In focus for this webinar

- Key features of electricity market design
- Market as platform to manage risks
- Trade lifecycle and functions it involves
- Attracting liquidity
- State of play of markets in the Energy Community
- Target for regional integration
Key features that define the electricity market design

- how it deals with network constrains
- balancing responsibility
- dispatch policy and contractual relations
Design addressing congestion

Zonal pricing

- Consideration of cross-zonal capacity with other zones

Nodal pricing

- Consideration of constraints between the nodes

Hybrid (nodal zones)

- Consideration of cross-zonal capacity with other zones, in addition to nodal pricing
Design addressing dispatch

Central dispatch

Operator

P1
P2
P3
P4
P5

Self dispatch

Operator

P1
P2
P3
P4
P5

Trading activity between market participants and scheduling with the operator

Info on costs

Dispatch orders
Design addressing balancing

- Balancing:
  - Procurement of reserves
  - Mandatory provision of services

- Balancing responsibility
  - Part of overall system costs
  - Financial responsibility (imbalance settlement)
European markets (incl. also EnC)

Zonal market – competition within the zone

Cross-zonal capacity allocation for regional integration

Self dispatch (de-centralised operational and investment decision)

Bilateral trading combined with centralised DAM/IDM

Market based procurement of balancing services

Financial balancing responsibility
Market is a platform to manage risks

Generators Long position

Risk

Risk

Risk

Risk

Traders

Market Risk

Cashflow Risk

Credit Risk

Suppliers (to end users) Short position

Volume time

hedge hedge & spec

hedge

Volume time
Market places & ways of trading

**Bilateral trading**
*(bilateral credit arrangements)*

- **Bilateral execution**
  - Structural/bespoke contracts

- **OTC**
  - Brokers via screen / phone
  - Standard contracts

**Exchange**
*(centrally executed & cleared contracts)*

- **Continuous trading (Forward and ID)**
  - Standard contracts / products
  - **Auctions**
    - Hourly DAM and ID

**Hybrid**
PXs in Europe

- Most (if not all) are members of Europex [http://www.europex.org/members/](http://www.europex.org/members/)
- Almost every country in EU has a PX for DA auctions and futures (derivatives)
- Counterparty is Clearing House/PX
- Transparent for general public (price, volume and products)
- From next week products up to few years ahead
- For delivery into specific market/TSO (or underlying market if financial)
- Margining and settlement with the Clearing House
OTC in Europe

- Trayport (Global Vision – GV) is an amalgamation of brokers platforms (including PXs)
- Prices not transparent for general public
- Standard bilateral contracts (Master agreement)
  - EFET/GTMA contracts (physical) / ISDA contract (financial)
  - Margining exchanged bilaterally
  - Execution on screen/phone
- LEBA – association of brokers
Where does it happen?

Source: Platts, wholesale power markets, Trayport, London Energy Brokers Association (LEBA) and DG ENER computations
Inside trading firms: functions

**Front office**
- Analysts
- Traders
- Originators
- Operations

**Middle office**
- Credit
- Market
- Product control (P&L)
- Settlement
- Reporting

**Back office**
- Treasury
- Finance /Accounting
- Tax department

Legal / Regulatory / Compliance
Trade lifecycle – trade in embryo

- Trading desk / trader is given a risk mandate

- Analysts assess supply and demand conditions, network capabilities, constrains, weather forecasts, hydrological forecast (based on previous years)
  
  - Also any information on new investments, or other information that might affect fundamentals for the coming period

- Credit team sets up credit arrangements (margining; bilateral or centrally)

- Trader makes price assessment – forward curves (expectation where the price is expected to be, expected/target P&L), other prices (gas, coal, CO2, etc.)
Trade lifecycle – trade execution

- Considering limitations and assessments made, the trader chooses the product and venue (including volume, price & direction)
  - Check the screen to buy 15 MW of Cal21 Base, delivery @ DE

- Once the trade is executed it is booked in the internal system

- Settlement/confirmation team confirms the trade with the broker and the counterparty

- Executed trade is reported (REMIT/EMIR)

- P&L team calculates the P&L at the end of the day

- Market risk updates the risk mandate

- Credit team - margin updates
Trade lifecycle – portfolio management

- Trader has a long position of 15MW of Cal21 Base, delivery @ DE
- Based on price assessments, fundamental analyses and any limitations, it may:
  - Sell part or all 15MW as Cal21 Base product
  - Wait until close to delivery and sell Month-ahead, Quarter-ahead, Day-ahead or Intraday …
- It chooses to sell 5MW as Cal21 Base, delivery @ DE and 5MW as Q1 2021
- Later it sells another 5MW as Q1 2021 Base and 5MW Q2 2021
Trade lifecycle – delivery

- Q1 2021 is flat but needs to be delivered
- Delivery involves nomination with the TSOs – this case with German TSOs
  - Take delivery of 15MW from CPs X and Y
  - Deliver to CPs A and B
  - Nomination is done usually on D-1 before 2pm (x-border nomination is different) – by the Operation team
- The remaining opening position is traded quarter/month/week ahead and/or day-ahead and intraday
Trade lifecycle – financial settlement

- Few days after the delivery month, the invoices are issued by counterparties (or PXs)
- Trading firms apply netting of payments so netting statements are exchanged and final payment/direction is confirmed by middle office
- Treasury team ensures the payment is made (cash transfer)
- Accounting confirm the records – daily reconciliation of accounts
- After the payment credit exposure changes – credit team updates the exposure
A drop into a pool!
Result is …

- Building up position…

- Long, bought electricity for future delivery so you need to sell it before the delivery comes
  - You are effectively a ‘generator’ / You expected that price will go up in shorter term market / You were bullish

- Short, sold electricity for future delivery so you need to buy it before the delivery comes
  - You are effectively a ‘supplier’ to end users / You expected that price will go down in shorter term market / You were bearish

- Have an offset position
Evolution towards a liquid market

1. Market access / licensing
2. De-regulate the entire wholesale market
3. Network losses through PX
4. RES through PX
5. Transparency
6. Mandatory liquidity measures (?)
7. FTRs
8. Support from incumbents
9. X-border capacity for the market
10. Intraday market
11. Balancing Market – right signals
12. Confidence/REMIT
13. Evolution
14. Revolution

The Energy Community Secretariat | Electricity Market and Trading, Arben Kllokoqi
DAM-PX only in RS and UA
Network losses generally procured in the market
RES and PSO in UA go through the DAM

Incumbents not very active in the market
More than 50% (in some cases up to 90%) of portfolio is via intragroup transfers
Little or no volume listed in the market
(mainly related to import/export)

Concerns regarding market abusive practices in UA, MD and AL
REMIT under transposition
Strong/independent regulators are needed

BiH stands the best
Little market activity on provisions of balancing services (mainly on energy)
Imbalance prices based on market index/methodology/based on balancing
Regional integration – mirroring EU

Forward cross-border capacity products

Spot cross-border capacity + energy products

Cross-border Balancing (TSO-TSO)

- Monthly (M+1)
  - Yealry (Y+n)
  - Forward Market (Long term Physical/Financial rights)
  - Allocation of forward rights on long-term basis through auctions as PTRs or FTR (tradable rights with UIOSI).
  - Single allocation office for capacity allocation.

- Daily rights implicitly allocated (daily rights + FTR or unused PTRs)
- LT PTRs used
- Delivery of Long term and Day ahead allocated rights
- Intraday implicit
- Delivery of intraday

- Day Ahead Market
- Delivery of Intraday Balancing

- Price coupling - auction mechanism managed by PXs with capacity module.
- Flow-based or NTC-based.

- Countinuous mechanisms with complementary auctions (PXs + capacity)
- Flow-based or NTC-based
- Exchnage of balancing products offered by MPs
- Real-time reserve activation, re-dispatch, countertrading...

The Energy Community Secretariat | Electricity Market and Trading, Arben Kllokoqi
THANK YOU
FOR YOUR ATTENTION

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