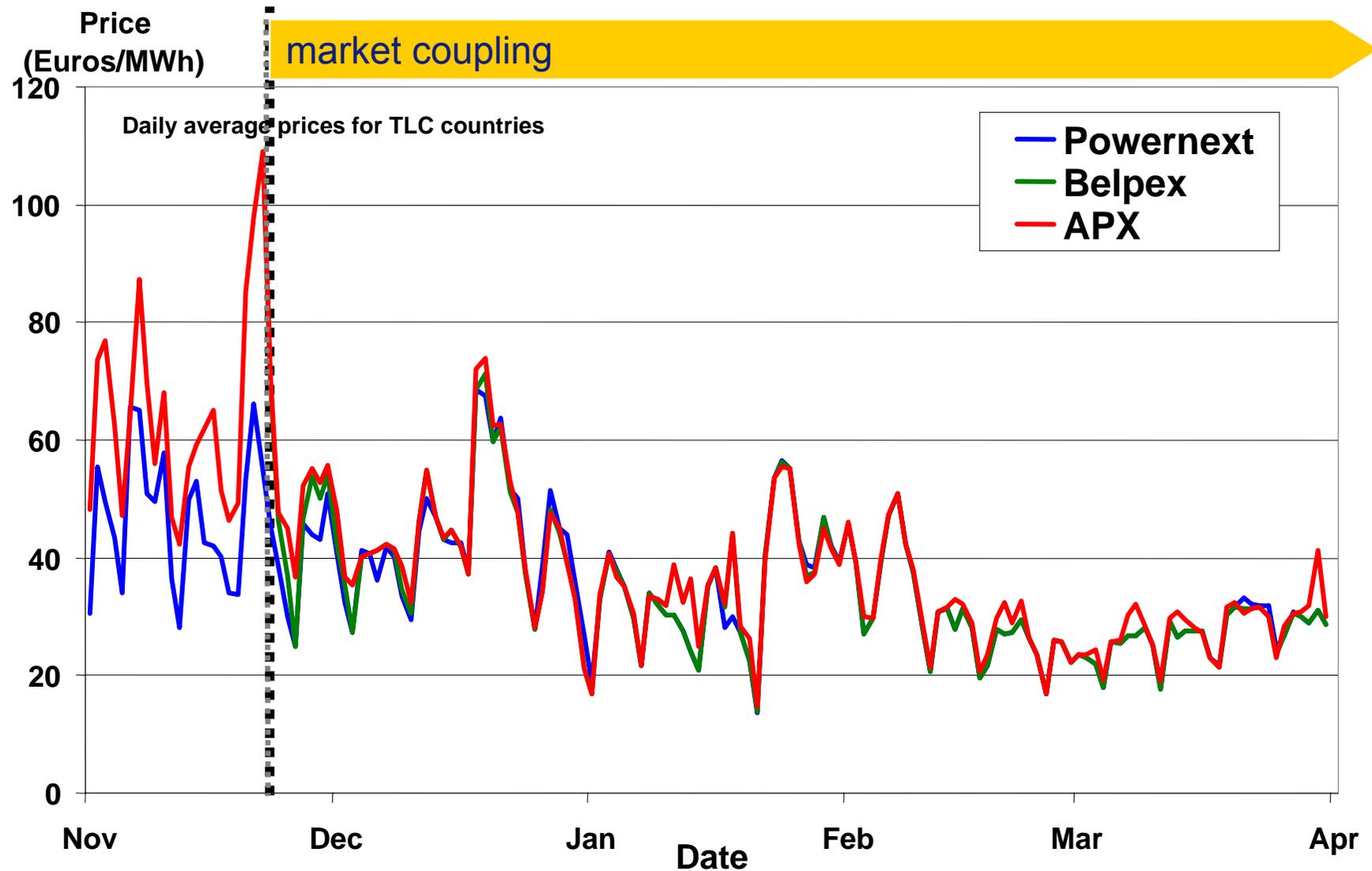
## Elspot - Price Areas

No. of hours (%) when one bidding area is isolated from all other areas - through 37-07



**Conclusion: Implicit Auctions integrate or rather "enlargens" national markets and thus enhances (price/volume) competition cross-borders in a way that explicit methods can not achieve**

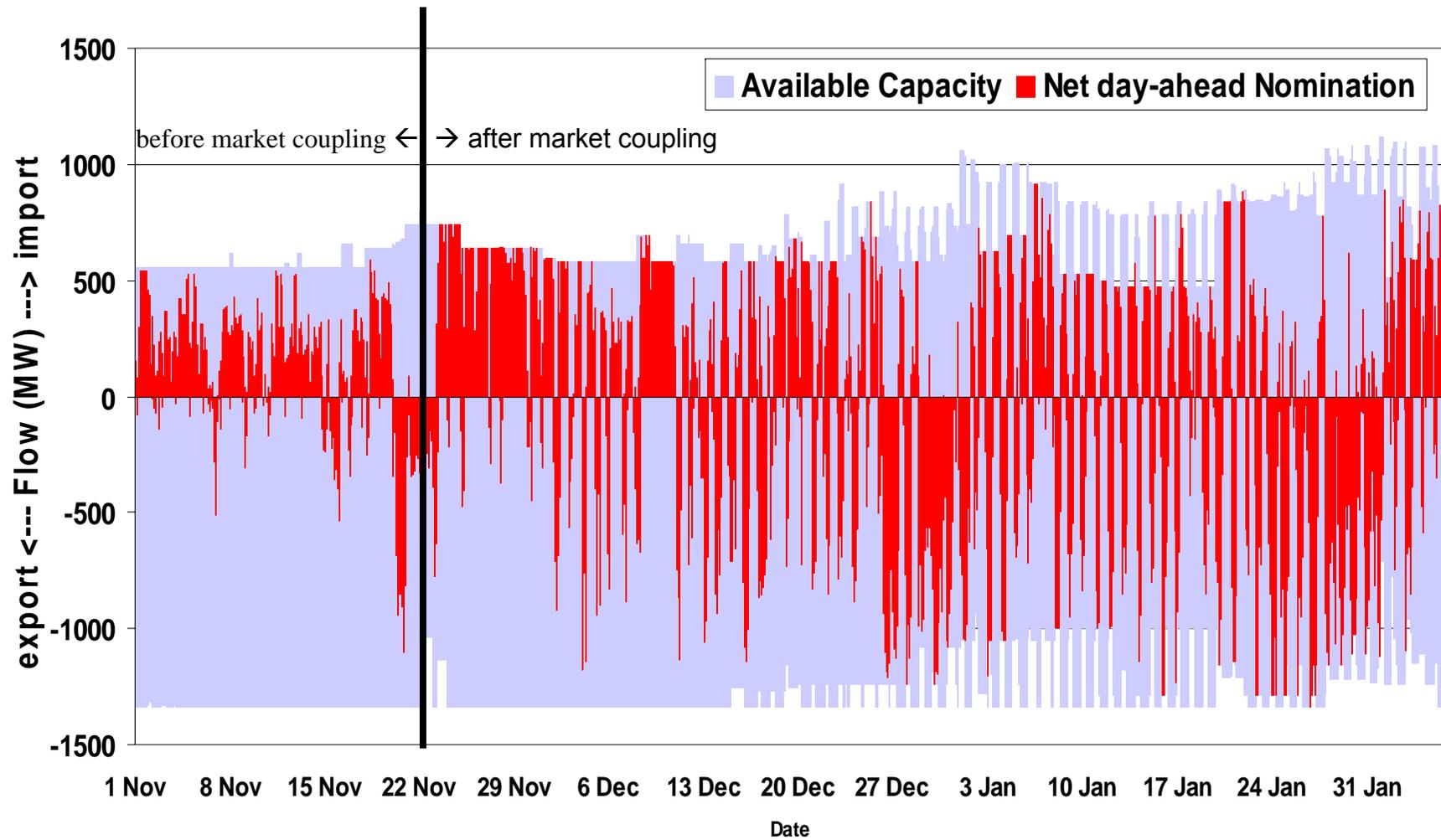
# Market Coupling results - Price convergence



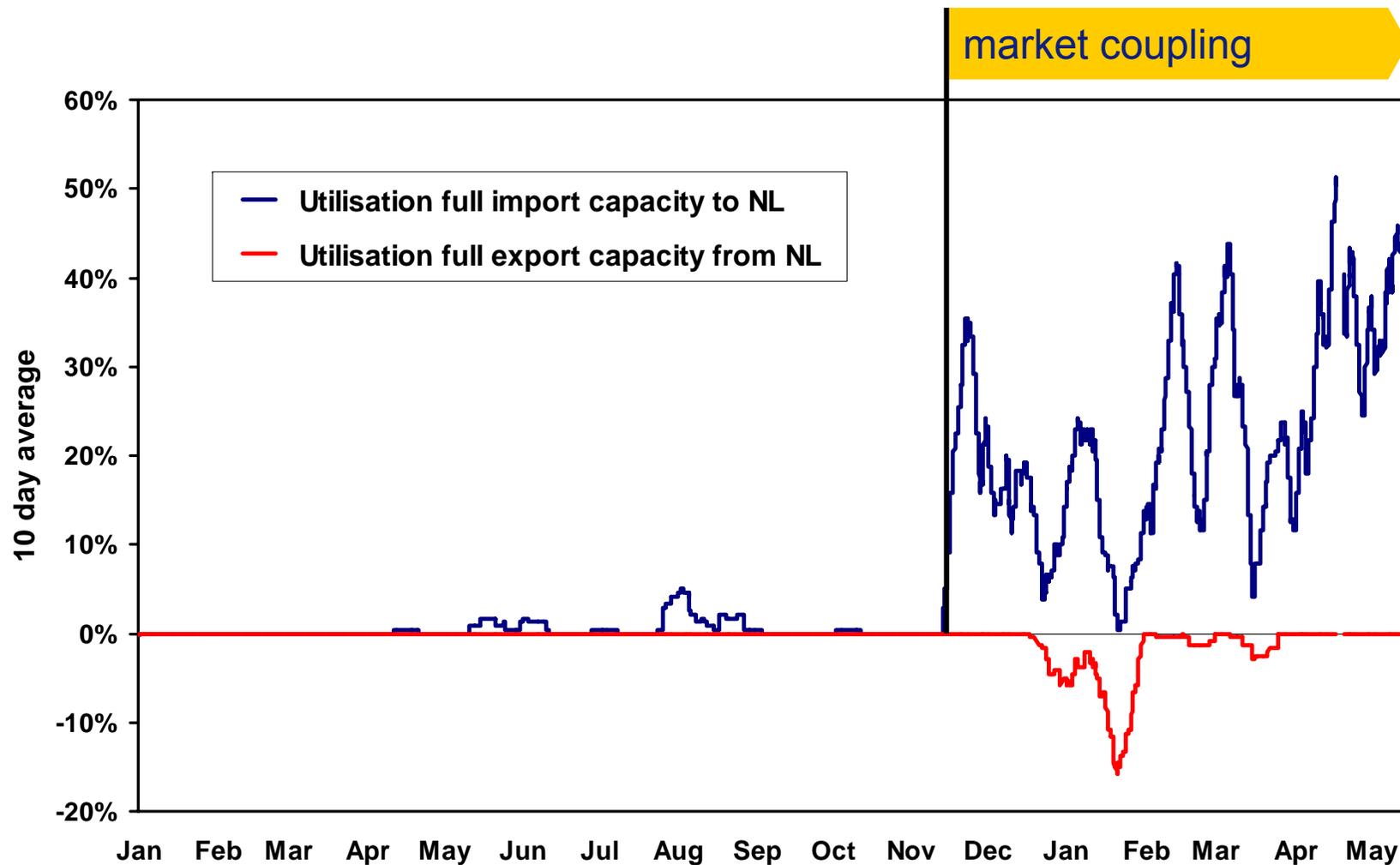
# Import/export utilization before and after



Utilisation of day-ahead capacity on the Belgian - Dutch border



# Better utilized transmission capacity: Dutch-Belgian border January 06 – May 07



# Congestion Management and Import and Export: Suitable for co-operation between exchanges and grid companies

