GAS BALANCING IMPLEMENTATION

Balancing systems performance and design, including information provision

Network Codes Team, Gas Department

DISCLAIMER

All results shown are provisional and may be reviewed before the publication of the ACER Balancing Implementation Report (2018).

The views expressed belong to the authors and do not represent the official view of the Agency, except for those that have been published already by the Agency.

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The Agency's assessment of Balancing Code implementation

THE REPORTS OF THE AGENCY

THE FIRST (2016) REPORT,

•Reviewed 24 covered a wide range of critical design elements of balancing implementation

•Proposed to monitor the progress in each country and called for improved knowledge sharing and dialogue across EU.

THE SECOND (2017) REPORT,

•the Agency developed a ***Balancing Analytical Framework (BAF)*** to measure regime performance - given the local circumstances.

•**enhanced the qualitative assessment review for 26 EU balancing zones**.

THE UPCOMING THIRD (2018) REPORT,

•**Extension** of the second Report to 5 balancing zones

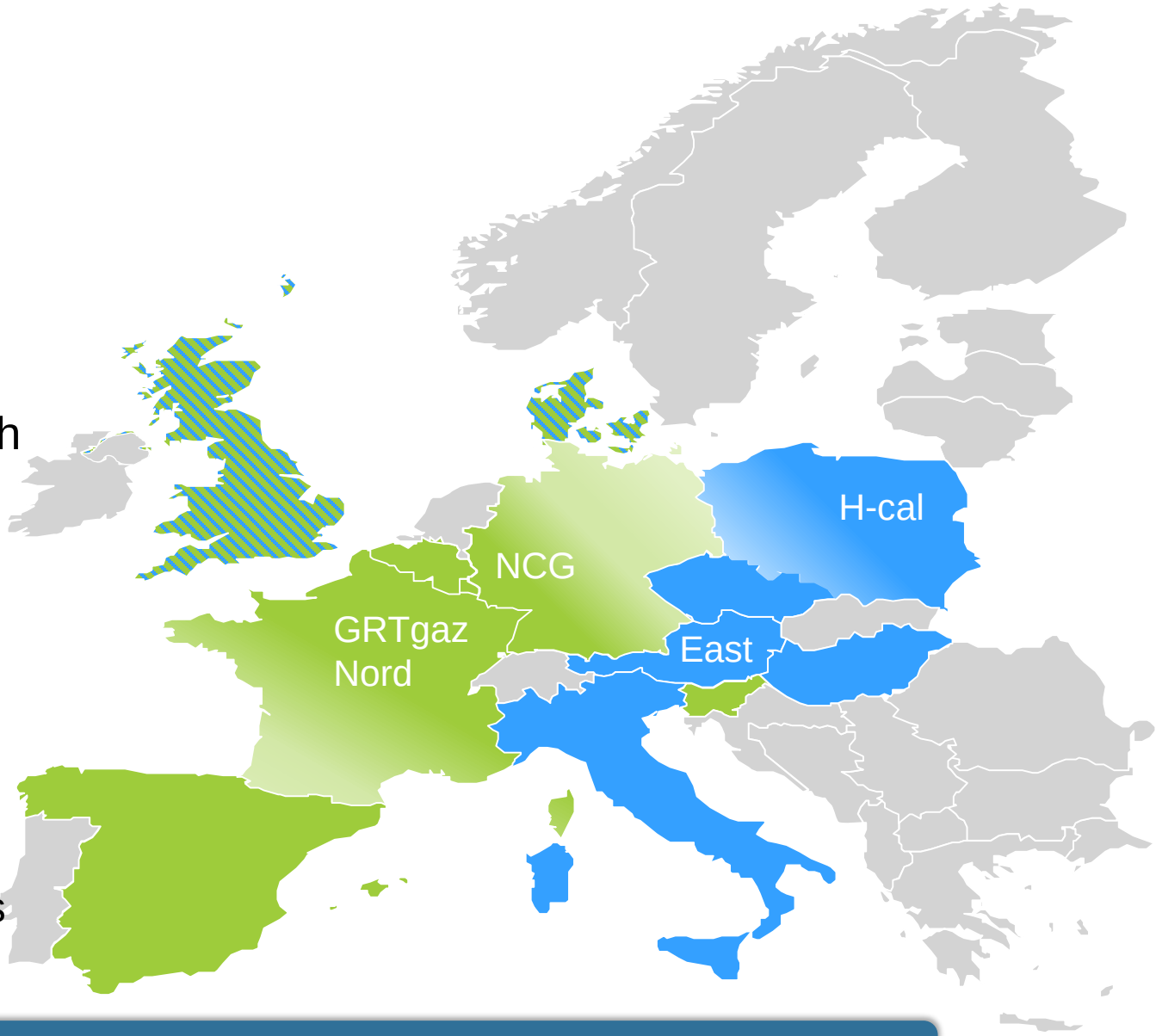
•Testing further the ***analytical framework***, with regimes applying special features like tolerances and linepack service.

The Agency is keen to support the meaningful implementation of the NC.

APPLICATION OF THE BAF IN 2017 AND 2018

Using data **GY 15/16** & **GY 16/17**. **2** reports covered 12 balancing zones:

- **NWE and S GRI**
- **SSE GRI**
- **DK** & **UK-GB** (in both reports)
- 2 transitory regimes;
- 3 Within-day regimes (WDOs);
- 2 zones with Linepack flexibility;
- 1 zone with tolerances
- 2 zones with incentives



How the BAF measures performance

A quantitative analytical framework is essential.

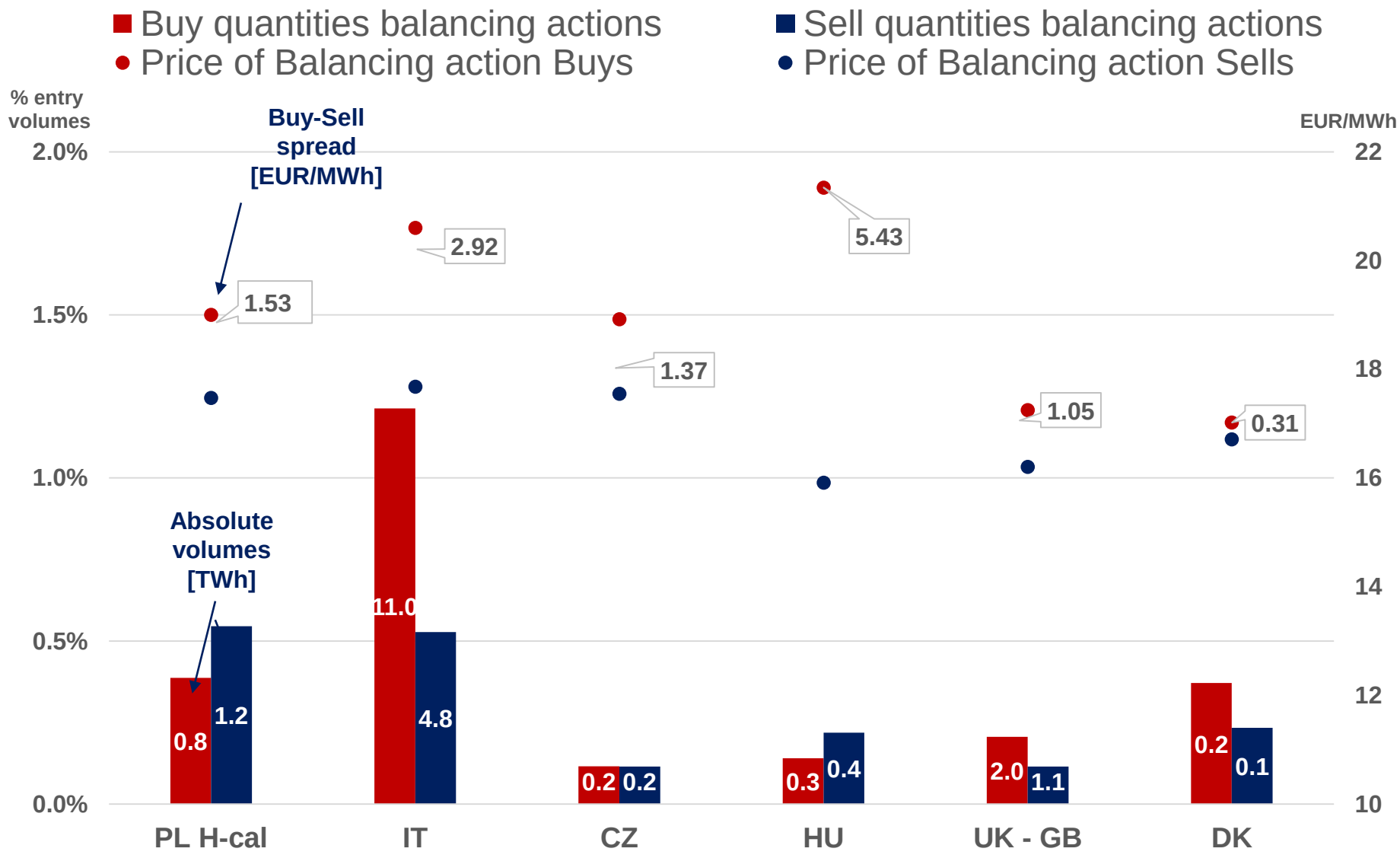
- The Agency's BAF measures balancing market functioning by reviewing:
  - TSO's balancing activity (balancing actions volumes and prices) – is it residual?
  - NUs' balancing activity (imbalance volumes and prices) – how does it evolve?
  - And their combined effects on the system (neutrality – both TSO and NUs)

THE BAF OUTCOME IN 2018

The BAF allows to make basic conclusions on how the key balancing design elements work. Preliminary findings:

- TSO residual role varies across countries;
- Relief from tolerances and LFS could be considered to provide adequate incentives for NU balancing; NDM forecast accuracy has an impact on NU balancing activity;
- Small adjustment to be sufficient, but not excessive;
- Neutrality per unit of market volume is low and comparable across selected zones.

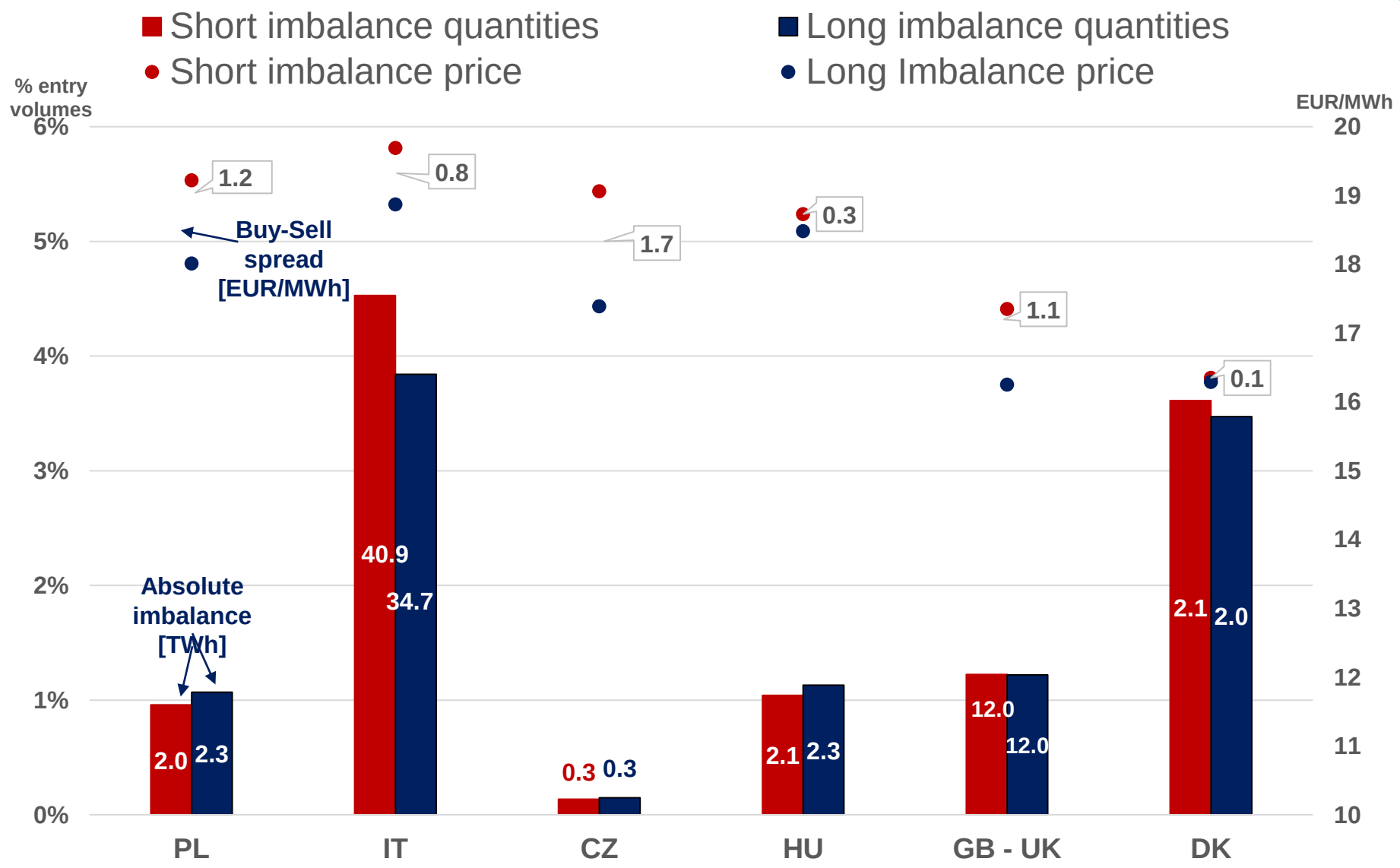
TSOs' BALANCING ACTIONS, GY 16/17



TSOs' BALANCING ACTIONS, GY 16/17

- Residual (**<0.5%** of entry volumes) activity in relative terms for all zones
  - **IT** is the exception (**> 1.5%**)
- Relative asymmetry of TSOs' balancing actions quantity (Buy nearly **doubles** Sell) for **UK, DK, IT**
  - The opposite for **HU**
- Average price spreads are limited (**< 2 EUR/MWh**)
  - except **HU** (**> 5 EUR/MWh**)
  - and **IT** (**>2.5 EUR/MWh**)

NETWORK USERS' ACTIVITY, GY 16/17

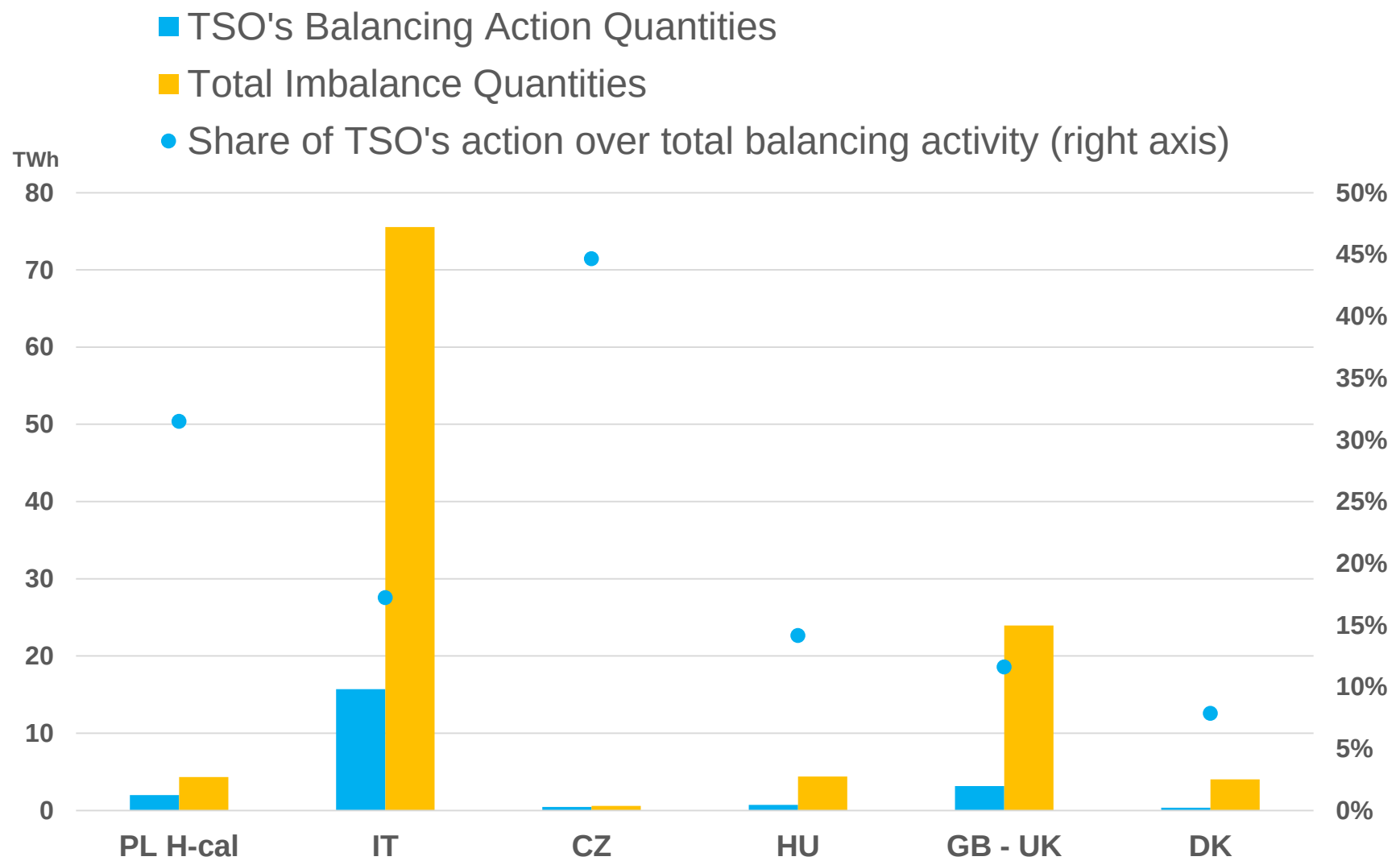


NETWORK USERS' ACTIVITY, GY 16/17

- Low imbalances in **PL, HU, GB** (**<2%** of entry volumes)
  - **PL: 28%** of imbalances within tolerances, shielded from marginal prices (sell: **15.8 EUR/MWh**, buy **20.9 EUR/MWh**)
- Very low in **CZ** (**<0.5%**), yet
  - Linepack flexibility service and
  - Unused flexibility market

  shield additional imbalances accounting for **3.4%** of entry volumes
- Higher levels in **IT (>8%)** and **DK (>7%)**
  - Possible reasons: information provision on NDM, not counterbalanced by other design elements?
- Rather symmetric imbalances, with seasonality

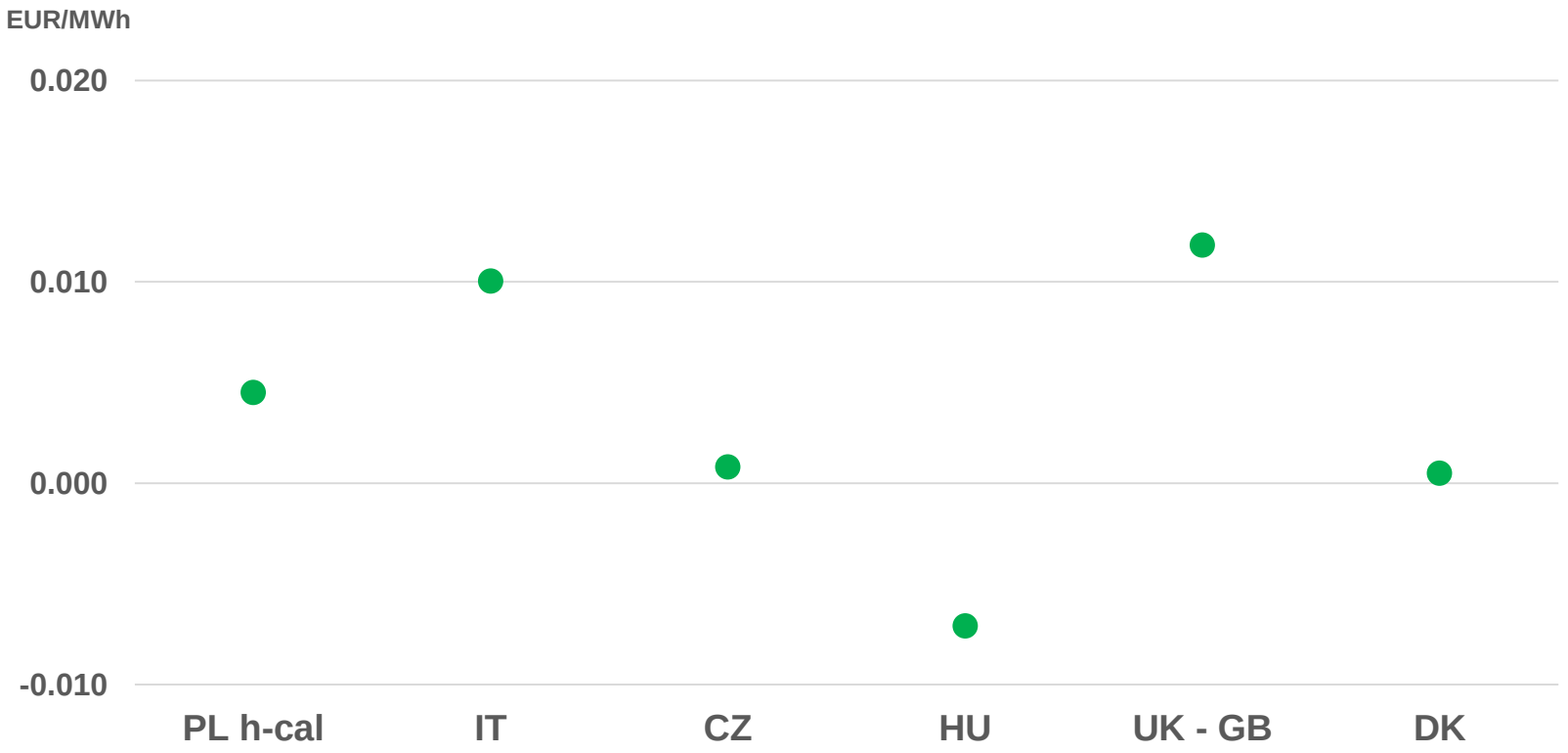
TSOs' SHARE OF BALANCING ACTIVITY, GY 16/17



OVERALL EFFECTS OF BALANCING ACTIVITY

The combined effect of NUs and TSOs' activity can be caught by the neutrality indicator

Net adjusted financial neutrality per unit of market volume (EUR/MWh, GY 6/17)



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Information Provision

THREE INFORMATION MODELS IN THE BAL NC

- **Base case**
  - NDM info is min 1 DA + 2 WD forecasts
    - First update before 1 pm (W), 12 (S) UTC on the Gas Day.
    - Second update depends on access to STSPs, accuracy of NDM forecast, renomination window, first update
- **Variant 1**:
  - Info on NDM and DM offtakes is based on apportionment of measured flows during the Gas Day
    - For NDM, based on min 2 WD updates
    - Initial allocation/imbalance quantity considered as final.
- **Variant 2:**
  - NDM info is min 1 DA forecast

Irrespective of the selected model, the NRA appoints a forecasting party - TSO, DSO, or third party.
The NC also requires TSOs, DSOs and forecasting parties to provide information.

COST-BENEFIT ANALYSIS

- Art. 38: *within 2 years* from entry into force of the NC, TSOs have to produce a cost-benefit analysis (to be consulted) on:
  - » Increasing frequency
  - » Reducing timeline
  - » Improving accuracy

  of the information provided to NUs, with breakdown among affected parties.

NRAs may decide to improve information provision, based on the results.

- Art. 42(3): Forecasting party to publish, every 2 years (at least), report on the accuracy of the NDM forecast.
  - » May serve as an input to the CBA

IMPROVING INFORMATION PROVISION…

- …aims at adequately attributing imbalances to network users.
  - » May create system-wide benefits
    - NUs confidence to act in the market may increase =>NUs more balanced on average/ TSOs more residual;
    - Level playing field for new NUs.
  - » May create different impact on different parties
    - With better forecast, NUs' imbalances may improve (depending on their portfolio).
    - Tolerances or others tools shielding from imbalances could be reduced.
  - » Has cost that may be shared among all NUs
    - spread to all (via tariffs, if approved).

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Thank you for your attention!

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