

# 13<sup>th</sup> SE Europe Energy Dialogue “Energy Security, Market Integration and Sustainability in SE Europe”

Electricity Market Integration in SEE

Friday, 17/06/2022



*Professor George Ioannou  
Chief Executive Officer  
Energy Exchange Group*

# Energy Exchange Group | Overview



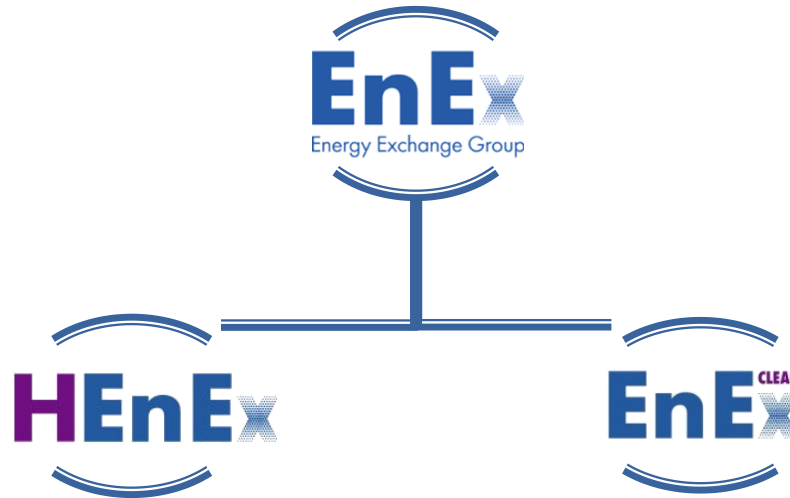
Power



Gas



Other



Public sector

42%

Private sector

58%



## Hellenic Energy Exchange S.A.

- Nominated Electricity Market Operator for Power Spot
- Operator of Energy Derivatives Market
- Trading Platform Operator for Gas

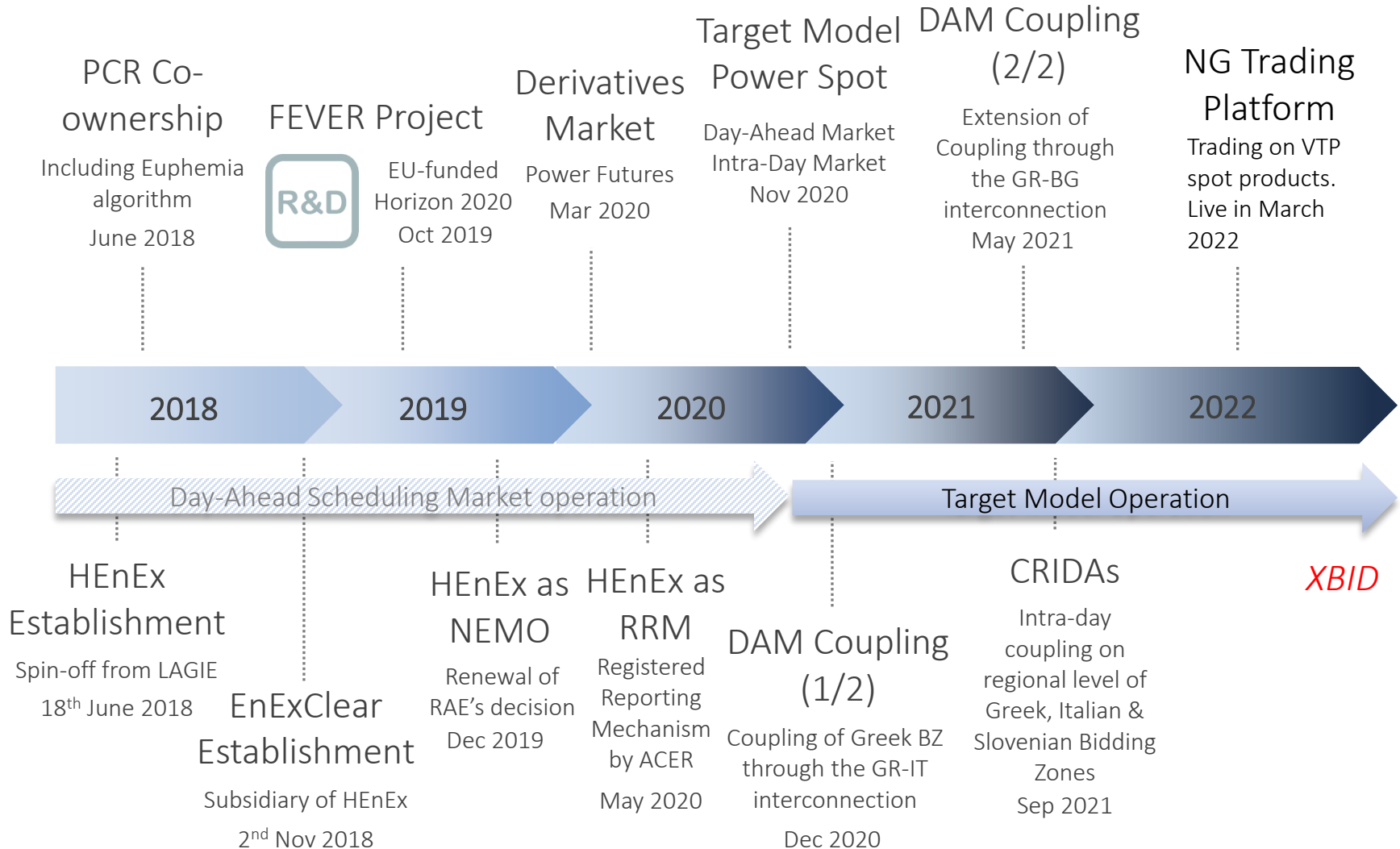
## EnEx Clearing House S.A.

- Risk management, clearing and settlement for power & gas spot markets
- Clearing and settlement of positions in the Balancing Market for Power

## ATHEXClear S.A.

- Derivatives Clearing House

# Energy Exchange Group | Milestones



# Regional Market Integration | European perspective

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## › An integrated energy market

- In line with Europe's aim to achieve a fully **integrated, interconnected and digitalized EU energy market and a power sector based largely on renewable sources**, Power Exchanges (PXs) play a vital role, contributing to the creation of a seamlessly interfaced energy market

## › The reason for the imminent / important role of PXs are:

- PXs benefit market participants through standardized trading and clearing procedures
- PXs enhance the regional energy market, e.g., through coupling with neighboring countries - the example of coupling Greek with Italian and Bulgarian Borders for HEnEx
- PXs contribute to a smooth transition towards European market coupling integration

# Regional Market Integration | Benefits

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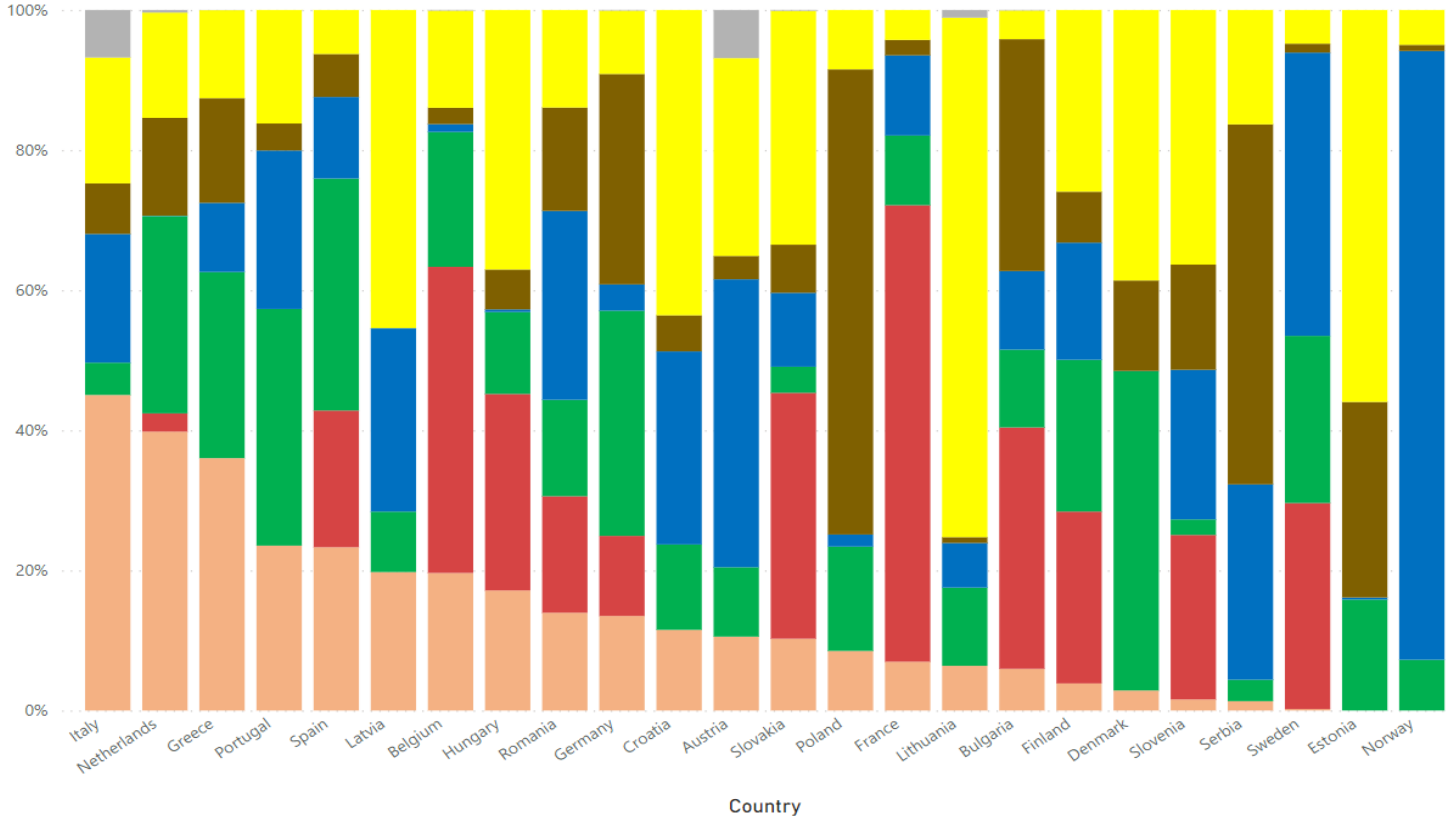
## › Benefits of an integrated market:

- Promotes increased liquidity, transparency, efficiency and social welfare since:
  - A market with a lot of power traded “in and out” leads to depth in the market
  - Liquidity helps the market **price discovery** process, leading to reliable price signals
  - An efficient price formation mechanism provides **sufficient incentives for investments**
- Price coupling guarantees the overall welfare and **optimal use of electricity network resources**
- Facilitates market **price convergence** across the EU markets
- Ensures **optimal flows** (imports/exports) of electricity across the interconnections of the markets

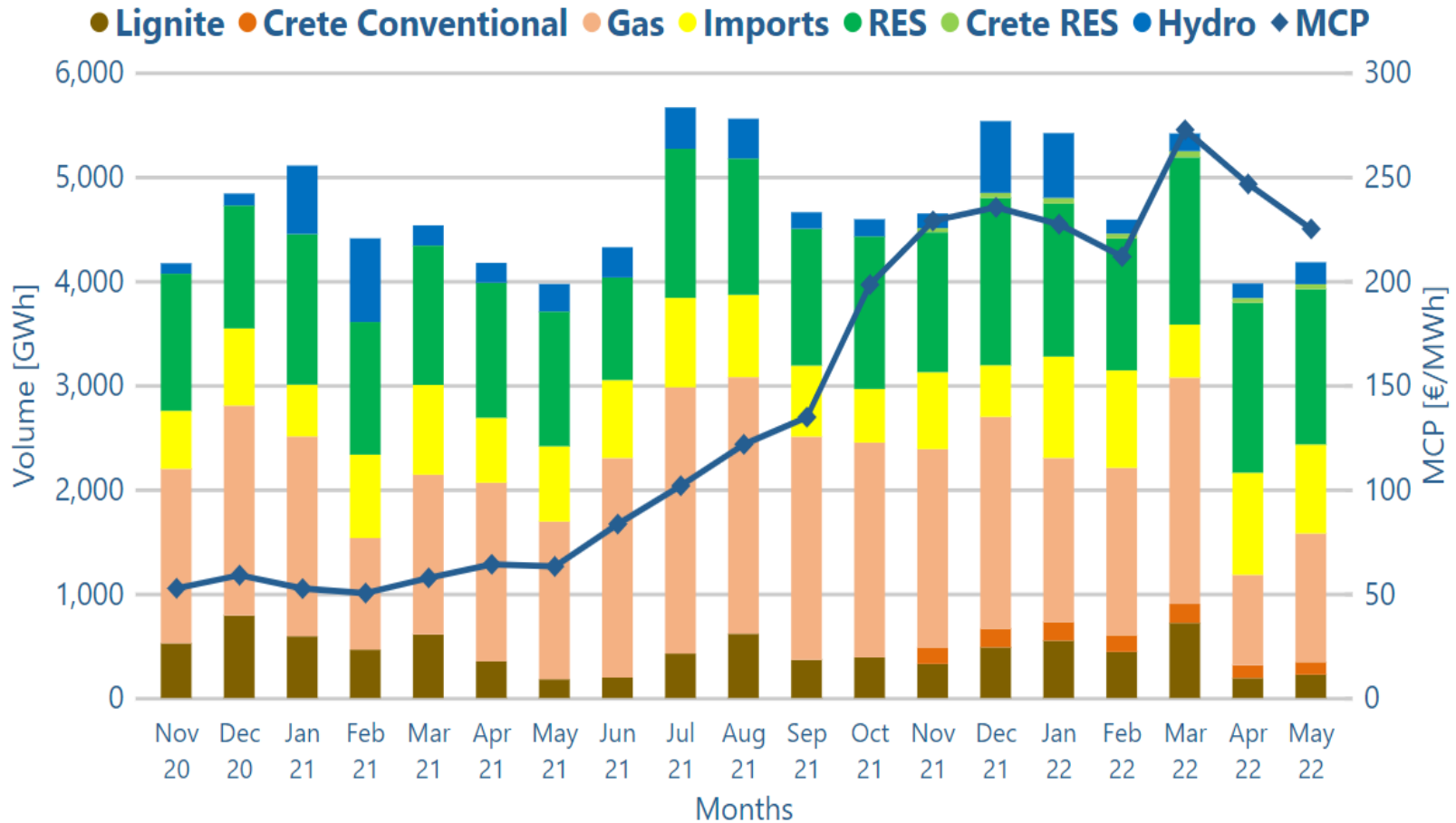
# Electricity Markets in Europe | Technologies / fuels

ENTSO-E Data concerning the fuel mix of EU countries for 2021

● NGAS ● NUCLEAR ● RES ● HYDRO ● Oil and Coal (eg. Lignite) ● IMPORTS ● OTHERS

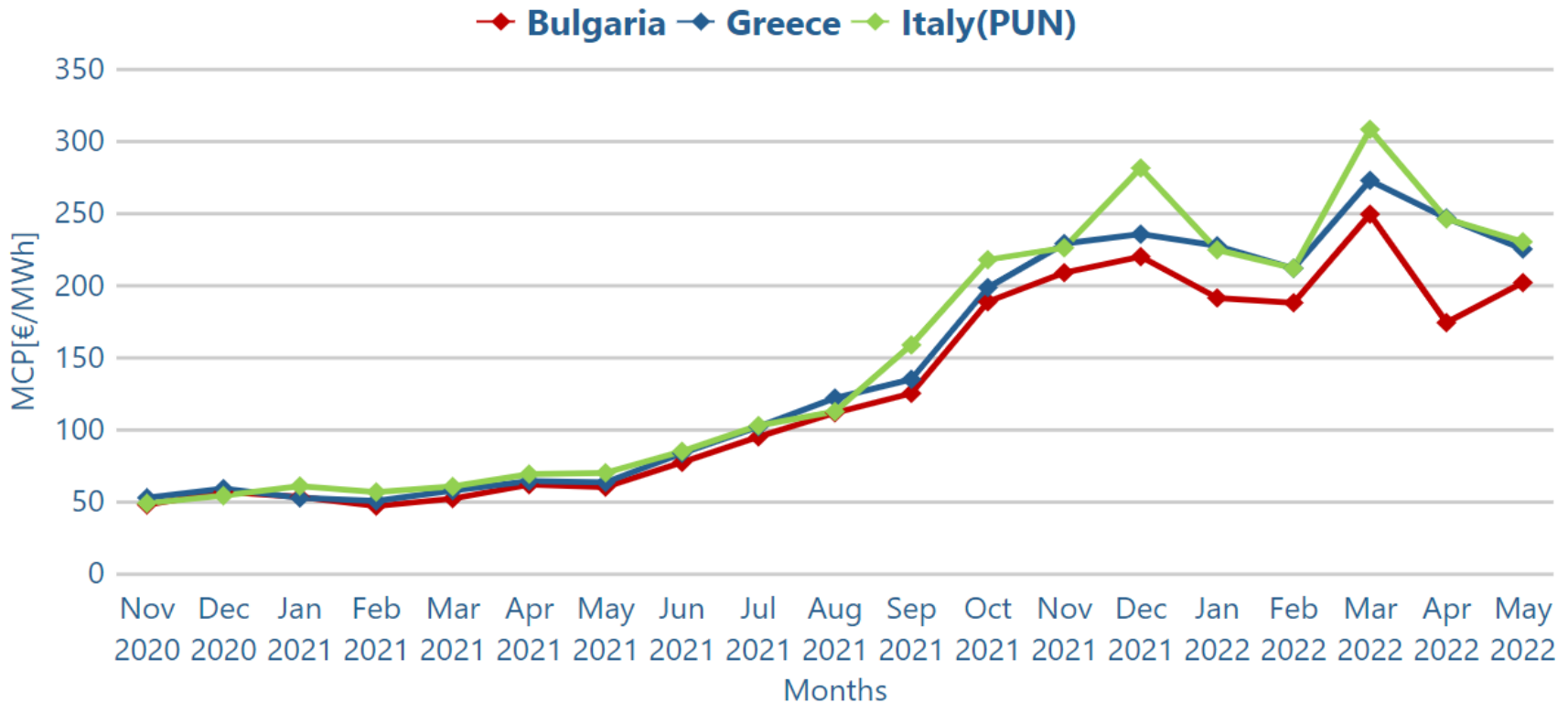


# The Target Model in Greece | Experience so far



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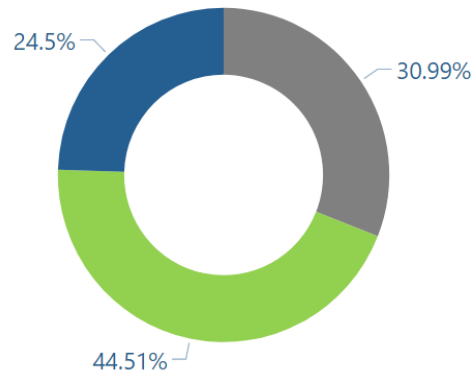
## DAM Yearly Average Price



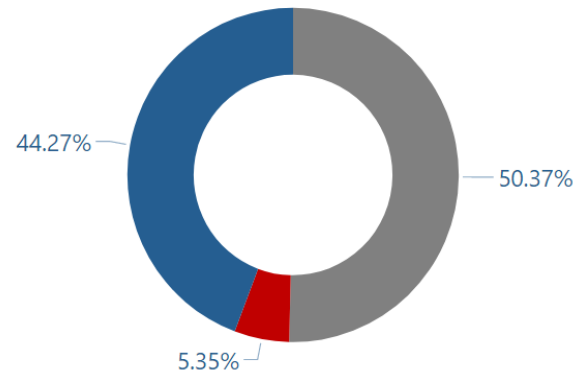


# The Target Model in Greece | Coupled Interconnections

Price convergence with coupled interconnections for DAM for May2021-April2022 – source HEnEx



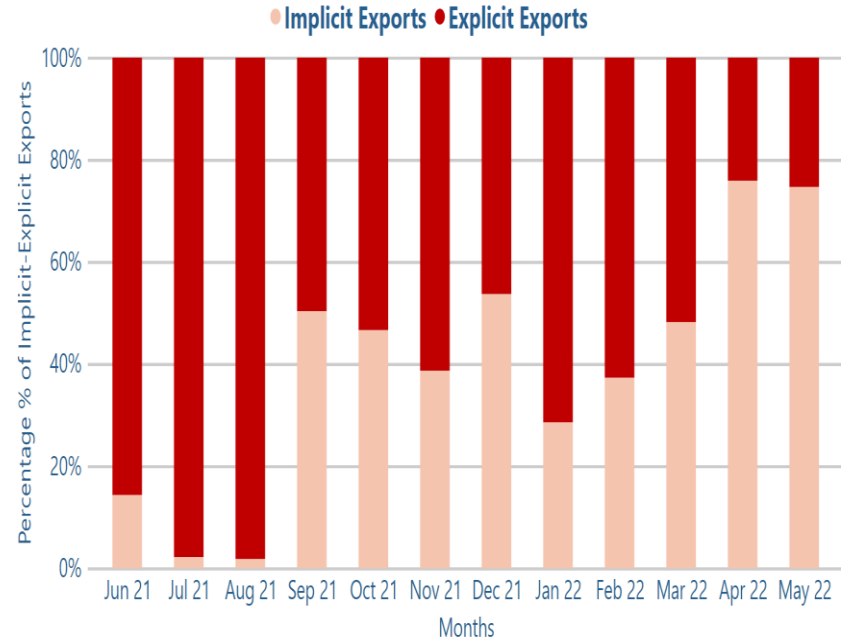
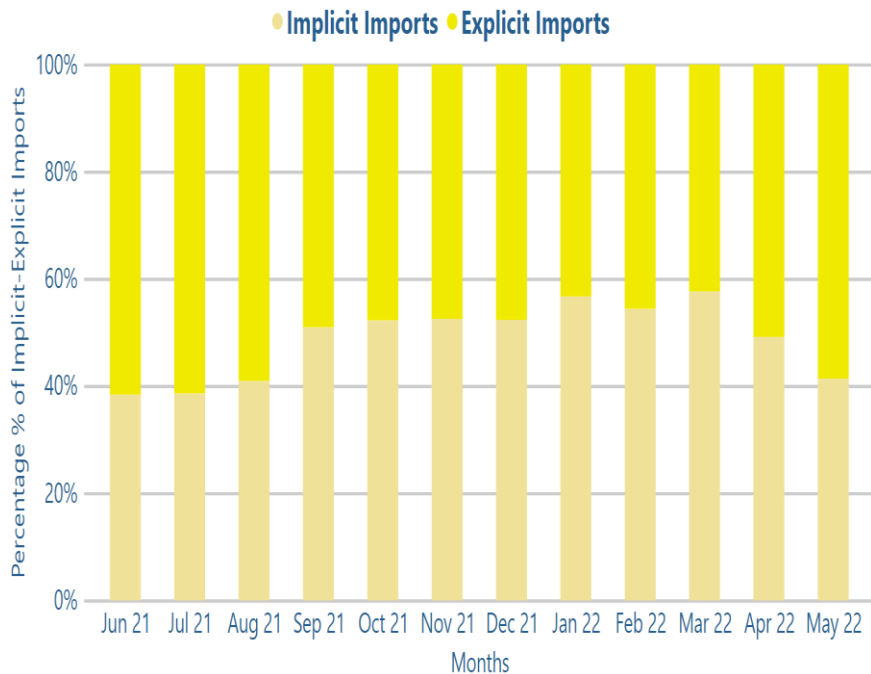
● MTUs Price GR = Price IT ● MTUs Price GR < Price IT ● MTUs Price GR > Price IT



● MTUs Price GR = Price BG ● MTUs Price GR < Price BG ● MTUs Price GR > Price BG

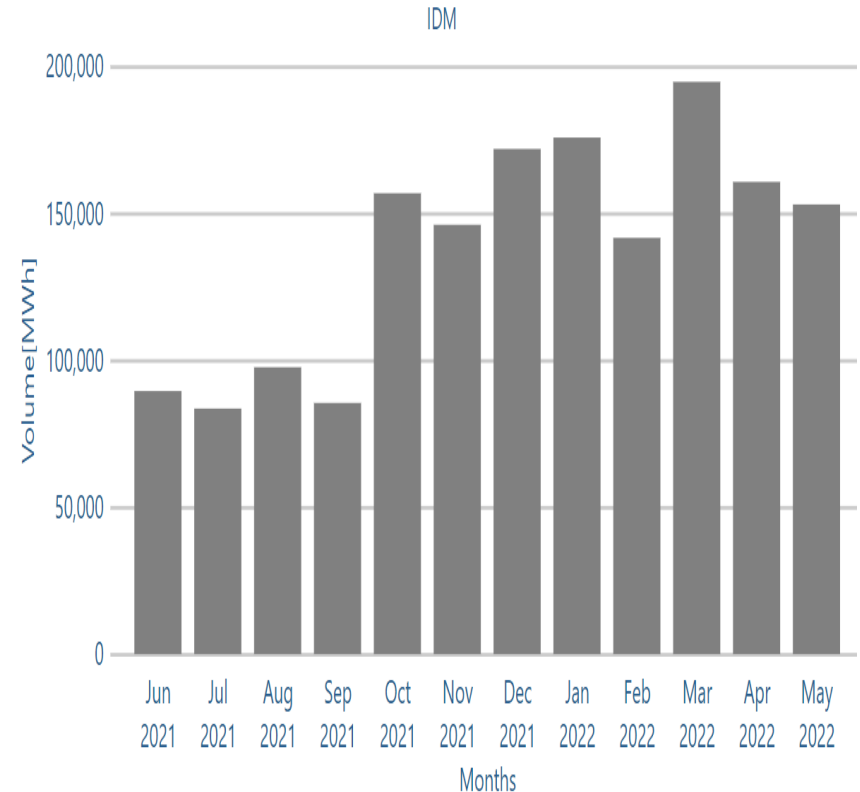
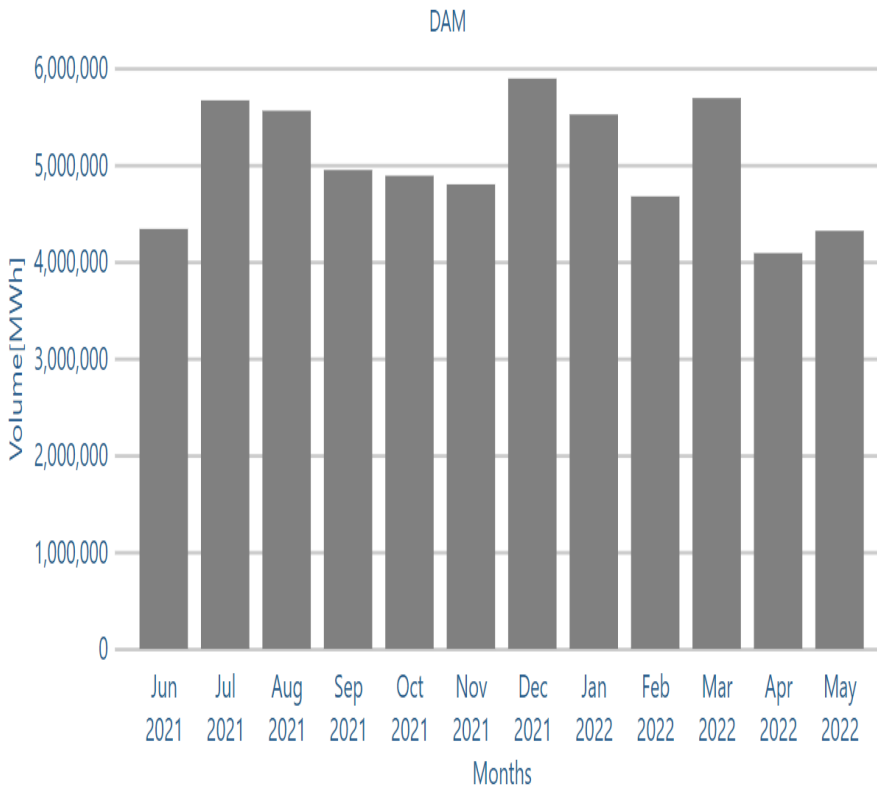
- **Imports** accounted for 15.33% of the fuel mix, more than half as a result of **the market coupling** (the same applies for **exports**)
- More than half of Market Time Units (MTU) the Greek DAM price was equal to that of the Bulgarian bidding zone, while 31% of MTUs it was equal to that of the Italian bidding zone, ensuring **efficient allocation of interconnected capacity** and **increasing social welfare**

# The Target Model in Greece | Coupled vs Non-coupled

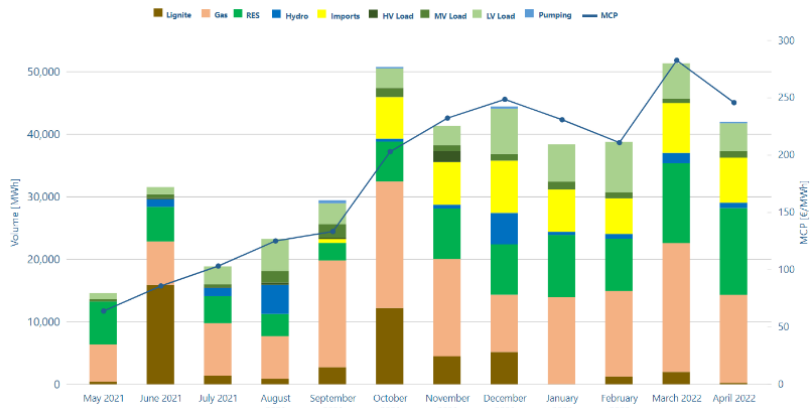
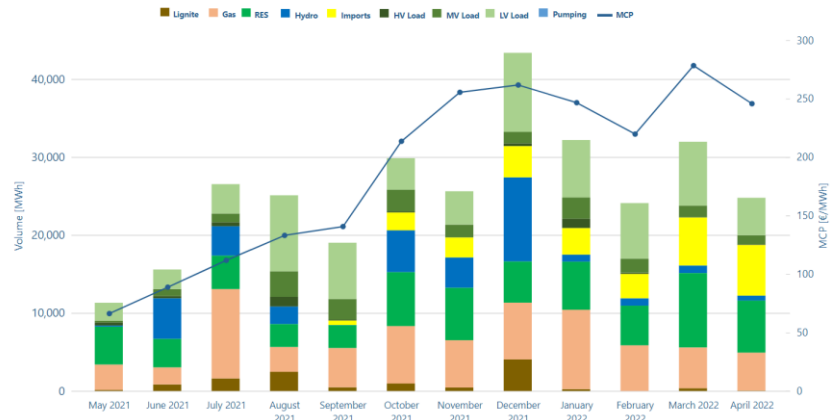
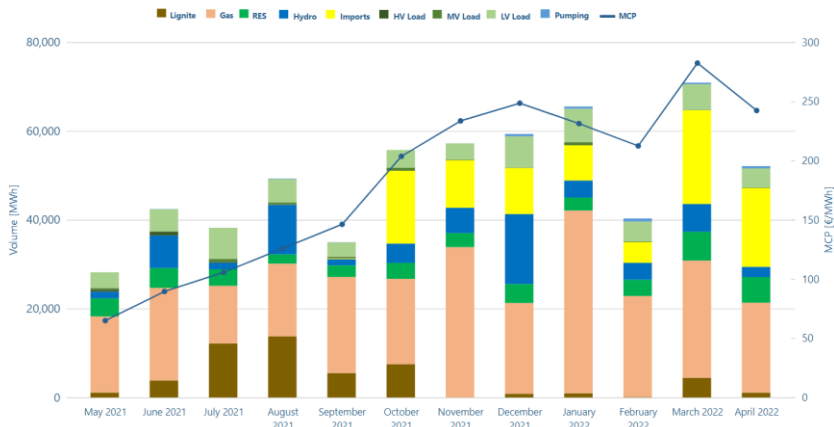


# The Target Model in Greece | Liquidity in the DAM & IDM

## Evolution: Volume traded per month



# The Target Model in Greece | Intra-Day Market (CRIDAs)



- CRIDAs volumes remain low – expected to grow after the undertaking of full balancing responsibility by RES and the participation of traders in CRIDAs
- Price pattern follows DAM

# Regional Market Integration | The case of the Greek market

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- › Greater price convergence across coupled zones and formation of sound economic signals through the market
  - Although volatility is the key observation during the last months, the “waves” of price evolution across the continent are evident
  - Price signals drive investments
- › Joint trading with a significantly wider range of Participants and increased competition:
  - Participants are following the market and respect the results of EUPHEMIA
- › Target Model provides significant flexibility to Participants in order to manage their positions – yet new tools are on the way – participation in XBID
  - This fact will especially help production from RES which have high variability
- › There is strong price discovery mechanism, as a result of the design principles of the market and the robustness of the algorithm
  - HEnEx has tools and procedures in place to monitor effectively the market and cooperates closely with all relevant supervisory bodies (knowledge transfer to ALPEX as well)
- › Optimal utilization of interconnections and free cross-border transactions
  - Coupling works effectively and supports the proper flows from lower-to-higher price zones

# Regional Market Integration | The case of the Greek market

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- › A successful Central Clearing via EnEx Clear for spot and ATHEX Clear for derivatives provides effectiveness and security to the market:
  - Efficient trading limits and robust default risk management solutions
  - Strong protection against counterparty risks
  - Reliance mainly on General Clearing Members (GMCs - banks) who carry out the settlement of the transactions on the basis of the Target Model that have a full view of the customers they represent
  - Clearing of the Balancing Market through EnEx Clear a positive aspect of the whole cycle
  
- › Price hedging through HEnEx's Derivatives Market - reducing the business risk of large price fluctuations:
  - Helps companies make medium-term plans and ensure profitable cash-flows
  - Unfortunately not effectively used by the majority of the participants, despite the obvious advantages it offers even in times of high volatility
  - Multiple product offerings within HEnEx, but lack of international traders hinders increased liquidity – actions necessary and support from the appropriate regulatory authorities
  - The Market Maker promotes steady trading and improves liquidity
  - Active participation by all market Members is of crucial importance and for the benefit of all in order to enhance the price formation mechanism of the market

# Future Developments | Additional offerings

- › New Continuous Trading Intra-Day Market (XBID) for trading closer to physical delivery (the market trading stops 60-min before the physical delivery)
- › Expansion of Intraday auctions from regional level (CRIDAs) to pan-European Intra-Day Auctions (IDAs)
- › Participation of Demand Response in the Day-Ahead & Intra-Day Markets
- › Special provisions for energy storage participation in the Day-Ahead & Intra-Day Markets
- › New products (15-min products) in the Day-Ahead & Intra-Day Markets



# Natural Gas Trading Platform | An Opportunity

- A joint effort between EnExGroup, the Athens Exchange Group and  $\delta$ esfa



- The platform is compatible with high EU Regulatory Standards and consists of:

› A Trading System



+ XNet Trader App

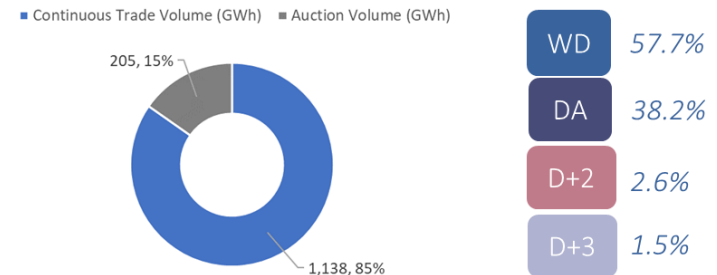
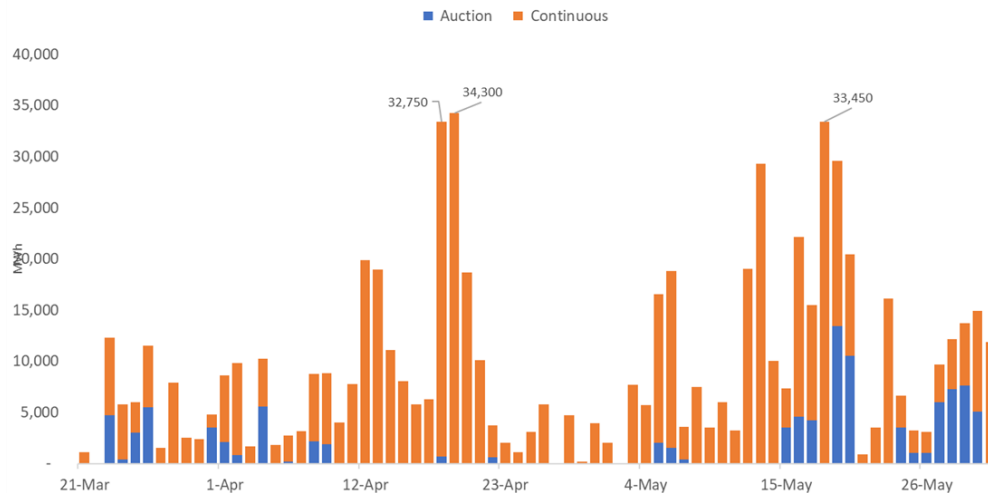
› A Clearing System



+ EMCS App



# Natural Gas Trading Platform | An Opportunity



- › We do not observe a clear trend in trading volumes so far
- › The maximum volume of trades was observed on Tuesday the 19<sup>th</sup> of April, and it was 34,300 MWh (23.5% of the total traded volume)

- › Continuous trading accounts for roughly 85% of the trades
- › Within-day and day-ahead account for almost 96% of the trades
- › The day-ahead share (38.2%) appears promising

Fully in-line with EU Regulation 312/2014 which supports the development of a competitive short term wholesale gas market in the European Union

Designed to provide a comprehensive exchange market for gas suppliers, traders and final consumers along with a robust set of reference prices and indices

# EnEx

Energy Exchange Group

A word cloud featuring the phrase "Thank You" in multiple languages and colors. The words are arranged in a dense, overlapping pattern. The colors used include shades of blue, green, yellow, orange, red, purple, and black. The languages represented include English, Spanish, French, German, Italian, Dutch, Polish, Czech, Slovak, Hungarian, Greek, Hebrew, Korean, Japanese, and Indonesian. The words are of various sizes and orientations, creating a vibrant and multicultural visual.

THANK YOU  
TEŞEKKÜR  
הדות  
감사합니다  
GRACIAS  
ĎAKUJEM  
DĚKUJI  
DANKE  
спасибо  
ХВАЛА  
TERIMA KASIH.  
OBRIGADO  
NGIYABONGA  
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KIITOS  
DANKE  
ARIGATÔ  
DHANYAVÄD  
KÖSZÖNÖM  
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