



**h u p x**  
HUNGARIAN POWER EXCHANGE

# Power exchanges: market coupling and RES integration

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# Market coupling

# MARKET COUPLING – CURRENT STATUS



CZ-SK-HU  
MC  
◆

MRC,  
4M MC  
◆

EU DA Target Model reached



ICP  
◆

Core FB MC  
◆

2011

2014

2018

2019

2021

2022



◆  
XBID

◆  
XBID

◆  
XBID

◆  
XBID

1st wave 2nd wave 3rd wave 4th wave



EU ID Target Model reached

✓ Simplification of trading processes: implicit allocation

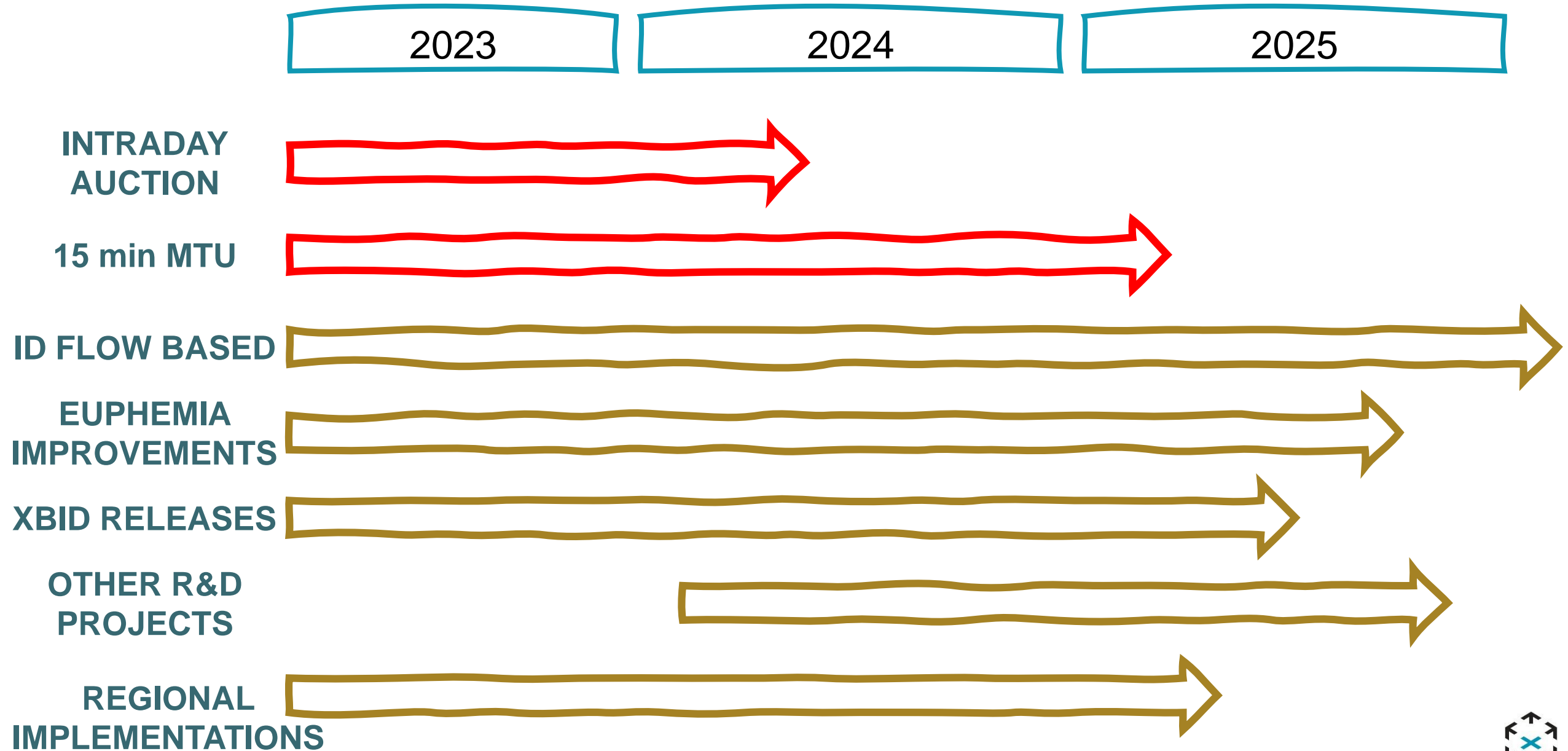
✓ More effective usage of XB capacities

✓ Price convergency between the bidding zones

✓ Increase of social welfare



# MARKET COUPLING – FUTURE



# HUPX DAM PRICES AND VOLATILITY

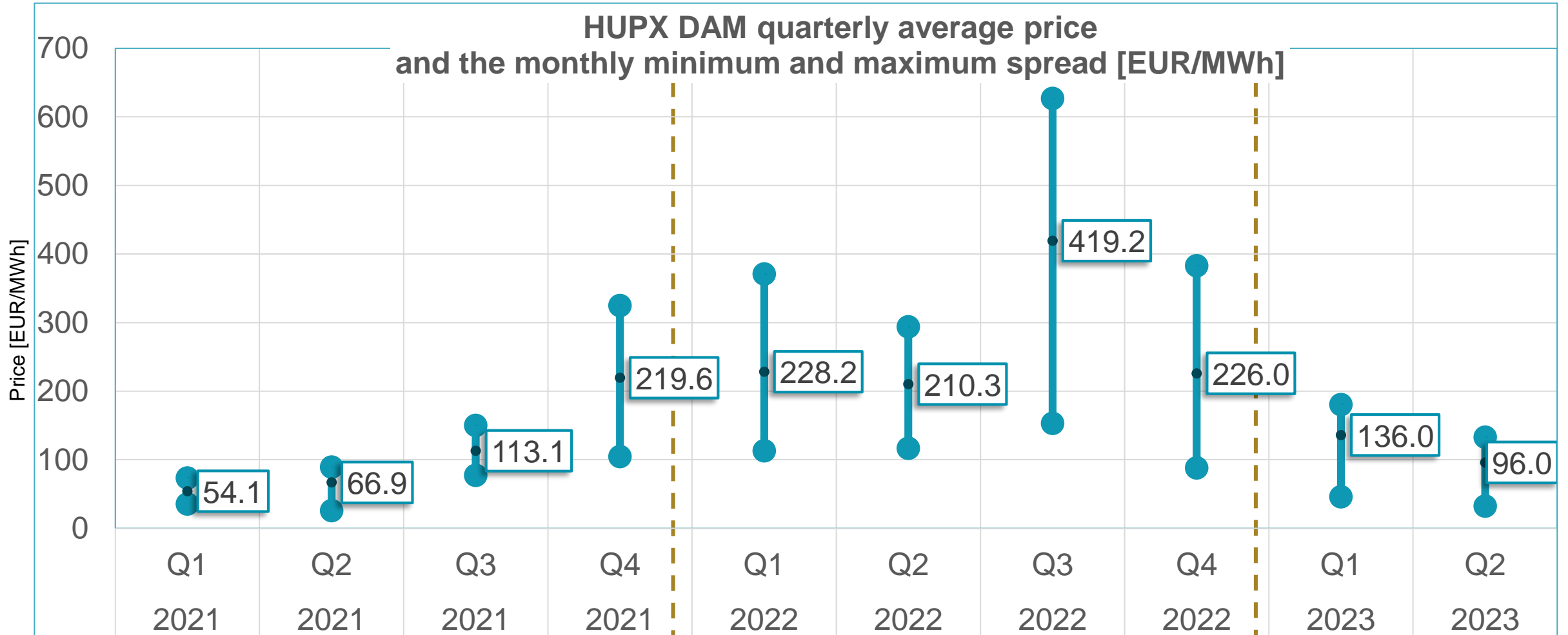
2021:  
113,4 EUR/MWh

2022:  
270,9 EUR/MWh

239%

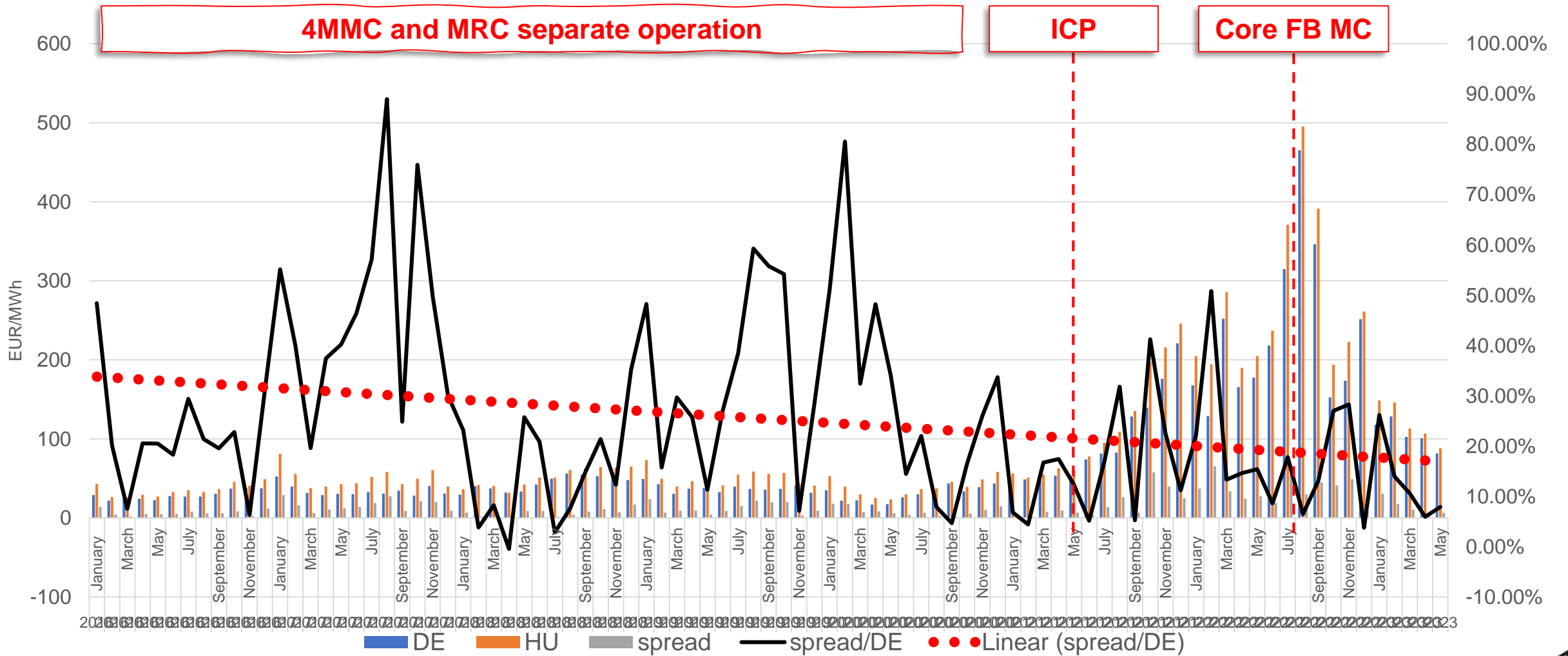
2023:  
116 EUR/MWh

42%

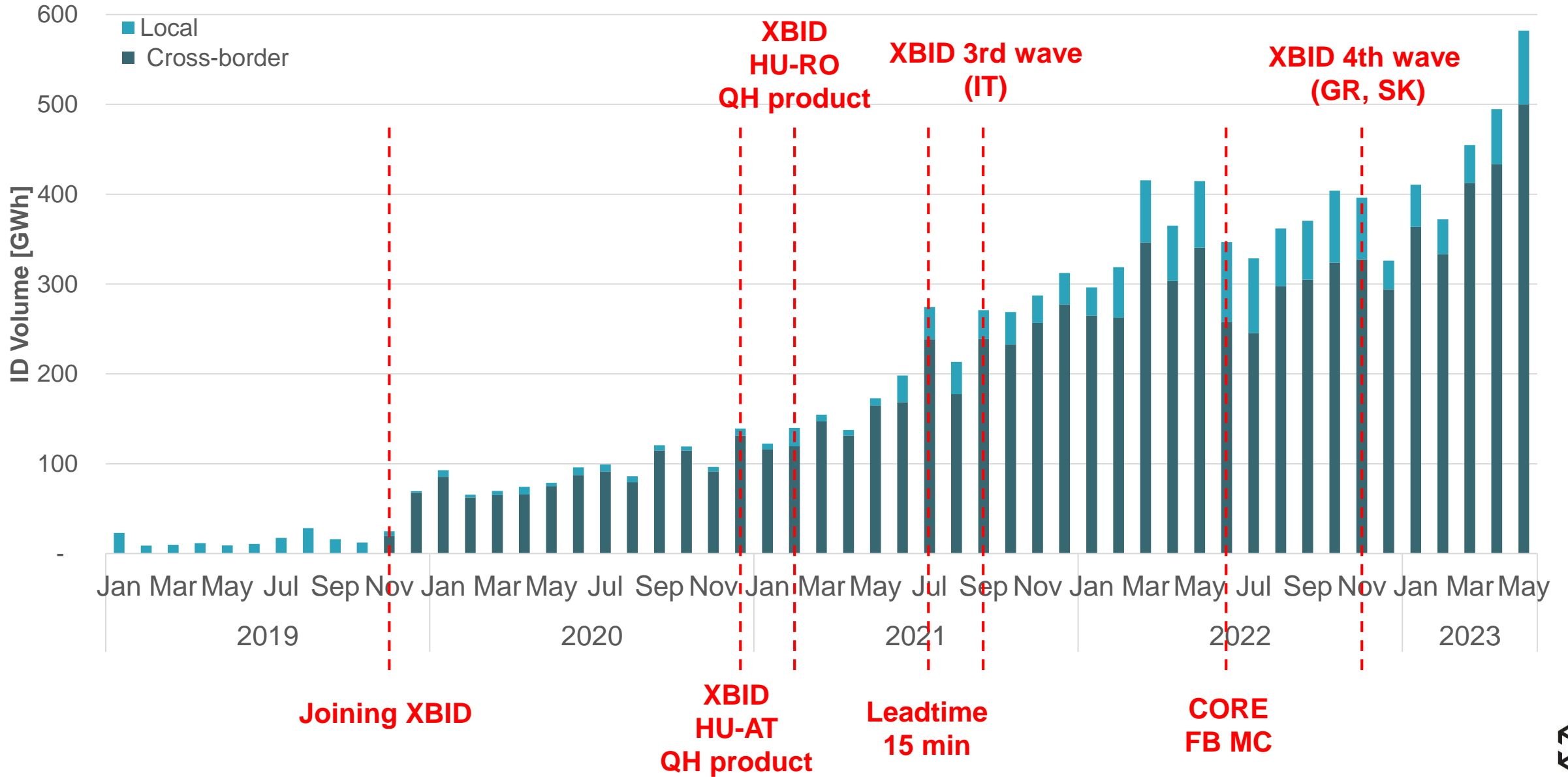


# PRICE CONVERGENCY ON DAM – EFFECT OF THE MARKET COUPLING

## DE-HU DAM spread (2016-2023)



# HUPX ID VOLUMES AND MILESTONES





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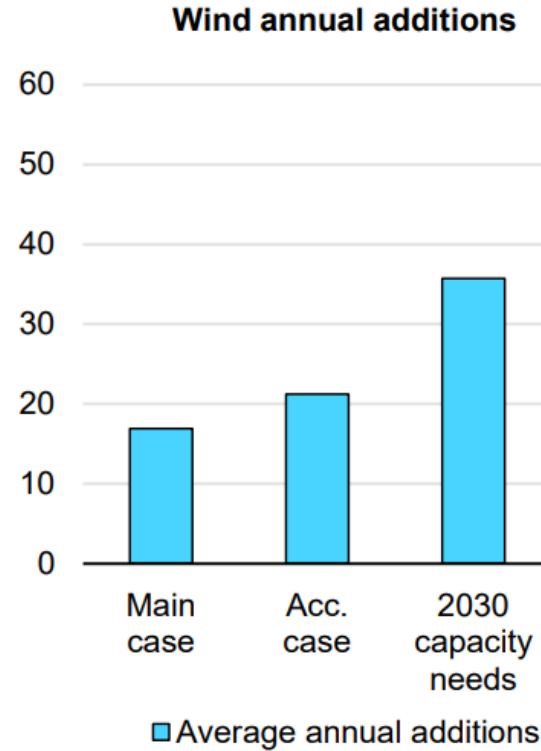
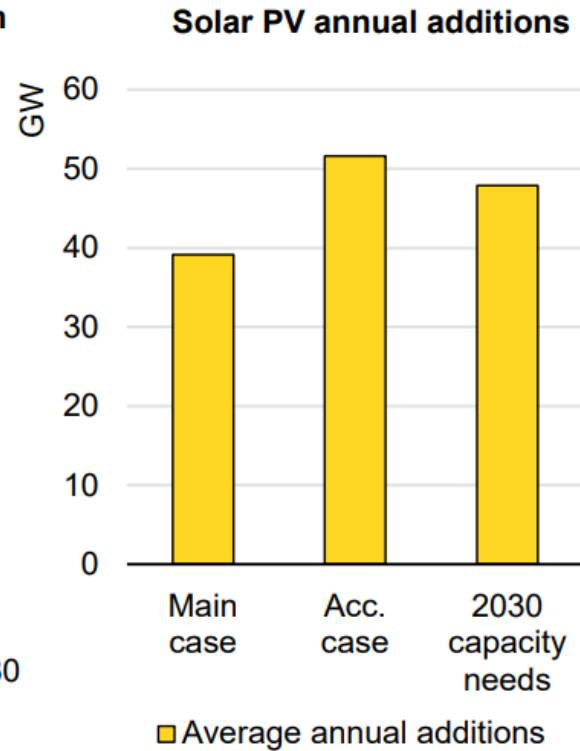
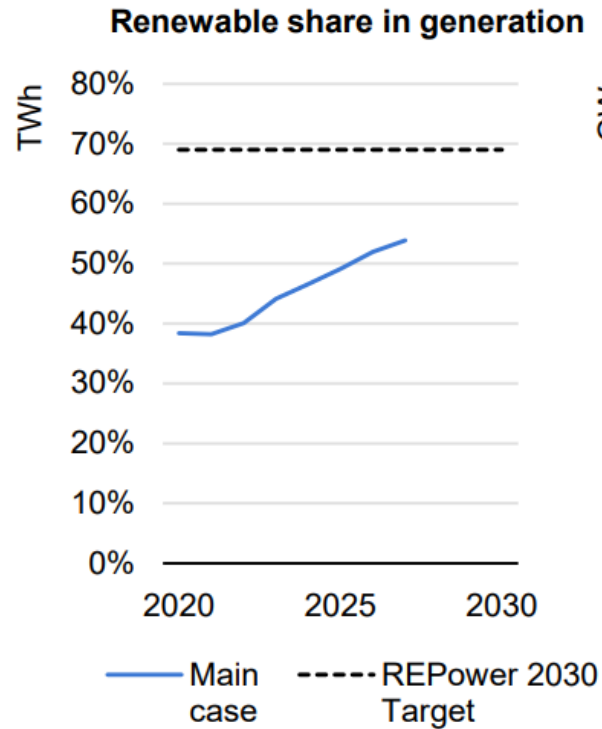
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# RES integration

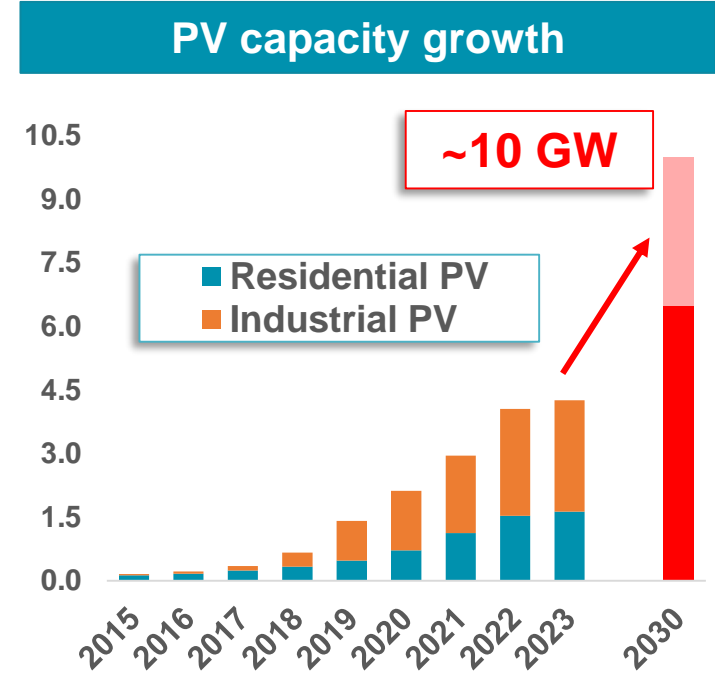


# RES FUNDAMENTALS – ENERGY MIX CHANGE

## EU outlook



## Hungary outlook

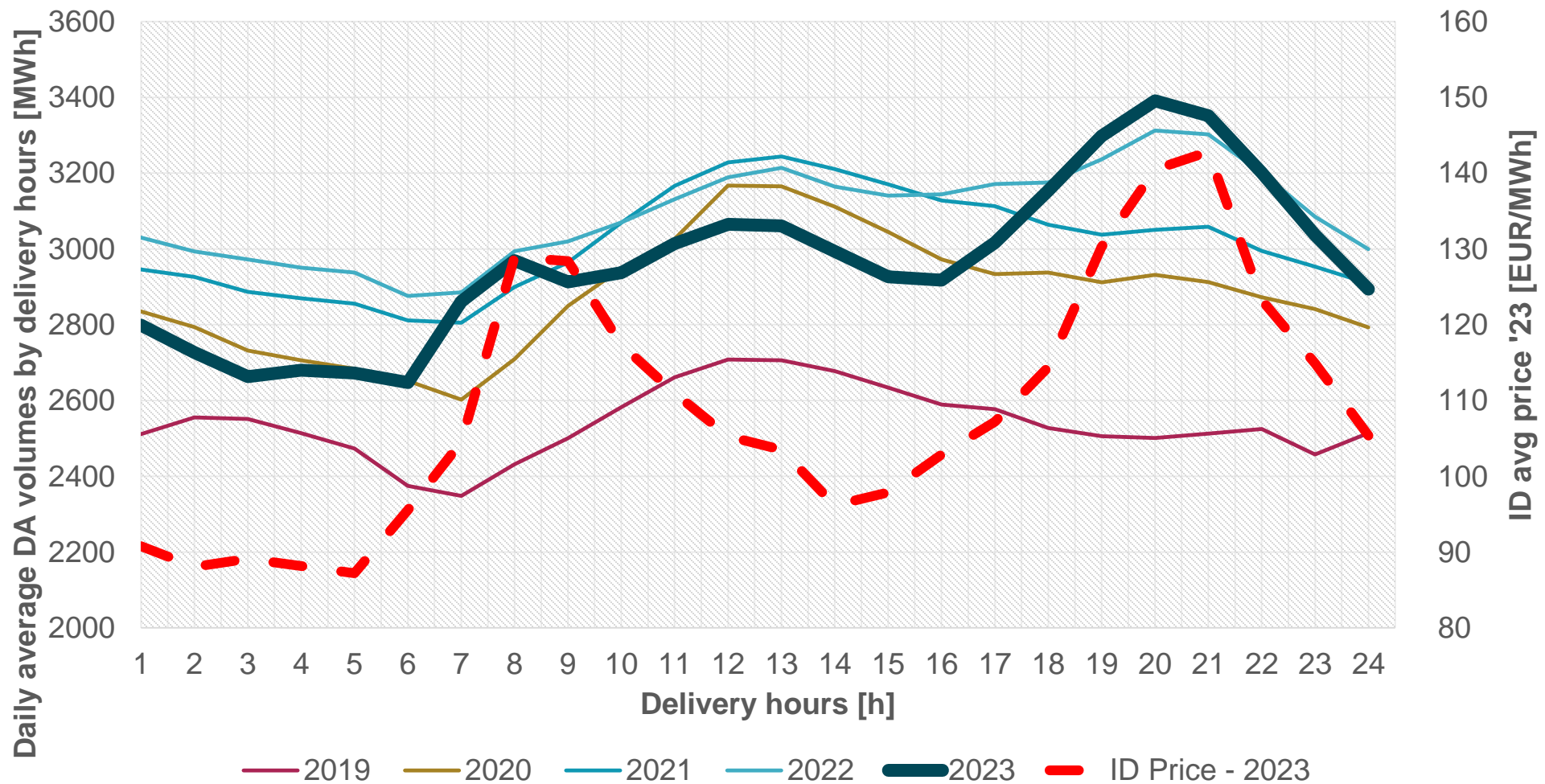


Source: **iea**

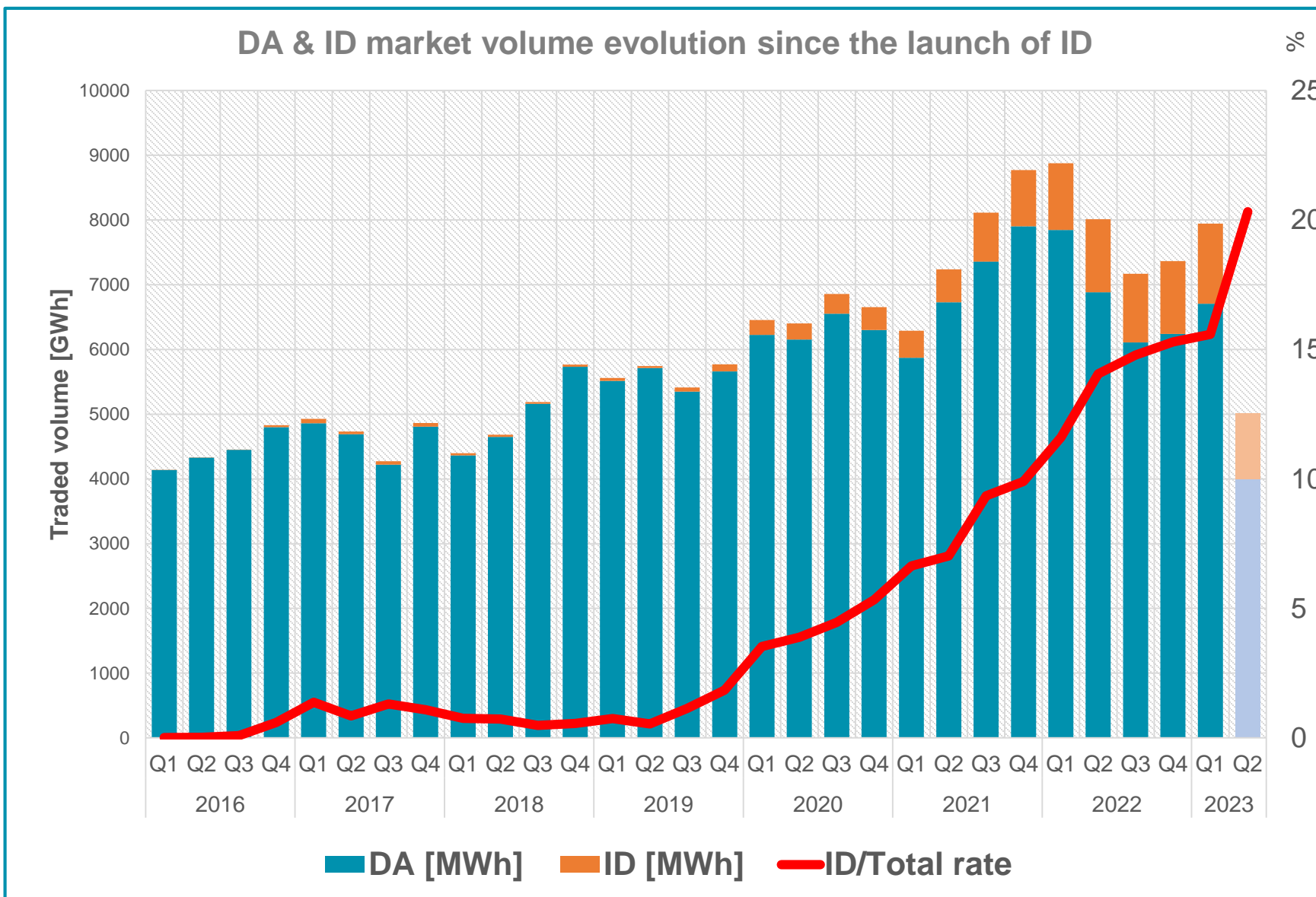


# DUCK CURVE IS COMING...

## Daily average DAM traded volume 2019-2023 and average ID prices of 2023 by delivery hours



# SHIFT OF FOCUS



✓ **ID is getting in the focus**  
(new members join HUPX mostly because of IDM)

✓ Most of the new members use API connection and **algotrading** solution

✓ **Regulation** is starting to have oversight on algotrading (REMIT)

✓ **Balancing regime** plays an important role



# CONCLUSIONS AND OUTLOOK

▶ **Market integration is positive process** on DA and ID timeframe – this is already proven

▶ Fundamentals make efficient **short term energy trading (especially ID)** and optimization **crucial on market** – where the focus will be in the future

▶ **There are opportunities for optimisation on ID market**, even in the extreme system periods there is **still liquidity** both on demand and supply side

**Close to real-time optimization is only possible through immense data processing, automation and algorithms**





# LET'S MEET AT OUR BOOTH!

## THANK YOU FOR YOUR ATTENTION!



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