



Annual Report · 2021

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1. CEO's Message

I am very pleased with this year's annual report which features the important milestones reached as well as the contribution of HEnEx to the positive transformation of the Greek electricity market.

Significant progress was achieved in creating a dynamic and competitive energy market, providing high-quality, transparent, and non-discriminatory services to all market participants. We enlarged the trading space and reduced barriers to market entry while contributing to Europe's market integration via market coupling.

Despite the continuous macroeconomic instability and the global difficulties brought on by the Covid-19 outbreak, HEnEx's markets performed well during the year. At the same time, HEnEx completed major projects, such as the market coupling with the Bulgarian bidding zone, the launch of the Complementary Regional Intraday Auctions (CRIDAs) between Greece, Italy, and Slovenia, as well as the integration of the Crete Hybrid Model in the trading and clearing systems and procedures of the Greek Day Ahead Market, while in cooperation with DESFA, HEnEx, laid the foundations for the creation of the Natural Gas Trading Platform, with a view to be launched at the beginning of 2022.

A lot of developments are still to come, which I truly look forward to, as we further the expansion of the Greek energy market.

Professor George Ioannou
CEO of EnExGroup

2. Executive Summary

The economic recovery in 2021 has tightened commodity markets and put upward pressure on prices across the board. Wholesale gas prices in the EU rose slightly in the third quarter to record levels in the last quarter of 2021, influenced by the tightness of global gas markets and growing geopolitical tensions. Coal prices in 2021 have also seen strong growth on the back of a rebound in demand, while crude oil prices¹ whipsawed from USD 20/barrel in the immediate aftermath of the pandemic in mid-2020 to around USD 70/barrel in mid-2021. High natural gas and coal prices have fed through to higher power prices in many markets, particularly where output from renewables has been relatively low.

The traded volume of the Day-Ahead Electricity Market (DAM) in Greece for 2021 accumulated at 57.2 TWh, with a rise of 13.49% comparing to 2020 volume which had the lowest traded volume of the decade. The average Market Clearing Price for 2021 was 116.44 €/MWh for baseload hours and 132.21 €/MWh for peakload, rising compared to 2020 prices, by 158.24% and 166.39% respectively.

On 11 May 2021, the market coupling operations of the Bulgarian bidding zone in Single Day-Ahead Coupling (SDAC) were successfully launched with the first delivery day 12th of May 2021.

On 22 September 2021, the first round of the three Complementary Regional Intraday Auctions (CRIDAs) between Greece-Italy-

Slovenia, substituting the three Local Intraday Auctions (LIDAs) of the Greek market since November 2020, was successfully launched. CRIDAs represent a further step towards the achievement of the single pan-European intraday electricity market, which aims to increase the overall efficiency of intraday trading by promoting competition, increasing liquidity and enabling more efficient utilization of the resources and the cross-border infrastructure across Europe.

On 27 October 2021, Market coupling operations for the Bulgarian-Romanian border in SDAC were successfully launched, with first delivery day the 28th October 2021. With the inclusion of the Bulgarian-Romanian border, a geographical loop has been closed and the Southeast Europe (SEE) region is now fully integrated in SDAC. This marks yet another major milestone in the process of integrating the European day-ahead power markets.

On the 31st of October 2021, for a first day of physical delivery on the 1st of November 2021, The Energy Exchange Group - EnExGroup, in cooperation with the Operators IPTO, HEDNO & DAPEEP, launched the Hybrid Model incorporating the volumes of the Small Connected System (SCS) Market of Crete in Day-Ahead Market, covering Phase-A of the connection of Crete to the mainland electricity network.

In the context of strengthening the Energy Financial Market (Derivatives Market), HEnEX Implemented, on 14/4/2021, the method of pre-agreed trades and the possibility of entering orders with STOP condition.

¹ <https://www.statista.com/statistics/262861/uk-brent-crude-oil-monthly-price-development/>

3. The Company

Company Profile

Participants - Members

International Activities

New Initiatives

Reporting and REMIT Services

Company Profile

The Hellenic Energy Exchange S.A. was founded on the 18th June 2018 as a spin-off from the electricity market branch of LAGIE S.A. and currently DAPEEP S.A. Building upon accrued experience gained over more than a decade of operating continuously and consistently the Day-Ahead Scheduling Energy Transactions System, HEnEx S.A. has been designated by the Greek Regulatory Authority for Energy (RAE) as Nominated Electricity Market Operator (NEMO) for the operation of the Day-Ahead and Intraday Electricity Markets.

Following the approval of the Hellenic Capital Market Commission (HCMC) on 16.3.2020 HEnEx S.A is also operating the Energy Financial Market, as Market Operator of the Energy Derivatives Market.

HEnEx is also responsible for organizing and operating Greek gas and environmental markets. Its subsidiary, EnEx Clearing House S.A. (EnExClear) provides clearing and settlement services.

HEnEx is committed to providing high quality, transparent, and non-discriminatory services to all market participants, working towards the EU's market integration and coupling its markets with neighboring countries. To that end, HEnEx has become a full member of the Price Coupling of Regions (PCR) initiative and is closely and actively following all the relevant EU initiatives.

Shareholders

HEnEx S.A. is a private company governed by Greek law. Its shareholders are:

Public Sector – 49%

- DAPEEP (Hellenic RES & GO) 22%
- ADMIE (Hellenic Power TSO) 20%
- DESFA (Hellenic Gas TSO) 7%

Private Sector – 51%

- ATHEX Group (Athens Exchange) 21%
- EBRD (European Bank for Reconstruction and Development) 20%
- CSE (Cyprus Exchange) 10%

EnExGroup

HEnEx S.A. and EnExClear S.A. are members of the Energy Exchange Group.

EnExClear S.A., a subsidiary of HEnEx founded on 02.11.2018, is responsible for the clearing and settlement of transactions concluded in the Day-Ahead and Intraday Markets, as well as the clearing and settlement of positions in the Balancing Market.

Participants-Members

The number of Market Participants in DAM & IDM Markets for 2021 amounted to 66 and the number of Members in the Derivatives Market amounted to 25 for 2021.

International Activities

HEnEx, as a member of European associations, is actively involved in several groups and task forces, among which are the following:

- 

[The business Association of European Energy Exchanges](#), market operators and delegated operators in Europe.

- 

[The NEMO Committee](#) facilitates the cooperation among NEMOs for all common European tasks necessary for the efficient and secure design,

implementation and operation of single day-ahead and intraday coupling. The NEMO Committee is formed by the appointed representatives of each NEMO.



[Price Coupling of Regions \(PCR\)](#) is the project of European Power Exchanges to develop a single price coupling solution to be used for calculating electricity prices across Europe respecting the capacity of the relevant network elements on a day-ahead basis.



[The aim of Single Day-ahead Coupling \(SDAC\)](#) is to create a single pan European cross zonal day-ahead electricity market.



[Single Intraday Coupling \(SIDC\)](#) is an initiative between Nominated Electricity Market Operators (NEMOs) and Transmission System Operators (TSOs) which enables continuous cross-border trading across Europe.

New Initiatives

According to the latest ACER report, the integration of the European energy market will bring more benefits in the future and underlines the importance of increasing the volume of interconnection capacity available for cross-border electricity trade, not only for efficiency and wider social prosperity, but also to deal with significant price shocks in the future.

The successful development and implementation of the Greek and Bulgarian bidding zones coupling for the Day Ahead

Market, the Regional Coupling of Intraday Markets with Italy and Slovenia, and the integration of Crete Hybrid Model in the trading and clearing procedures of the Day Ahead Market during 2021 are strong evidences of HEnEx's strategic priority on projects enhancing regional liquidity.

The current circumstances in the energy sector and in the economy as a whole has strengthened our resolve to continue on implementing new initiatives.

The Natural Gas Trading Platform developed in collaboration with DESFA and scheduled to start operations in Q1 2022, is expected to provide new trading opportunities to Market Participants and efficient price signals.

The integration of Greek-Italian and Greek-Bulgarian borders to the Single Intraday Coupling, the continuous intraday trading solution of XBID, scheduled for going live by December 2022, is expected to increase the liquidity of the Intraday Market and further enable the penetration of Renewable Energy Sources. Activation of storage and Dispatchable RES functionalities in DAM and IDM are expected to boost their efficient participation in the market.

New products, expansion of regional partnerships and interfaces with established trading platforms, are also in our scope of interest for the Energy Derivatives Market.

EnExGroup & ATHEX support the Cyprus Stock Exchange to provide clearing & settlement services to the Cyprus Transmission Operator for its Day Ahead and Balancing markets.

Minding the initiatives of National and European institutional bodies we shall stay focused on exploring prospects,

opportunities and potential collaborations for expanding our activities in existing and new markets and services of strategic interest.

Reporting Services

Compliance with pre and post trade transparency requirements and regular reporting and support to Regulators is well established. Close cooperation with competent EU Bodies and Regulatory Authorities, coordination of regulatory documentation activities along with specialized data reports as requested provide solid evidence of our commitment for establishing trust and market transparency. Regular publications available on our website provide insight information and statistics to market participants and stakeholders.

REMIT Reporting:

According to REMIT Regulation 1227/2011 Art.8, all Market Participants shall provide the Agency for Cooperation of Energy Regulators (ACER) with a record of their wholesale energy market transactions, including orders to trade.

HEnEx, being approved as a Registered Reporting Mechanism (RRM) for providing such records to ACER, offers REMIT Reporting Services to (a) Market Participants who intend to use HEnEx as RRM, (b) Market Participants who intend to use a third party RRM but are trading members of HEnEx and (c) Market Participants reporting their bilateral contracts.

HEnEx is providing a dedicated reporting application accessible through its REMIT Portal enabling Market Participants to fulfil their REMIT Reporting obligations.

RRM services are expected to be extended also for covering the reporting obligations of our market participants engagement in the Natural Gas Trading Platform and continuous intraday trading (XBID).

MiFID II Position Reporting and MiFIR Transaction Reporting:

- Investment firms which are HEnEx Members can fulfil their transaction reporting obligations through Athens Stock Exchange SA ("ATHEX"), which is authorized from the Hellenic Capital Market Commission ("HCMC") as an Approved Reporting Mechanism (ARM).
- HEnEx Members that are non-Investment firms can fulfil their reporting obligations through a dedicated service offered by HEnEx (HRS).
- Reports are automatically generated and are submitted to the National Competent Authority (NCA) in time to meet reporting deadlines.

Position Reporting:

All trading venues on which commodity derivatives, emission allowances and derivatives thereof are being traded are obliged to report positions on a daily and weekly basis. PRS (Position Reporting System) is a service part of Enxgroup Members' Portal. PRS has been developed in order for HEnEx to comply with the above reporting regulations.

3. Electricity Markets in Greece

Day-Ahead Market

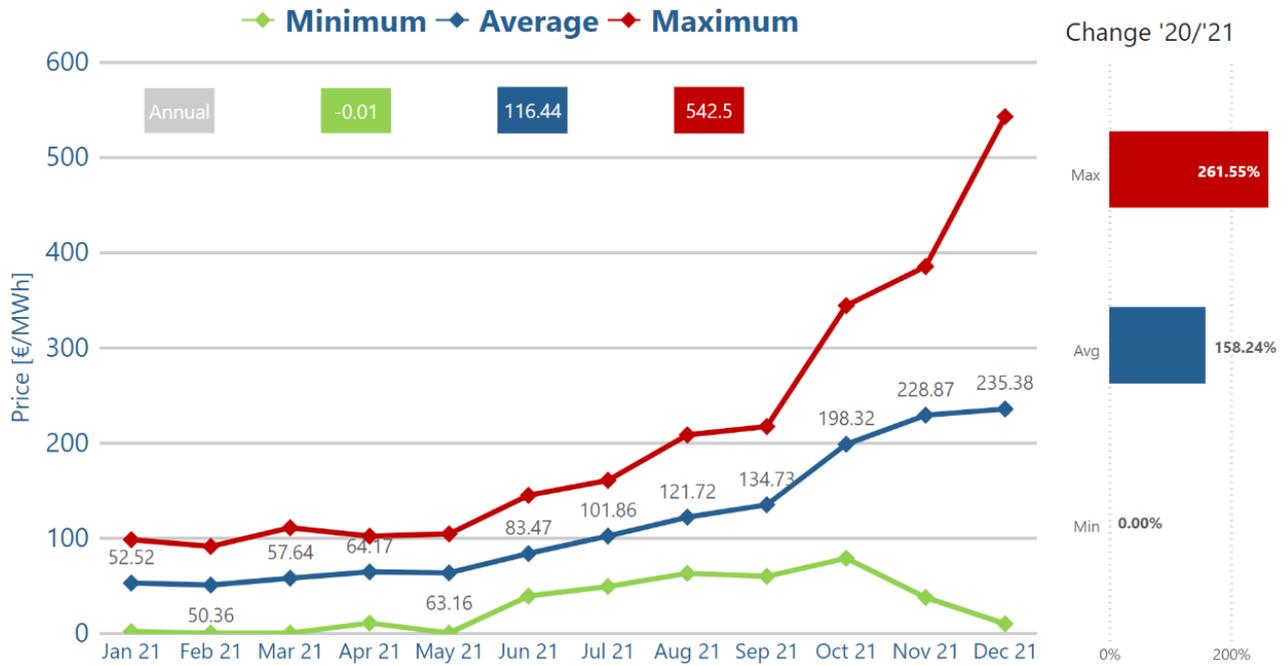
Intra-Day Market

DAM & IDM Aggregated Overview

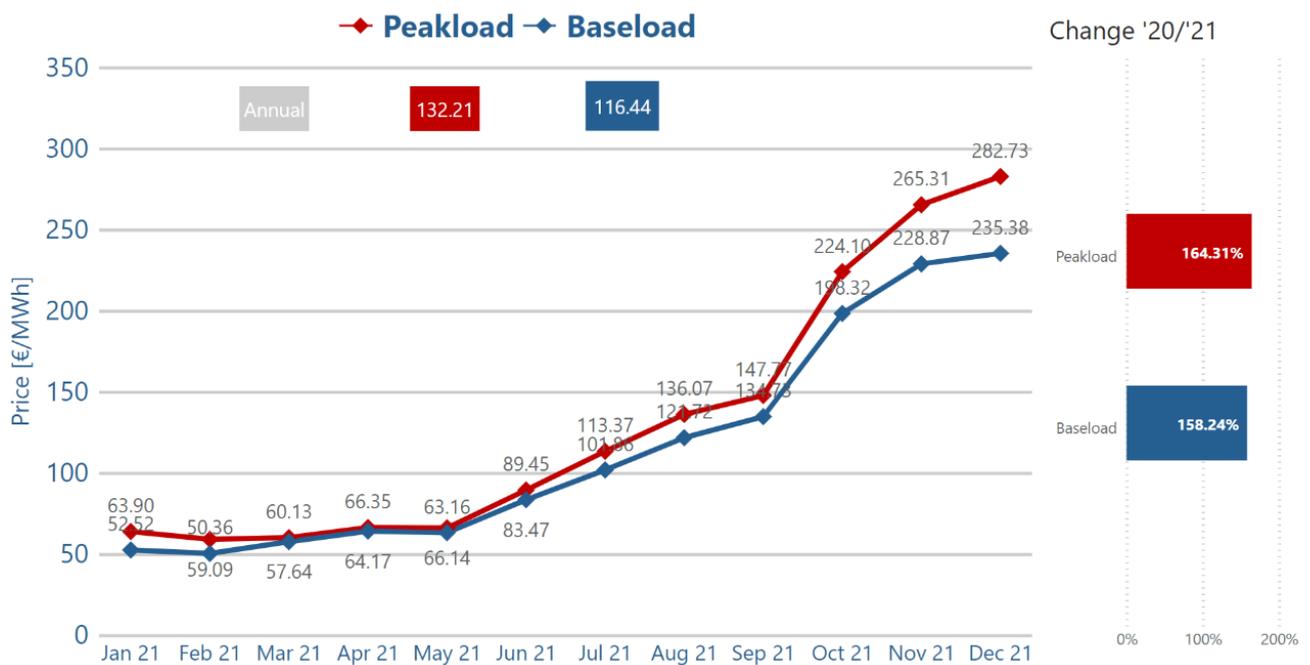
Derivatives Market

Day-Ahead Market

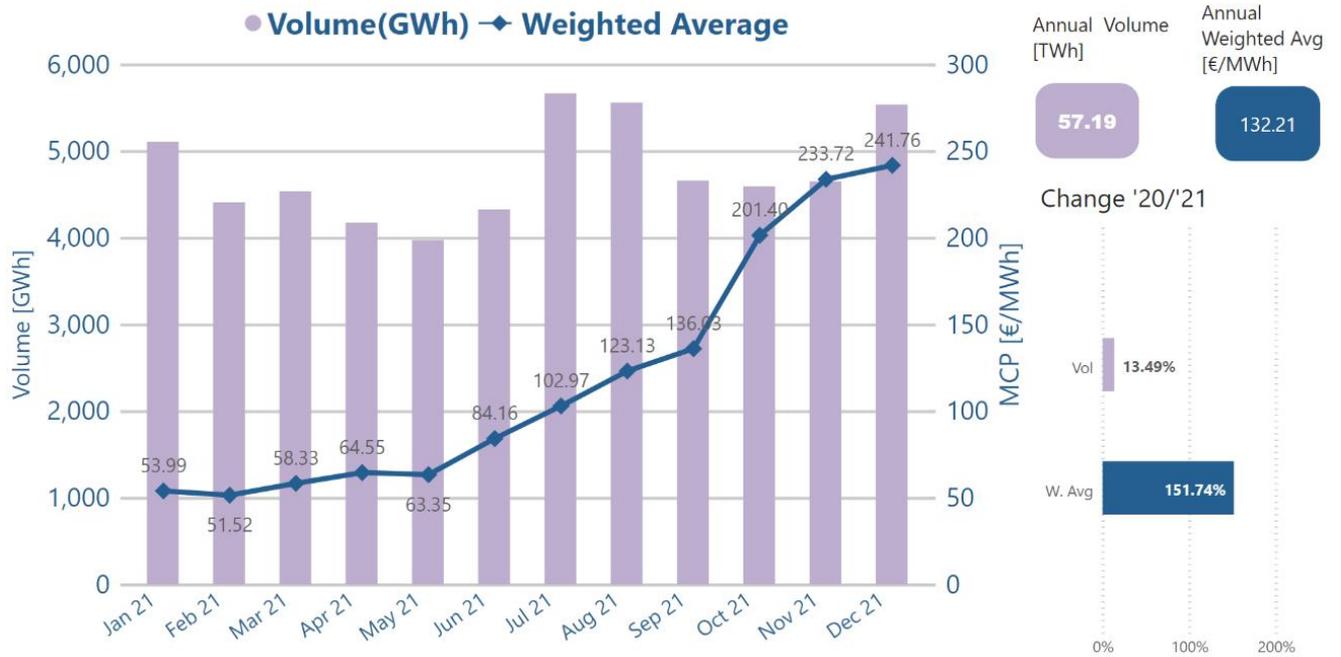
Monthly Day-Ahead MCP



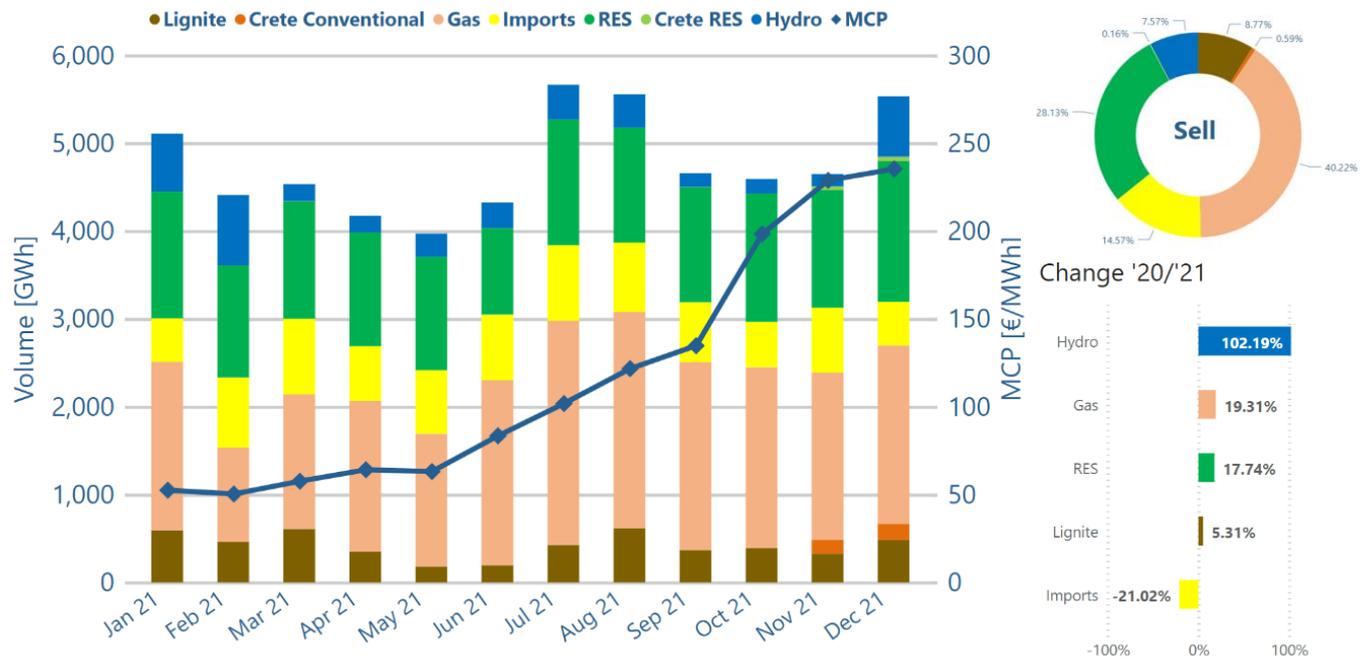
Monthly Day-Ahead Prices – Peakload Vs Baseload



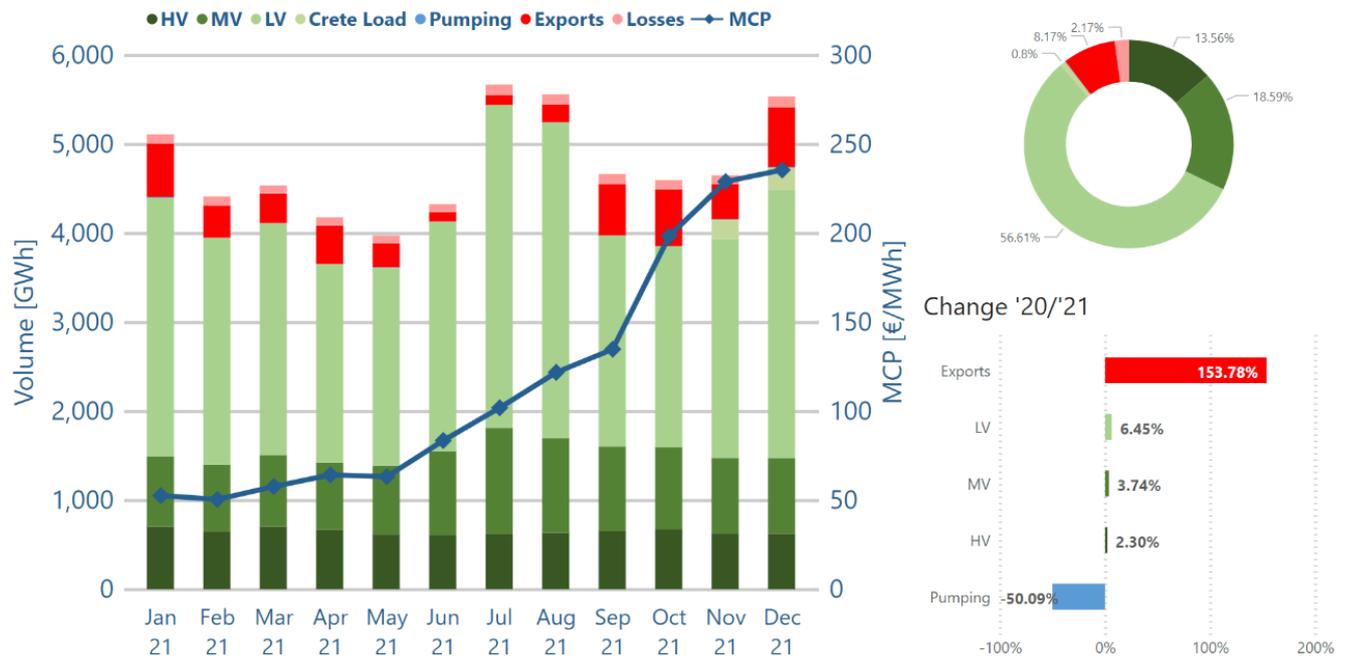
Monthly Day-Ahead Volume and Weighted Average Prices



Monthly Day-Ahead Sell Side Volume Mix



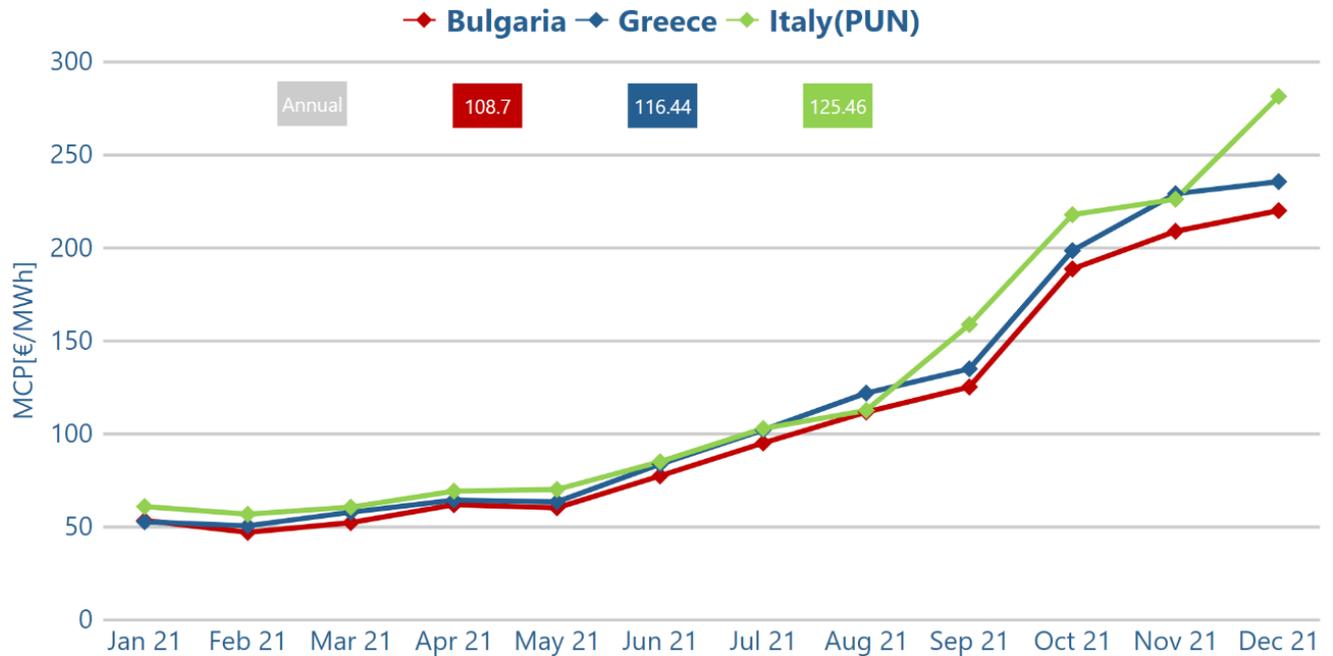
Monthly Day-Ahead Buy Side Volume Mix



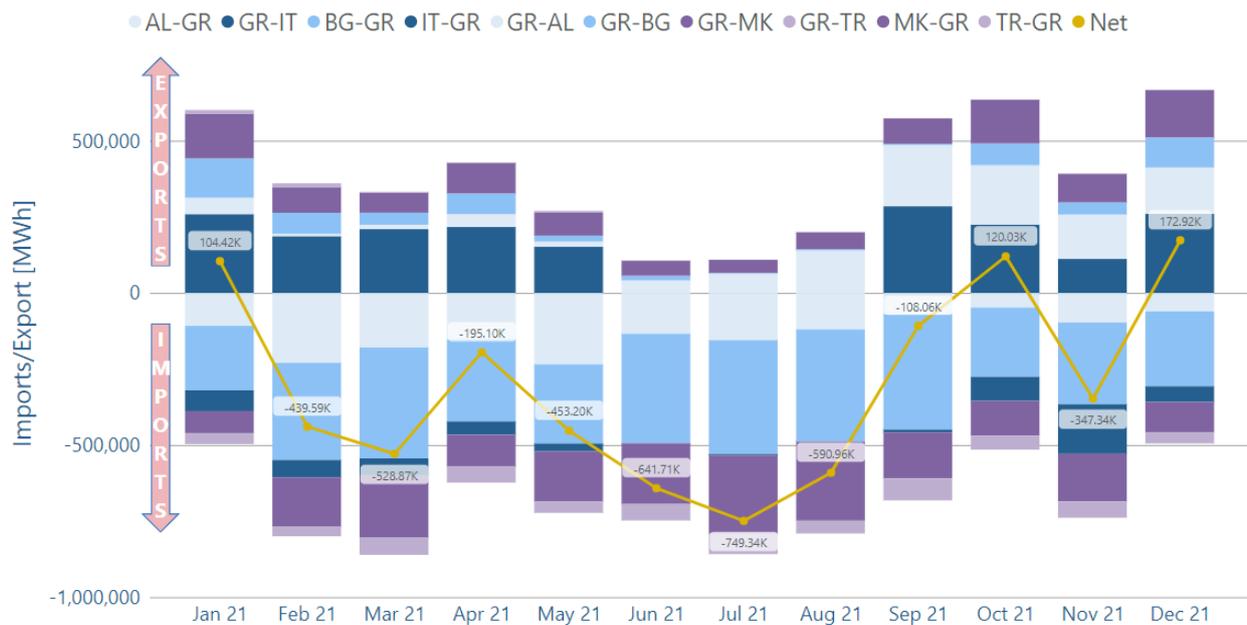
Day-Ahead MCP and Volume per Month

Year	Month	Minimum MCP [€/MWh]	Average MCP [€/MWh]	Maximum MCP [€/MWh]	Peakload MCP [€/MWh]	Volume [Gwh]
2021	January	1.50	52.52	98.02	63.90	5,109
2021	February	-0.01	50.36	90.96	59.09	4,411
2021	March	0.00	57.64	110.60	60.13	4,535
2021	April	10.40	64.17	101.73	66.35	4,176
2021	May	0.00	63.16	104.13	66.14	3,972
2021	June	38.88	83.47	144.64	89.45	4,325
2021	July	48.79	101.86	160.37	113.37	5,667
2021	August	62.71	121.72	208.12	136.07	5,558
2021	September	59.50	134.73	216.94	147.77	4,660
2021	October	78.56	198.32	344.00	224.10	4,594
2021	November	37.38	228.87	385.00	265.31	4,649
2021	December	9.70	235.38	542.50	282.73	5,535

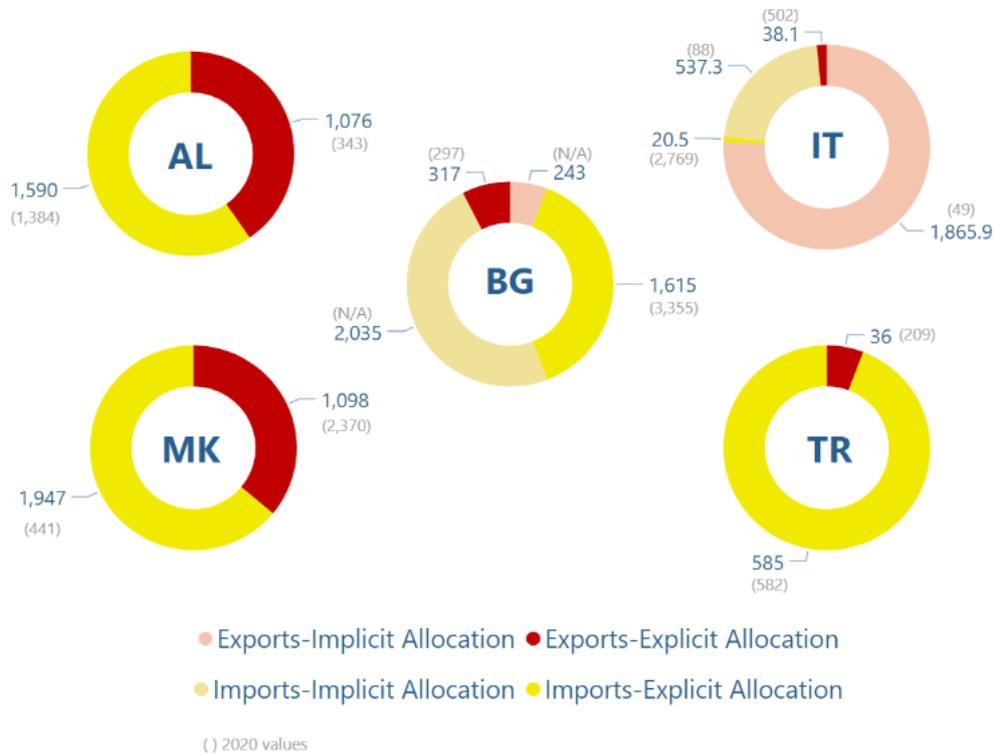
Monthly Day-Ahead Prices on Greece, Italy (PUN) and Bulgaria



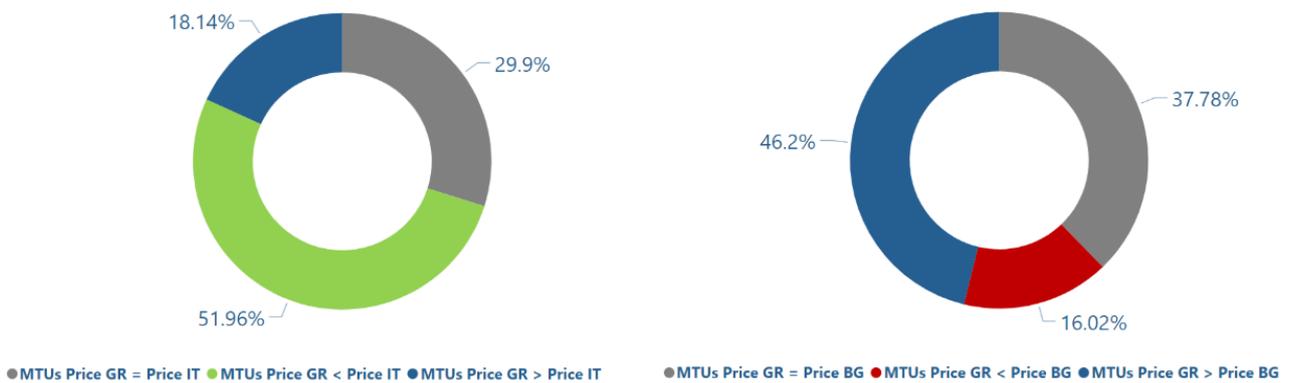
Cross Border Volume (MWh) – Imports, Exports and Net flow per month



Total Cross Border Volumes (GWh) per Border

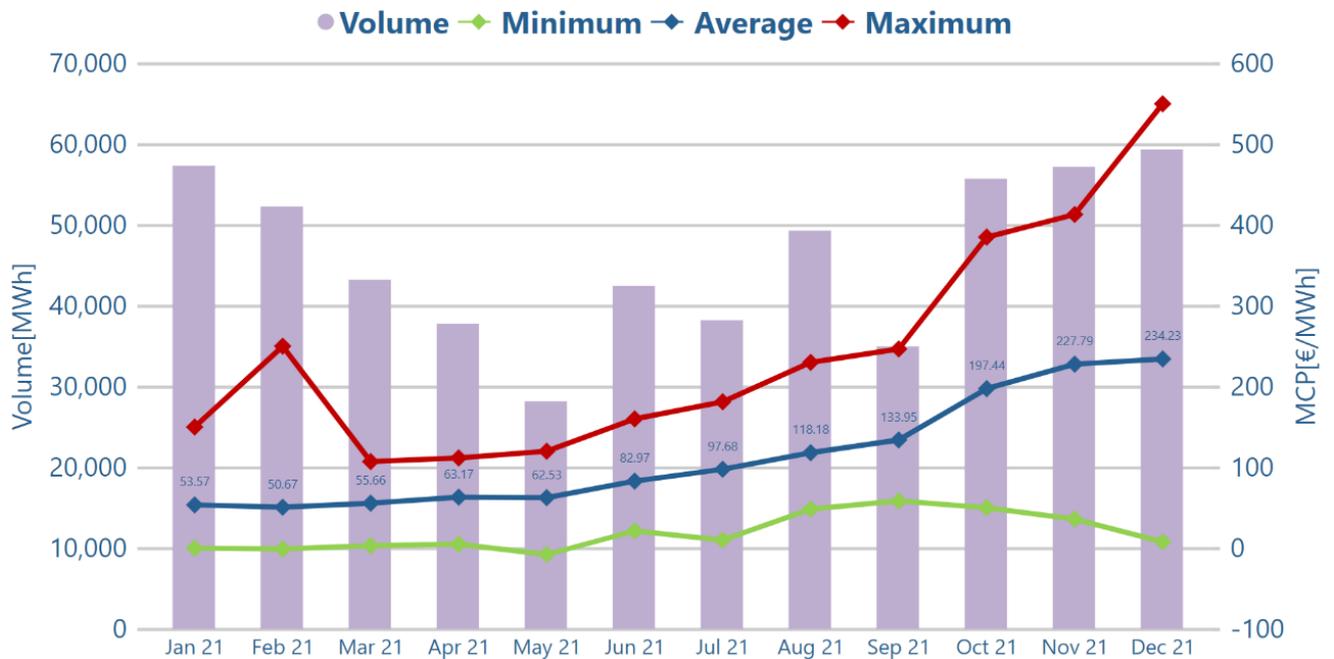


Price Coupling per MTU

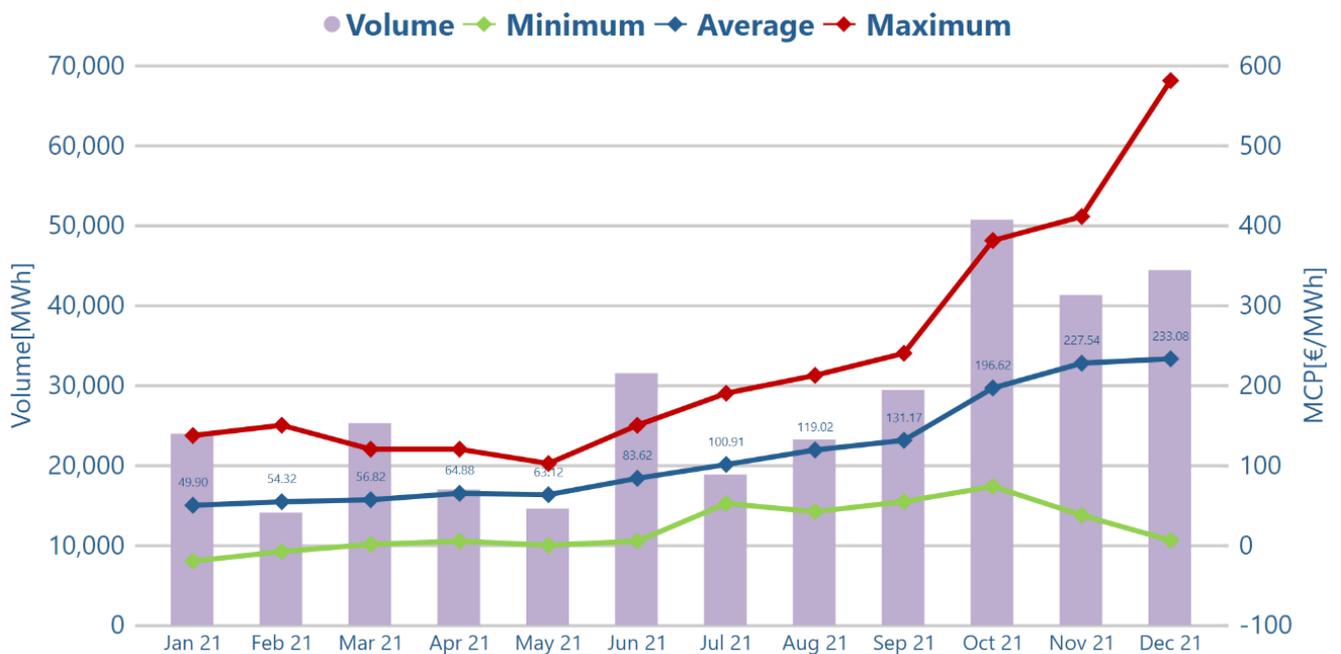


Intra-Day Market

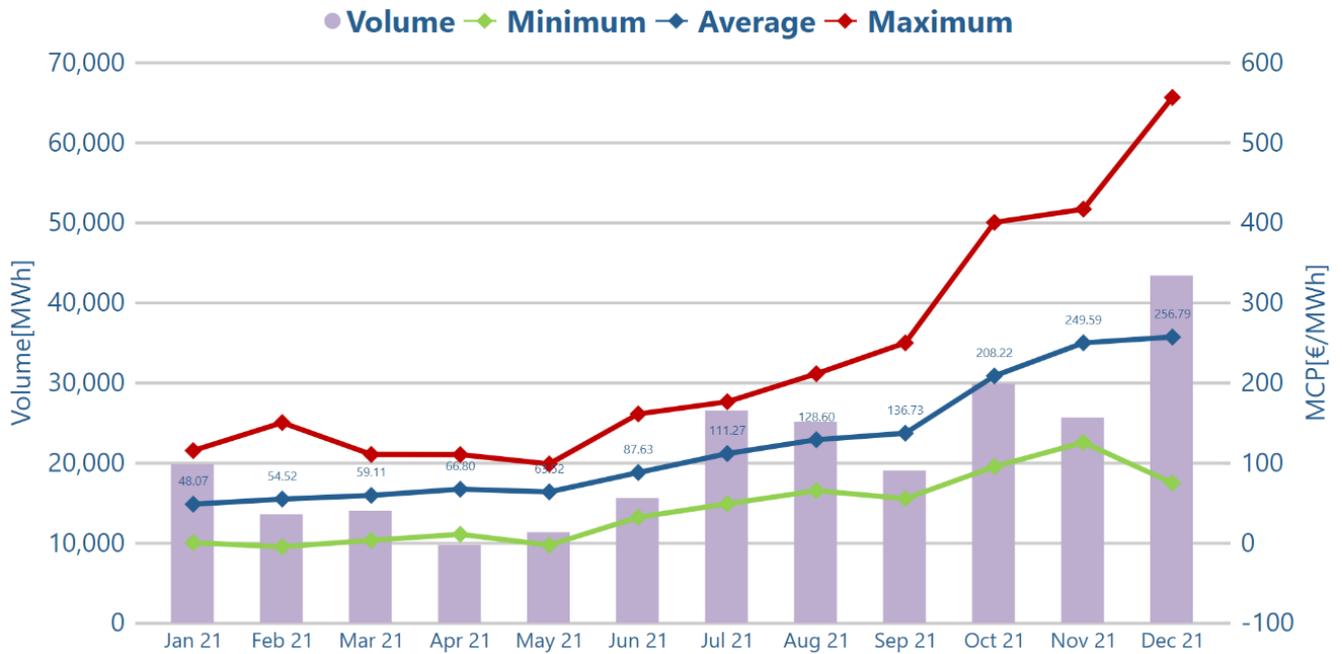
Intraday-Day MCP and Volumes – LIDA1/CRIDA1



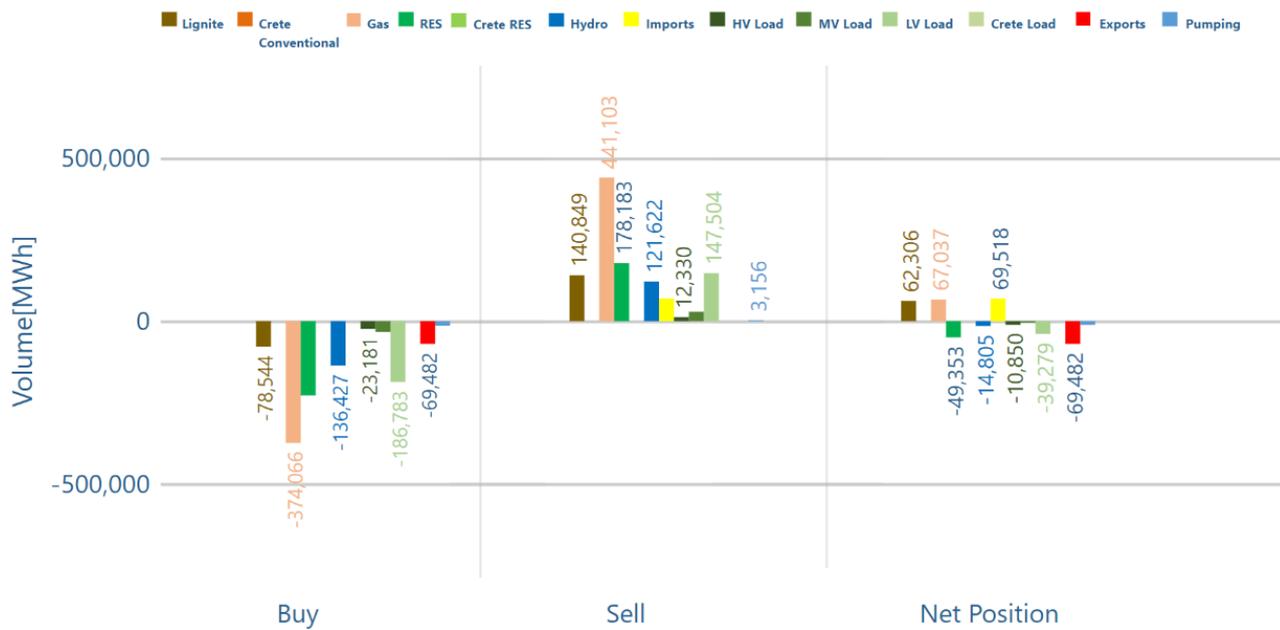
Intraday-Day MCP and Volumes – LIDA2/CRIDA2



Intraday-Day MCP and Volumes – LIDA3/CRIDA3

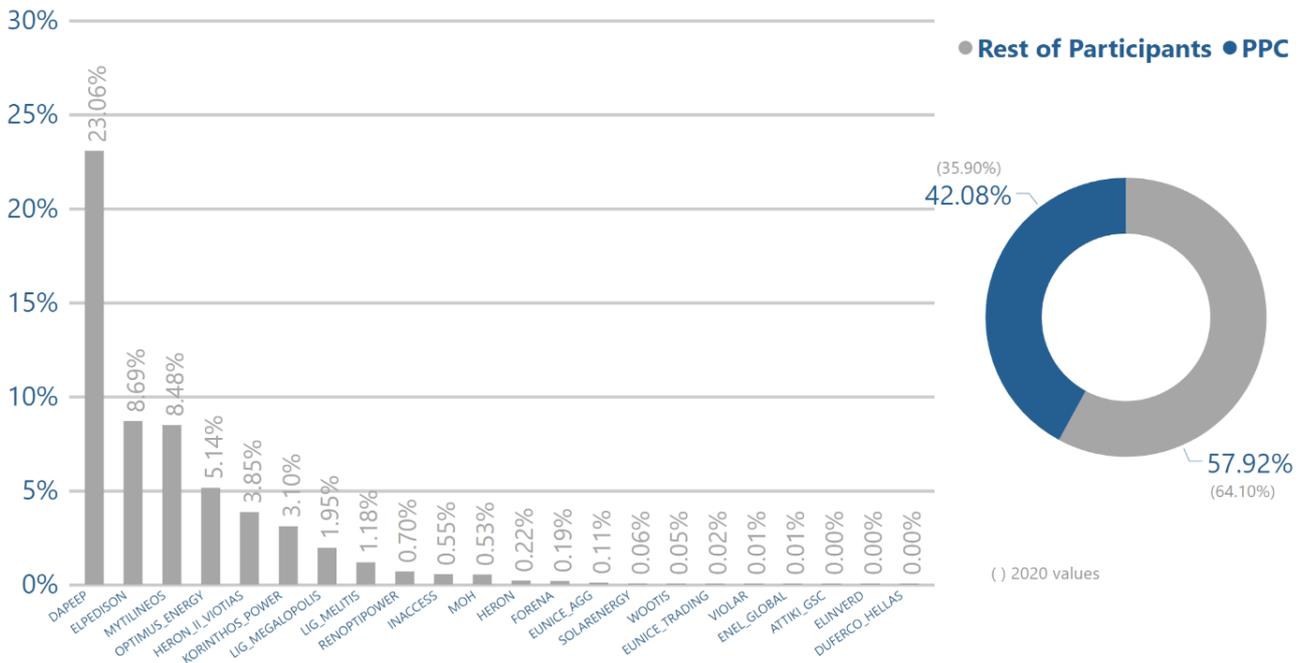


Intraday-Day Volume Mix per side and Net position

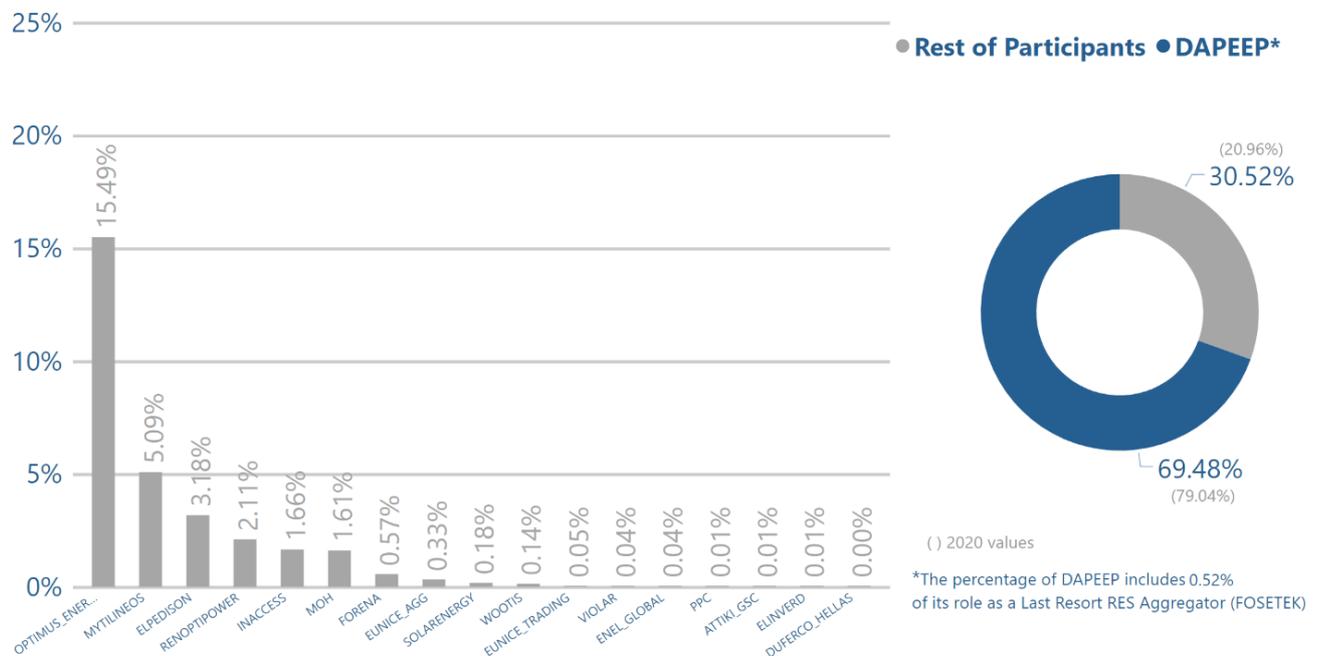


DAM & IDM · Aggregated Overview

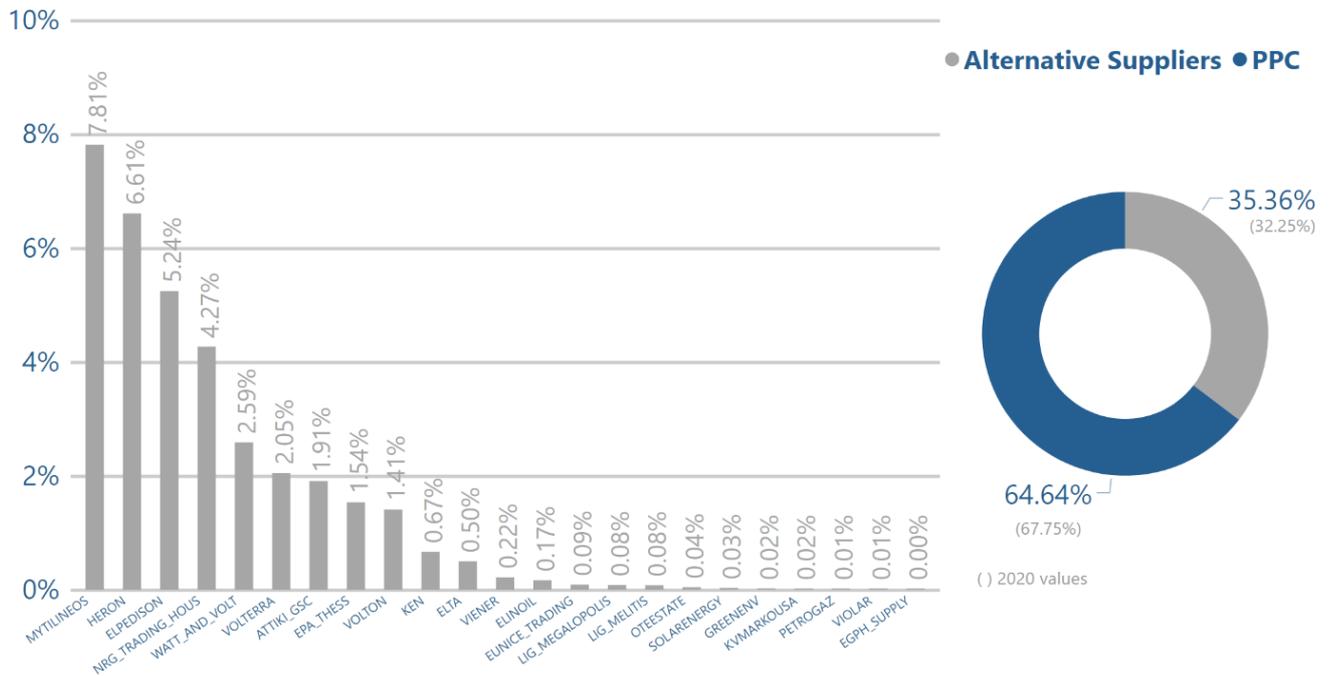
Final Market Schedule Shares for Production Units per Market Participant



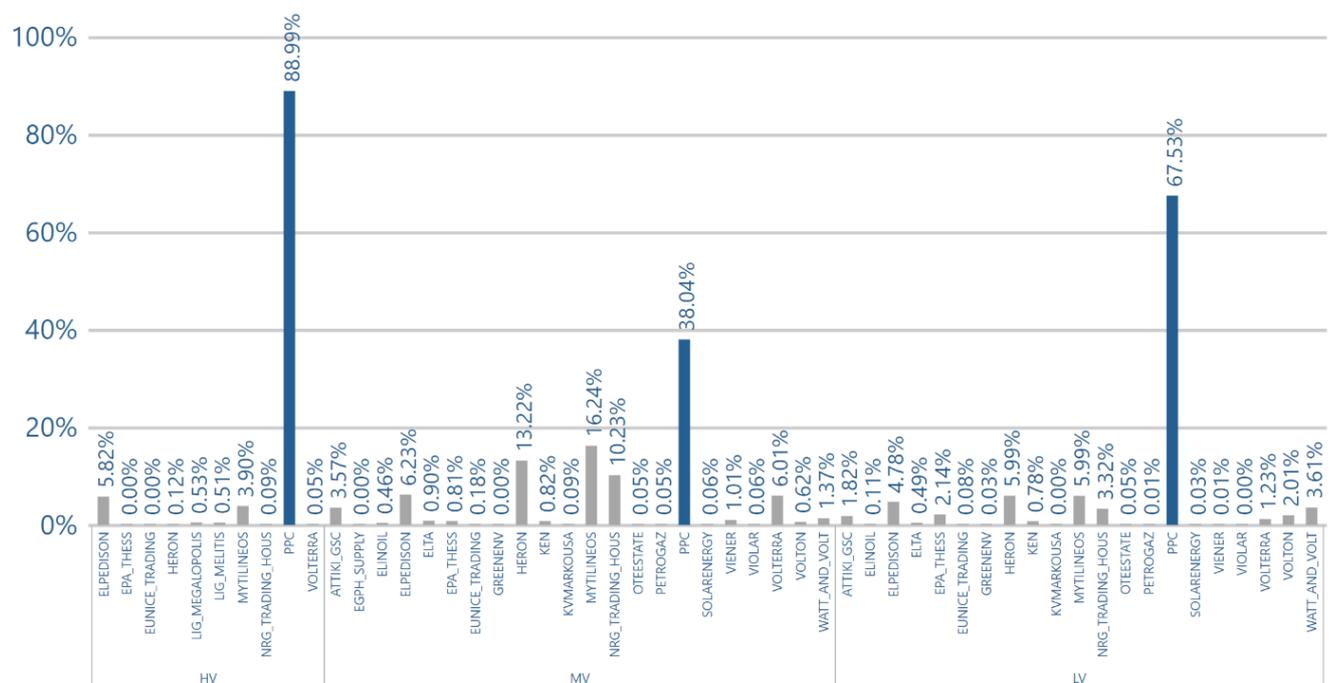
Final Market Schedule Shares for RES Production Units per Market Participant



Final Market Schedule Shares for Domestic Load per Market Participant



Final Market Schedule Shares for Domestic Load per Voltage Level and Market Participant



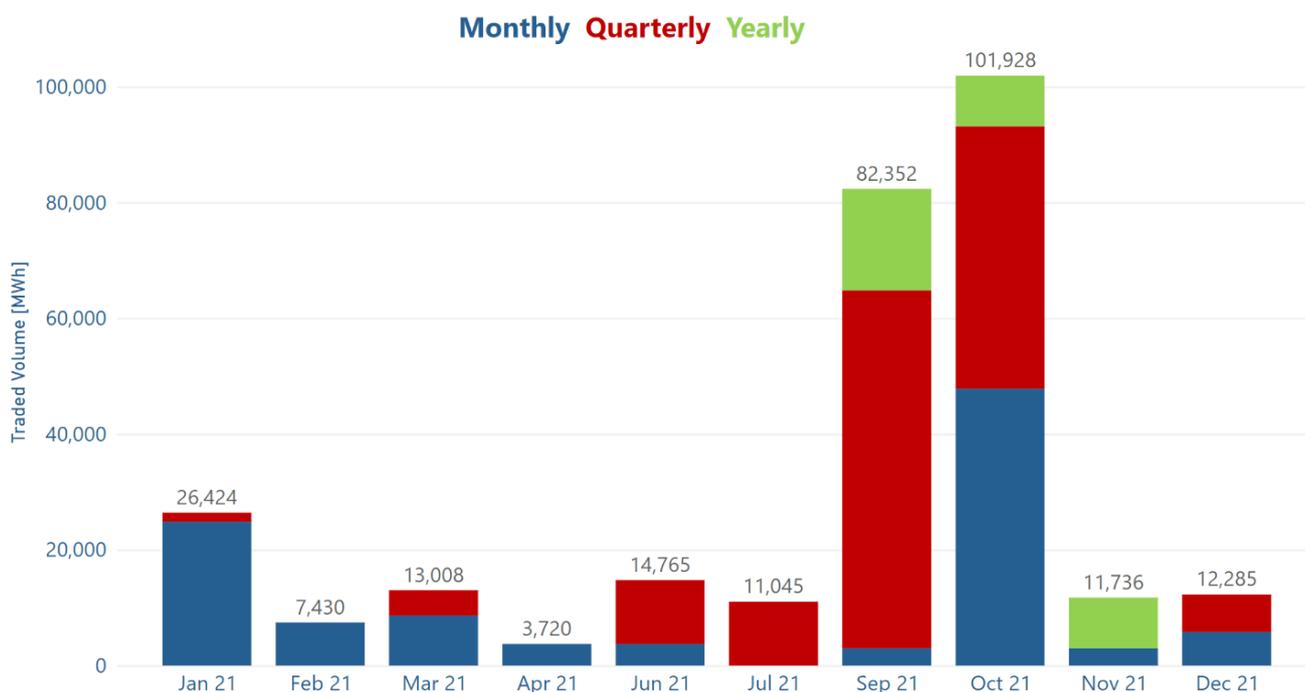
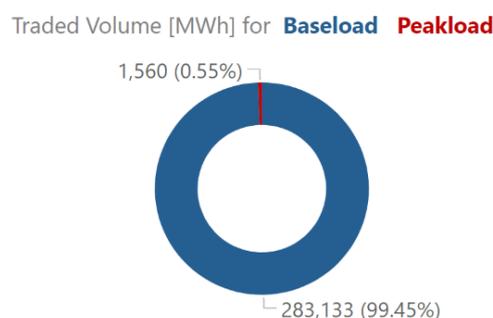
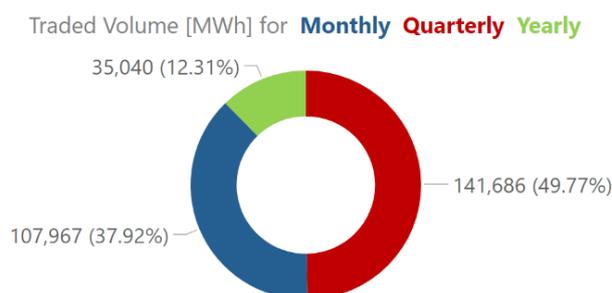
Derivatives Market

The number of admitted members increased to 25 from 22 by the end of the year and one registered Market Maker.

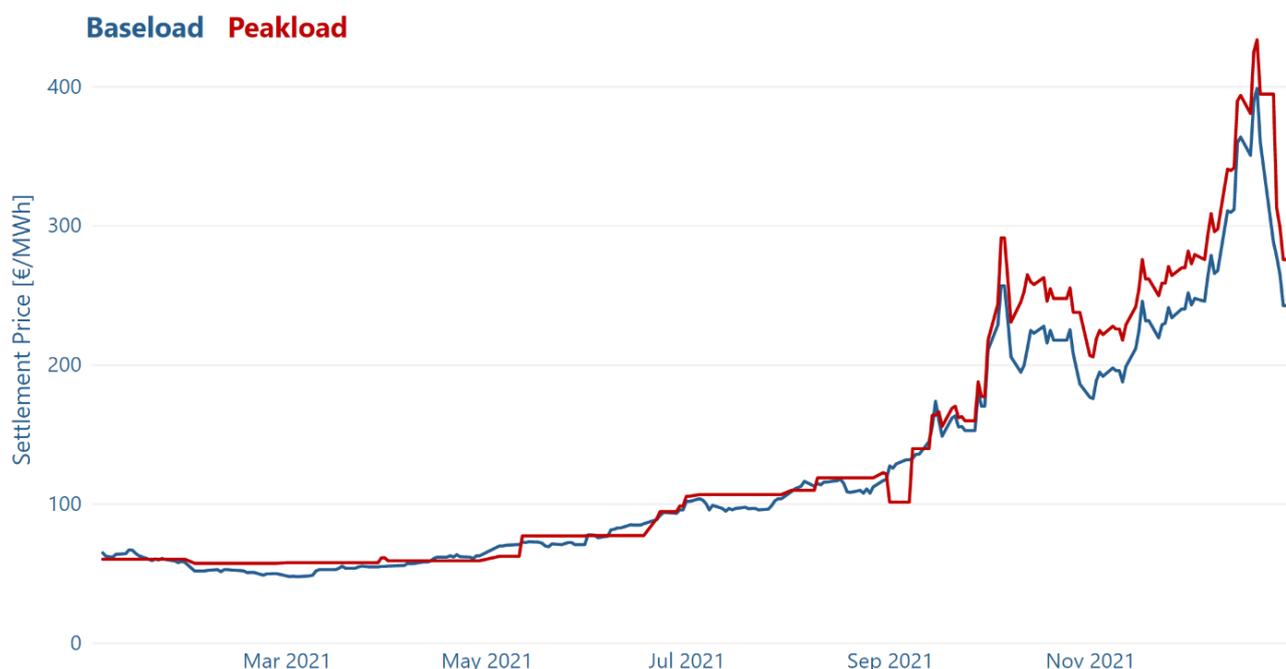
Volumes remained lower than expected, mainly due to the general turbulence in the fundamentals of energy markets. The best month in terms of turnover was October with 101,928 MWh traded.

Traded Instruments – Value (€), Volume (MWh), Number & Vol

Instrument	Traded Value [€]	Traded Volume [MWh]
GREBQ421	11,811,081.20	83,942
GREBQ122	11,315,319.00	51,816
GREBM1221	4,522,404.00	18,600
GREBY22	4,382,190.00	35,040
GREBM1121	3,790,800.00	16,560
GREBM1021	3,129,745.00	18,625
GREBM0221	1,536,528.00	24,864
GREBM0122	1,137,576.00	4,464
GREBM0421	459,000.00	8,640
GREBM0321	384,874.00	7,430
GREBM0222	352,128.00	1,344
GREBM0721	301,320.00	3,720
GREBM0521	229,710.00	3,720
GREBQ221	220,584.00	4,368
GREPQ221	96,720.00	1,560
Total	43,669,979.20	284,693



Daily Settlement prices for Month-Ahead (M+1) Instrument



Final settlement prices for 2021 for traded series

Series	Final Settlement Price (€/MWh)	Series	Final Settlement Price (€/MWh)
Base Load		Peak Load	
GREBM0121	52.52	GREPM0121	63.92
GREBM0221	50.36	GREPM0221	59.09
GREBM0321	57.64	GREPM0321	60.13
GREBM0421	64.17	GREPM0421	66.35
GREBM0521	63.16	GREPM0521	66.14
GREBM0621	83.47	GREPM0621	89.45
GREBM0721	101.86	GREPM0721	113.37
GREBM0821	121.72	GREPM0821	136.07
GREBM0921	134.73	GREPM0921	147.77
GREBM1021	198.32	GREPM1021	224.1
GREBM1121	228.87	GREPM1121	265.31
GREBM1221	235.38	GREPM1221	282.73

4. Annex

Definitions

ACRONYM	Definition
GR BZ	Greek Bidding Zone
MCP	Market Clearing Price
NTC	Net Transfer Capacity

Data Sources

Monthly Day-Ahead Prices on Greece, Italy and Bulgaria

- Data source for MCP of Italy: <http://www.mercatoelettrico.org/En/Download/DatiStorici.aspx>
- Data source for MCP of Bulgaria: <http://www.ibex.bg/en/market-data/dam/prices-and-volumes/#data-table>

Market Details

- Market Time Units of GR BZ are in CET-hr.
- Intraday Market of GR BZ from 01/11/2020 to 21/09/2021 consists of three Local IntraDay Auctions (LIDAs) and from 22/09/2021 of three Complementary Regional Intraday Auctions (CRIDAs).
- The Hybrid Model for the operation of the Small Connected System (SCS) market of Crete was launched on Delivery Day 01/11/2021.