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European Union Agency for the Cooperation of Energy Regulators

Observations on congestion in gas transmission systems

ACER-ENTSOG Workshop on maximisation and efficient use of gas transmission capacities

14 March 2023, Brussels and online

What is capacity maximisation

- Article 16(1) of Regulation (EC) 715/2009:

  The maximum capacity at all relevant points referred to in Article 18(3) shall be made available to market participants, taking into account system integrity and efficient network operation

- Article 18(3) of Regulation (EC) 715/2009:

  For the services provided, each transmission system operator shall make public information on technical, contracted and available capacities on a numerical basis for all relevant points including entry and exit points on a regular and rolling basis and in a user-friendly and standardised manner

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What is congestion

- Congestion happens when the interest in transmission capacity exceeds the available capacity. It occurs in two forms:
- ‘Contractual congestion’ means that interest in obtaining capacity rights exceeds the marketed capacity
- ‘Physically congested’ gas transmission capacity implies that all booked capacity is used to flow gas, up to the operational limits of the gas system.

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Observations on congestion

Disclaimer:

We present the preliminary results. The validated final results will be part of ACER’s Report on Congestion in EU Gas Markets and How it is Managed

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How ACER monitors contractual congestion

- ACER monitors whether interest in booking capacity exceeds the offered capacity for yearly, quarterly and monthly products (occurrence of auction premium); or whether none of these products were offered in the first place (non-offer)
- Interconnection points that meet the criteria laid down in point 2.2.3(1) of Annex I of the Regulation (EC) No 715/2009 are identified as (contractually) ‘congested’

Observations on contractual congestion Congestion in 2022 (preliminary results)

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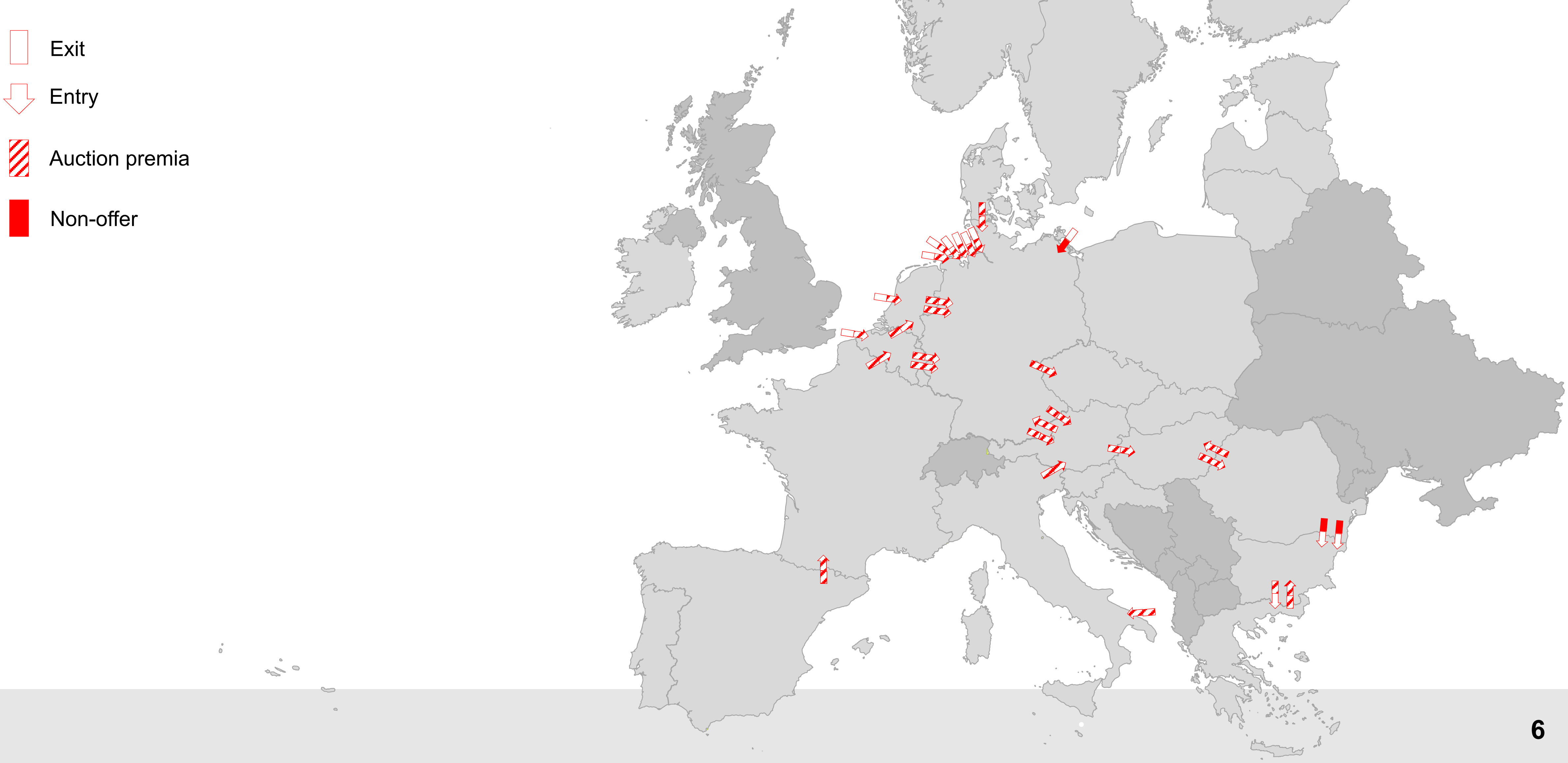


Observations on contractual congestion
Congestion in 2021

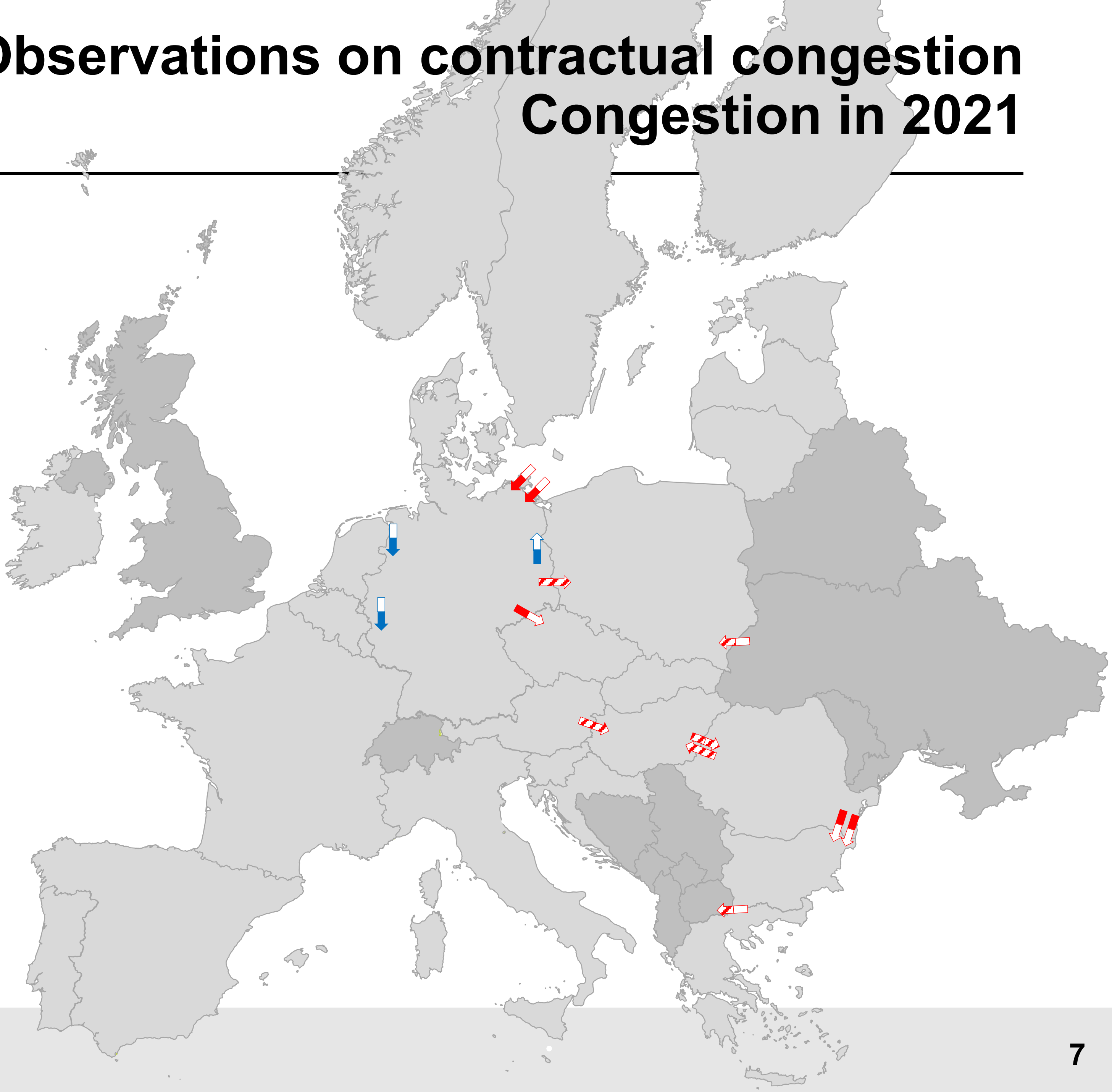
Exit

Entry

Auction premia

Non-offer

In-country point

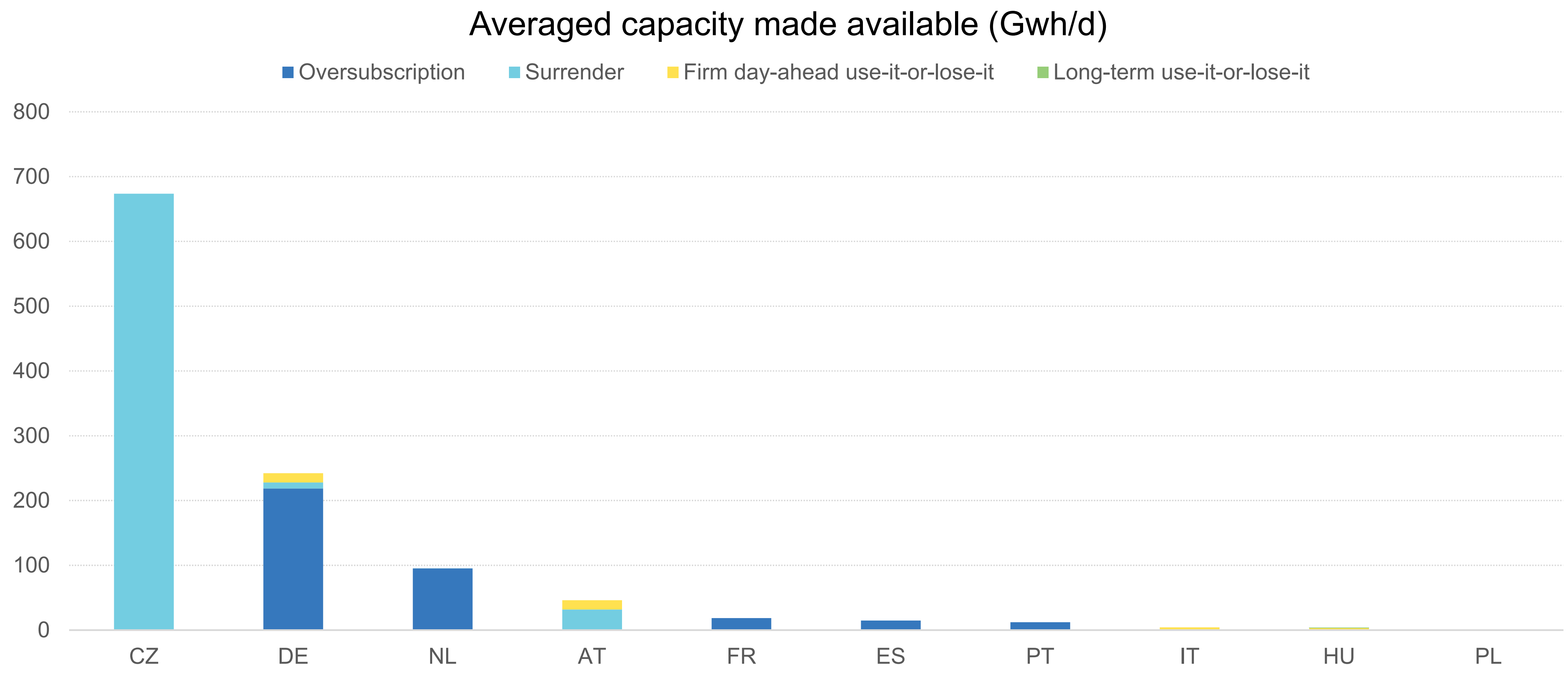


Observations on contractual congestion More congestion and for longer duration

Product type	Count of auction premia 2022 auctions	Count of auction premia 2021 auctions
Yearly	94	5
Quarterly	322	30
Monthly	283	36
Day-ahead	6371	796

From > To	Auction premium for yearly product 2022/3	Auction premium for yearly product 2023/4	Auction premium for yearly product 2024/5	Auction premium for yearly product with start in 2025 or later
AT > HU	x	x	x	
BE > DE	x	x	x	
BE > NL	x	x	x	
DE > CZ	x	x	x	
FR > BE	x	x	x	x
NL > DE	x	x	x	

Observations on contractual congestion
Application of congestion management procedures



Source: ENTSOG

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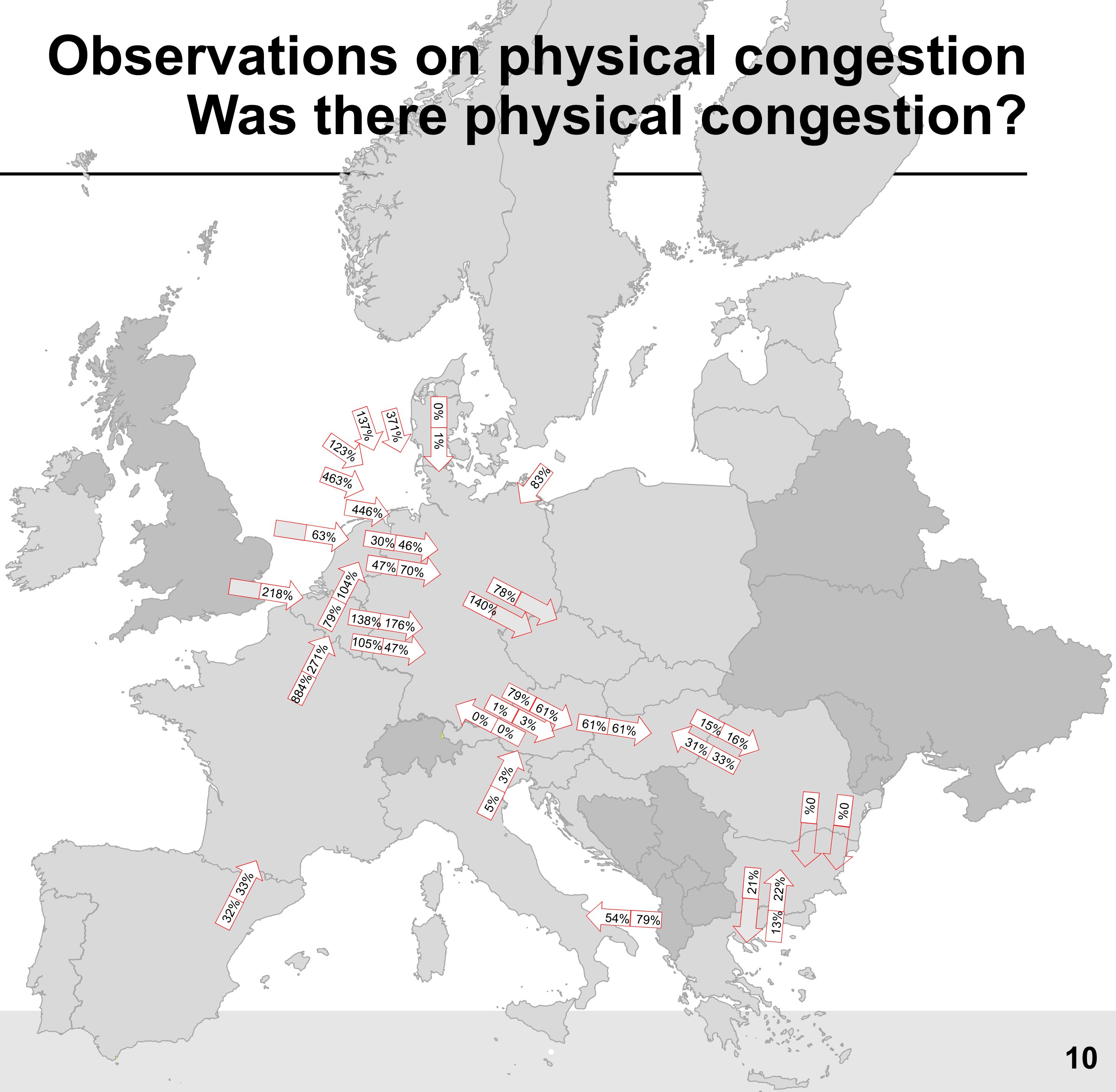
Observations on physical congestion
Was there physical congestion?



Utilisation rate (%) is average physical flow / maximum firm technical
Source: ENTSOG TP

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Expected actions

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What actions could we expect from TSOs and NRAs to maximise capacities and manage congestions?

- TSO action
  - Managing contractual congestion
    - Bringing unused capacity back to the market by firm-day ahead UIOLI and other measures;
  - Maximising capacities by optimising the operation of the existing infrastructure
    - Optimisation of the network configuration to the new flows, e.g. boosting compression;
    - Interruptible capacity;
  - Investment in infrastructure
    - May also be non-TSO investment in supply infrastructure (or demand reduction measures)
  - Improve transparency on these actions
- NRA action
  - Monitoring and following up on the TSO actions;

When reported firm technical capacity is frequently lower than observed maximum flows, can the market know whether capacities were maximised?

Key take-aways

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Key take-aways

- ACER observes substantially more and longer (contractual) congestion in Europe, in particular north-west Europe, for products auctioned in 2022
- ACER was not able to monitor effectively the presence of physical congestion based on available data
- ACER expects TSOs take action to maximise capacities and manage congestions and NRAs to monitor these actions, e.g.:
  - Effective application of measures to manage contractual congestion
  - Maximising firm capacities, maximising bundling of capacities
  - Invest where appropriate to do so
  - Raise transparency

Thank you!
Any questions?

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