

Annual Report 2023



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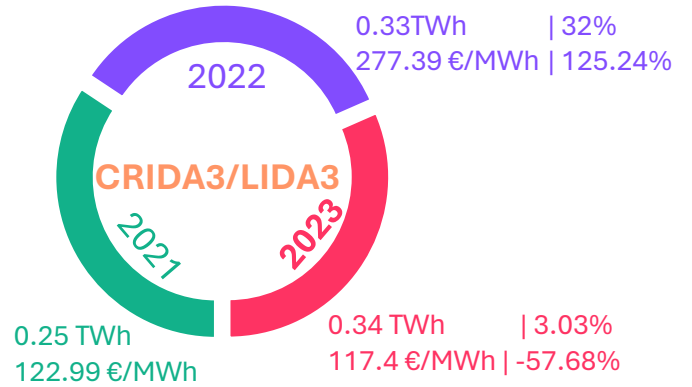
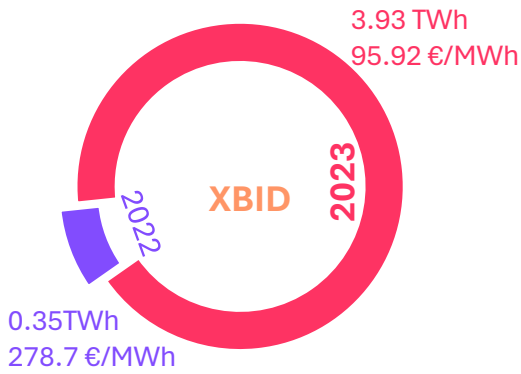
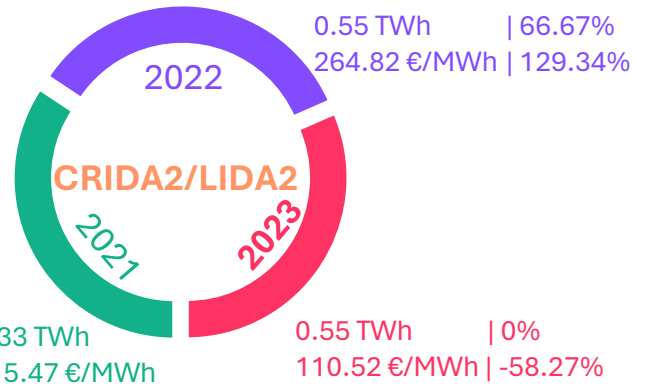
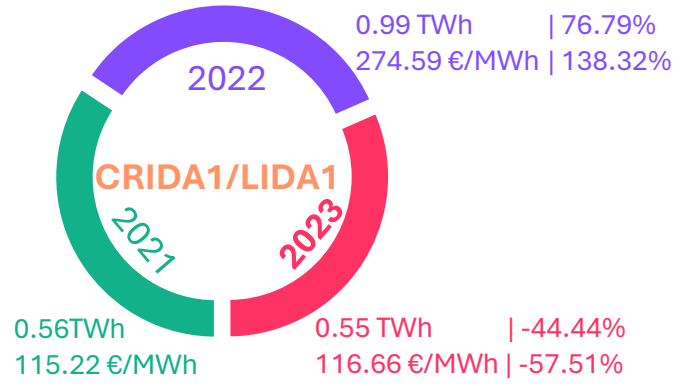
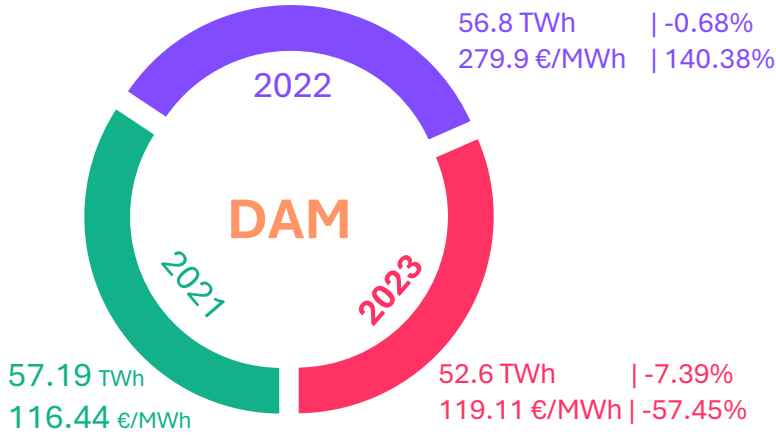
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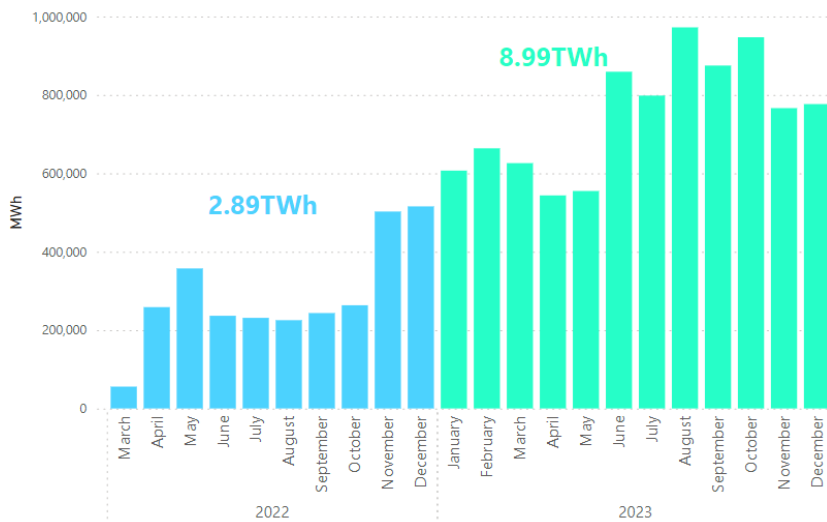
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SUMMARY

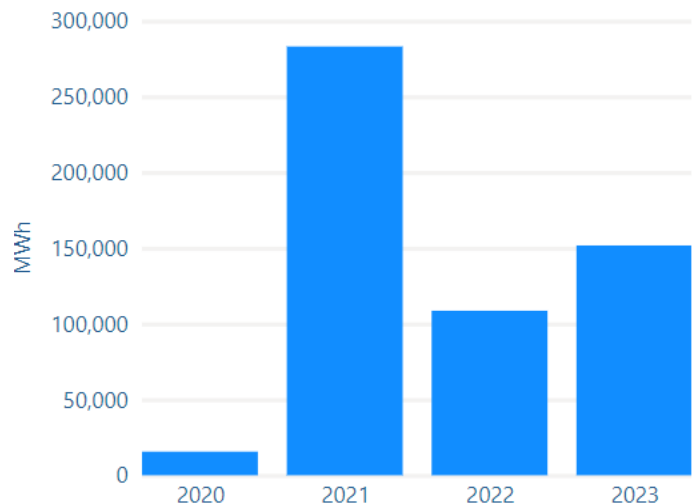
DAM & IDM – 3 Years of Target Model



NGAS



DERIVATIVES



1. Electricity Markets

Day-Ahead Market

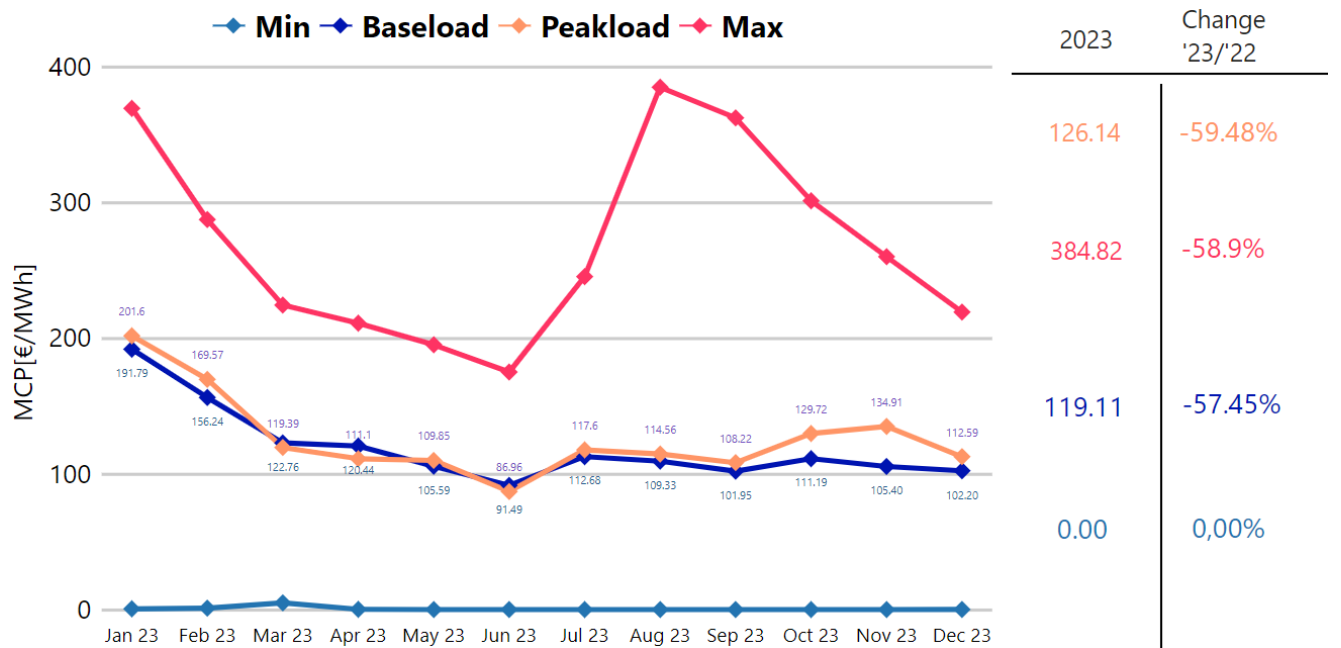
Intra-Day Market

DAM & IDM Aggregated Overview

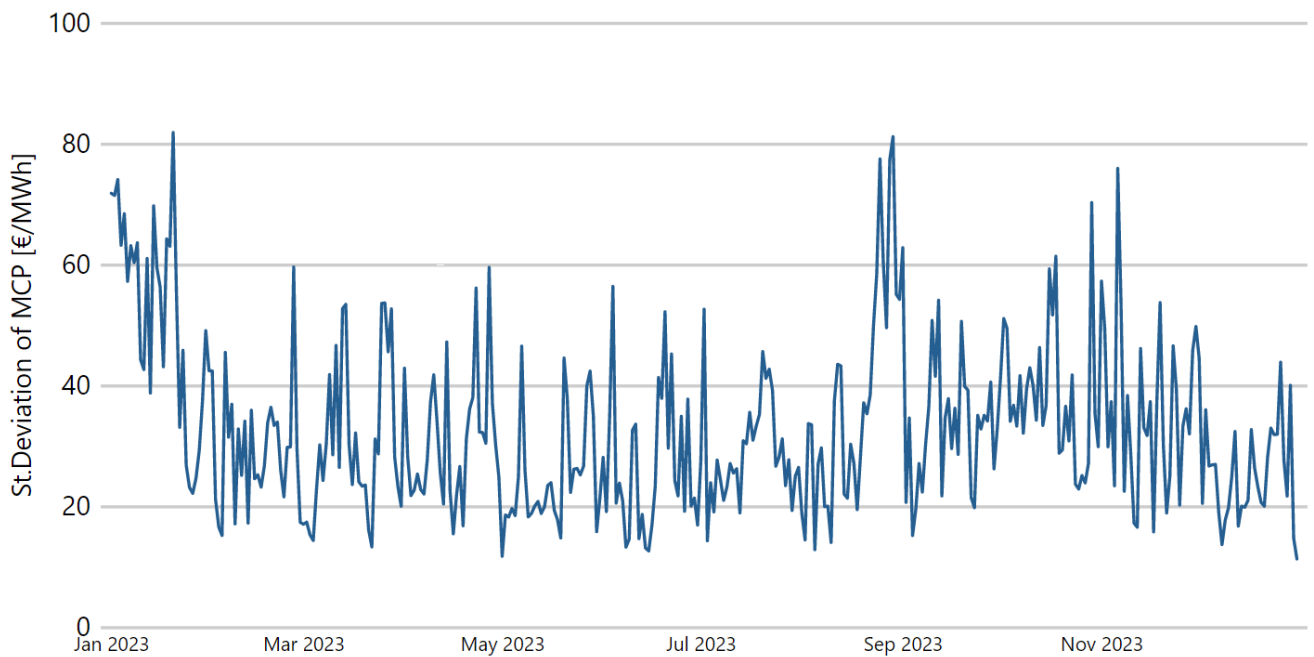
Derivatives Market

Day-Ahead Market

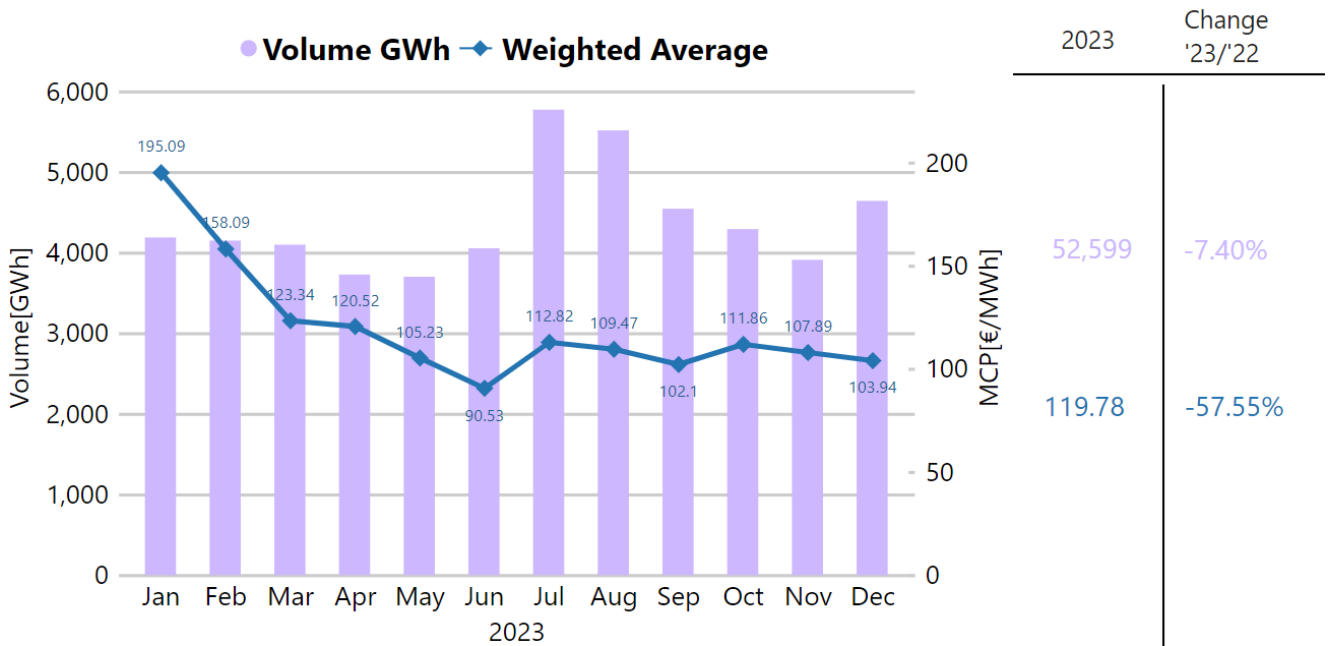
Monthly Day-Ahead Market MCP



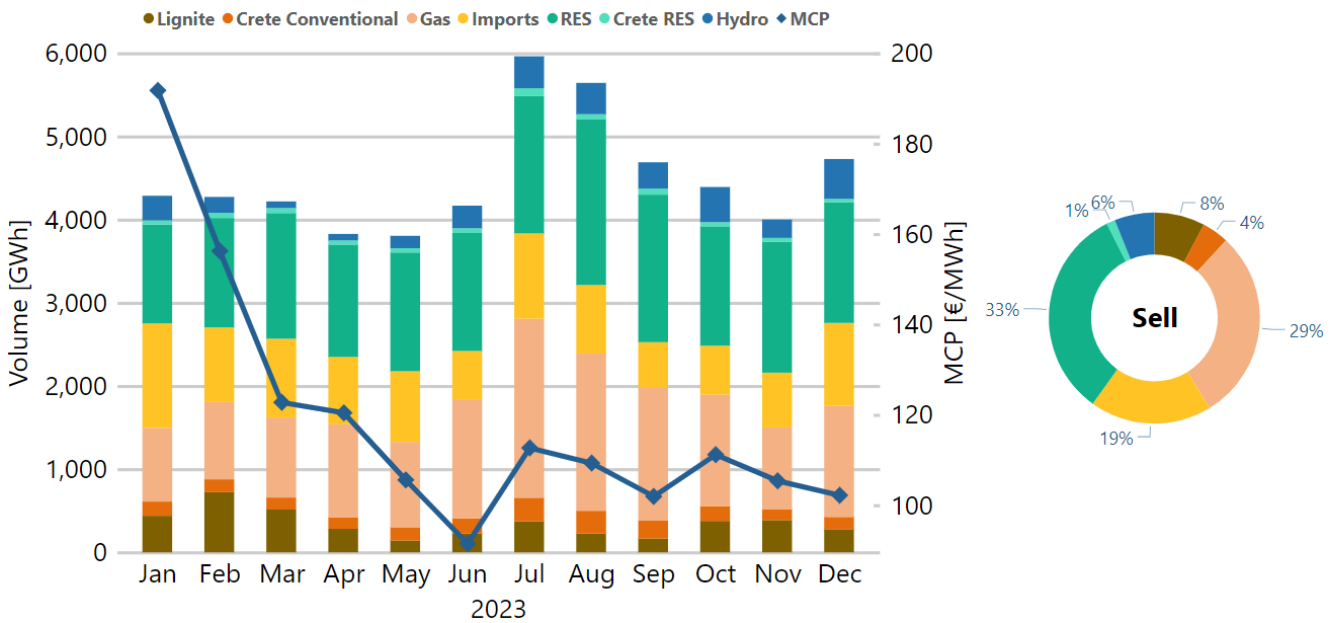
Daily Volatility of Day-Ahead Market MCP



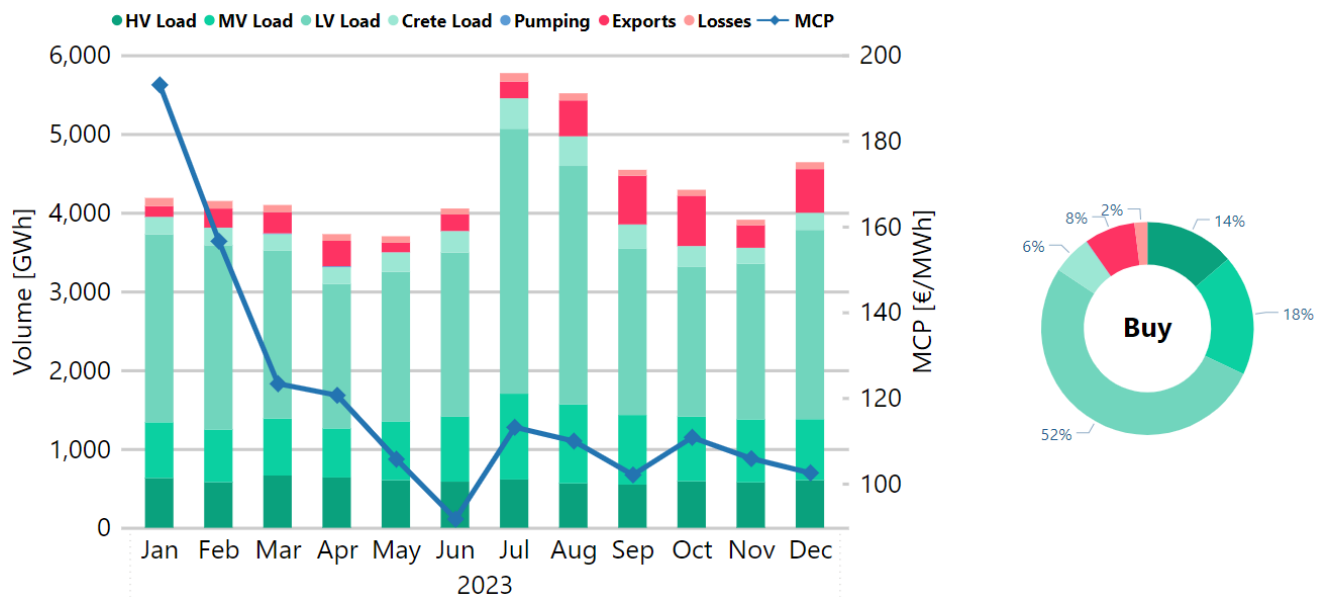
Monthly Day-Ahead Market Volume and Weighted Average MCP



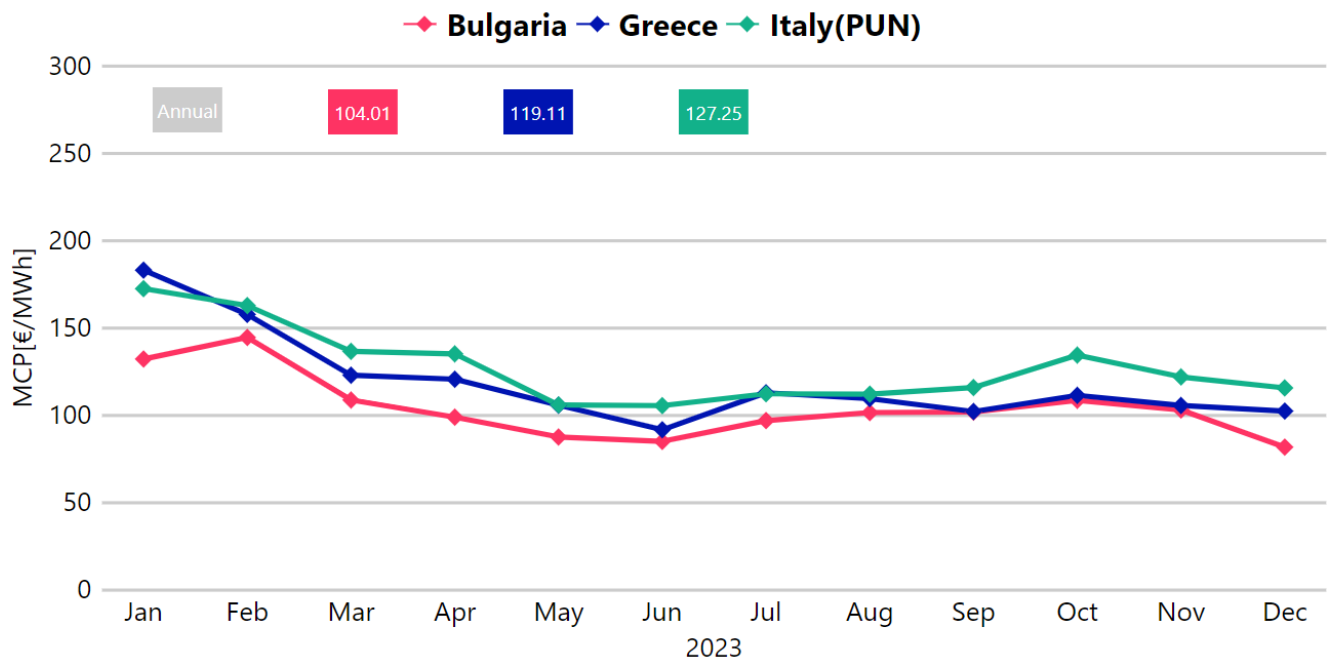
Monthly Day-Ahead Sell Side Volume Mix



Monthly Day-Ahead Buy Side Volume Mix

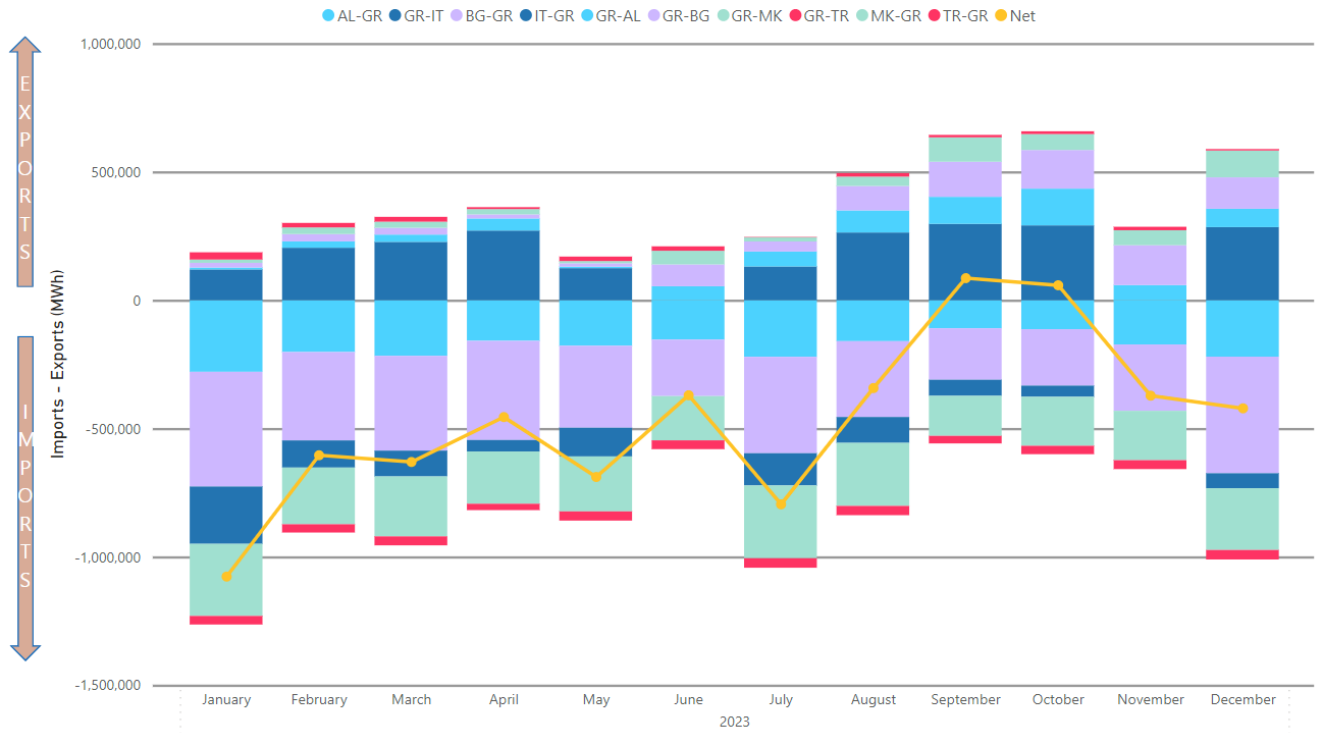


Monthly Day-Ahead Market MCP on Greece, Italy (PUN) and Bulgaria

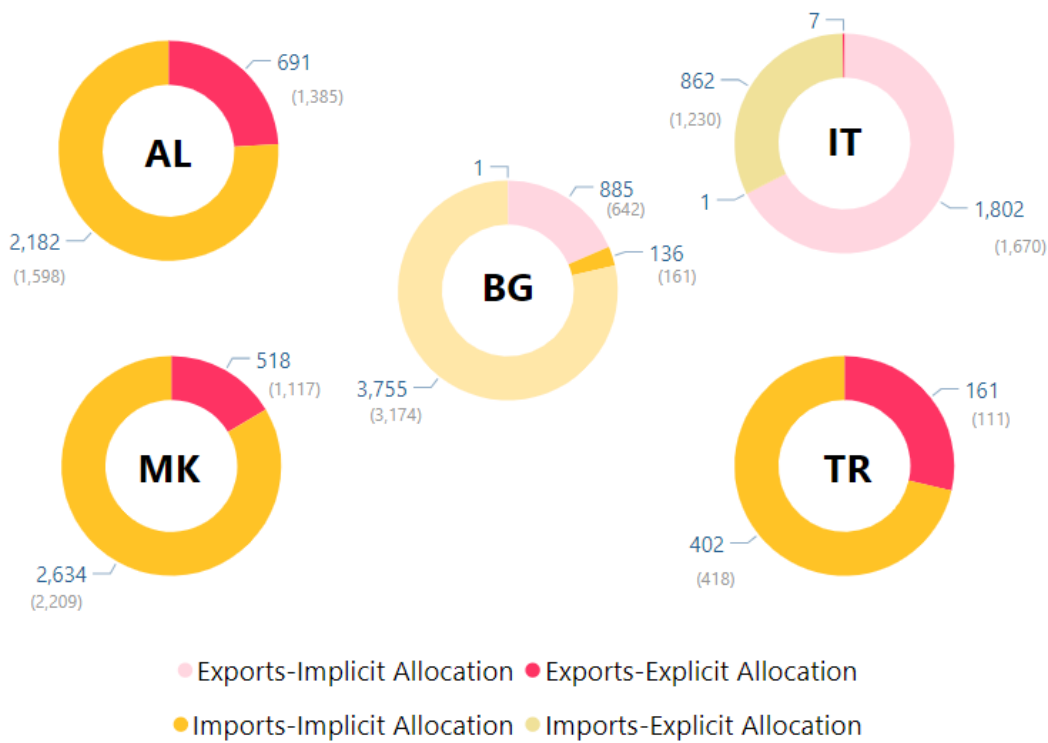


* Datasource for IT (SUD BZ) MCP: <http://www.mercatoelettrico.org/En/Esiti/MGP/EsitiMGP.aspx> and for BG MCP: <https://ibex.bg/markets/dam/dam-market-segment/>

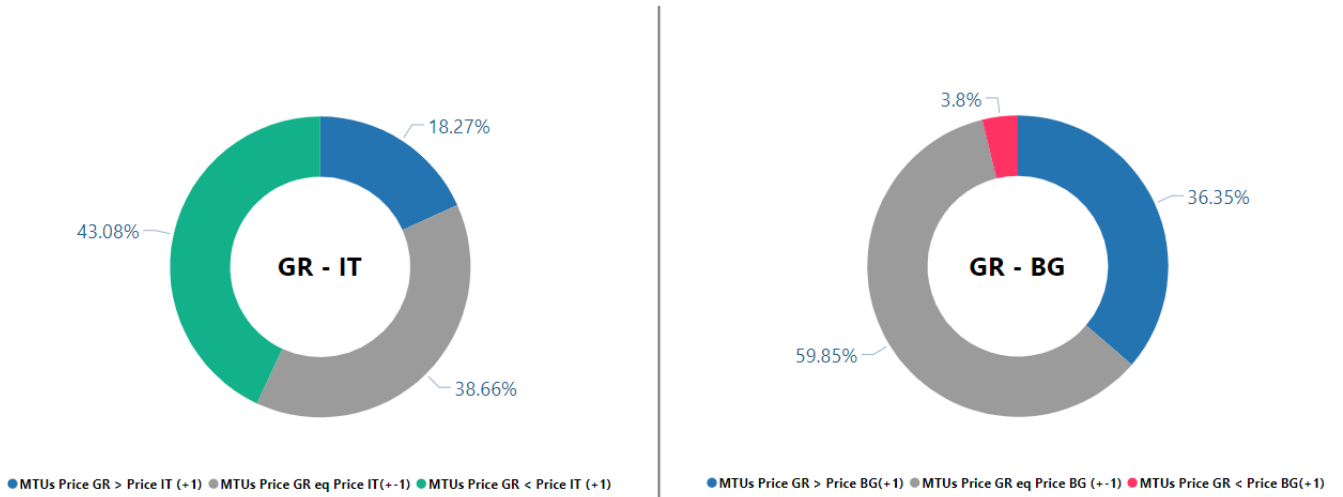
Cross Border Volume (MWh) – Imports, Exports and Net flow per month



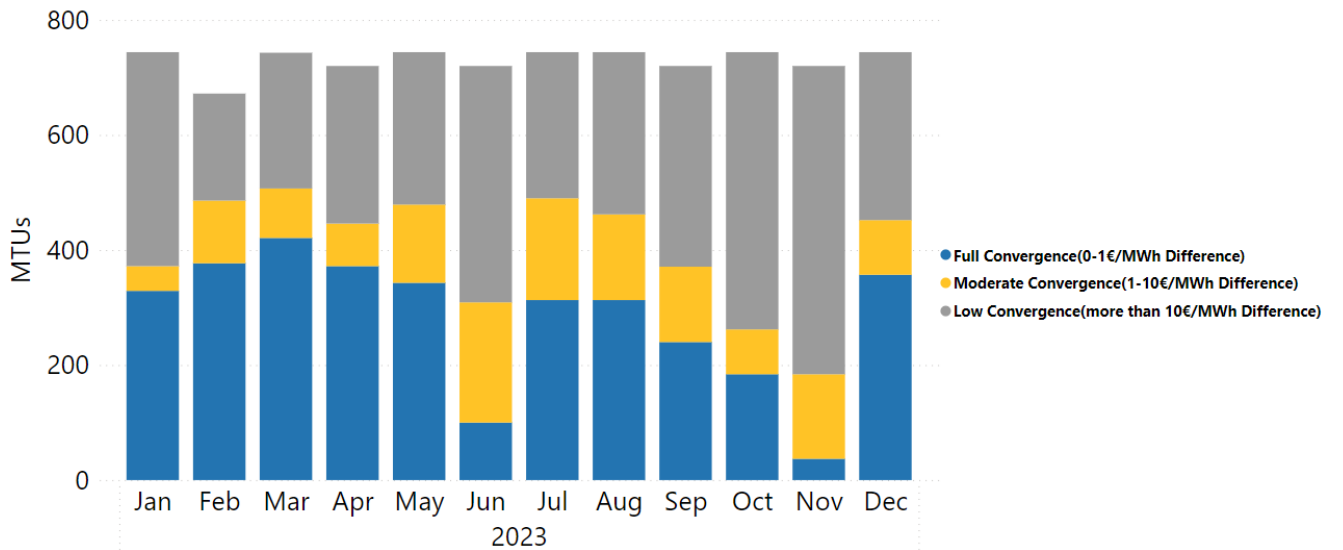
Total Cross Border Volumes (GWh) per Border



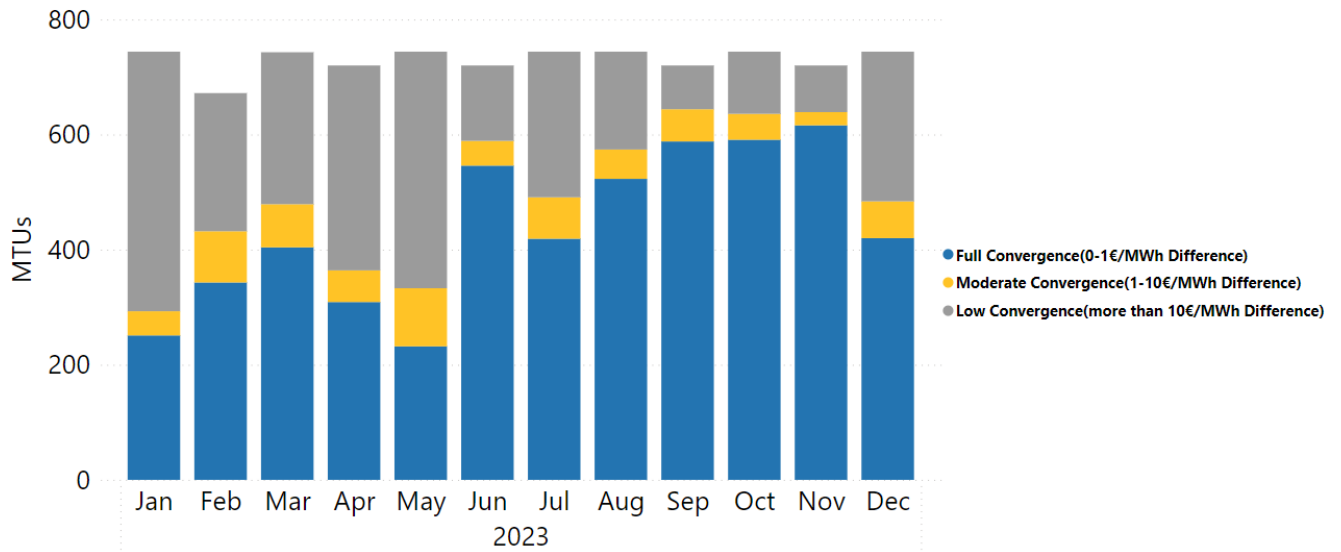
Annual Price Convergence – Coupled Borders



GR-IT Monthly Price Convergence



GR-BG Monthly Price Convergence

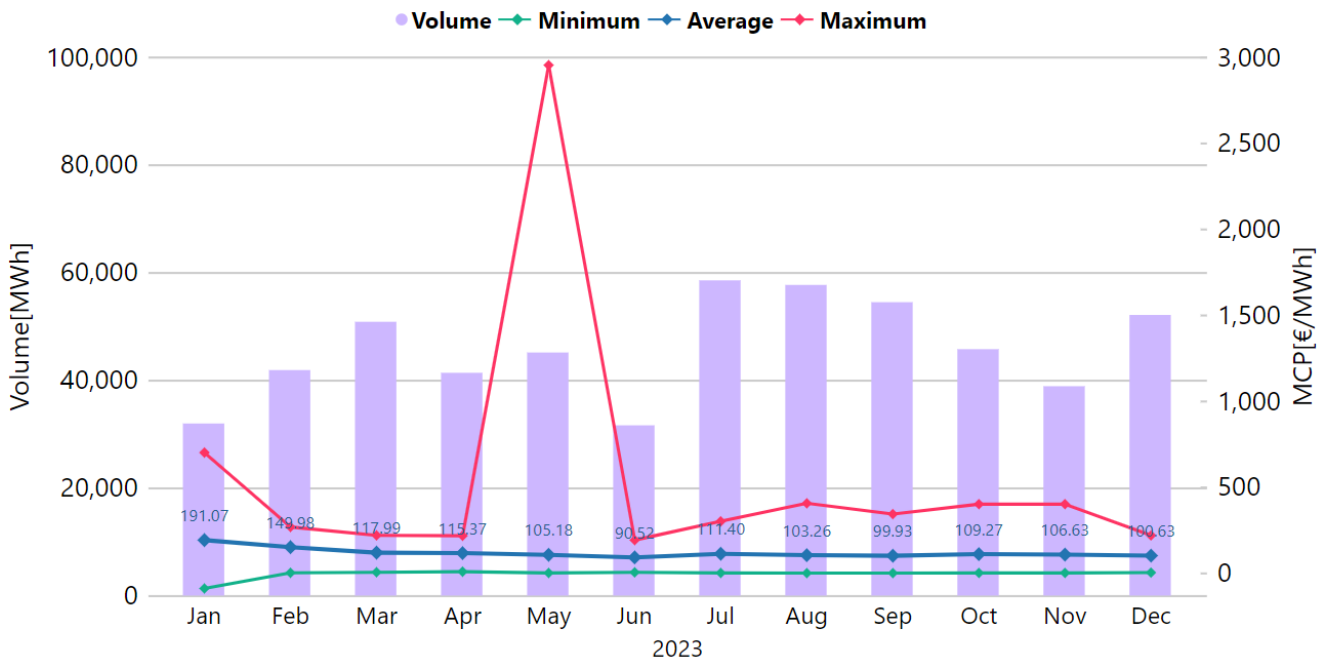


Day-Ahead Market MCP and Volume per Month

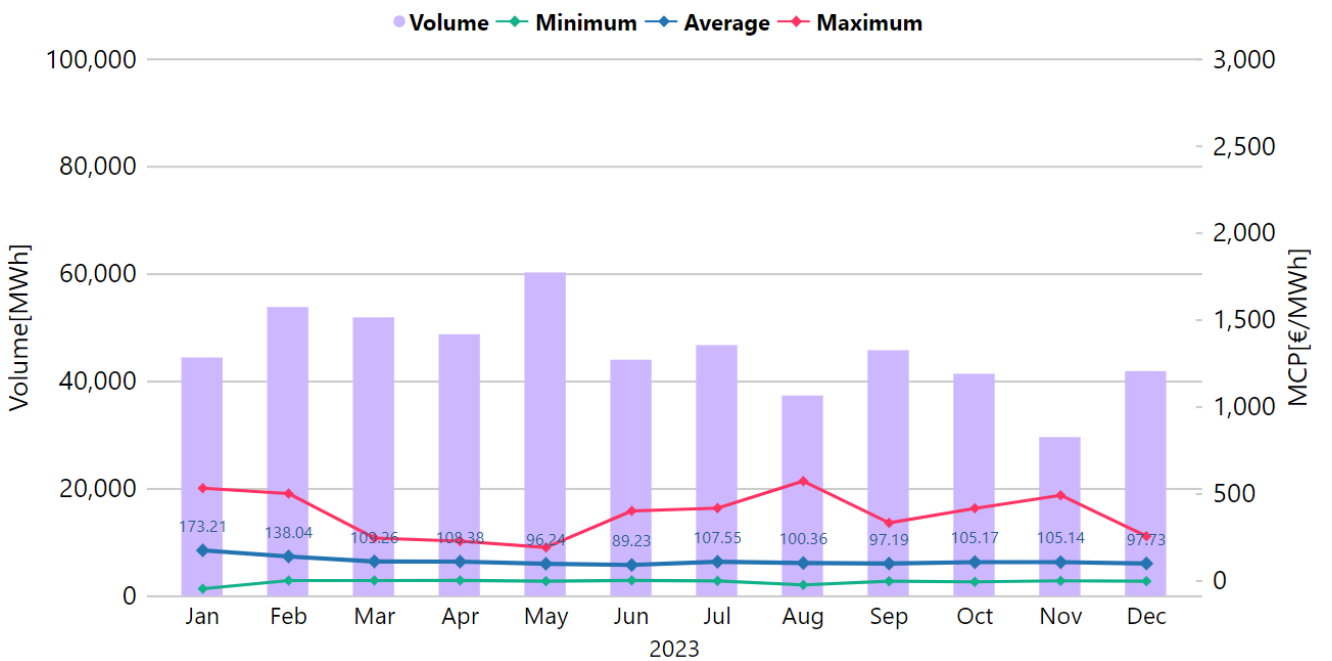
Year	Month	Minimum MCP[€/MWh]	Average MCP[€/MWh]		Maximum MCP[€/MWh]	Peakload MCP[€/MWh]		Volume [GWh]
2023	January	0.49	191.79	↓ -31%	369.17	201.60	↓ -41%	114,950
2023	February	1.01	156.24	↓ -19%	287.32	169.57	↓ -16%	114,950
2023	March	4.95	122.76	↓ -21%	224.29	119.39	↓ -30%	114,950
2023	April	0.18	120.44	↘ -2%	211.00	111.10	↘ -7%	114,950
2023	May	0.00	105.59	↓ -12%	195.07	109.85	↘ -1%	114,950
2023	June	0.02	91.49	↓ -13%	174.99	86.96	↓ -21%	114,950
2023	July	0.00	112.68	↑ 23%	245.30	117.60	↑ 35%	114,950
2023	August	0.00	109.33	↘ -3%	384.82	114.56	↘ -3%	114,950
2023	September	0.00	101.95	↘ -7%	362.17	108.22	↘ -6%	114,950
2023	October	0.00	111.19	↗ 9%	301.15	129.72	↑ 20%	114,950
2023	November	0.00	105.40	↘ -5%	259.96	134.91	↗ 4%	114,950
2023	December	0.04	102.20	↘ -3%	219.11	112.59	↓ -17%	114,950

Intra-Day Market

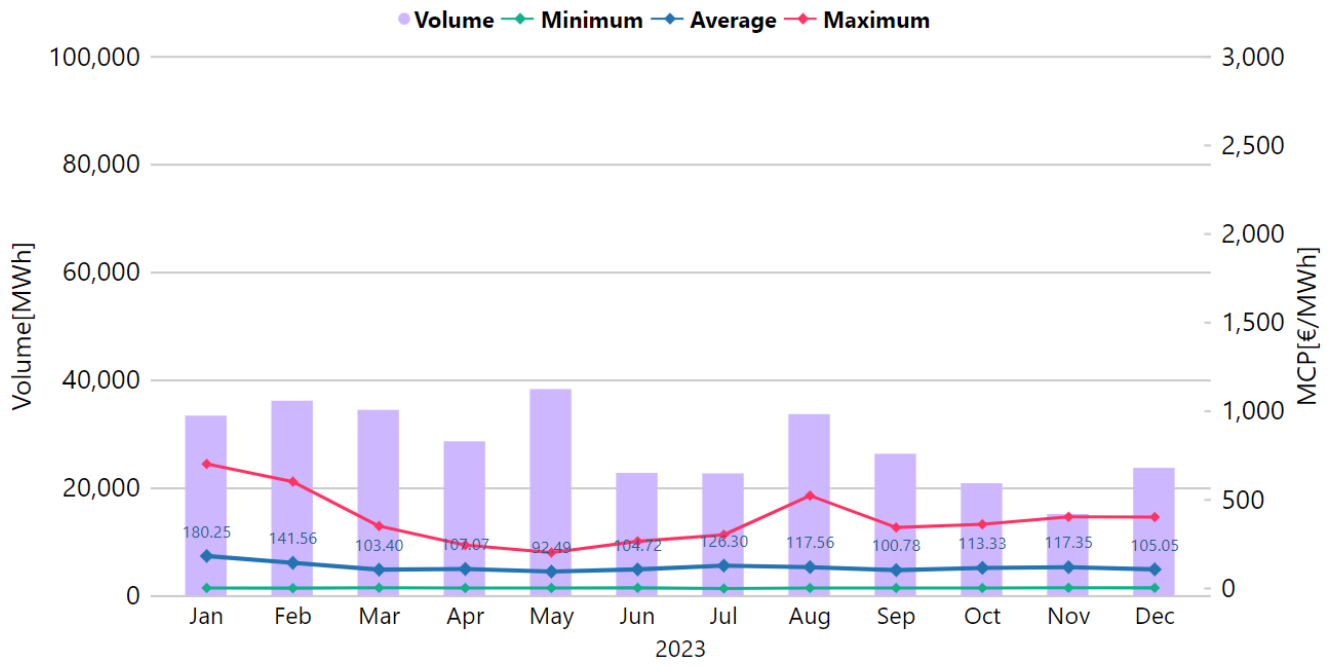
Intraday-Day MCP and Volumes – CRIDA1



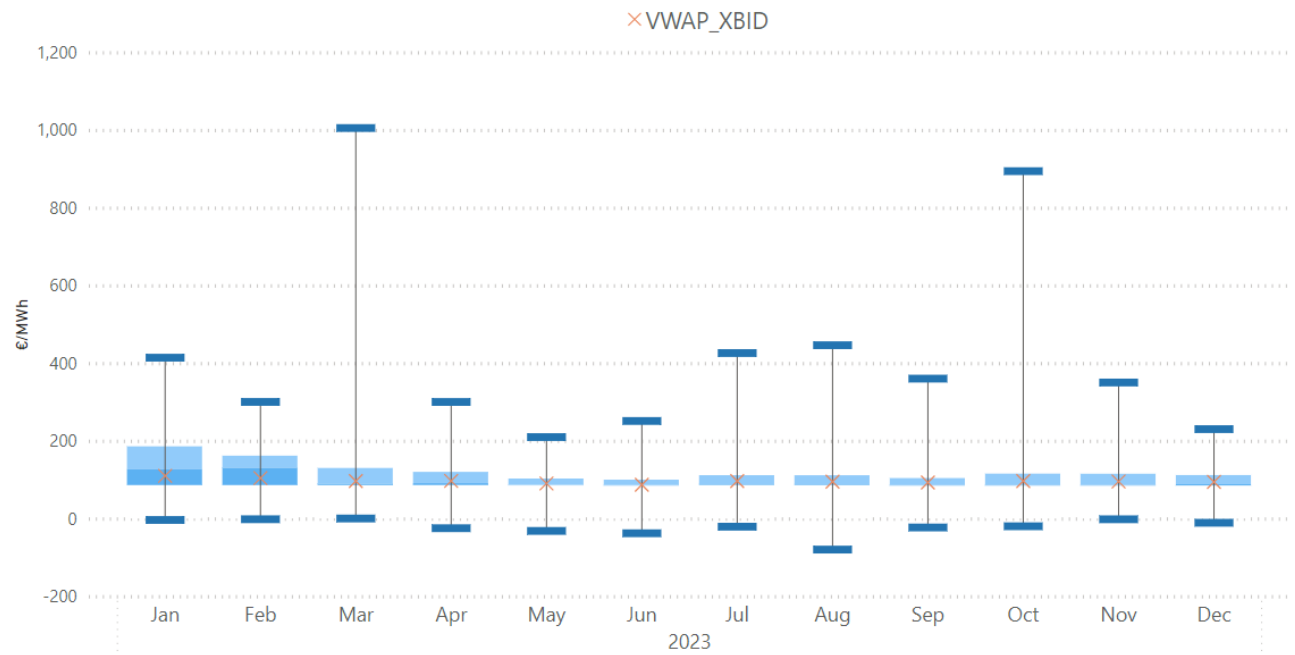
Intraday-Day MCP and Volumes – CRIDA2



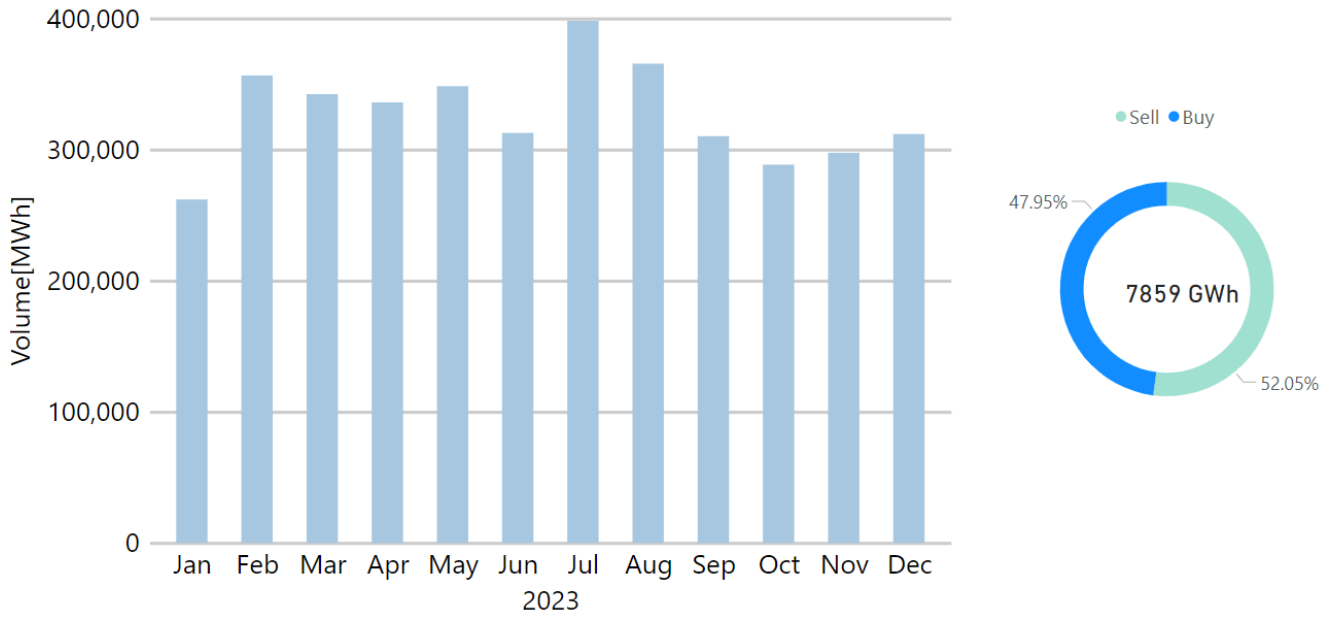
Intraday-Day MCP and Volumes – CRIDA3



Intraday- XBID Prices

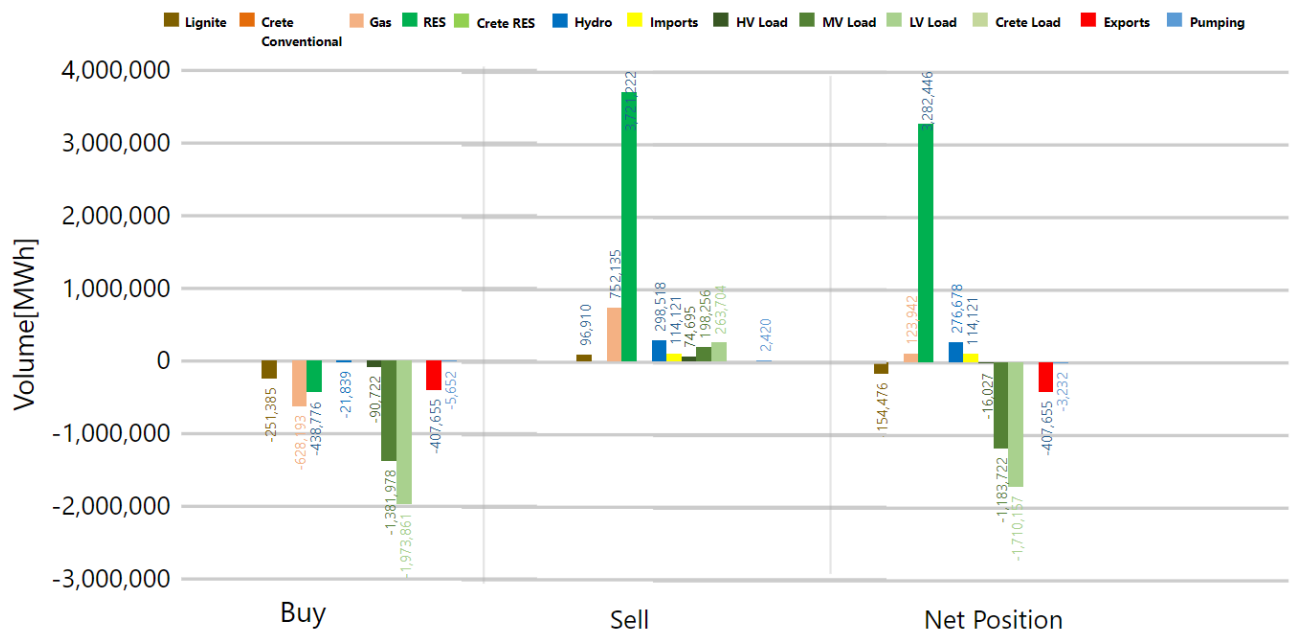


Intraday-Day XBID Volumes *



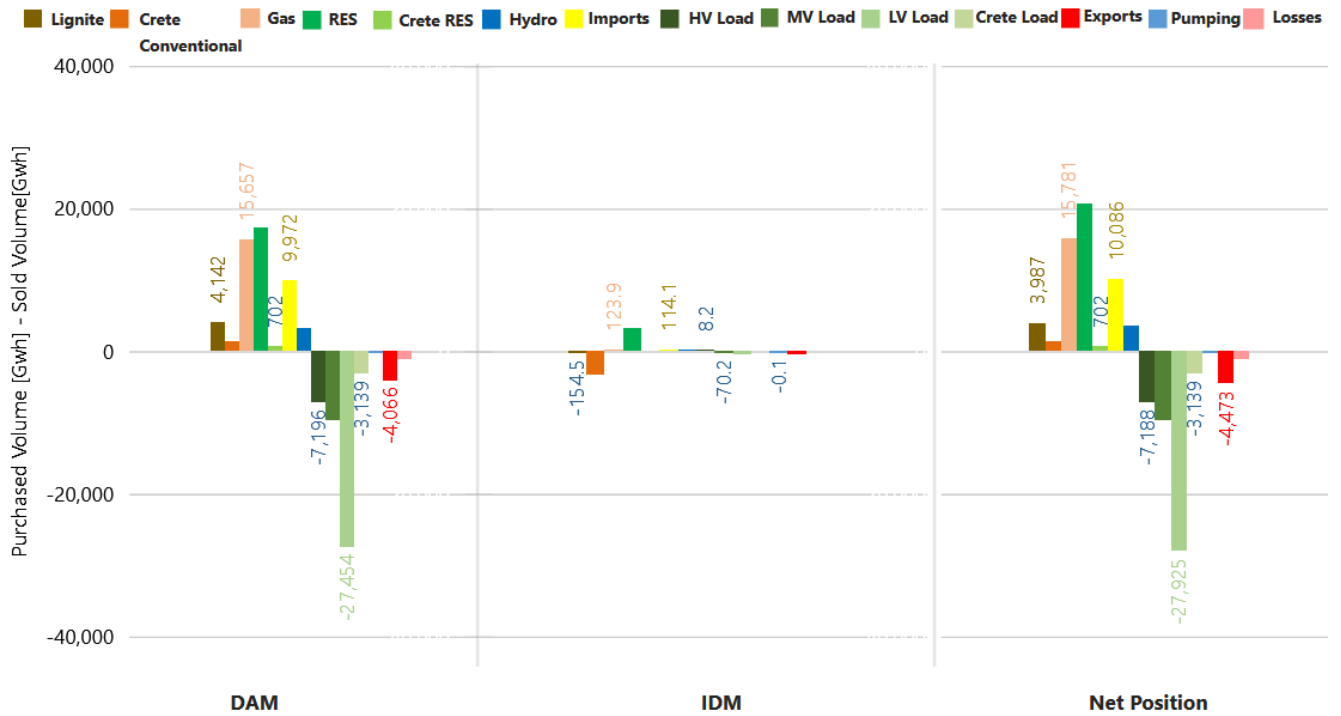
* Volume = (Sell + Buy) / 2

Intraday-Day Volume Mix per side and Net position for 2023

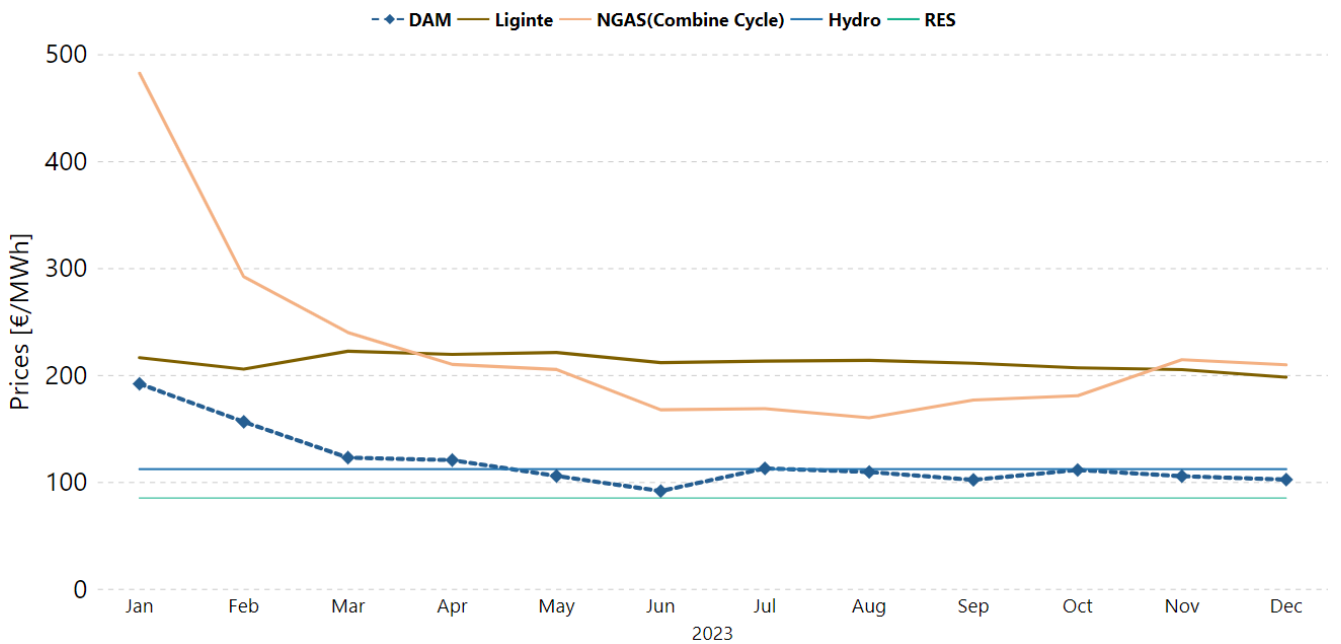


DAM & IDM · Aggregated Overview

Market Schedules

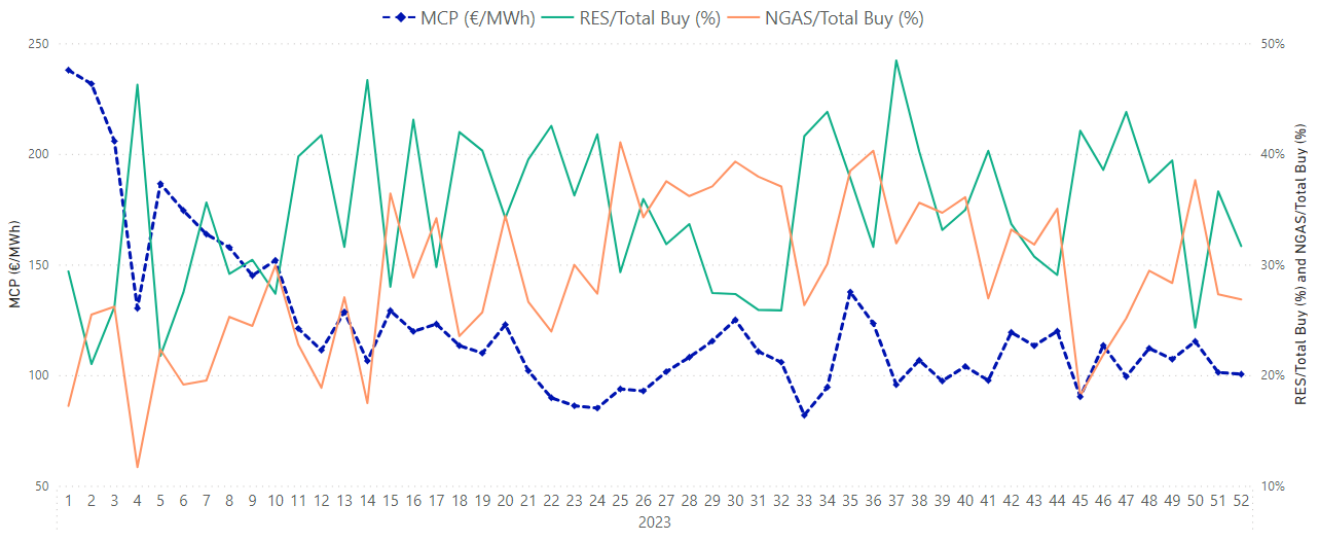


DAM MCP comparison with Reference Prices*

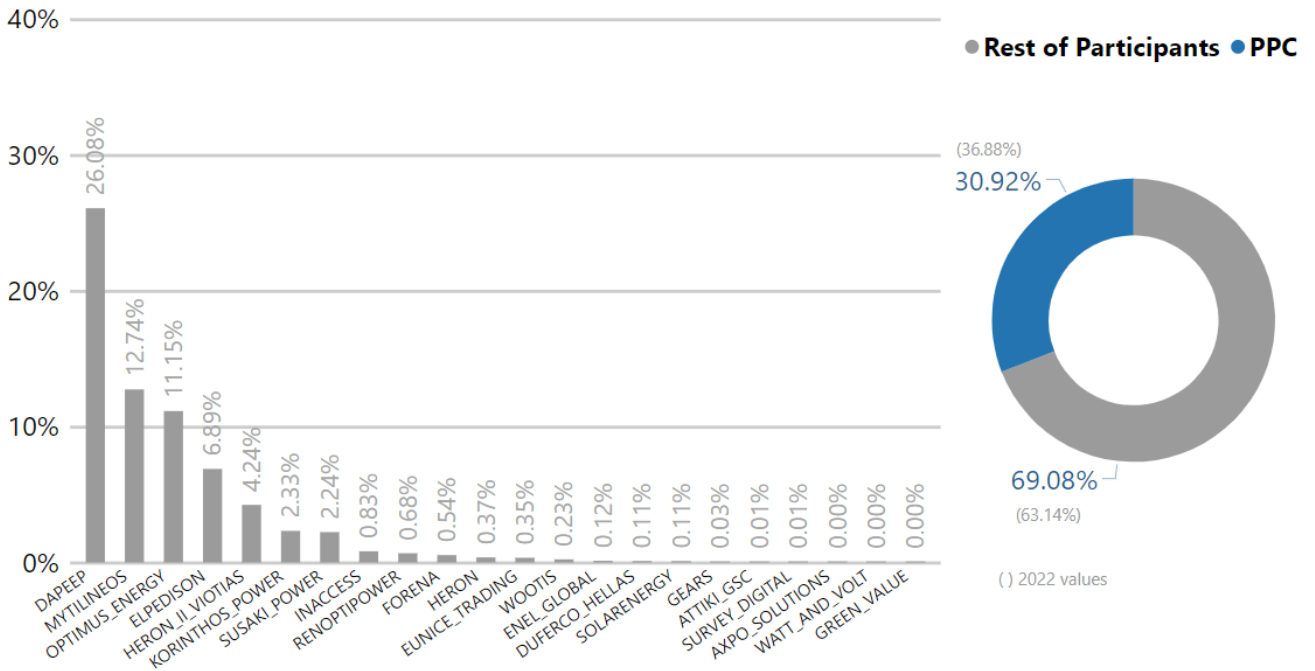


*Reference prices refer to the Temporary Mechanism for the Partial Return of Income from the Day-Ahead & Intra-Day Markets as of July 2022 (Law 4425/2016A'185), effective up until 31 December 2023.

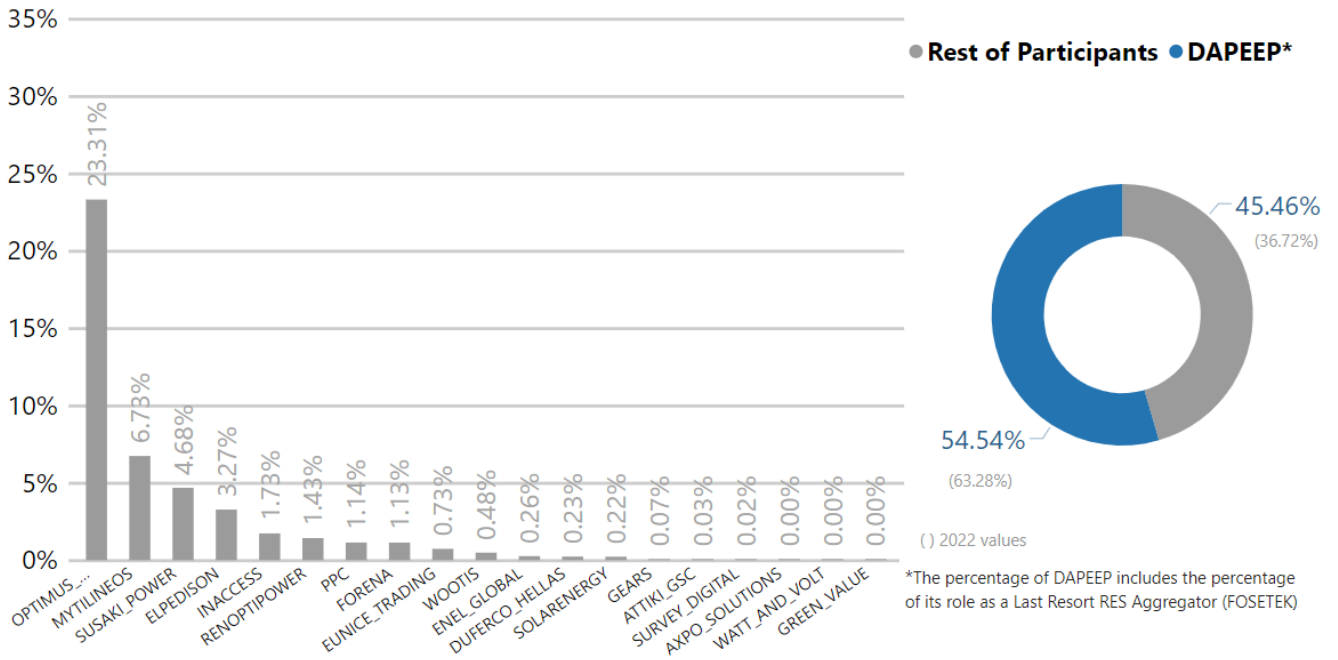
Weekly DAM MCP comparison with RES/Total Buy ratio and NGAS/Total Buy ratio



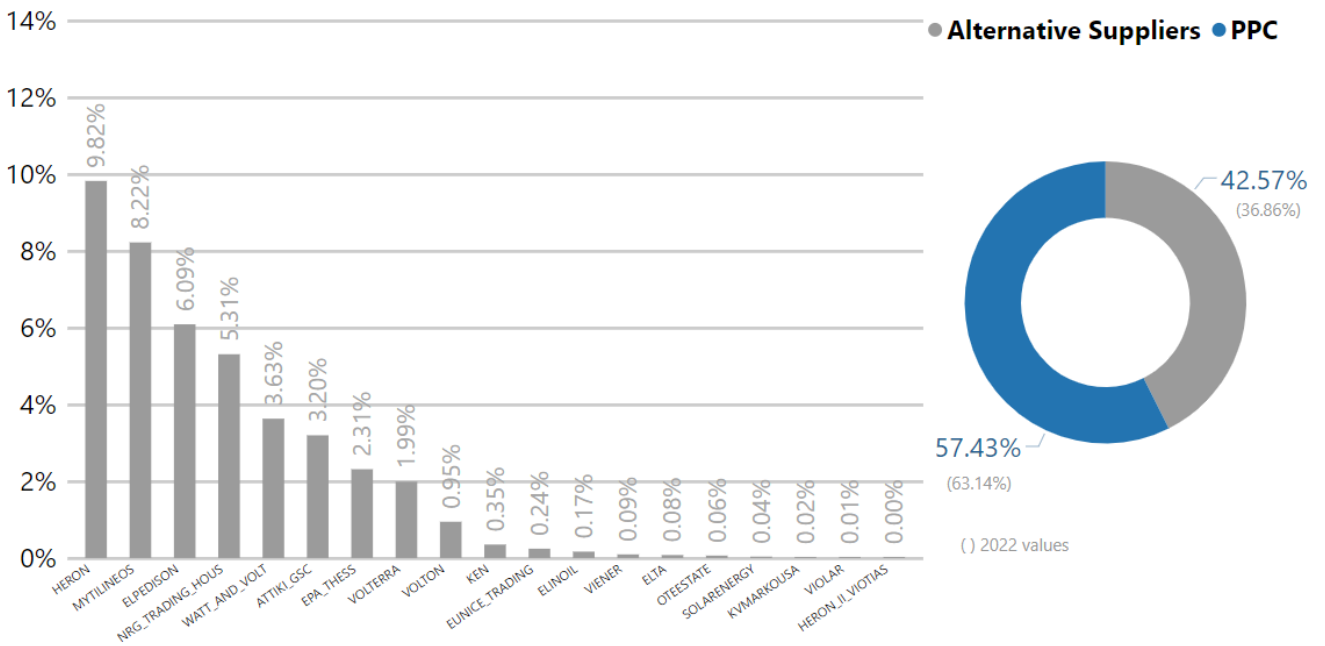
Final Market Schedule Shares for Production Units per Market Participant



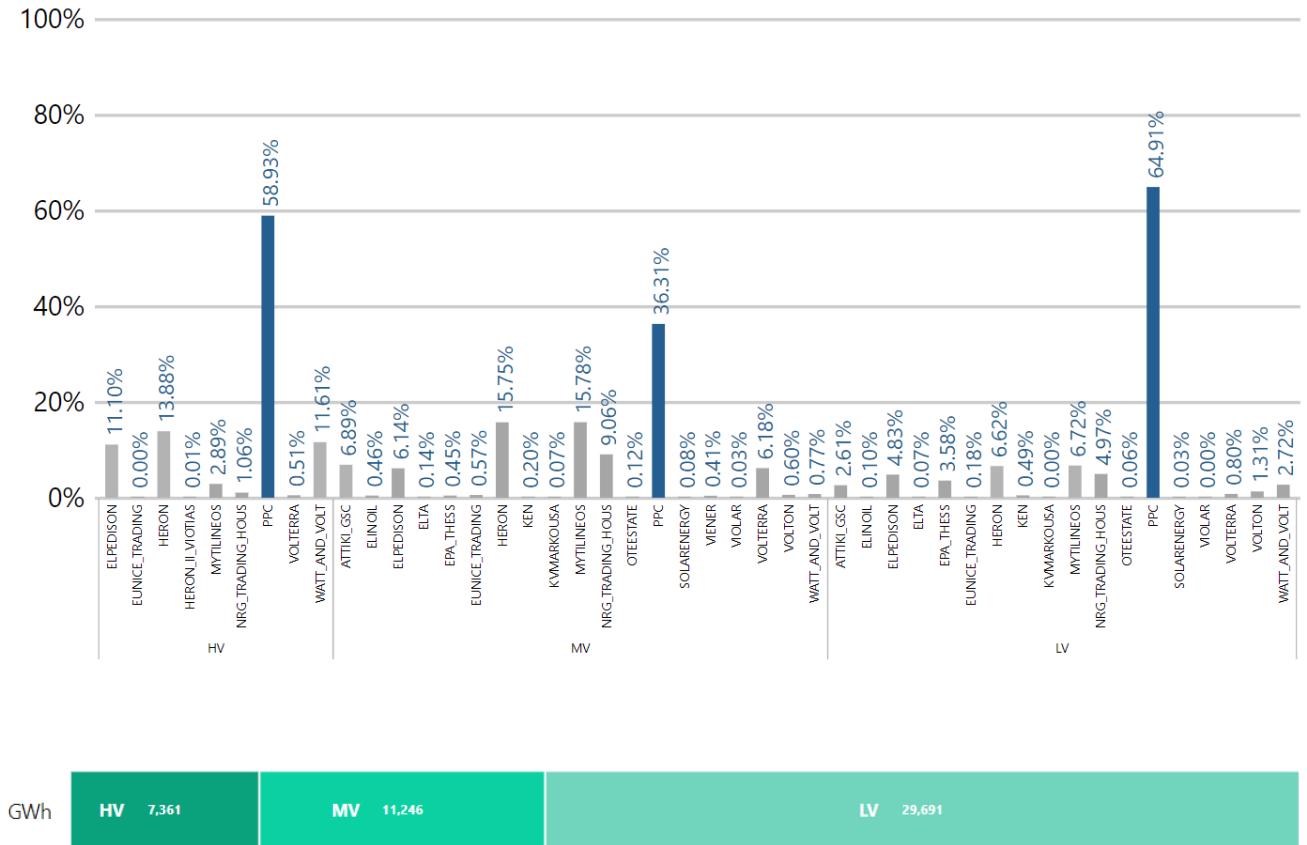
Final Market Schedule Shares for RES Production Units per Market Participant



Final Market Schedule Shares for Domestic Load per Market Participant



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



SDAC & SDIC Markets Operation Statistics

MRC/SDAC Usage Indicators

Daily Average Orders No

	2022	2023
BLK	50	53
HBD	3,366	2,943
PPT	1,214	1,486
	4,630	4,481

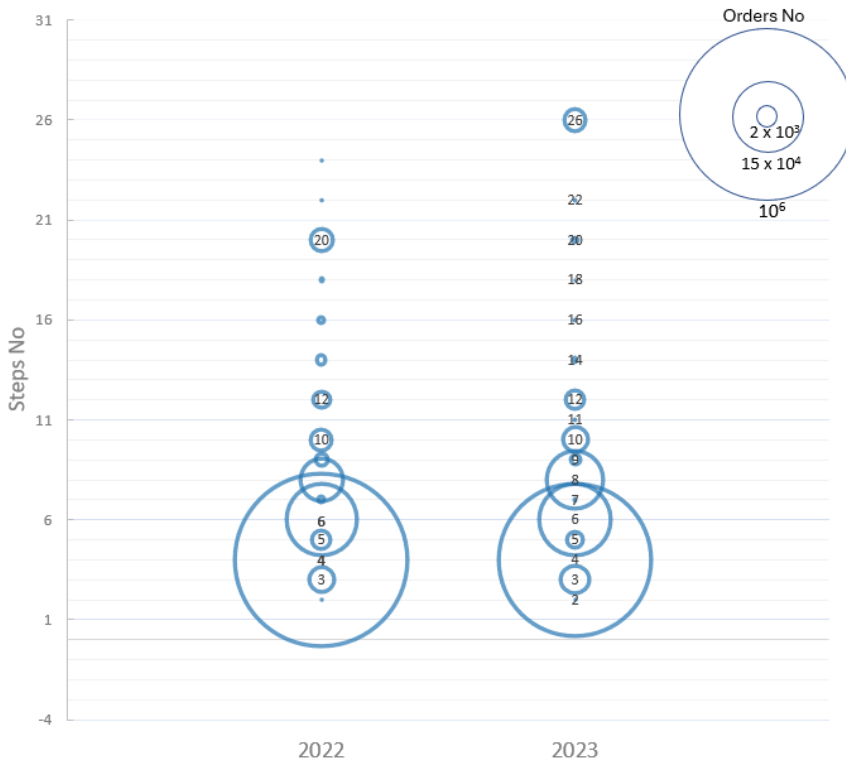
HBD – Daily Average number No of HBD steps

	2022	2023
Avg	16,500	15,499
Min	14,041	13,790
Max	17,844	16,799

Block Orders – Daily Average No by Relation Type

	2022	2023
Simple	31	26
Linked	16	21
Exclusive	3	5

HBD Orders – Orders No Per Max Steps



MRC/SDIC Usage Indicators

CRIDAs Daily Average Orders No

	2022	2023
HBD	2,048	1,764

CRIDAs – Daily Average number No of HBD steps

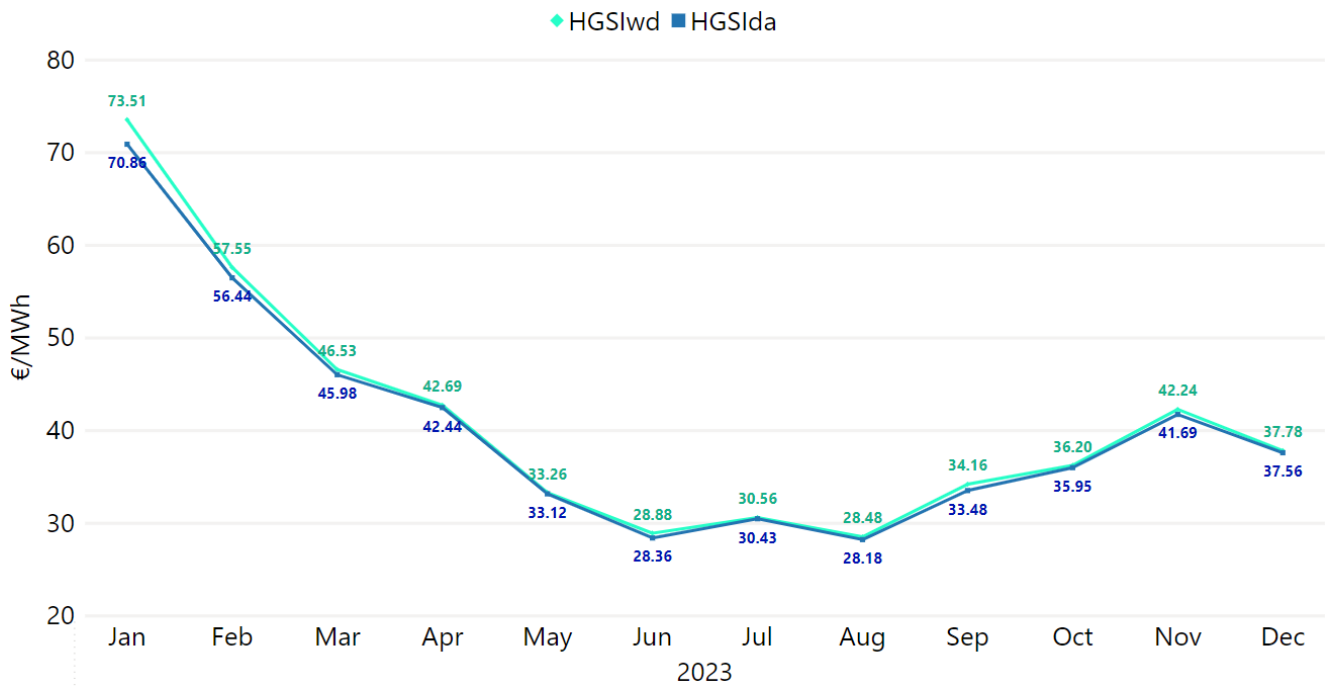
	2022	2023
Avg	4,765	3,704
Min	1,521	1,273
Max	10,611	5,831

XBID Daily Average Orders No

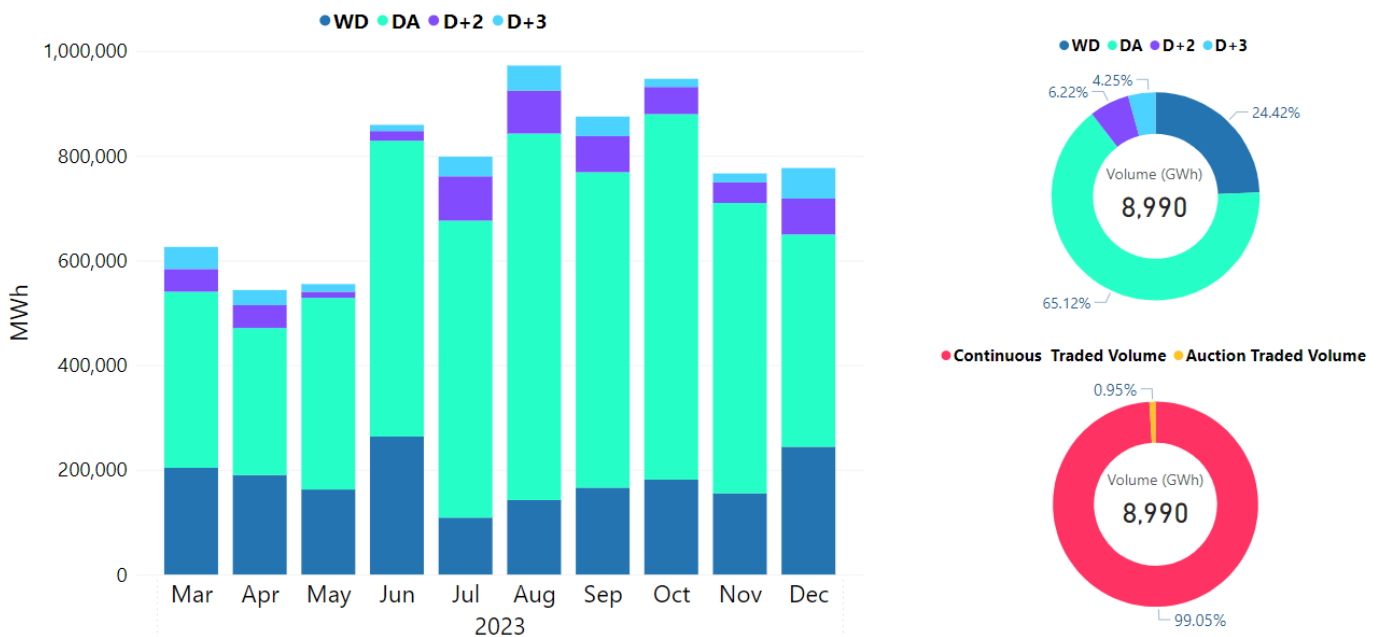
	2023
XBLK	115
XICE	31
XREG	400

2. Natural Gas Market

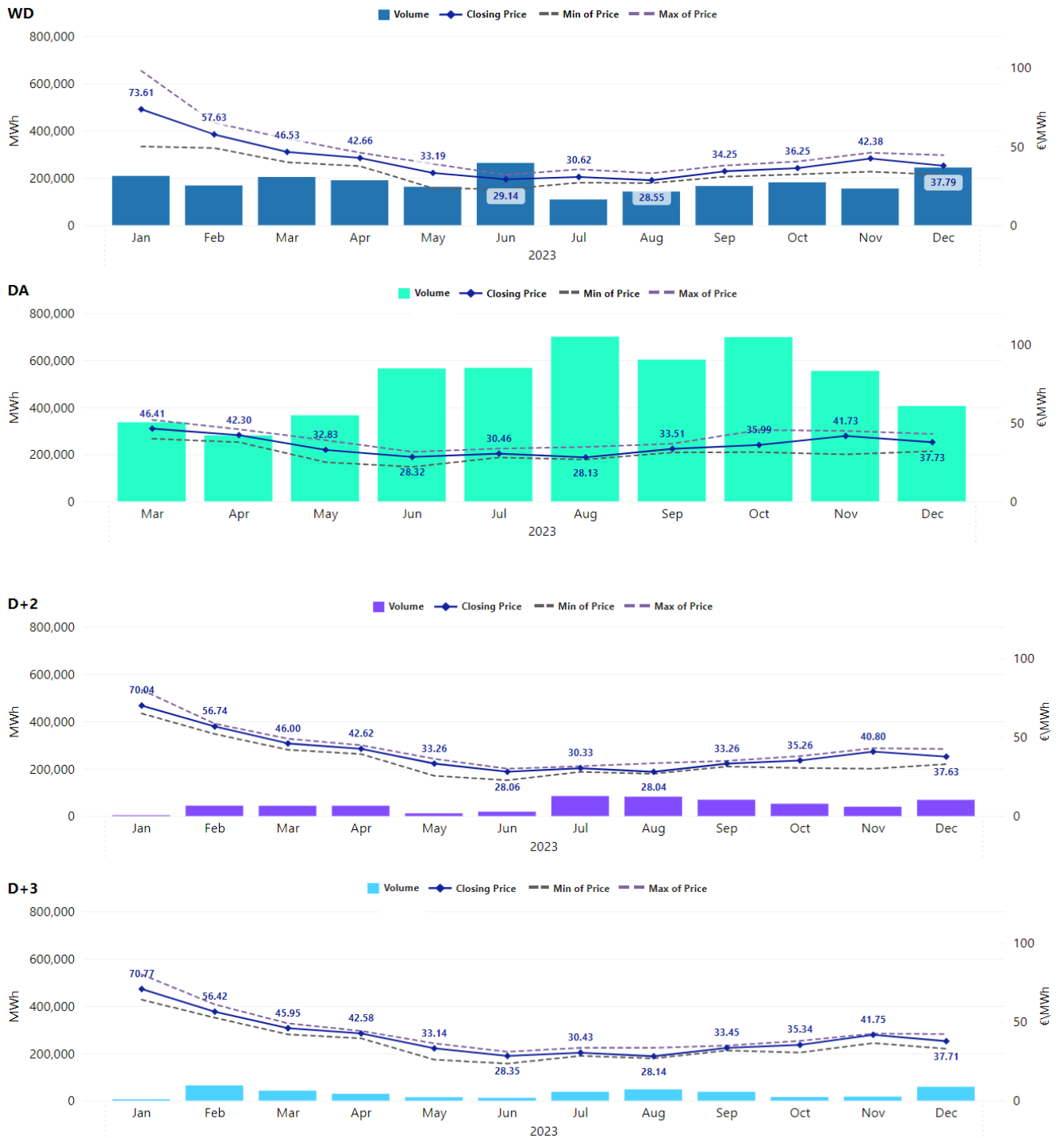
HEnEx NGAS indices



Trading Volume per Contract and Method



Volume, Closing, Min, & Max Prices per Month & Product

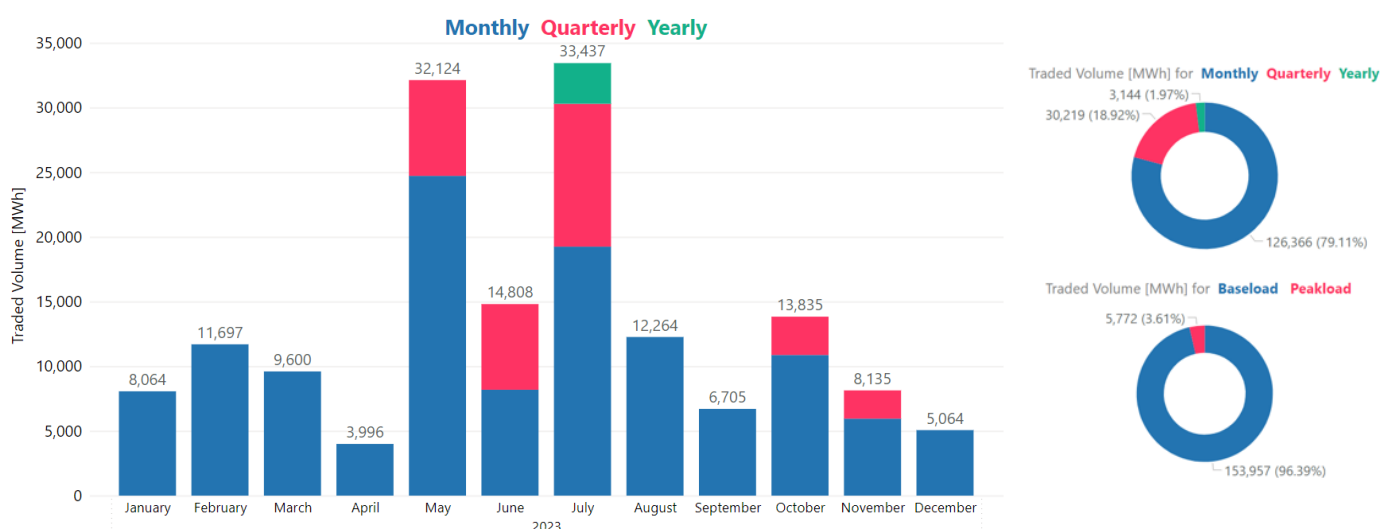


3. Derivatives Market

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



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



Final settlement prices for 2023 for monthly products

Series	Final Settlement Price (€/MWh)	% change	Series	Final Settlement Price (€/MWh)	% change
GREBM0123	191.79		GREPM0123	201.60	
GREBM0223	156.24	↓ -19%	GREPM0223	169.57	↓ -16%
GREBM0323	122.76	↓ -21%	GREPM0323	119.39	↓ -30%
GREBM0423	120.44	↘ -2%	GREPM0423	111.10	↘ -7%
GREBM0523	105.59	↓ -12%	GREPM0523	109.85	↘ -1%
GREBM0623	91.49	↓ -13%	GREPM0623	86.96	↓ -21%
GREBM0723	112.68	↑ 23%	GREPM0723	117.60	↑ 35%
GREBM0823	109.33	↘ -3%	GREPM0823	114.56	↘ -3%
GREBM0923	101.95	↘ -7%	GREPM0923	108.22	↘ -6%
GREBM1023	111.19	↗ 9%	GREPM1023	129.72	↑ 20%
GREBM1123	105.40	↘ -5%	GREPM1123	134.91	↗ 4%
GREBM1223	102.20	↘ -3%	GREPM1223	112.59	↓ -17%

4. Annex

Definitions

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

Market Details

- Market Time Units of GR BZ are in CET-hr.
- The Intraday Market of GR BZ consists of three Complementary Regional Intraday Auctions (CRIDAs) and of a Continuous Intraday Market (XBID)
- 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>



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