

Cross border intraday trading over NorNed cable

First results 15-29 March

Linking partners in power

- Cross border intraday trading
= Implicit allocation of transmission capacity
- Elbas platform
 - Operational in Nordic region since nineties
 - Operational in BE-NL: coupled since 16 Feb 2011
- Both regions coupled over NorNed since 14 March 2012



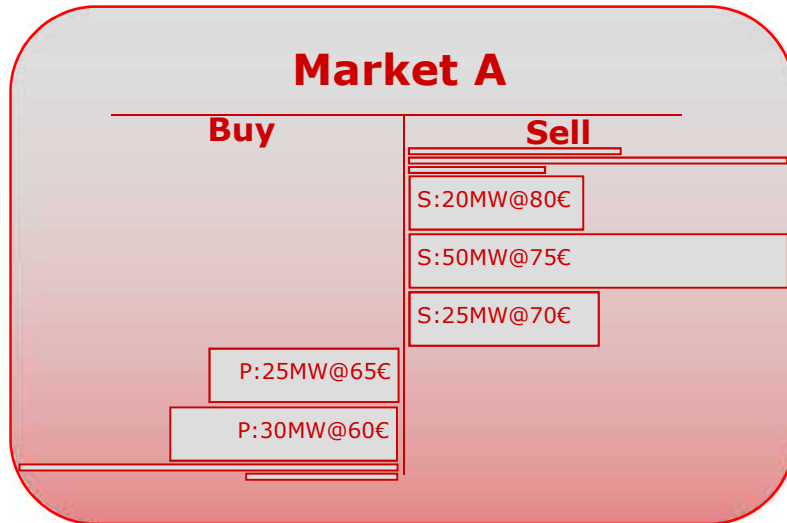
- XBID NO2-NL: first trades for 15 March 2012
- Between 15-29 March, a total of 2083.7 MWh was traded over the NorNed cable via Elbas
 - NO2-BE: 1983.1 MWh
 - BE-NO2: 30.2 MWh

 - NO2-NL: 70.0 MWh
 - NL-NO2: 0.4 MWh
- > In total 2013.3 MWh extra trading opportunities created in BE, despite high ratio of day-ahead congestion on NorNed

- Average day-ahead price spread 15-29 March
 - NO2-NL: 18.23 €/MWh
- DA flow caused congestion on NorNed cable in NO2-NL direction 94.4 % of hours from 15-29 March
- Average day-ahead prices in March
 - Belpex DAM 45.18 €/MWh
 - APX Power NL 44.71 €/MWh
 - Nordic system price 29.20 €/MWh
- Nordic hydropower reservoirs
 - 46.3 % full
 - Compared to 39.6 % seasonal average



No capacity (comparable to today's situation)

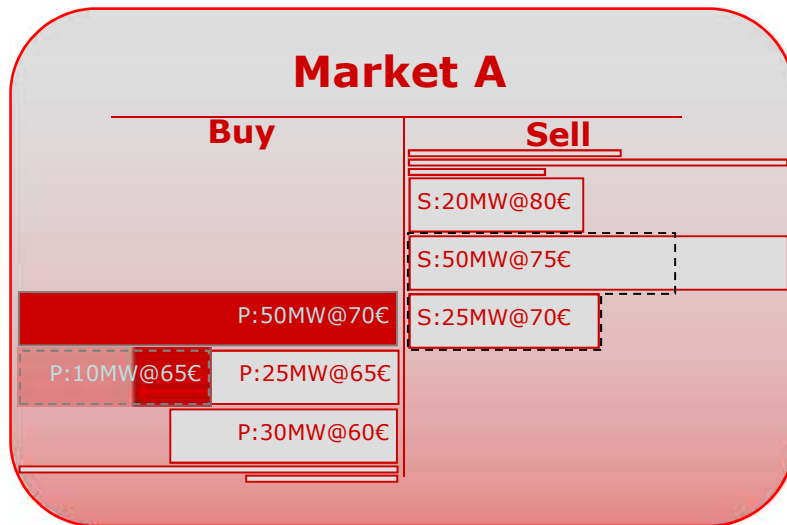


Market A: Liquid / low spread

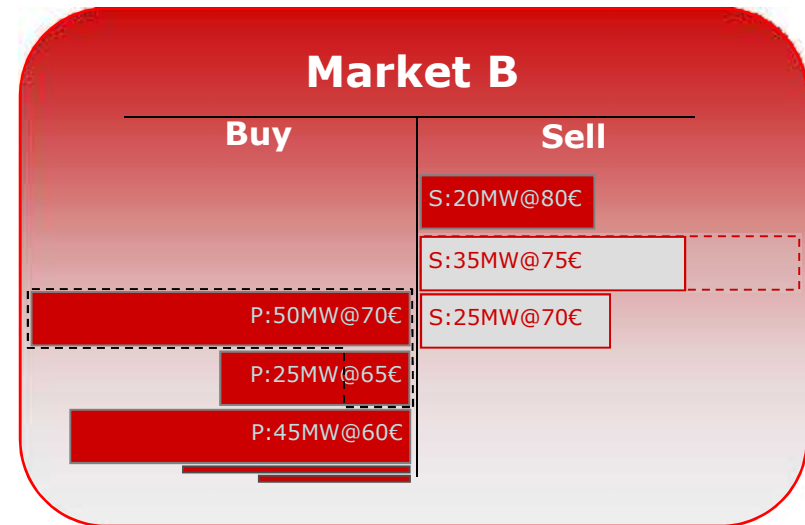


Market B: few sell / high spread

ATC A->B = 60 MW

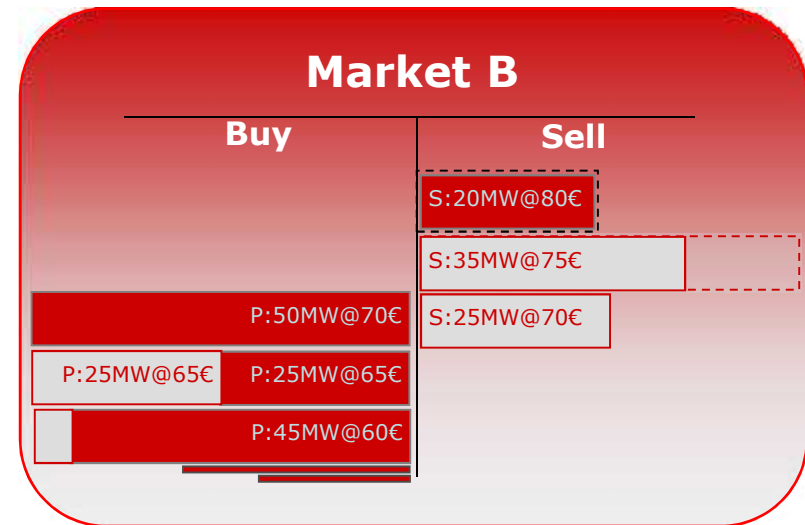
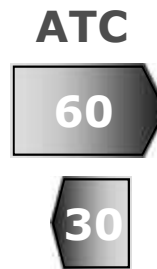
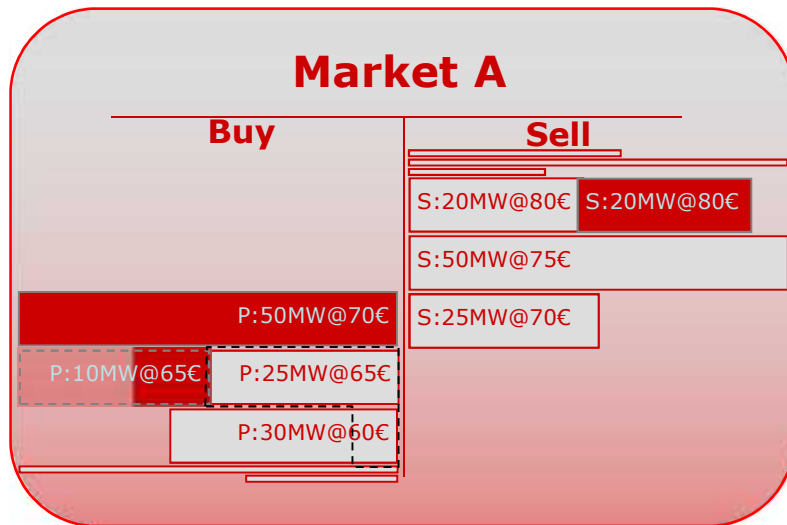


ATC
60



- With 60 MW capacity from A to B
 - 60 MW cheapest sell orders in A are shown in B
 - 60 MW most expensive buy orders in B are shown in A

ATC B->A = 30 MW



- With 30 MW capacity from B to A
 - 30 MW most expensive buy orders in A are shown in B
 - 30 MW cheapest sell orders in B are shown in A (but only 20 MW available)

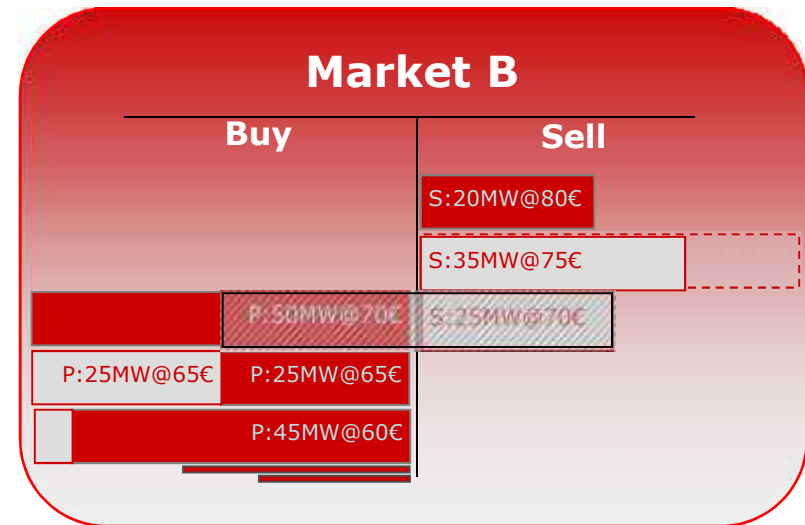
Matching



ATC

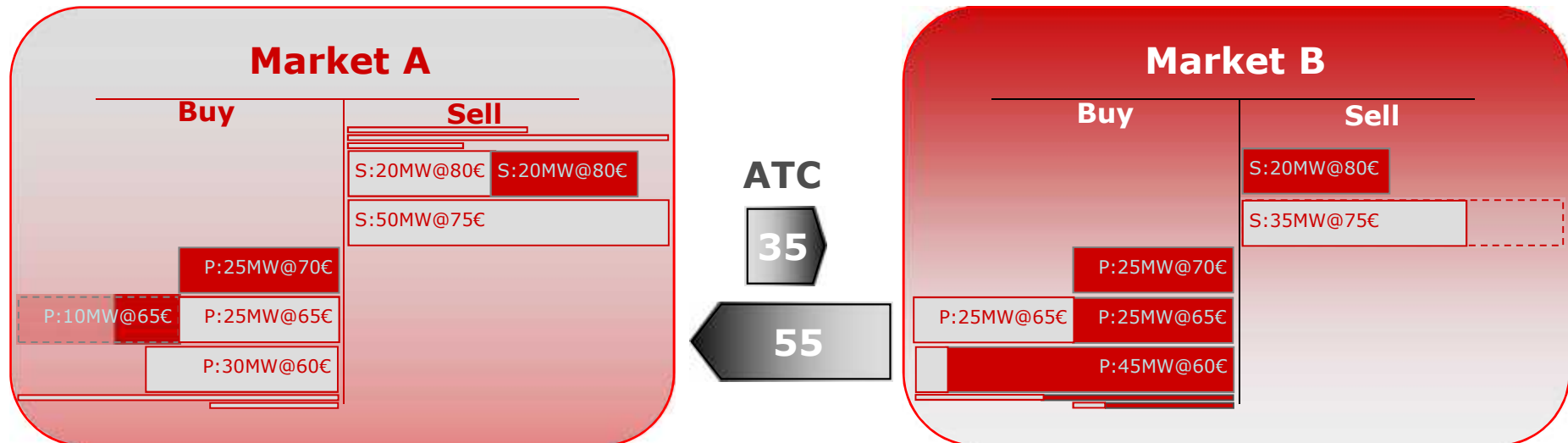
60

30



- A sell order of 25 MW in market A can match a buy order in market B

Netting



- 25 MW of capacity used in the direction A -> B ($ATC_{A \rightarrow B} = 60 - 25 = 35$)
- 25 MW can be netted in the direction B -> A ($ATC_{B \rightarrow A} = 30 + 25 = 55$)
- Orderbooks are updated accordingly

**Continuous implicit capacity allocation
makes intraday markets more efficient and creates more
opportunities for market players**