

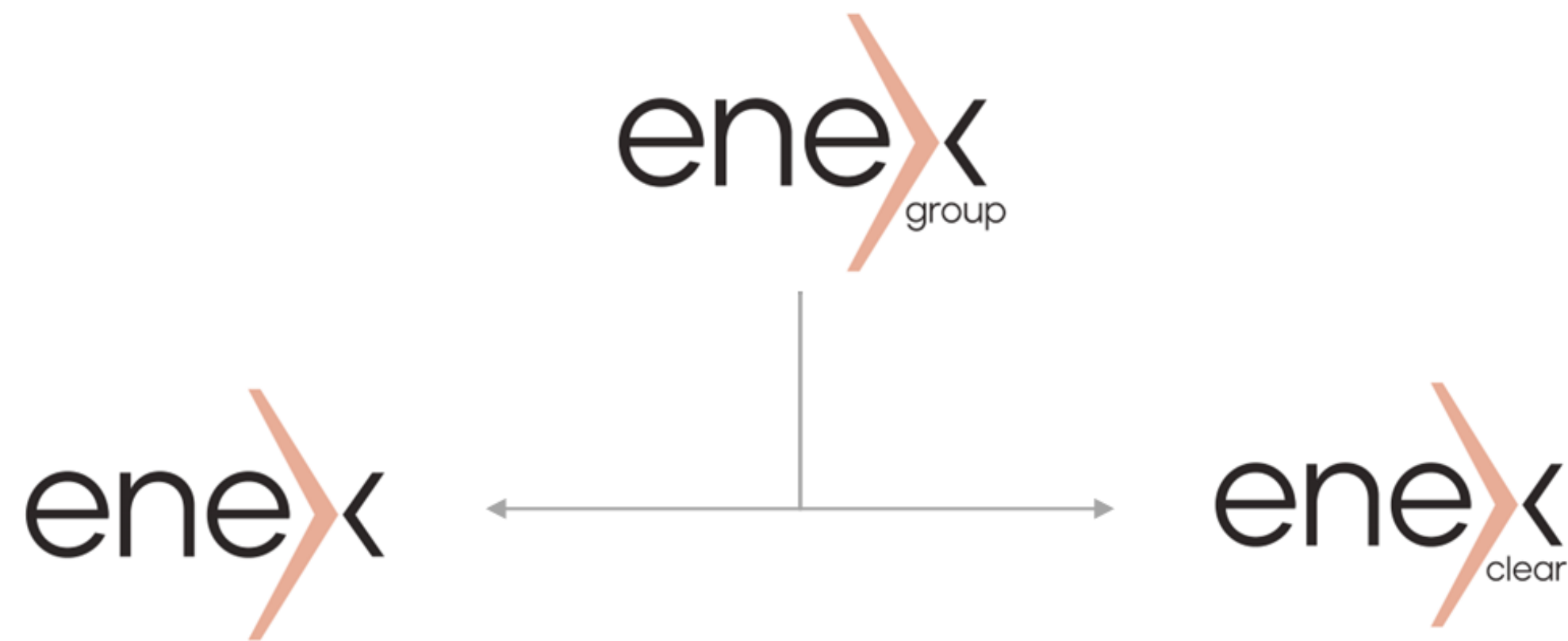


Hellenic Energy Exchange Markets

12th Cyprus Energy Symposium

Christos Nikolaidis, Deputy CEO EnExClear

Hellenic Energy Exchange — Overview



- Nominated Electricity Market Operator for the **Greek Power Spot Market**
- Operator of the **Energy Derivatives Market**
- Operator of the **Natural Gas Trading Hub**
- **Risk management, clearing and settlement** for power & gas spot markets
- Clearing and settlement of positions in the **Balancing Market** for Power (operated by IPTO)

Private sector
58%

Public sector
42%

Hellenic Energy Markets — Products

Electricity



Spot

- Day-Ahead Market
- Intraday Market

Derivatives

Futures

Gas



Spot

- Daily Contracts (D+1, D+2, D+3)
- Within-Day

Derivatives

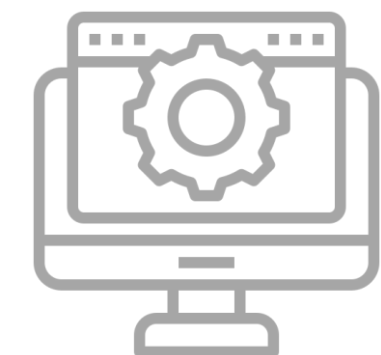
Futures
(under investigation)

Other


















RES PPA Platform

(scheduled for December 2025)



Hellenic Energy Markets — Operational Model

	SPOT Electricity Markets			Natural Gas Trading Platform	Energy Derivatives Market (Electricity)
Market	Day-Ahead	Intraday	Balancing	Natural Gas Trading Platform	Energy Derivatives Market
Type of Market	Physical	Physical	Physical	Physical	Cash Settlement with optional Physical Delivery
Market Operator					
Clearing and Risk Management					
Platforms & Technical Services					

HEnEx Market Participants

Spot Electricity Markets

✓ Participants can be:

- Producers and RES Producers
- Suppliers
- Traders
- Aggregators
- Self-Supplying Consumer
- Consumers representing Dispatchable Load
- Transmission System Operator
- RES & GO Operator

Derivatives Market

✓ Participants can be:

- Producers and RES Producers
- Suppliers
- Traders
- Aggregators
- Self-Supplying Consumer
- Consumers representing Dispatchable Load
- Transmission System Operator
- Credit Institutions & Investment Firms

Natural Gas Trading Platform

✓ Participants can be:

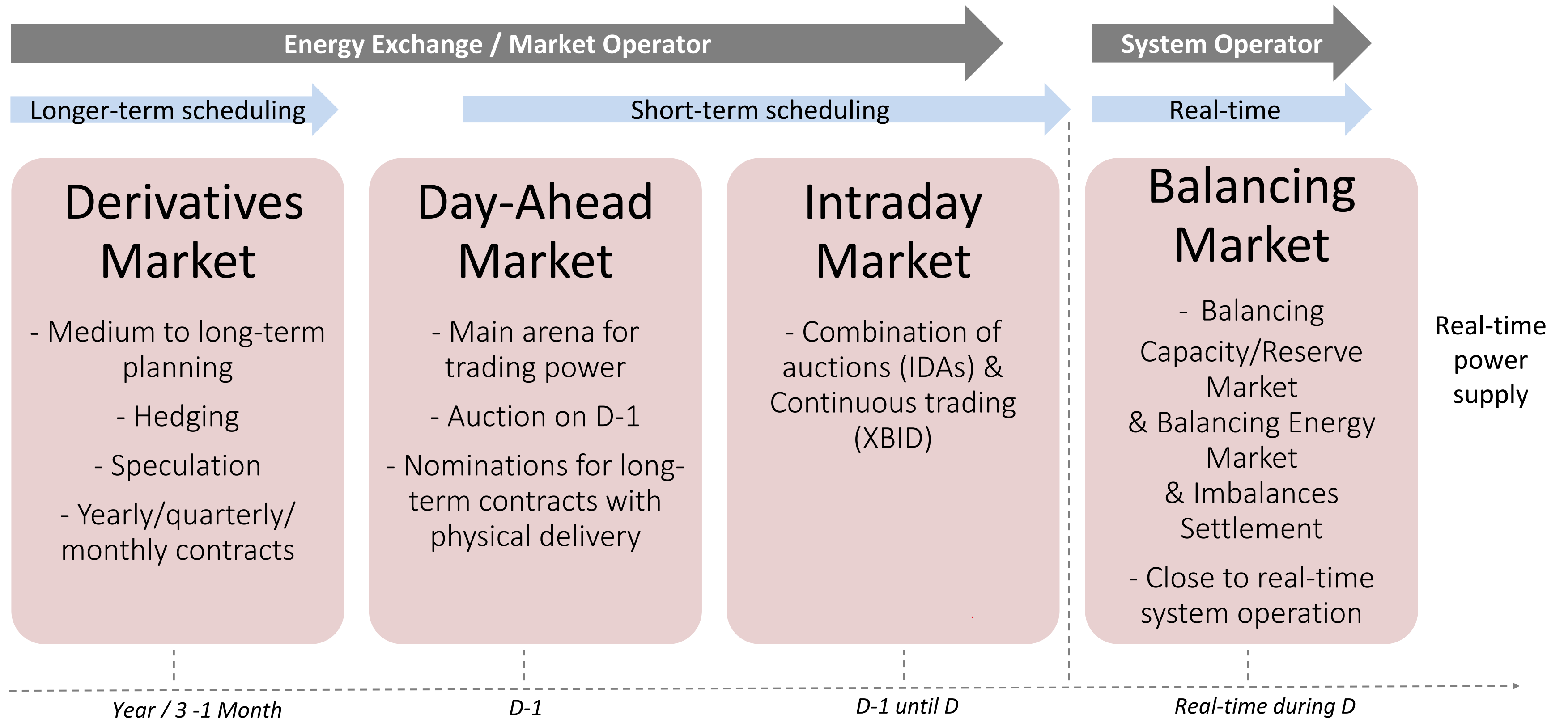
- Transmission Users who are included in the List of Eligible Participants in the Trading Platform held by DESFA (Suppliers, Traders)
- Transmission System Operator (DESFA)



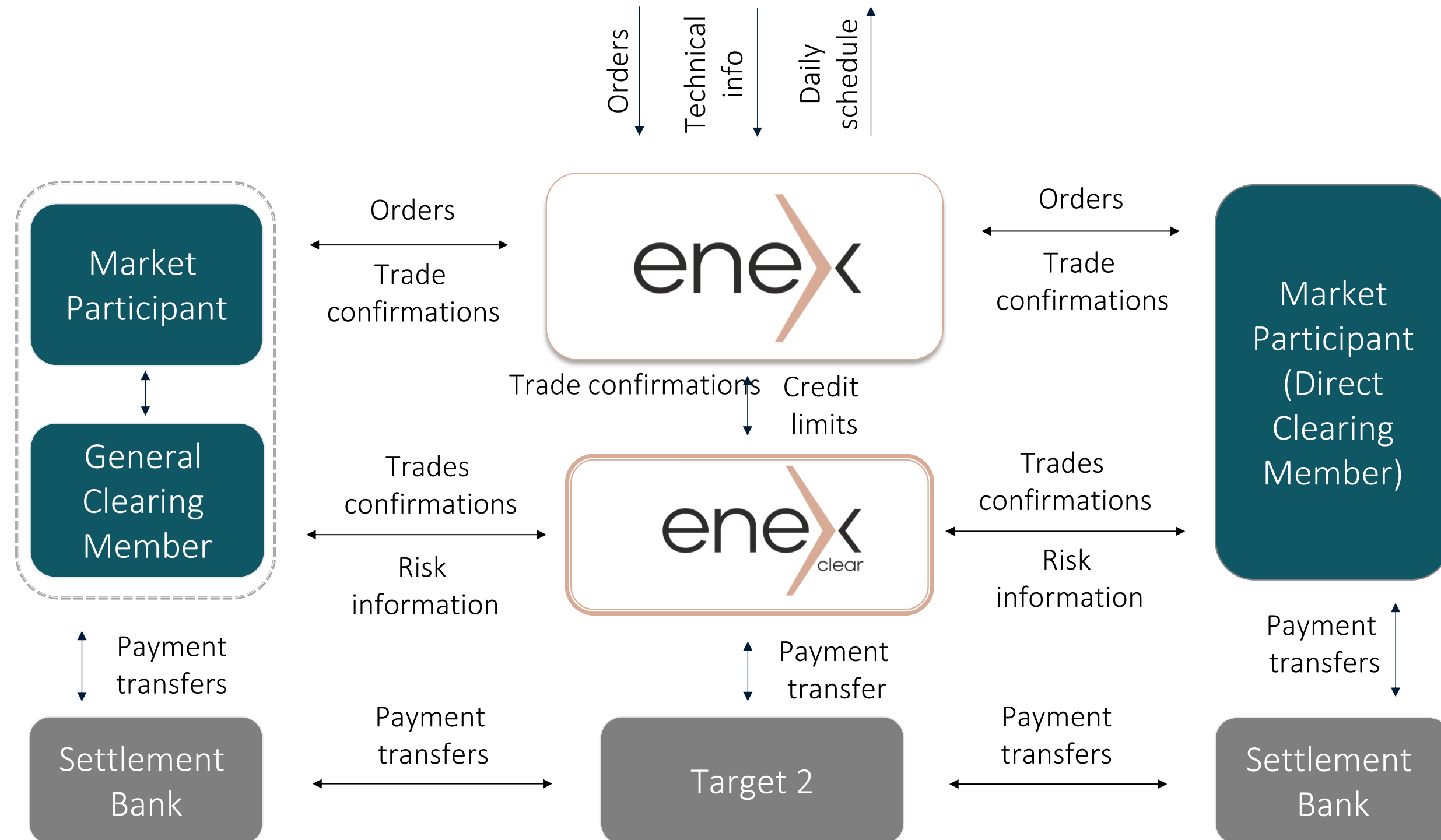
Energy Exchange Group | Milestones



Hellenic Electricity Markets — Products



Hellenic Electricity Markets — Products



Electricity Spot Market Participants & Clearing Members



Market
Participants
72

Clearing
Members
8

GCM
5

DCM
3



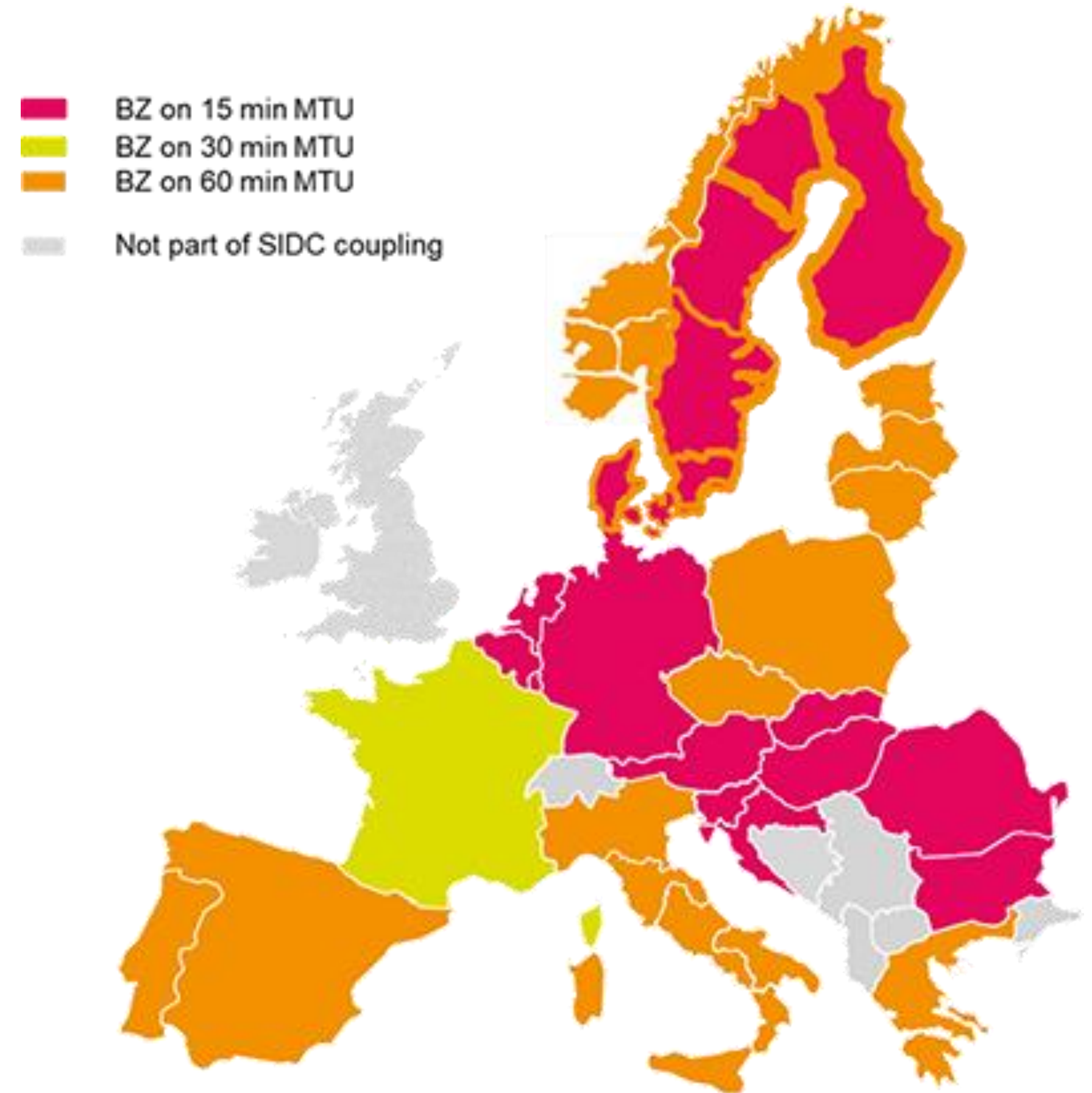
Day-Ahead Market Design

- ▶ European Single Day Ahead Coupling
- ▶ Single Auction per Delivery Day
 - Time Horizon: next day
 - Time Granularity: hourly
 - Space: EU countries + Norway
 - Spatial granularity: Bidding Zone
 - Participation is mandatory
- ▶ EUPHEMIA algorithm
 - Complex Optimization problem
 - Objective: welfare maximization
 - Inputs: Orders & Interconnector Capacities
 - Outputs: Cleared order quantities & Prices in BZs
 - Marginal Pricing
- ▶ Advantages
 - Transparent Prices
 - Optimal capacity allocation → welfare maximization



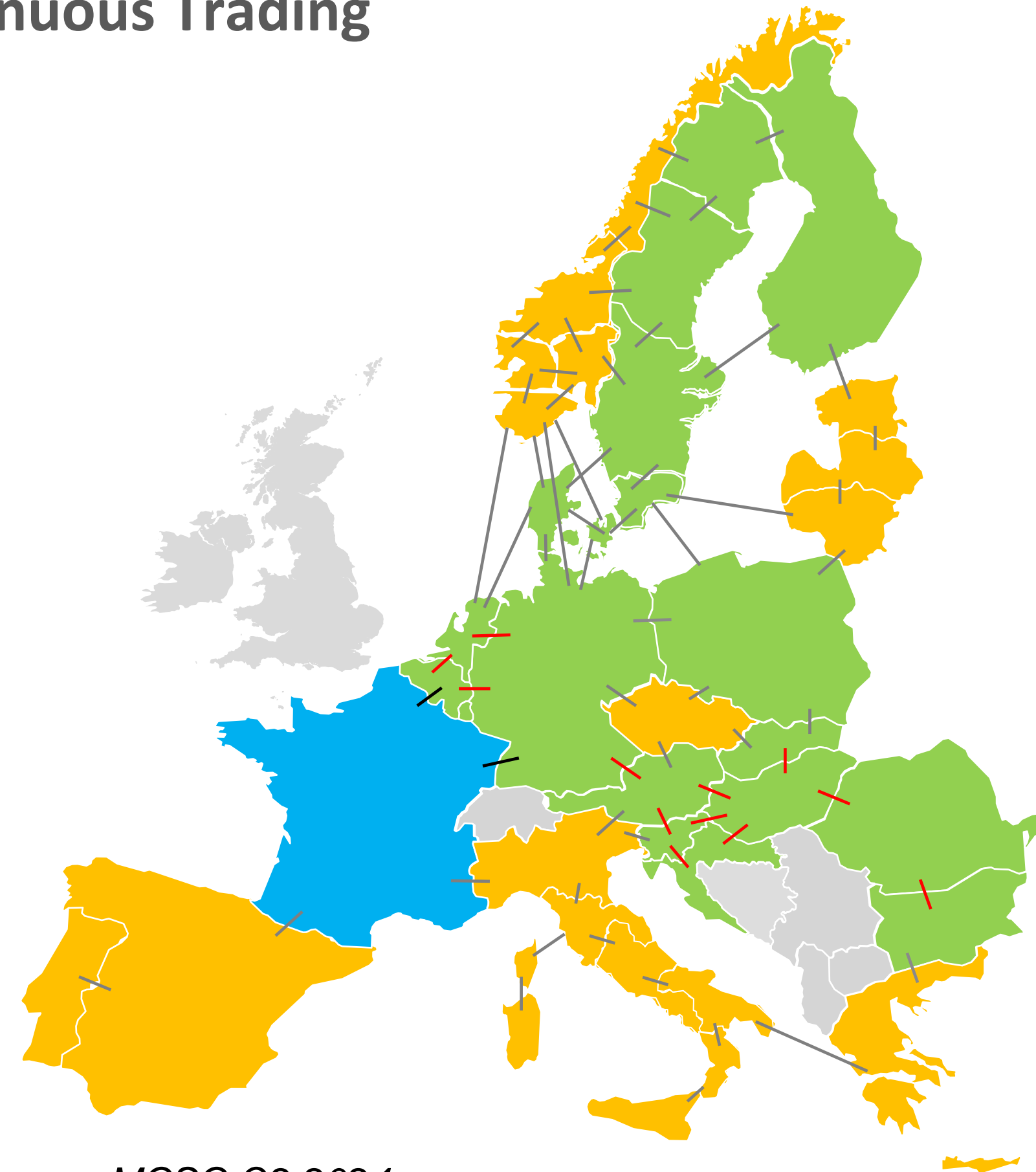
Intra-Day Market Design | Auctions

- ▶ 3 Auction per Delivery Day
 - Time Horizon: next or current day
 - Time Granularity: hourly
 - Space: EU countries + Norway
 - Spatial granularity: Bidding Zone
 - Participation is not mandatory
- ▶ EUPHEMIA algorithm
 - Complex Optimization problem
 - Objective: welfare maximization
 - Inputs: Orders & Interconnector Capacities
 - Outputs: Cleared order quantities & Prices in BZs
 - Marginal Pricing
- ▶ Advantages
 - Transparent Prices
 - Optimal capacity allocation → welfare maximization



Intra-Day Market Design | Continuous Trading

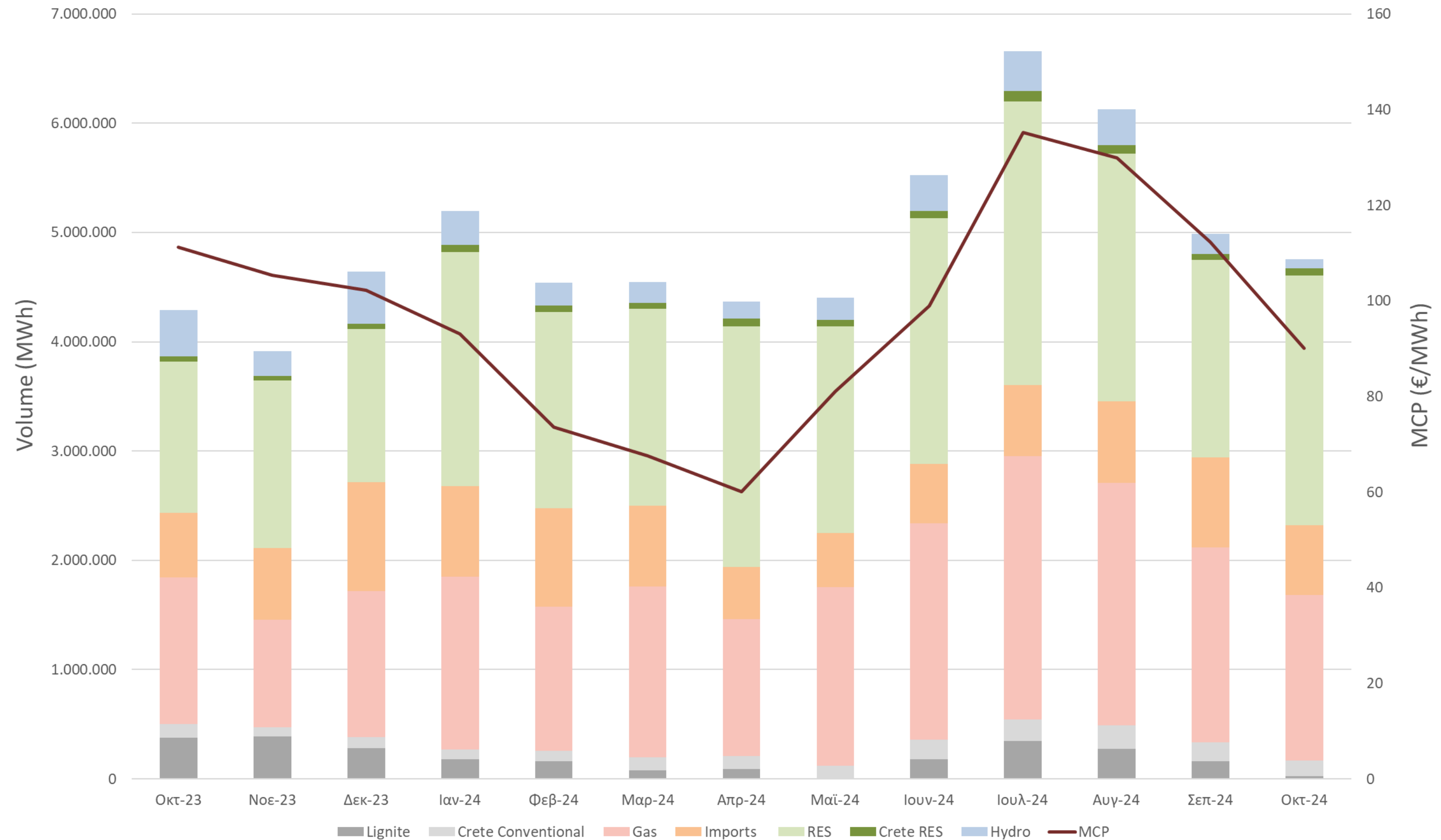
- ▶ Continuous trading
- ▶ MTU duration: 60min
- ▶ Algorithm: XBID
 - Time Horizon: next or current day
 - Time Granularity: hourly
 - Space: EU countries + Norway
 - Spatial granularity: Bidding Zone
 - Participation is not mandatory
- ▶ Products
 - 60min products
 - User-defined Blocks
- ▶ Allocation of IT, BG interconnection capacity via continuous trading algorithm
- ▶ Advantages
 - Trading session open 24/7
 - Trading available up to 1 hour ahead of actual delivery



- Border on 15 min MTU
- Border on 30 min MTU
- Border on 60 min MTU
- BZ on 15 min MTU
- BZ on 30 min MTU
- BZ on 60 min MTU
- Not part of SIDC coupling

Source: MCSC Q2 2024

Electricity Mix & DAM MCP



*Thank you for
your attention*

Additional info:

www.enexgroup.gr

