

BAL NC – Implementation in the Czech Republic

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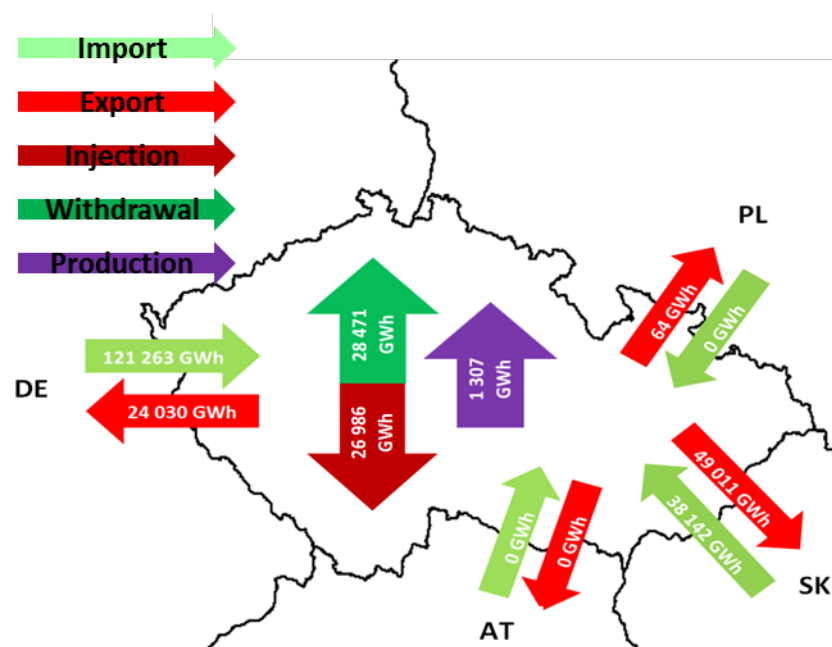
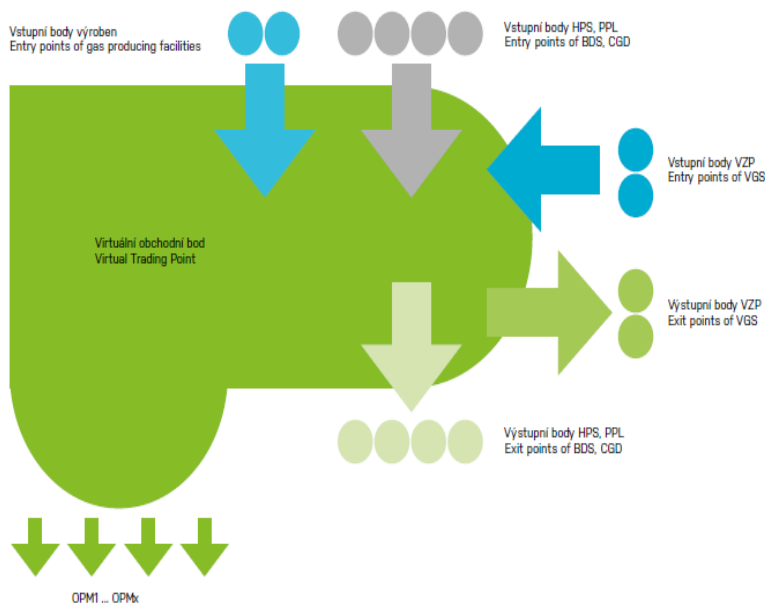
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Content

- Basic facts about the Gas market model in the Czech Republic,
- Roles in the balancing system
- Introduction of the balancing system
- Evaluation after 18 months

Basic facts about the gas market



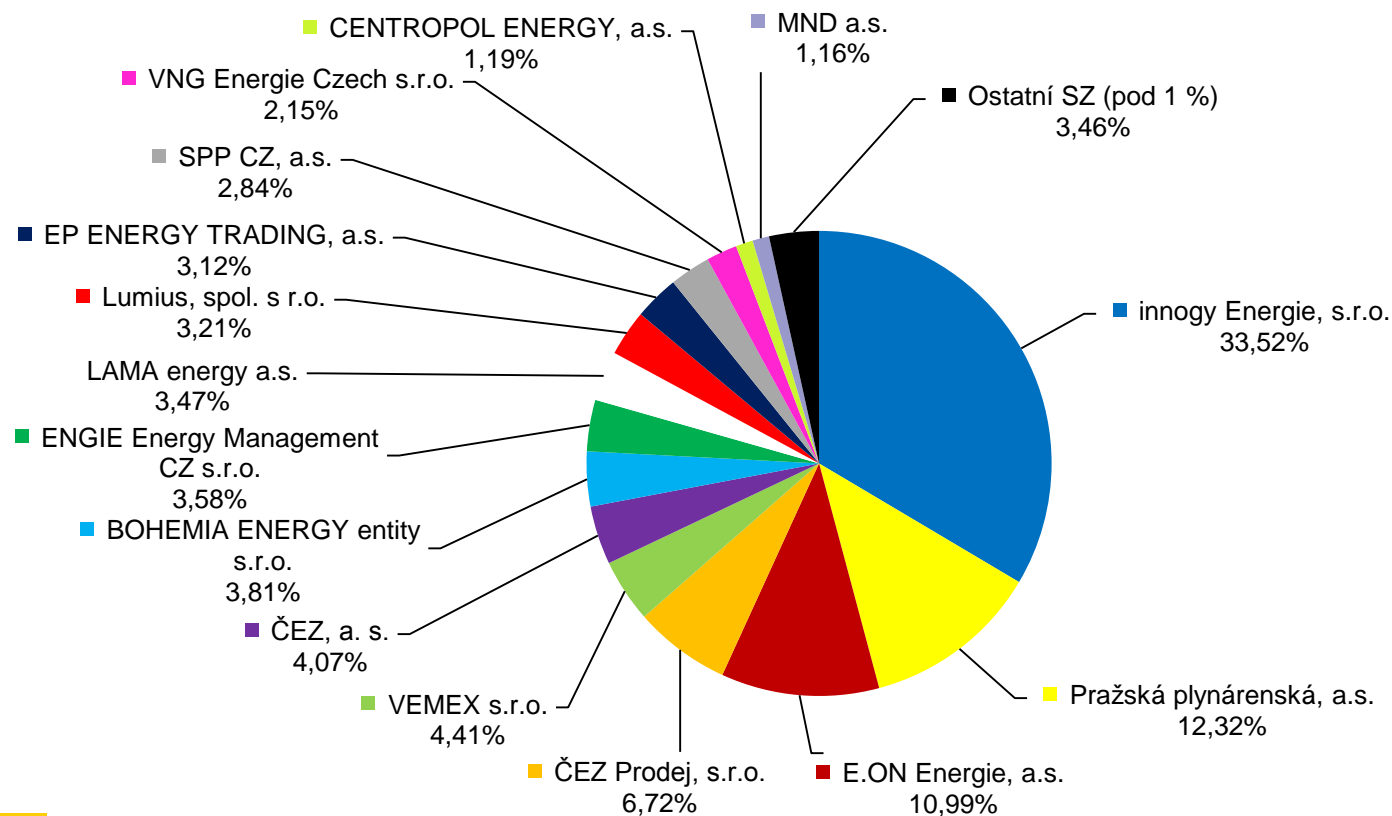
- The entire territory of the Czech Republic is one balancing zone, the so-called Virtual Trading Point (VTP)
- The gas market is fully liberalized since 2007

Annual consumption

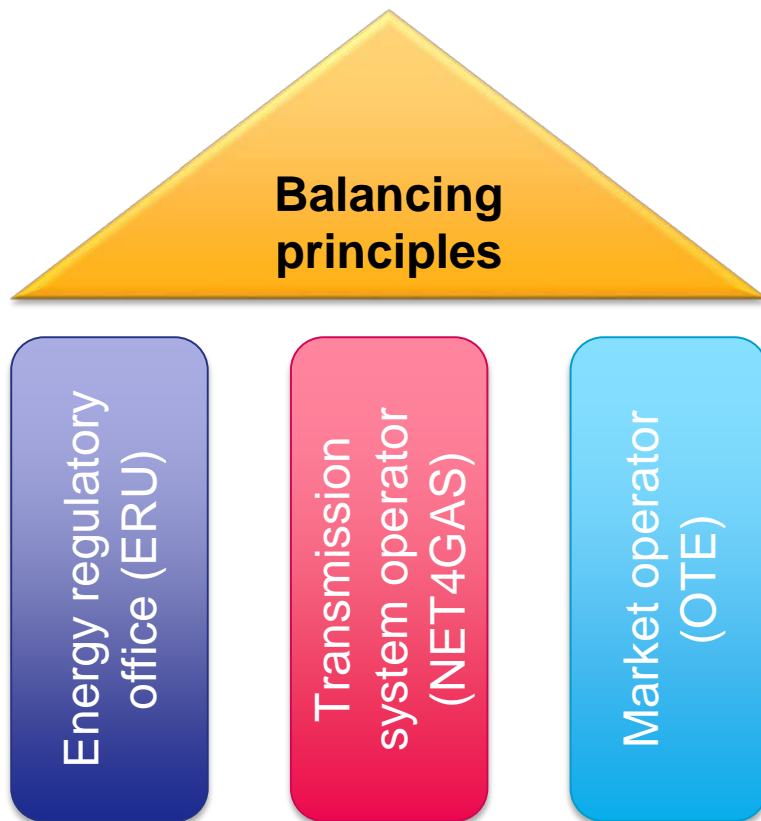
- 2016 – 90,1 TWh
- 2015 – 86,2 TWh
- 2014 – 77,0 TWh
- 2013 – 87,9 TWh



Shares of BRPs on consumption in 2016



Institutional background - Responsibilities and competencies



Energy regulatory office

- Implementation of network codes
- Setting rules for the market model

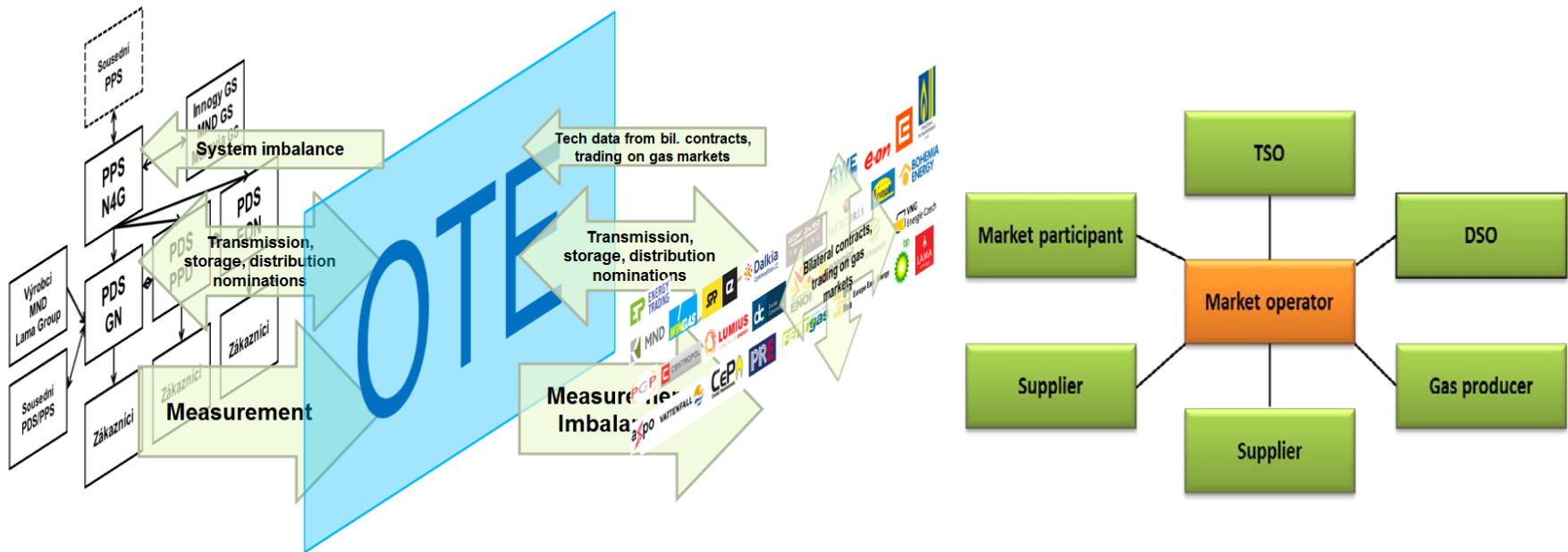
Transmission system operator

- Physical balancing of the network
- Secure safe, reliable and economical (efficient) operation of the transmission network

Market operator

- Commercial balancing of imbalances
- Financial settlement
- Organizing of short-term gas markets
- 24/7 exchange of data and information among market participants

Market operator - OTE



- OTE is the central counterparty for financial settlement (excluding bilateral contracts) and for communication between market participants
- OTE defines the standards of many messages used for communication (XML)
- Central platform, one data warehouse for all market participants for billing

Transmission network



- Built as a transit network to transport big volumes of gas from east to west
- Reverse flow is fully working
- Total length of more than 3,800 km
- Nominal pressures ranging from 4.0 to 8.4 MPa

Technical capacity [GWh/d]		
BDS	Entry	Exit
Brandov OPAL	1 154.838 000	0.000 0000
Brandov STEGAL	0.000 000	290.136 000
Český Těšín	0.000 000	28.342 560
Eugal	0.000 000	0.000 000
Hora Sv. Kateřiny - Olbernhau	367.000 000	0.000 000
Hora Sv. Kateřiny	150.900 000	197.529 733
Lanžhot	1 640.413 428	913.680 000
Mokrý Háj	0.000 000	0.000 000
Waidhaus	450.000 000	1 071.471 783

Implementation timeline

- ❑ 26 March 2014 – Directive (EU) 312/2014 – NC BAL
- ❑ 2014 – meetings with market participants, sharing opinions about possible approaches, looking for feasible solution
- ❑ Q4/2014 – start of the 1st consultation – principles of the model, questionnaire for market participants
- ❑ Q1-Q2/2015 – 2nd consultation – specific model of the new balancing regime was offered to market participants to express their opinions
- ❑ Q2-Q3/2015 – public consultation of the legislative wording of the proposal
- ❑ Q3-Q4/2015 – the Public notice on the Gas Market Rules was approved in the law-making process
- ❑ Q1-Q2/2016 – adjustment of the IT systems of the TSO and OTE, intensive testing
- ❑ 1 July 2016 – entry into a force



Initial analysis - existing system vs. mission

Some parts of the old balancing regime were not in line with NC BAL

- ❑ Entire imbalance or its portion could be settled in-kind
- ❑ Price for imbalance is not related to the balancing action of TSO
- ❑ Tolerances were provided

Some parts were in line with NC BAL

- ❑ Financial settlement of imbalances provided by OTE
- ❑ Physical balancing of imbalance procured by NET4GAS
- ❑ Daily balancing regime
- ❑ Setting of imbalance
- ❑ Settlement of differences between the actual and allocated consumption values for the non-interval metering
- ❑ Settlement of differences of differences between monthly and final allocation

Mission & Vision

Key visions and aims

- Small suppliers should not be exposed to any barrier restricting participation on the Czech gas market
- OTE and NET4GAS should not bear higher risk
- Support the organized short-term gas market as much as possible in order to increase its liquidity
- Use existing OTE platforms and IT systems to the extend possible
- Implementation cost should be the lowest possible

Key questions regarding the implementation

- Information scenario
- Interim measures
- Starting date of the new balancing regime

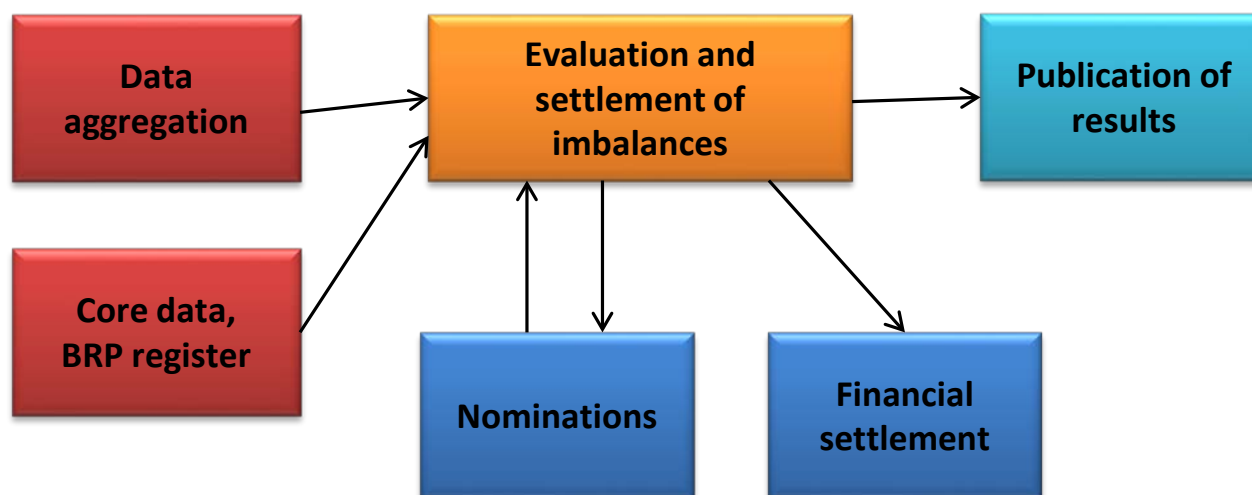


Evaluation of imbalances

Evaluation of imbalances is carried out in 4 steps

- Daily evaluation (D+1) – based on preliminary data in D+1
- Monthly evaluation (M+1) – based on real data in M+1
- Final monthly evaluation (M+4) – based on corrected measurement data in M+4

Calculation of imbalances for each Balance responsible party (BRP) is carried out by OTE. These values are not at disposal for TSO.

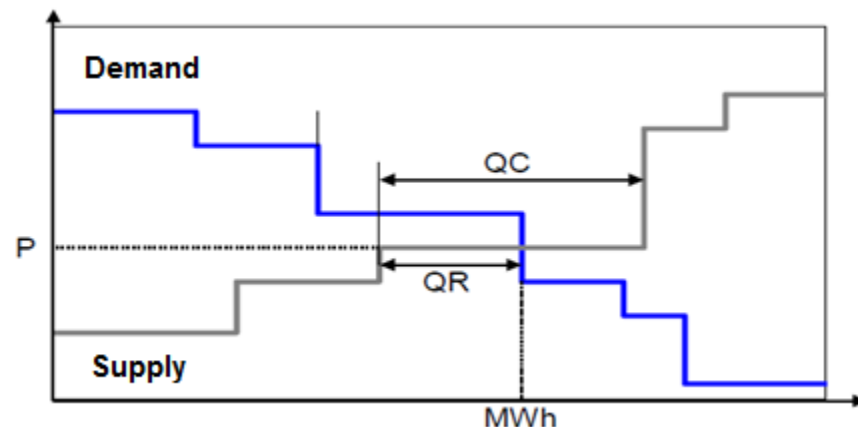


Linepack flexibility service

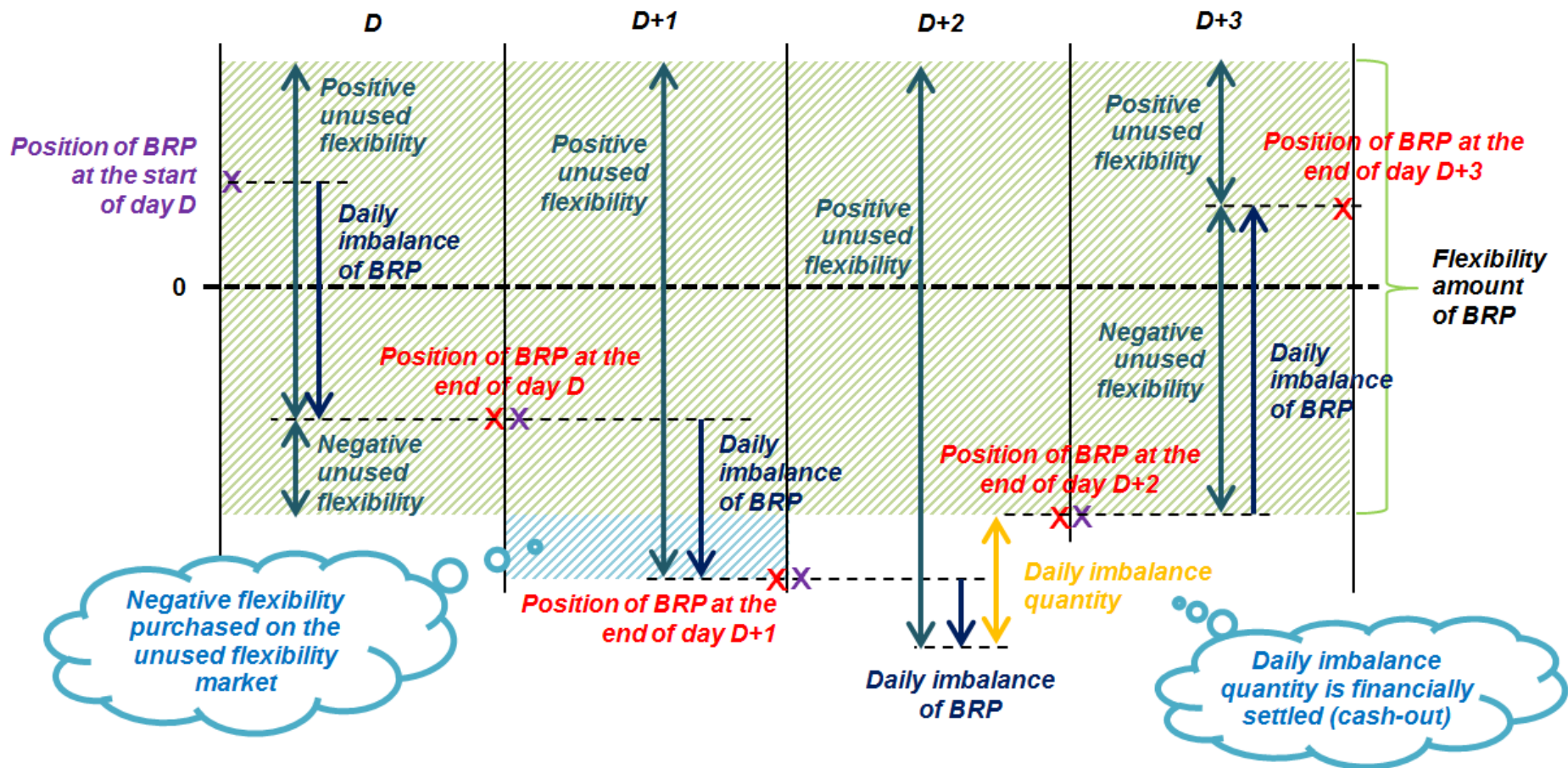
- The linepack flexibility service has become the only tool allowing balance responsible parties to make use of the inherent capability of the gas system, which is linepack change with no impact on the smooth and secure operation of the gas system.
- The flexibility service is provided free to those balance responsible parties that have a reserved capacity at the border points or at the gas storage points (unless the allocation rule OBA applies for the relevant gas day), and those balance responsible parties responsible for imbalances at specific points of delivery.
- Due to the flexibility services, it is possible to oscillate the trading position of clearing entities within the set amount of flexibility so that, if these limits are not exceeded, additional costs are not generated to compensate for the imbalances.
- Total level of flexibility service is a sum of balance responsible party's flexibility at all points where this entity is active.
- The flexibility service forms approximately just units of per cent of total volumes of gas transported by a balance responsible party.

Unused flexibility market

- This platform enables individual balance responsible parties to use the market approach for settling directly between them imbalances exceeding the flexibility of the balance responsible party.
- The balance responsible party is allowed to trade its unused flexibility (positive/negative), if it is not fully used, on daily basis on organized short-term market:
 - Negative flexibility market
 - Positive flexibility market
- The market is only organized, based on the principle of matching supply and demand curves



Flexibility and Daily imbalance quantity



Financial settlement of imbalances

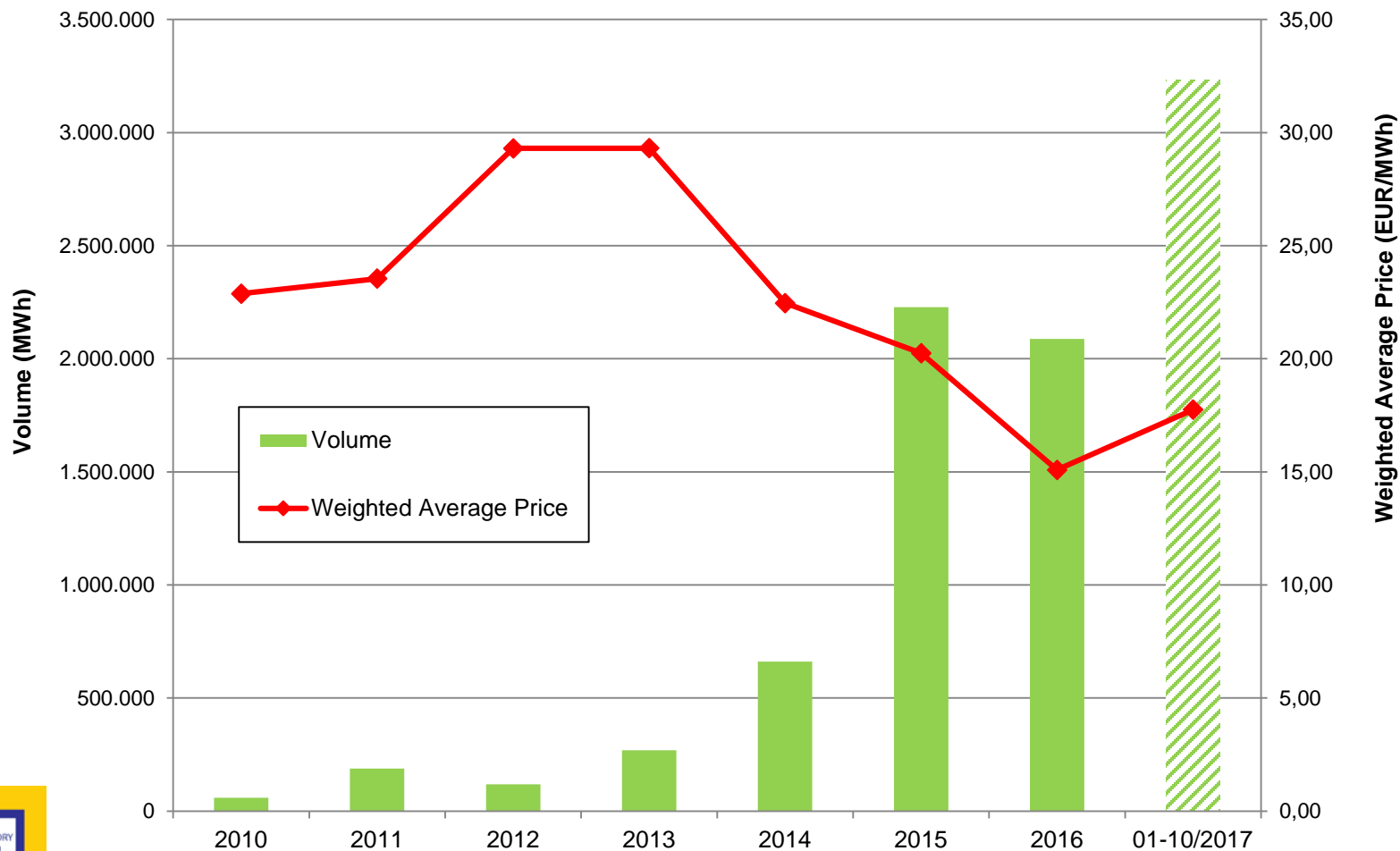
The applicable price

- The applicable price for a positive / negative daily imbalance quantity is derived from the daily gas market price in the Czech Republic (OTE Index) with a small price surcharge taking into account the price of the TSO balancing operation if the TSO balancing action is implemented on that date.
- The small price surcharge represents the function of a system imbalance – the higher system imbalance, the higher surcharge.
- For negative daily imbalance quantity, the higher of the two prices below shall be applied in EUR:
 - the highest price of the relevant purchase of the transmission system operator (relevant shall mean the purchase of gas by the transmission system operator in organized markets associated with a balancing action) if such price exists,
 - the OTE Index increased in the range of 2% – 5%.
- For positive daily imbalance quantity, the lower of the two prices below shall be applied in EUR:
 - the lowest price of the relevant sale of the transmission system operator (relevant shall mean the sale of gas by the transmission system operator in organized markets associated with a balancing action) if such price exists,
 - the OTE Index decreased in the range of 2% – 5%.

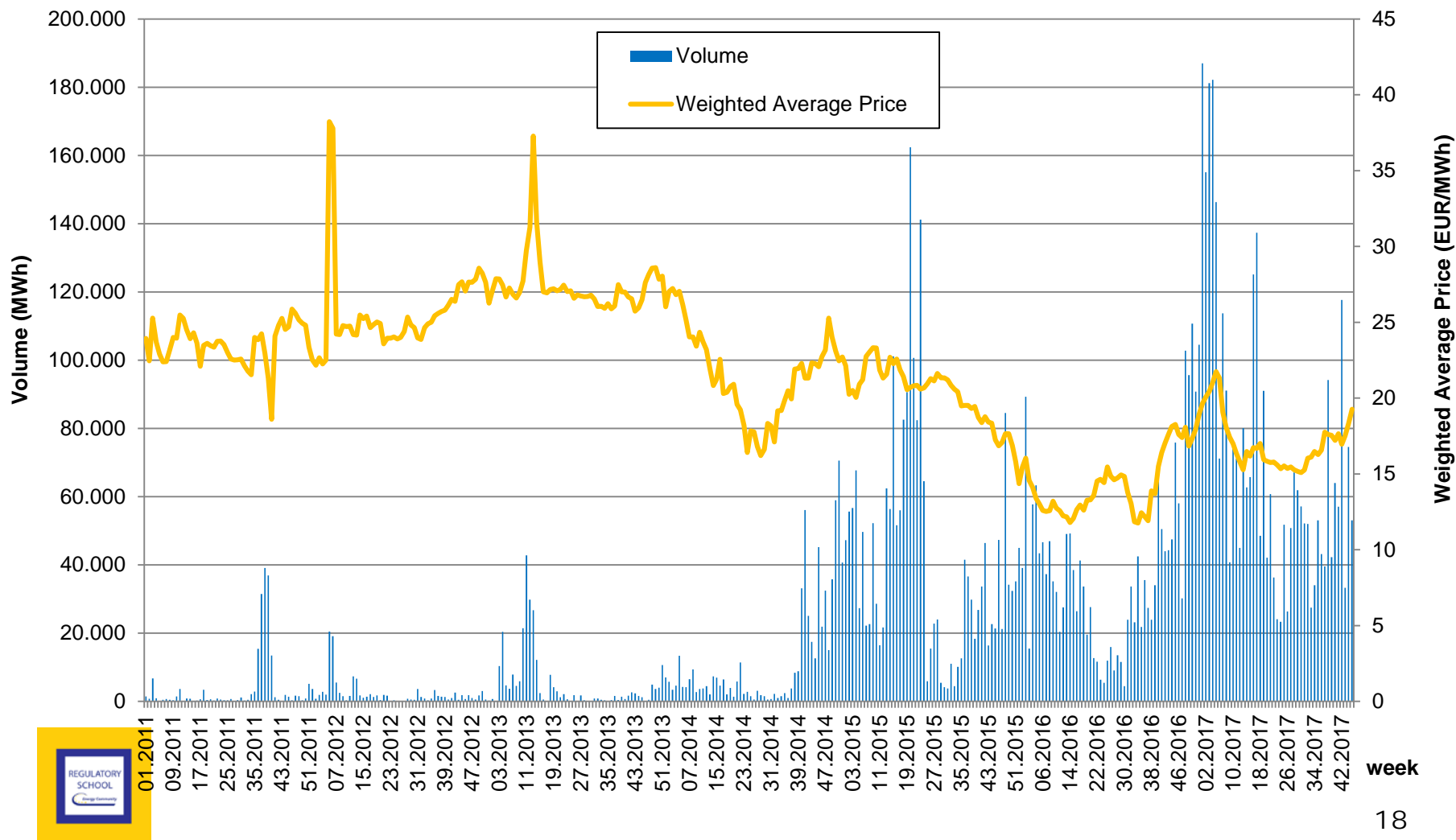
Balancing actions

- TSO needs to balance the system by purchasing or selling balancing gas.
- Balancing action is associated with the actual or anticipated balancing of balance responsible parties.
- TSO uses the intra-day gas market organized by OTE, available short-term market, activation of the balancing services.
- Market operator maintains the TSO account that varies according to settled daily imbalances quantities and executed balancing actions.
- The TSO account has been stipulated two levels that signal the TSO to undertake the balancing action.
- The balancing service can be used if TSO's needs are not met within given time frame via market based actions.

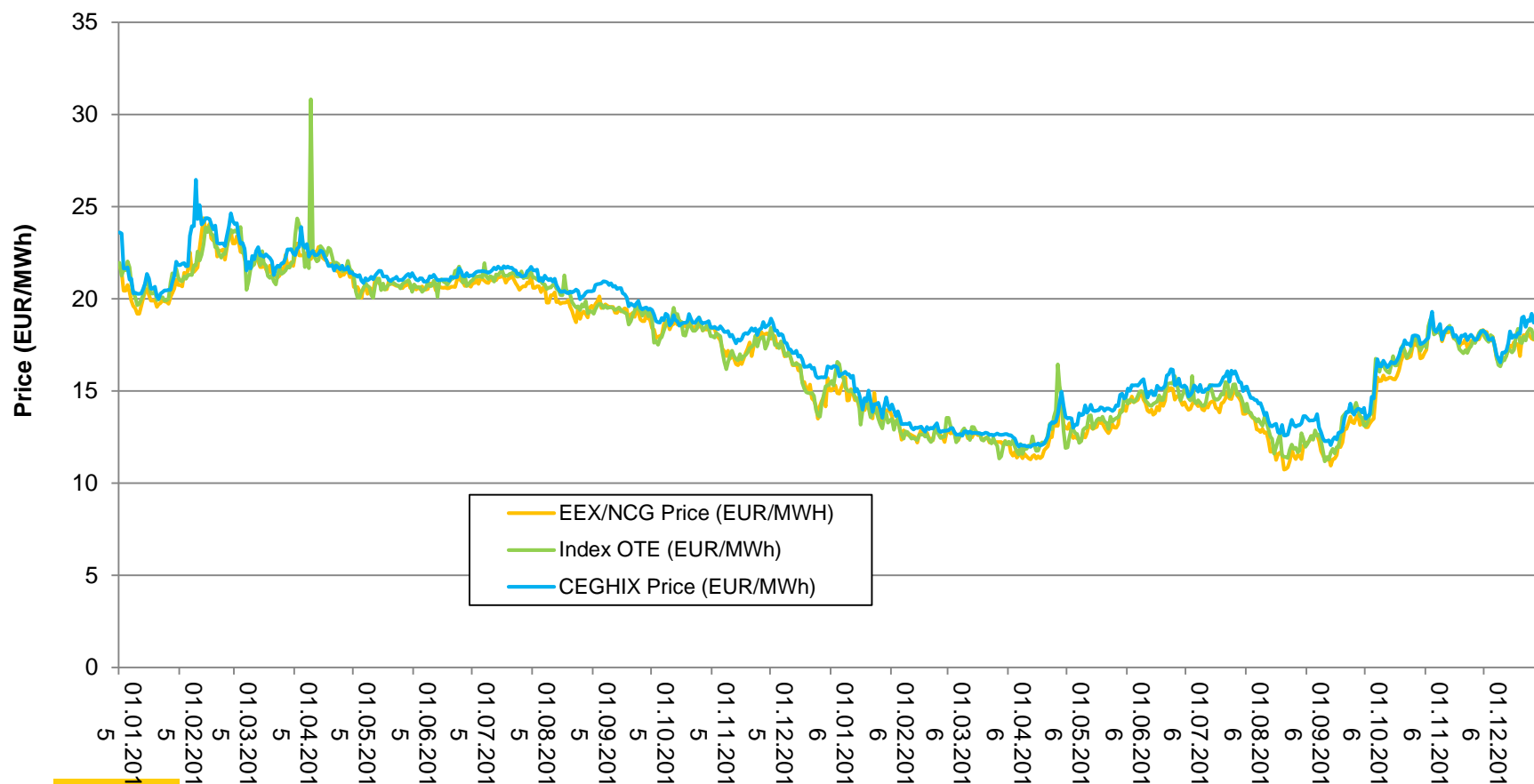
Yearly volumes on intraday gas market



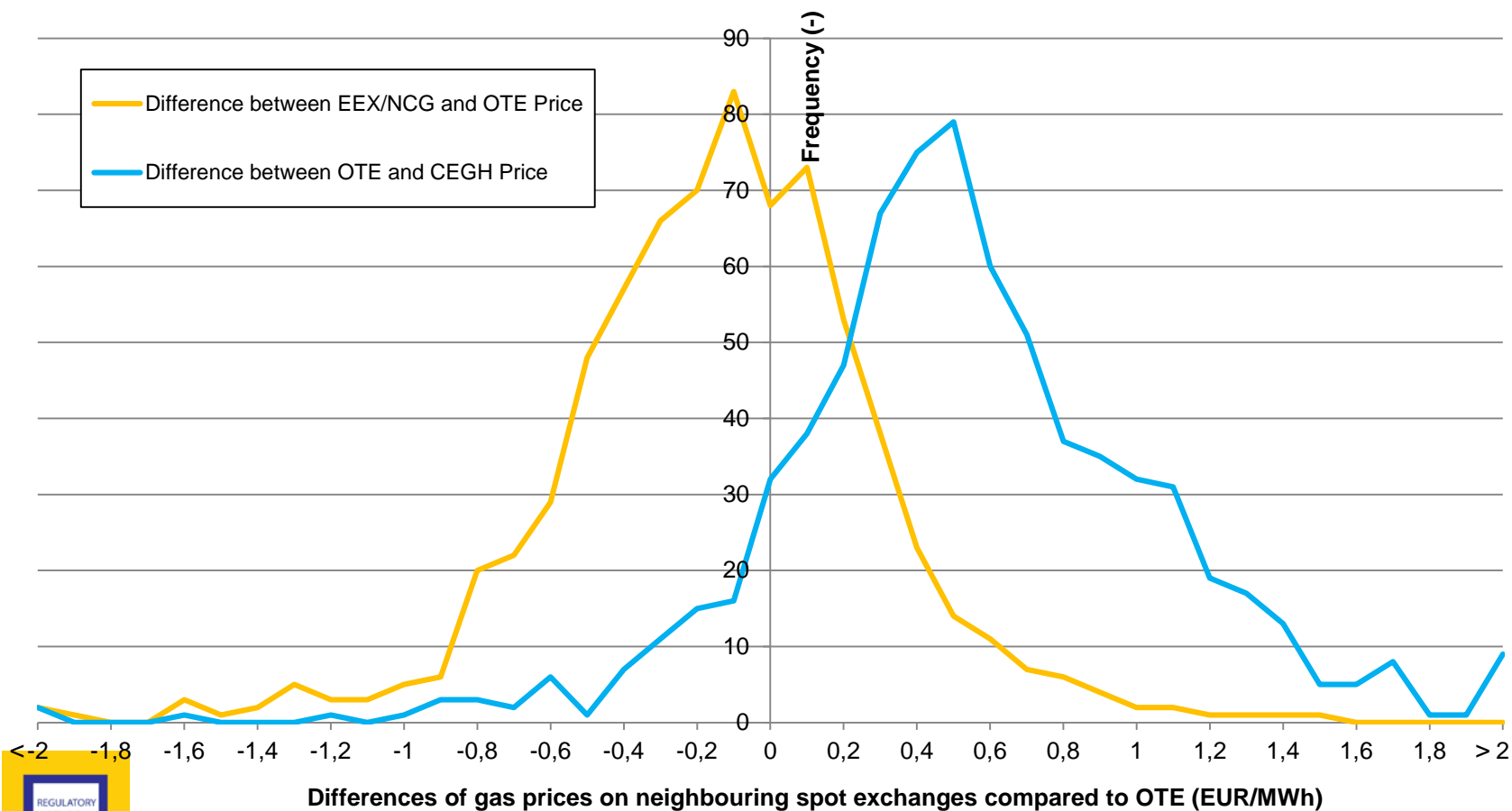
Weekly volumes on intraday gas market



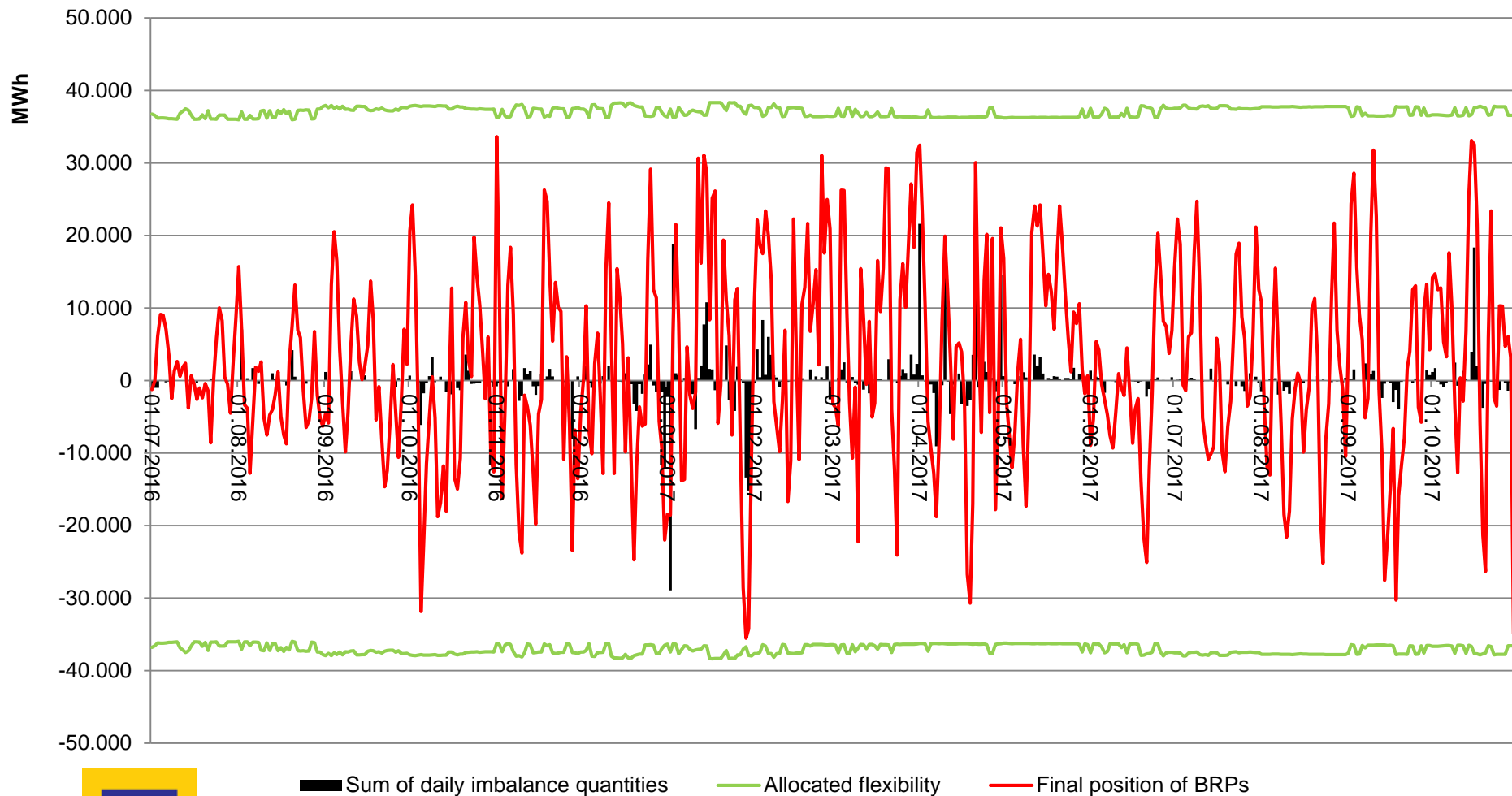
Price differences between OTE, EEX and CEGH in 2015 and 2016



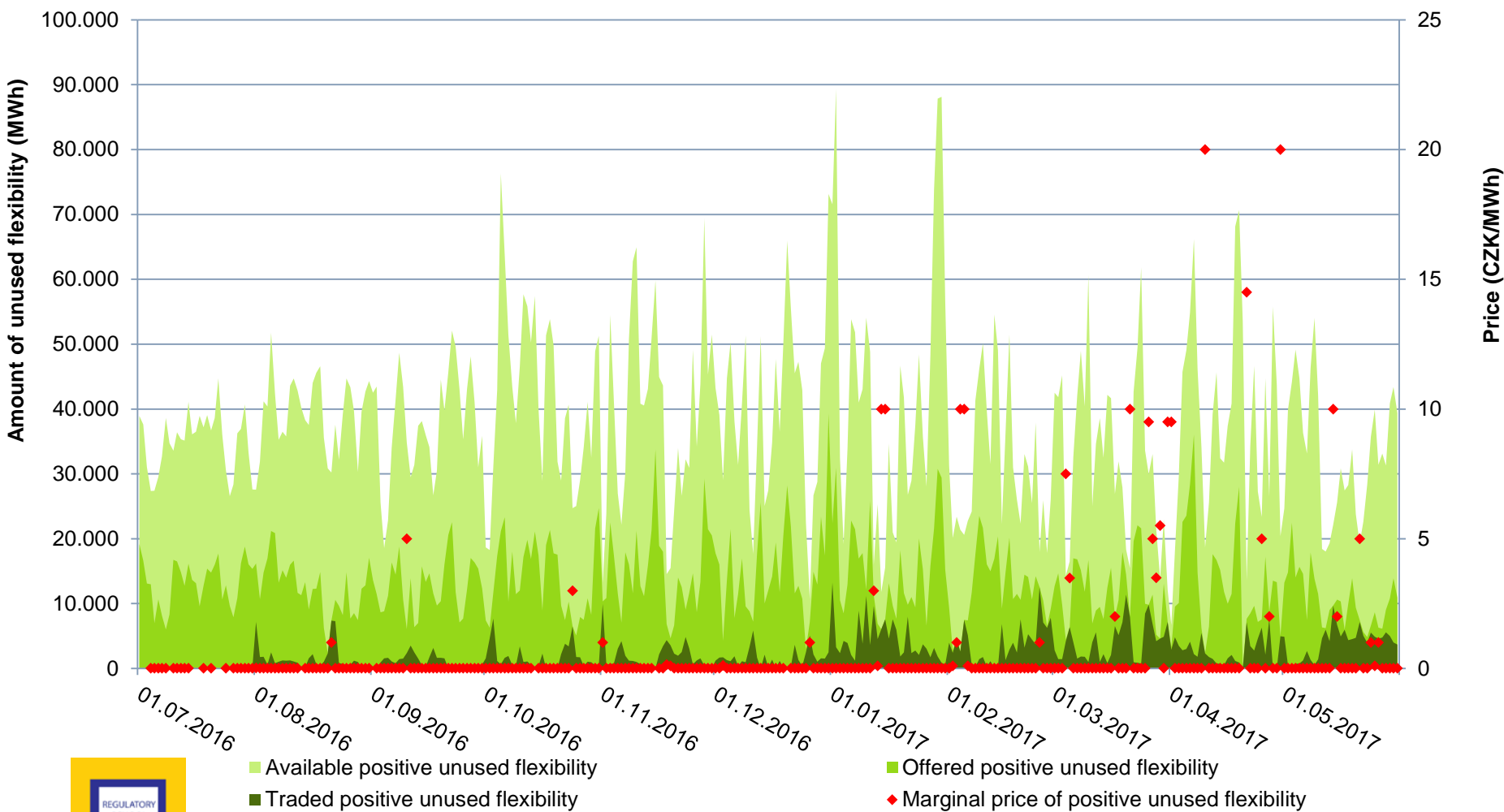
Frequency of price differences between OTE, EEX and CEGH during 2015 and 2016



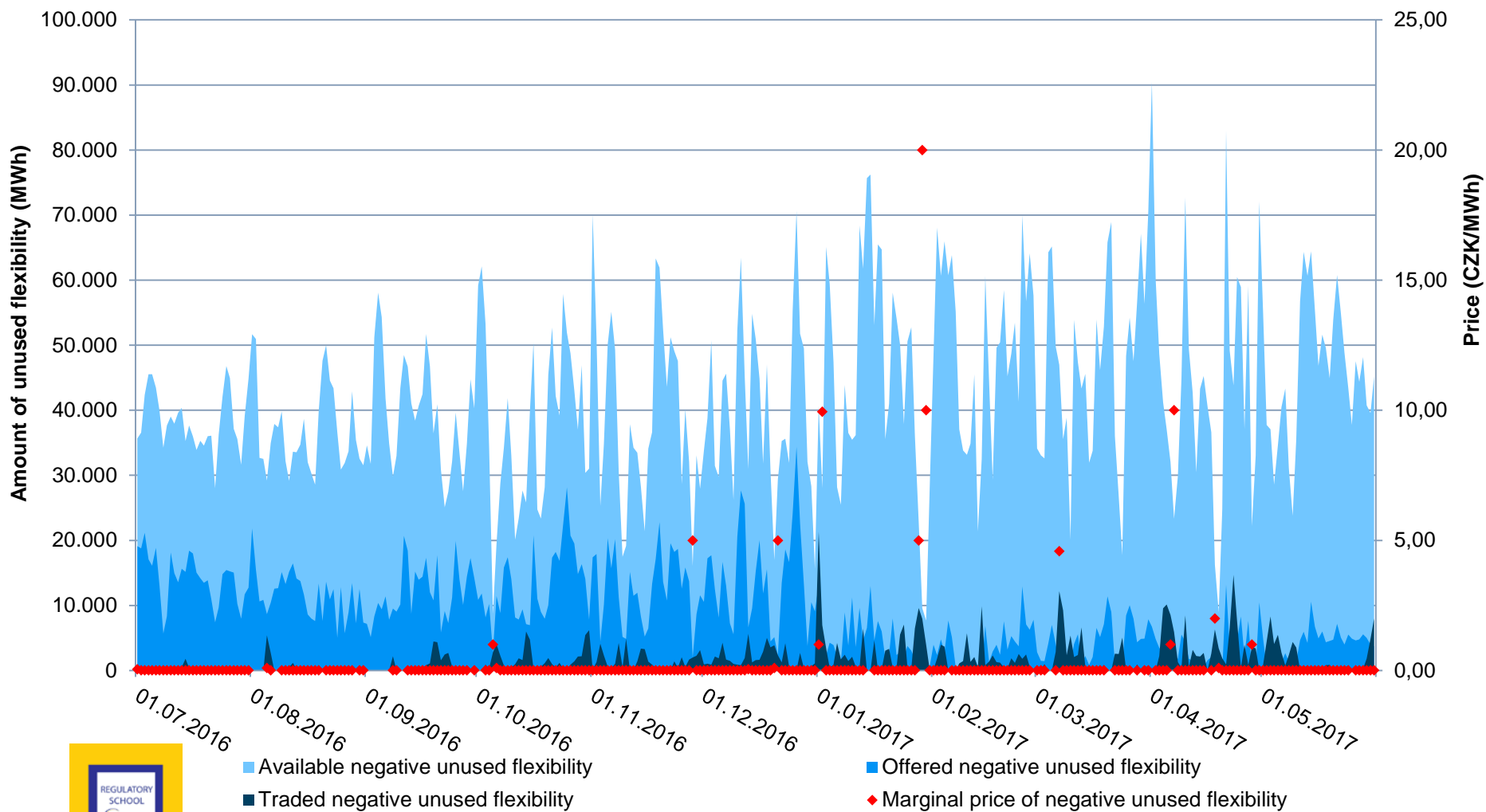
Position of BRPs within allocated flexibility



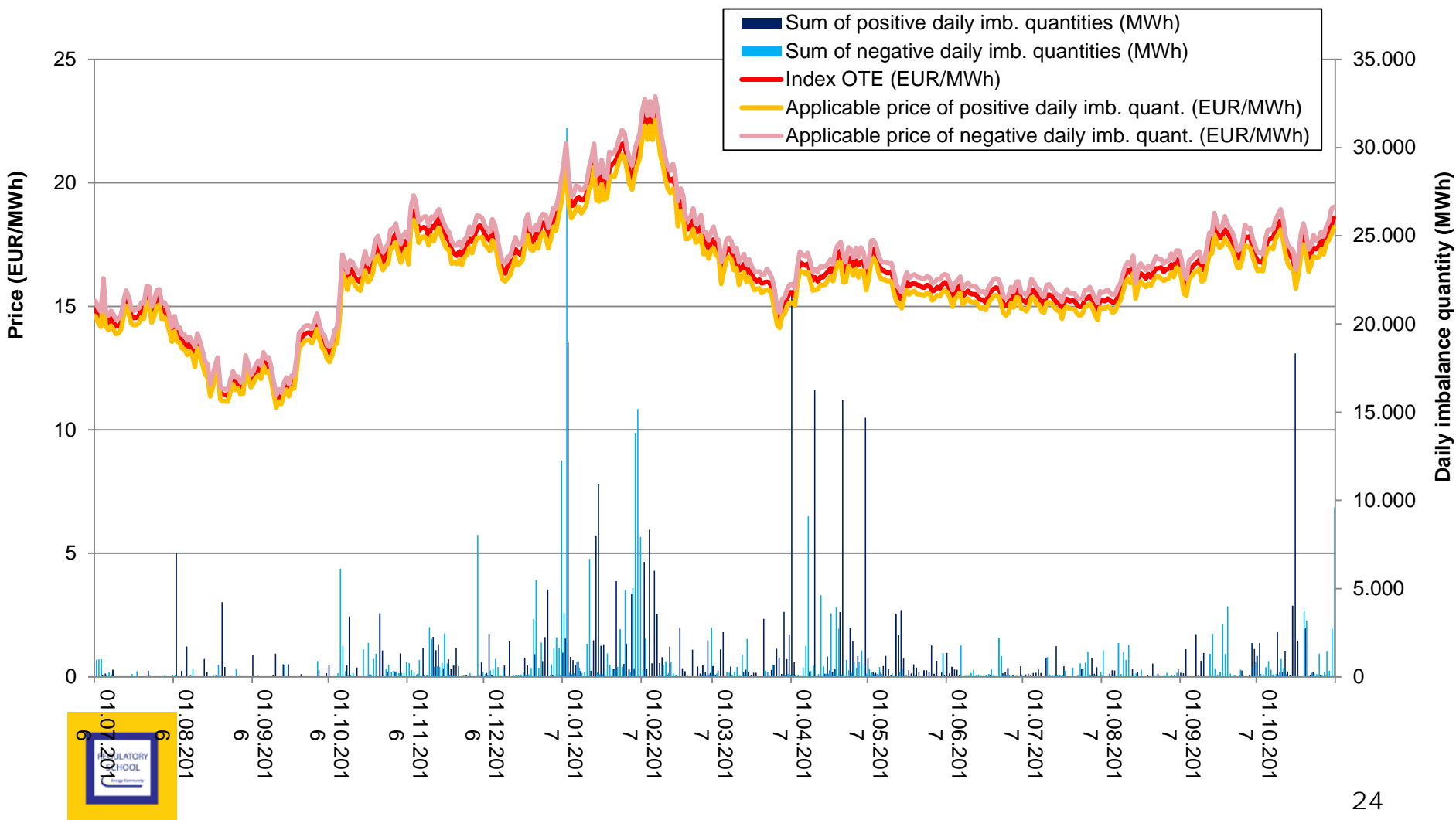
Positive flexibility market - results



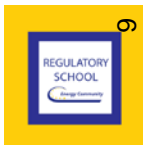
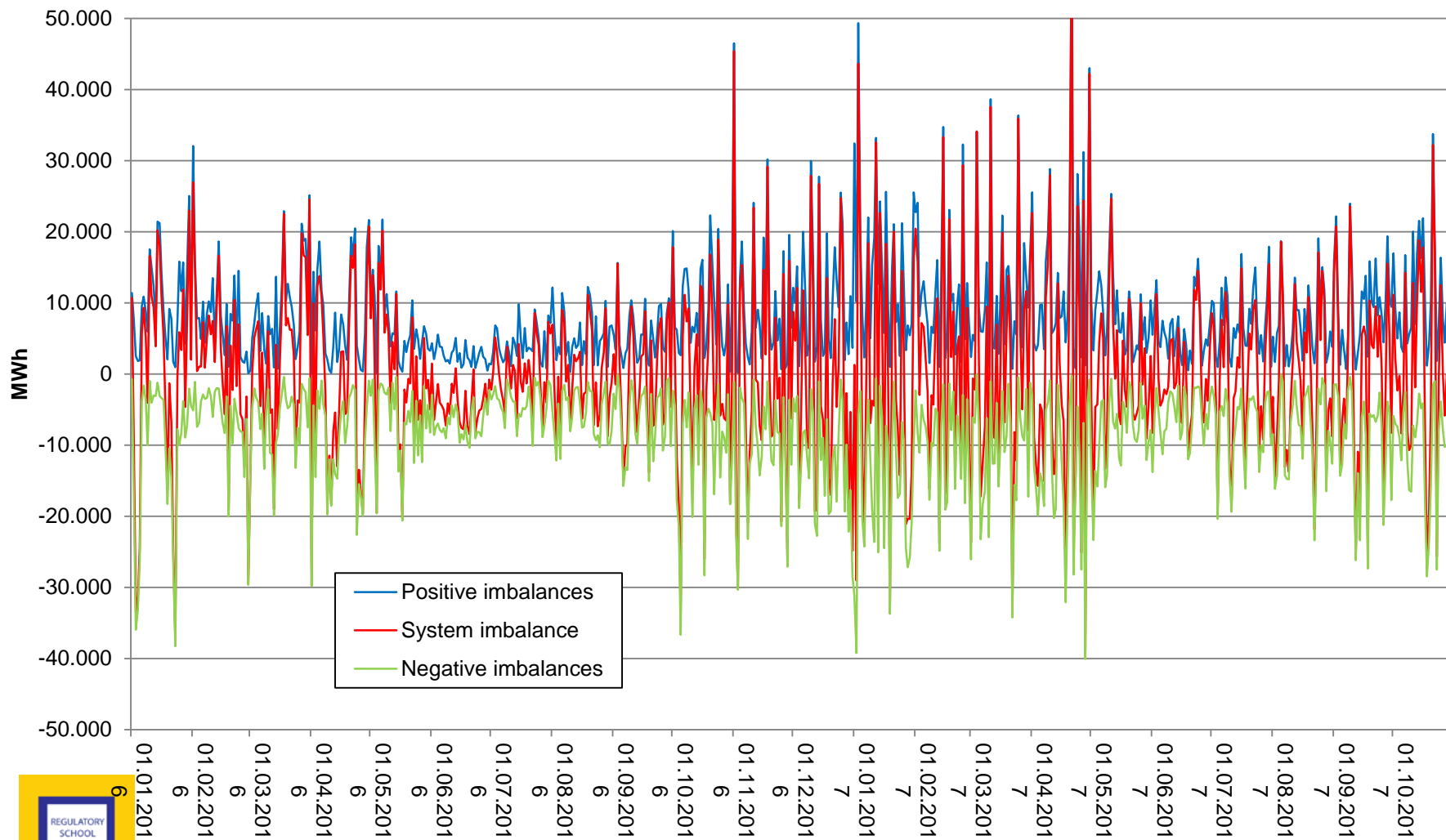
Negative flexibility market - results



Applicable prices of daily imb. quant



Imbalances



Results and steps forward

Goals

- Since 1 July 2016, the system is working smoothly without any problem
- Volumes of gas traded on intraday market significantly higher
- Number of suppliers is steady
- Gas prices are close to EEX prices
- Intraday gas market is liquid enough to tackle the balancing actions of TSO
- Balancing system, as it is set, is significantly cheaper than the previous one (0,063 €/MWh vs. 0,004 €/MWh)

Steps forward

- Improvement of the values from the non-interval metering
- Request market participants for feedback
- Depth-in analysis of 18 month with the new balancing regime



Thank you for attention.