



# Hellenic Energy Markets: Moving Ahead

Friday December 23<sup>rd</sup> | IENE 23<sup>rd</sup> National Energy Conference

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**Michael Philippou: CEO, Hellenic Energy Exchange**

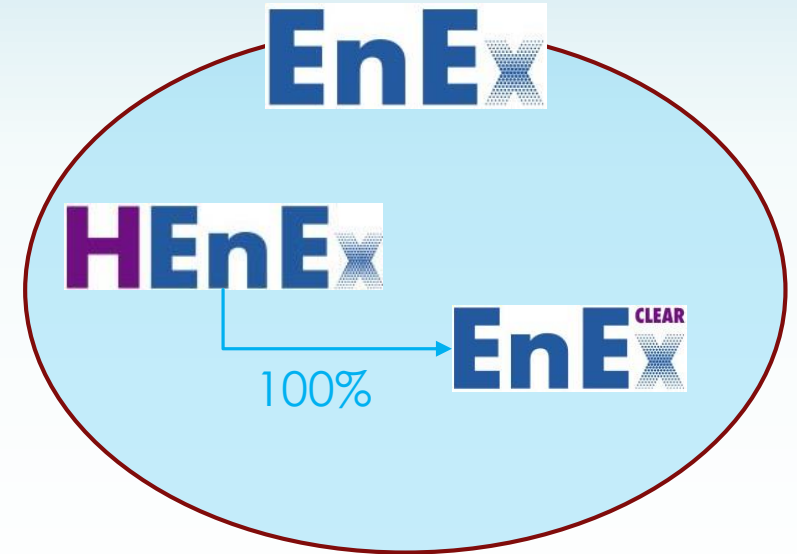


# The Energy Exchange Group

GROUP CORPORATE STRUCTURE

# The EnEx Group

- ▶ **EnEx Group** (Energy Exchange Group)
  - ▶ **HEnEx** (Hellenic Energy Exchange S.A.)
    - ▶ Private company operating Spot & Derivatives energy markets
  - ▶ **EnEx Clear** (EnEx Clearing House S.A.)
    - ▶ 100% owned by HEnEx
    - ▶ Private company clearing spot energy markets
      - ▶ Derivative energy markets cleared by ATHEX Clear (company of ATHEX Group)



# HEnEx shareholders

## Public sector



22%



20%



7%

49%

## Private sector



21%

**ATHEXGROUP**  
Athens Exchange Group



20%

**European Bank**  
for Reconstruction and Development

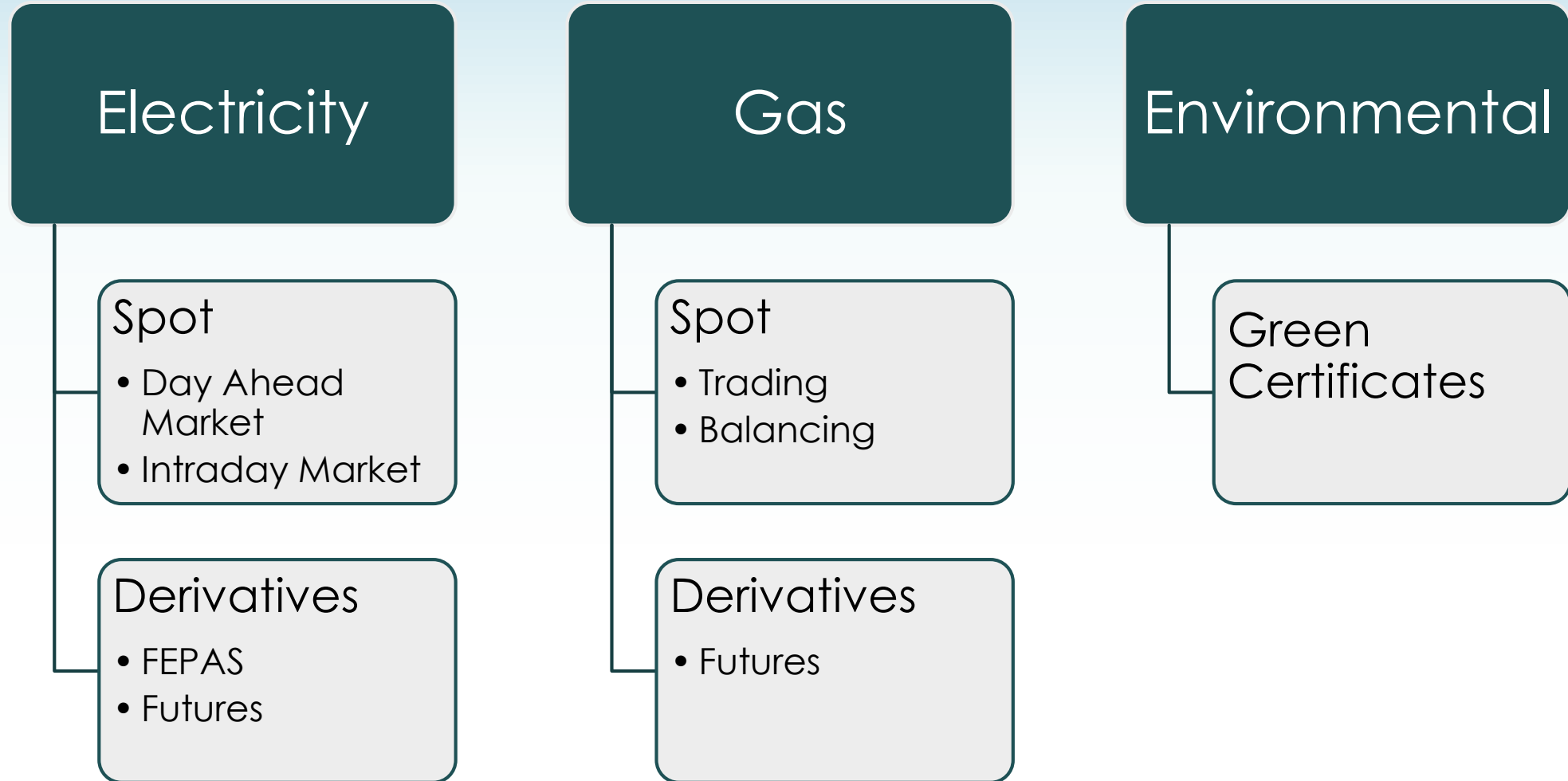


10%

ΧΡΗΜΑΤΟΤΗΓΗΡΙΑ ΑΞΙΩΝ ΚΥΠΡΟΥ  
CYPRUS STOCK EXCHANGE

51%

# EnEx group – target markets





# Towards the European Target Model

CHALLENGES & MILESTONES

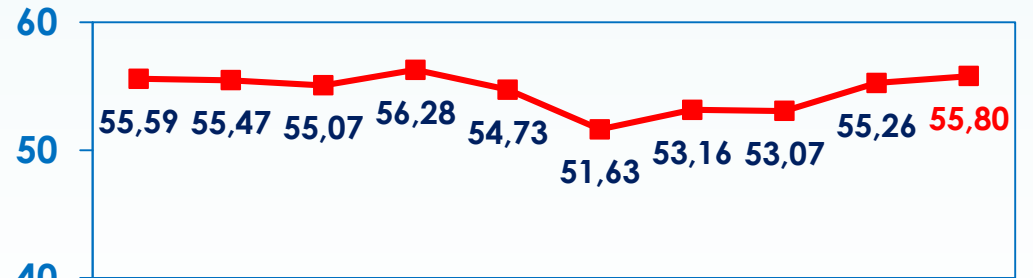
# Hellenic Electricity Market key figures



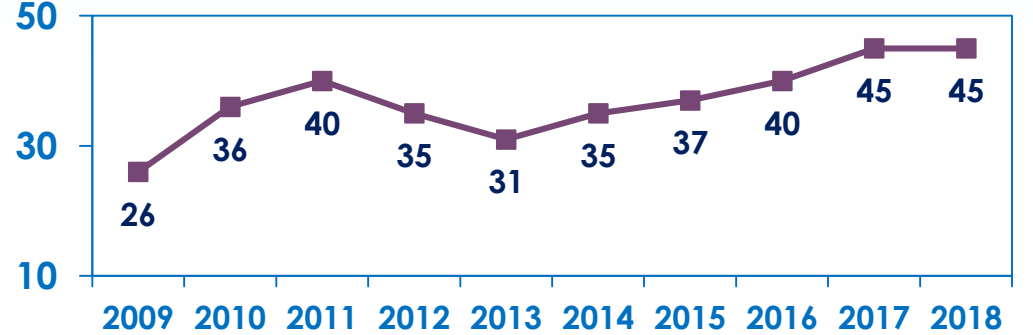
Price  
(€/MWh)



Volume  
(TWh)



Participants



# Steps towards the new Spot markets 1/5

SPOT  
TRADING  
RULEBOOK

Drafting

HEnEx approval and submission to RAE

Consultation

Re-Drafting submission to RAE

RAE approval

Finished  
Advanced  
Started  
Not started



# Steps towards the new Spot markets 2/5

SPOT  
CLEARING  
RULEBOOK

Drafting

HEnEx approval and submission to RAE

Consultation

Re-Drafting submission to RAE

RAE approval

Finished  
Advanced  
Started  
Not started

# Steps towards the new Spot markets 3/5

**SPOT IT  
SYSTEMS**

**Analysis Phase**

**PCR full membership**

**PCR testing Environment setup**

**System Implementation**

**User Acceptance Tests**

**Training (Operators, Market Participants,  
Clearing members)**

**Dry Run**

**Finished**  
**Advanced**  
**Started**  
**Not started**

# Steps towards the new Spot markets 4/5

DAY AHEAD  
MARKET  
IMPLEMENTATION

PCR evaluation - Order types impact

Dry Run Start

Local Go-Live

Application to IBWT SC

Market Coupling GR - IT

Market Coupling GR - BG

Finished  
Advanced  
Started  
Not started

# Steps towards the new Spot markets 5/5

## INTRADAY MARKET IMPLEMENTATION

Setup regional intraday auctions with  
IT

Finished  
Advanced  
Started  
Not started

Local Auctions Go-Live

Market Coupling GR - IT

Market Coupling GR - BG



# Power Derivatives Market

CHALLENGES & MILESTONES



# Steps towards the Derivatives market 1/5

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## DERIVATIVES TRADING RULEBOOK

**Drafting**

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**HEnEx approval and submission to RAE**

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**Consultation**

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**Re-Drafting submission to RAE**

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**RAE approval**

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# Steps towards the Derivatives market 2/5

## DERIVATIVES CLEARING RULEBOOK

**Drafting**

**HEnEx approval and submission to RAE**

**Consultation**

**Re-Drafting submission to RAE**

**RAE approval**

**New products authorization for ATHEX Clear  
(HCMC/EMIR College)**

# Steps towards the Derivatives market 3/5

**DERIVATIVES  
IT SYSTEMS**

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**Analysis Phase**

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**System Implementation**

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**User Acceptance Tests**

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**Training (Operators, Market Participants,  
Clearing members)**

---

**Dry Run**

---



# Steps towards the Derivatives market 4/5

DERIVATIVES  
MARKET  
IMPLEMENTATION

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**User Testing**

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**Dry Run Start**

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**Go-Live**

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# Lessons learned & New Challenges

# Lessons learned & New Challenges

## ➤ Risk Management

- Credit Risk
  - Market participant defaults
  - Cost allocation to other participants and/or to the society
- Business Risk
  - Uncontrolled expansion of key accounts (e.g. Renewables)

## ➤ Disruptive technologies

- Cost Characteristics
  - High Investment Cost
  - Very Low or Zero Marginal Cost
- Challenges
  - Price signal formation
  - Subsidy Schemes
  - Investment incentives
  - Capacity & Flexibility Markets



# Natural Gas Market

TAKING THE NEXT STEP



# Hellenic Gas Market – Developments & Prospects

## Forming the basis for a liquid Gas Market

- **TAP pipeline**
  - 10 bcm (20 bcm) / year
- **IGB pipeline**
  - 3 bcm (5 bcm) / year
- **LNG Terminals**
  - **Revithousa**
    - Upgrade
      - Storage (+73%)
        - 130 → 225 Km<sup>3</sup>
      - Regasification Capacity (+40%)
        - 1000 → 1400 m<sup>3</sup> LNG/h
      - LNG carrier size (+68%)
        - 155 → 260 Km<sup>3</sup>
  - **FSRU Terminals**
    - Alexandroupolis
      - Storage: 170 Km<sup>3</sup> | Cap.:6,1 bcm/year
  - **Kavala Storage**



# Working towards the new NG market

## ▶ Our vision

- ▶ Establishment of a Gas Trading Platform
  - ▶ HEnEx as a Trading Platform Operator (TPO)
  - ▶ EnEx Clear as a Gas Clearing House
- ▶ Investigation of synergies for a Regional Gas Market
  - ▶ Creation of regional indices and price signals

## ▶ First Step: Feasibility study

- ▶ Analysis and presentation of the European landscape
- ▶ Analysis of the Greek Natural Gas sector
- ▶ Suggestion for an NG exchange-based Trading and Clearing Model
- ▶ Potential for creation of a regional market
- ▶ Financial analysis of HENEX's activity as NG Trading Platform Operator (TPO)
- ▶ Implementation Plan



**Thank you for your attention**