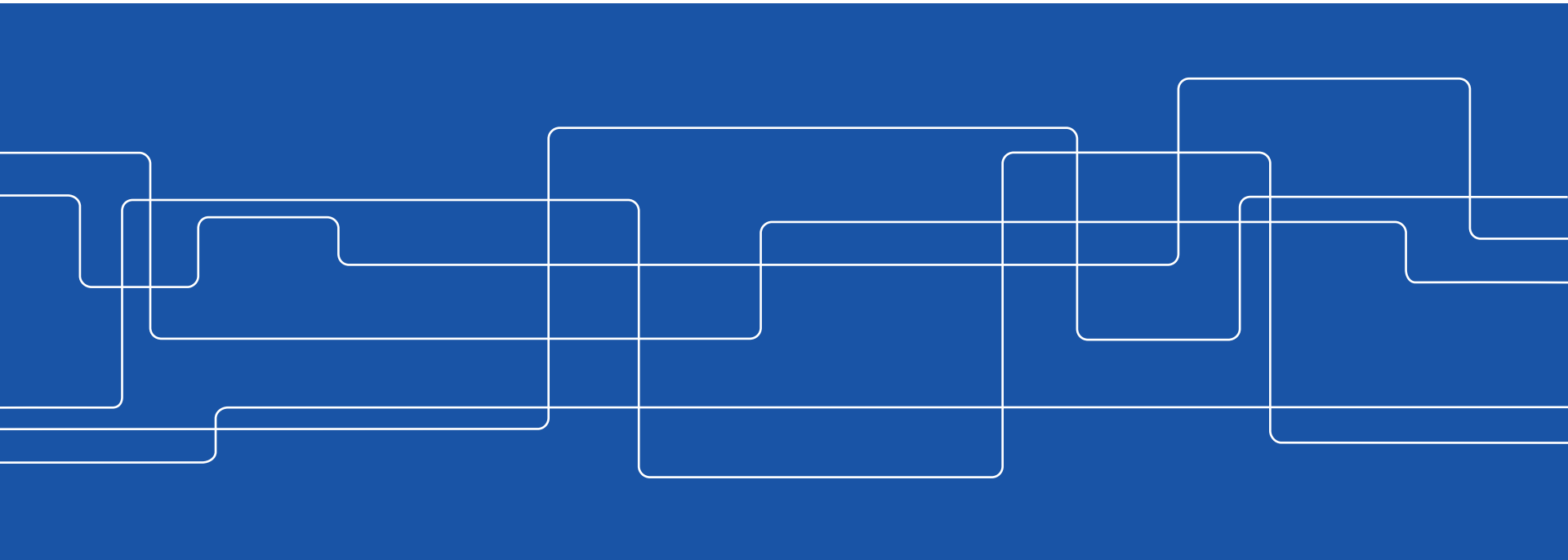
Trading behaviour on Elbas

Work-in-progress

Richard Scharff, Mikael Amelin, Enerday, 11 April, 2014



Elbas

- Nordic synchronous area
- DK1
- Baltic countries
- PL
- DE
- NL
- BE

Timing

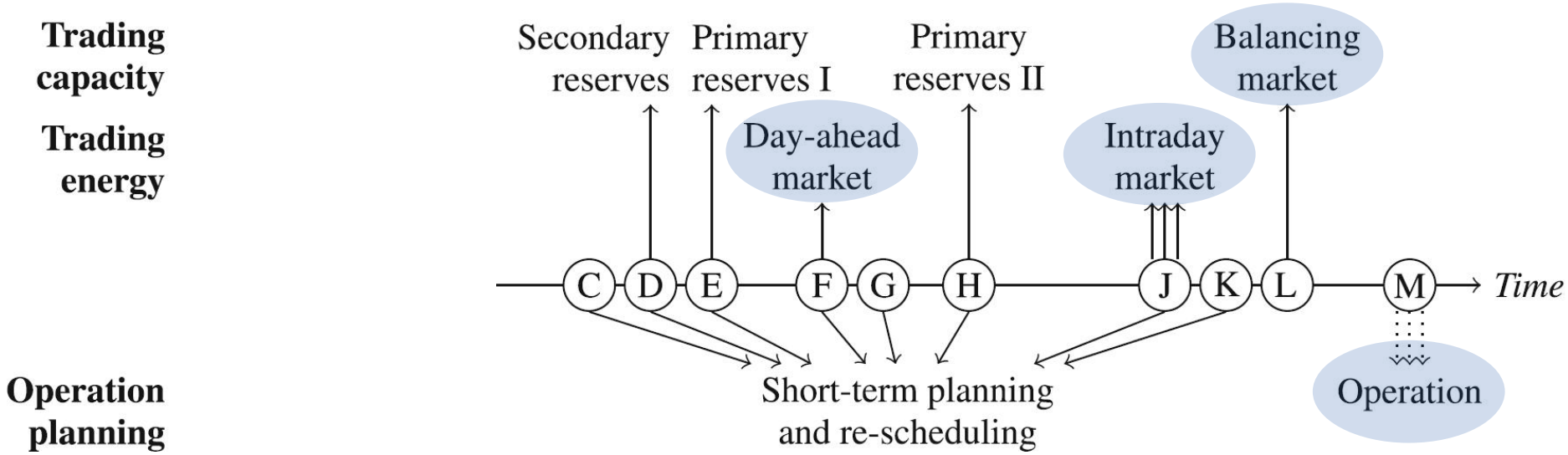


FIGURE BASED ON ARTICLE HTTP://DOI.ORG/10.1007/S12667-013-0104-2 IN ENERGY SYSTEMS, 2014

Expected elements of a trading strategy

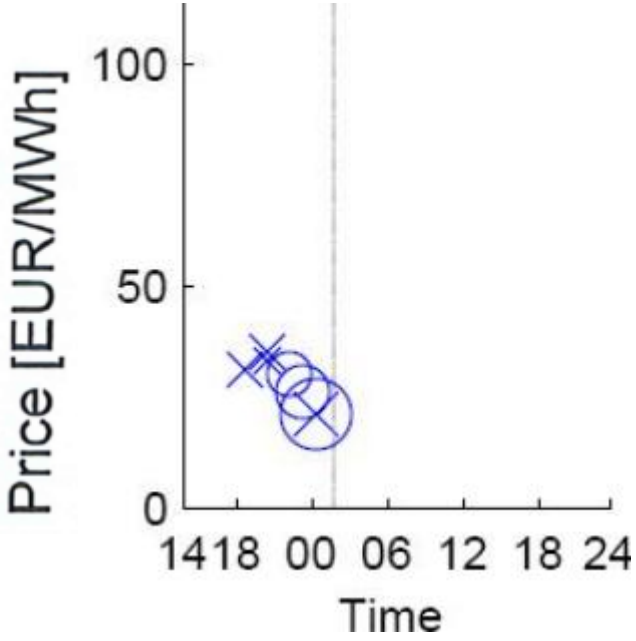
- Own expected imbalances
- Expected system imbalance
- Expected prices for imbalance settlement
- Outages etc.: trade as soon as possible
- Wind power etc.: trade as close to end as possible
- (Prices on day-ahead market)
- (Goal: trade-into-balance versus trade-without-need)

Data

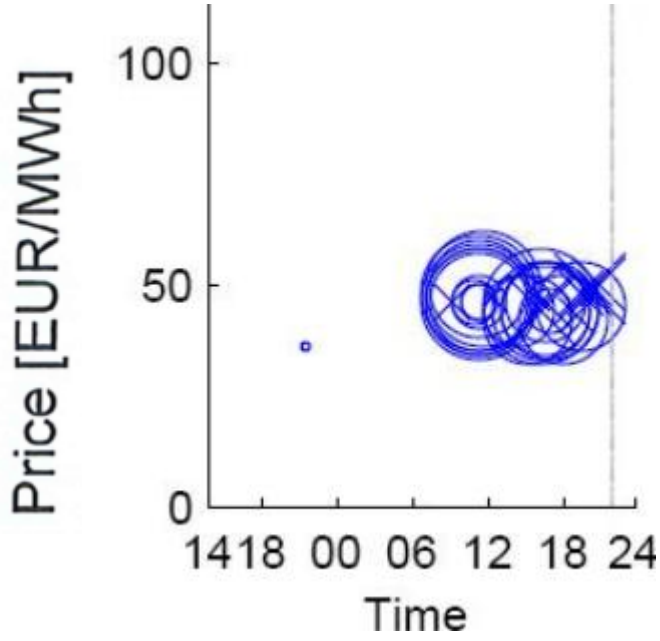
- Volumes day-ahead market
- Binding production plan wind (at time t-1)
- Observed wind generation
- Bid volume balancing market (tertiary, pos./neg.)
- Volume of activated balancing bids (tertiary, pos./neg.)
- Market price on balancing market (tertiary)
- Volume activated primary control
- Transmission capacity available (day-ahead, intraday)
- Scheduled flows (day-ahead, intraday)
- Matched bids intraday market (time, volume, price, areas)
- Grid frequency (time series)

A glimpse on examples (SE3) I

x : Seller
o : Buyer



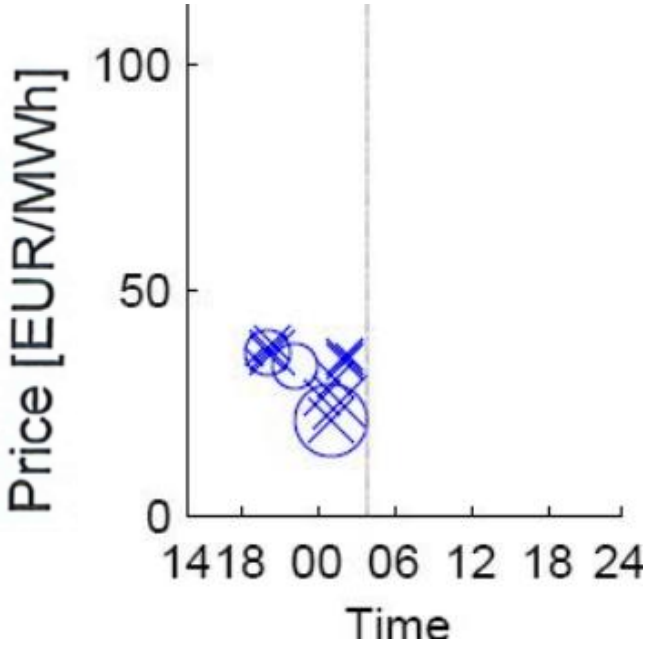
PH 03 130110



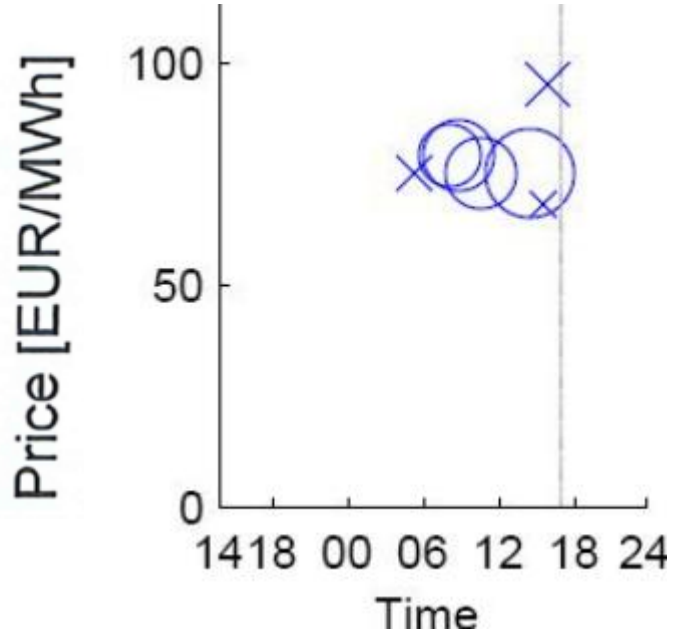
PH 23 130116

A glimpse on examples (SE3) II

x : Seller
o : Buyer



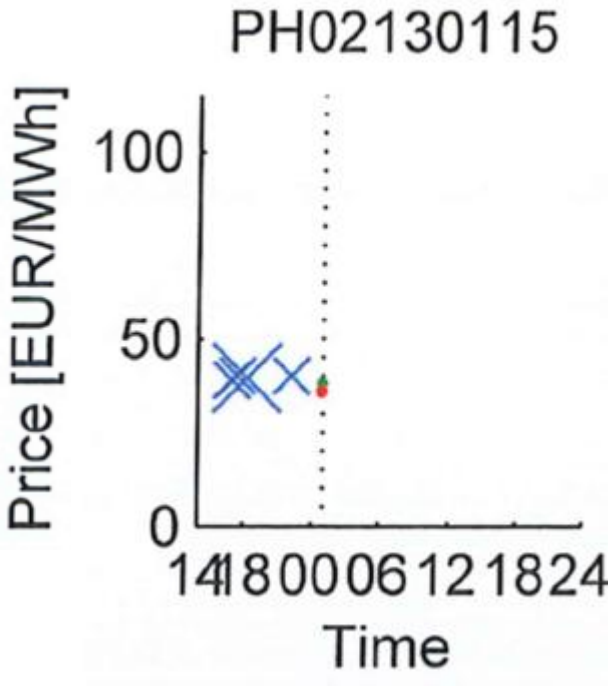
PH 05 130110

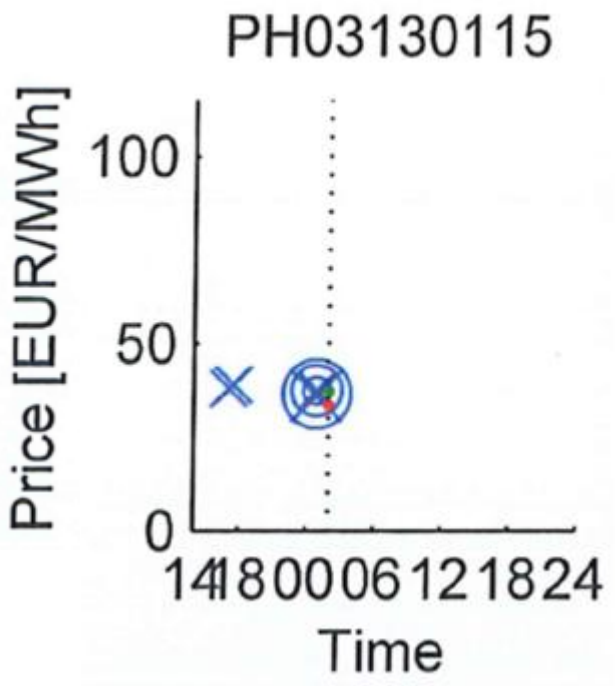


PH 18 130123

A glimpse on examples (SE3) III

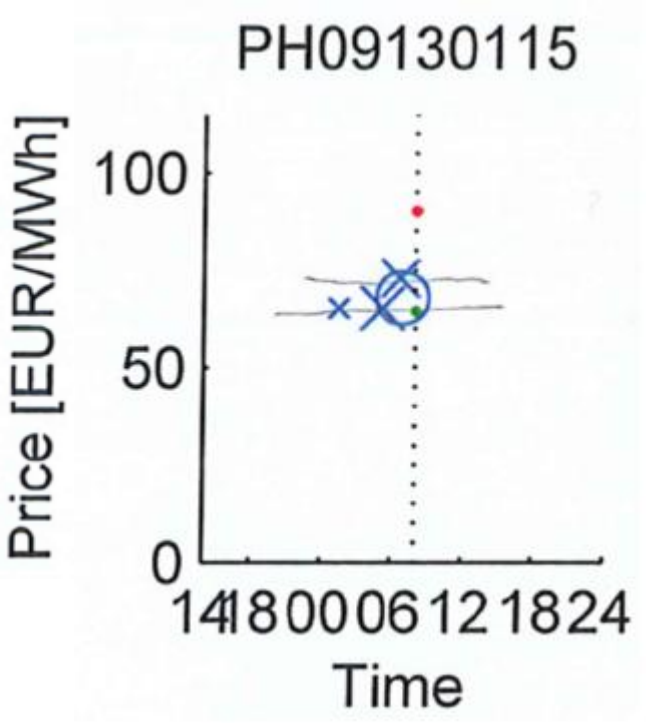
x : Seller
o : Buyer

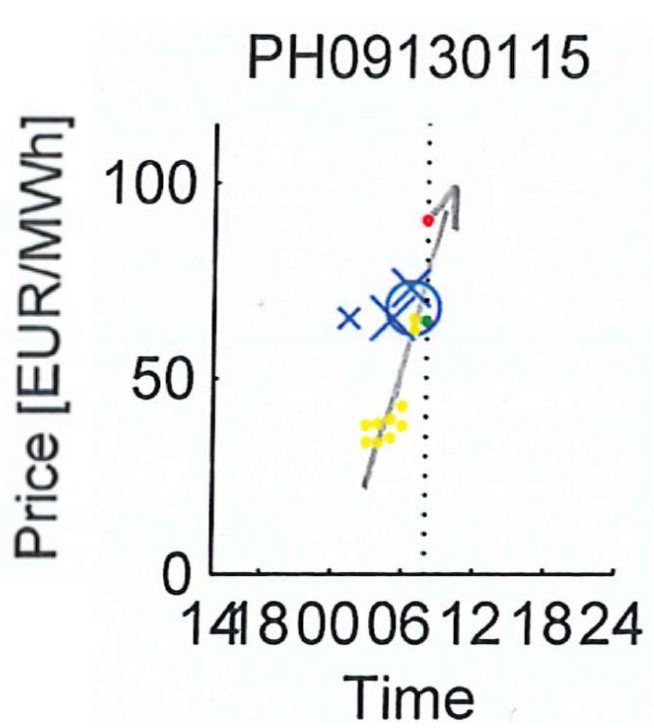




A glimpse on examples (SE3) IV

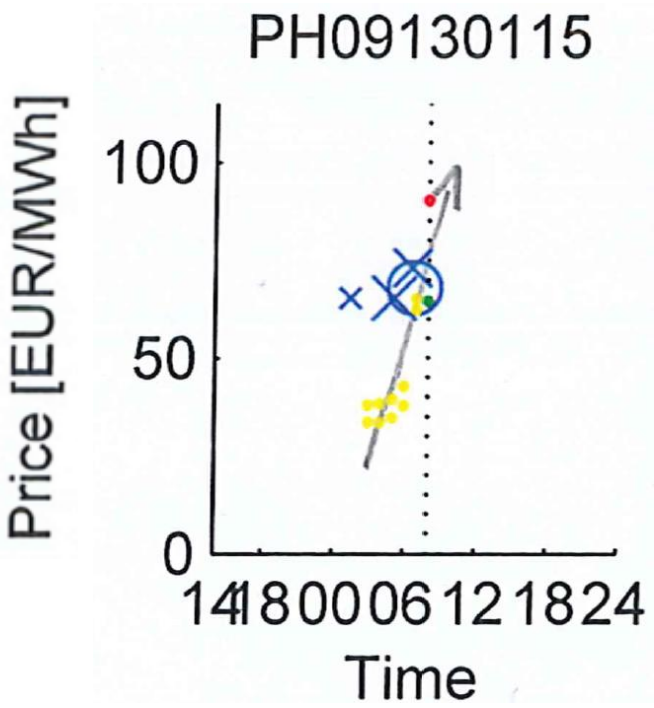
x : Seller
o : Buyer

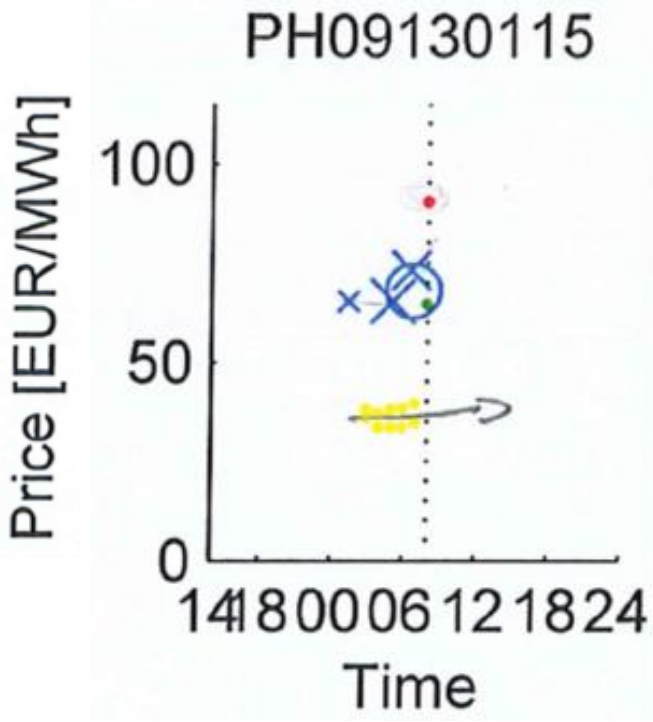




A glimpse on examples (SE3) V

x : Seller
o : Buyer





Tack!

Contact: richard.scharff@ee.kth.se

FIGURE: HTTPS://WWW.ENTSOE.EU/PUBLICATIONS/GRID-MAPS/