‘Lifecycle of a trade’

Arben Kllokoqi

Electricity Expert, Energy Community Secretariat

Regulatory School, EFET-EnC, 10 March 2022
Electricity contracts

Uniform products, but ...

Product specification is linked to:
- Place of delivery
- Time/period of delivery (tenor)
- Optionality

Primary source of energy implies the product – technology
- Nuclear / coal / gas = base
- Gas / oil / hydro = flexibility (peak /hourly)
- Wind / PV / must-run river = intermittent
# Market places & ways of trading

## Bilaterally

structural/bespoke contracts

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

**OTC**
Brokers via screen or phone
Standard contracts

## Continuous trading

**Standard contracts**

**Auctions**
Hourly day-ahead products
Intraday too, in some cases

## Exchange
*(centrally cleared contracts)*

Diagram showing interaction between market participants, with arrows indicating transactions and a shaded box highlighting continuous trading.
**Risks …**

- **Political, legal and regulatory risks** – instability and uncertainty around the legal and regulatory framework (changes on the design, requirements, climate actions…)

- **Risk from market abuse** – market is evolving with new ways and means of trading, increasing the potential for abusive behaviour

- **Market/price risk** – volatility of the price on forward basis (1, 2, 5, 10 years ahead)

- **Credit/counterparty risk** – potential default of counterparty, risk of non-delivery, change of credit rating, etc.

- **Cash-flow risk** – margining to cover long-term exposure consume a lot of financial guarantee

- **Operational risk** – an increases level of no of trades, new system, transition into ‘smart’ increases represents an exposure (maybe also Cyber-threats!)

- **Weather exposure** – with more intermittent production, the exposure is spilled out to all participants

- … **other risks** – any view?
Managing risks

Generators (Long position)

Risk -> Market

hedge

Traders

Market Risk

Cashflow Risk

Credit Risk

hedge & spec

Suppliers (to end users) (Short position)

Risk

Risk

Risk

Credit Risk

Cashflow Risk

Volume

time

Volume

time
Trading from inside the trading firms

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 – getting ready**

**Entering new market**

**(internal)**
1. Business case
2. Market assessment
3. Legal and Regulatory assessment

**(external)**
4. License with the Regulator- if needed
5. Balance Responsible Party with the TSO to be able to use transmission network
6. PX/Clearing House registration
7. Bilateral arrangements
Trade lifecycle – trade in embryo

- Each desk / trader is given a risk mandate – exposure allowed to take … say for a year ahead products

- Analysts look at 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 year

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

- Trader makes price assessment – forward curves (expectation where the price is expected to trade, expected/target P&L)
Trade lifecycle – trade execution

- Considering potential limitations and assessments made, the trader chooses the product and venue (including volume, price & direction)
  - Check the screen to buy 15 MW of Cal23 Base, delivery @ MAVIR:
  - If a price is offered on screen (by an initiator) – the trader clicks and executes the purchase (he is the aggressor), or
  - He puts a bid at a the price x and waits for an aggressor

- Once the trade is executed it is booked in the system (deal capture)
- Settlement/confirmation team confirms the trade with the broker and the counterparty (via electronic platform, email or fax …)
- Executed trade is reported (REMIT/EMIR)
- P&L team calculates the P&L at the end of the day
- Market risk may update the risk mandate on daily basis if high price volatility
  - Potential margin updates
Trade lifecycle – portfolio management

- **Trader has a long position of 15MW of Cal23 Base, delivery @ MAVIR**
- **Based on price assessments, fundamental analyses and any limitations, it may:**
  - Sell part or all 15MW as Cal23 Base product
  - Wait until close to delivery and sell Month-ahead, Quarter-ahead, Day-ahead or Intraday …
  - *It chooses to sell 5MW as Cal23 Base, delivery @ MAVIR and 5MW as Q1 2023*
  - Later it sells another 5MW as Q1 2023 Base and 5MW Q2 2023
Trade lifecycle – delivery

- **Q1 2023 is flat but needs to be delivered**
- **Delivery involves nomination with the TSOs – this case with MAVIR**
  - 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 updates the exposure
Recap of the trade lifecycle

Pre-trade process:
- Set up with TSO
- Bilateral/PX set-up
- Credit arrangements
- Fundamental analyses
- Price assessments (FX)

Trade execution

Trade confirmation (bilateral/broker)

Portfolio management / trade around the position / exchange of margin

Delivery / Flow / Nomination / Scheduling

Invoicing

Confirmation

Netting statements

Payment

Exchange of margin (bilateral/PX)

P&L check

Reconciliation of accounts
Multiply this by X times
Just after delivery - balancing with the TSO

Each MP has an account with at least: Sales and/or Purchases

Example of nomination process:

• MP A sold (nominated) on 500 MWh/h in total (100 each) to parties B, C, D, E and F
• (1) MP A purchased (nominated) 500 MWh/h from party X, or
• (2) MP A is a producer and provided physical nomination for producing 500 MWh/h

(To have confirmed nominations, counterparty has to nominate the same)

(1) MP A as a trader, is fully balanced; no imbalances
• (2a) MP as a producer, produces 490 MWh/h (though his parties paid for 500 at price ‘y’)
  • TSO has activated a upwards balancing offer for 10 MWh/h at a price ‘x’
  • TSO charges 10 MWh/h for imbalances at price ‘x+’

(For mechanism to make sense/right incentive, x>y)

• (2b) MP as a producer, produces 510 MWh/h (though his parties paid for 500 at price ‘y’)
  • TSO has activated a downwards balancing offer for 10 MWh/h at a price ‘x’ or -x’
  • TSO pays/charges 10 MWh/h for imbalances at price ‘x’ or -x’
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**
Thank you!

www.energy-community.org
Arben.Kllokoqi@energy-community.org