



Evolution of  
the electricity  
market  
Annual report

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2024

## Annual report 2024 / Contents

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### Executive summary

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2. Intraday auction market
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# Annual report 2024

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## Executive summary / Market results

- ▶ During 2024, the total energy traded in the daily and intraday markets was 278,8 TWh, 5,7% higher than that traded in 2023. Of this 278.8 TWh, 230,7 TWh were traded on the daily market and 48,1 TWh on the intraday markets.
- ▶ The arithmetic average daily market price on the MIBEL was 63,24 €/MWh, 27,9% lower than in 2023. The average price in the Intraday auction market, 54,42 €/MWh was lower than the daily market and the weighted average price in the continuous intraday market was 60,72 €/MWh.
- ▶ In the market shares in Spain by technology in 2024 in the Daily Base Operating Program (PDBF) compared to the shares in 2023, the largest increases correspond to hydroelectric energy, which has increased from 10,7% to 14,5%, and to solar energy, which has increased from 16.2% to 19.6%. The largest decreases correspond to combined cycle, which fell from 7.0% to 2.7%, and to nuclear energy, which fell from 22.6% to 20.0%.
- ▶ In the market shares in Portugal by technology in 2024 in the Daily Base Operating Program (PDBF) compared to the shares in 2023, the combined cycle plants have decreased their contribution, from 16,1% to 3,5%, with the rest of the technologies remaining in approximately the same proportions as the previous year, except for hydroelectric energy, which has increased its contribution from 32,9% to 40,4%.
- ▶ The technologies that have marked the most marginal hours are, in order, hydroelectric energy, wind, solar photovoltaic and biomass-cogeneration-waste (see Figure 1.13 and 1.14).

# Annual report 2024

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## Executive summary / Market results

- ▶ With respect to international energy exchanges and in comparison with the previous year, it can be seen that in the MIBEL zone continues to be a balance between imports and exports compared to the previous year when MIBEL had an exporting net position (see figure 5.7). The net energy exchange in the market with Morocco has been exporting.
- ▶ One of the most relevant events that took place in 2024 was the start-up on June 13th of three European intraday auctions. These new auctions replaced the regional auctions that had been held since April 1998 with the participation of agents belonging to the Spanish area and beyond June 30th 2007, in conjunction with the Portuguese area.
- ▶ In connection with the project to change the markets from one-hour trading period to quarter-hourly periods, OMIE has been working during 2024 on the proposal of market operating rules to allow for such a change, modification of procedures, on the necessary adaptations of applications that could cover different scenarios, as that could cover different scenarios, depending on whether the new trading period is allowed in one market or another, and designing and participating in the tests with the MIBEL market agents and with the different market and system operators involved in the different markets. The implementation of the quarter-hourly trading period in the daily market is planned to be performed jointly with the entire European scope in June 2025 and in the MIBEL intraday markets in March 2025.

# Annual report 2024

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## Executive summary / Market results

- ▶ In the MIBEL area, OMIE has continued to hold different seminars to report on the progress of current projects, such as, the new European intraday auctions, the implementation of the quarter-hour trading period and the new typology of daily market products for MIBEL.
- ▶ In the SWE (South West Europe) scope, on February 28th 2024, the OMIE - EMCO coupling took place at the French border on the day-ahead market in addition to the already implemented OMIE - EPEX. This coupling required the adaptation of market operation and settlement procedures on the MIBEL and European.
- ▶ In the European scope, on March 20th was held a simulation of “decoupling of all European markets” from the daily market where all the operating parties of the European Daily Market (NEMOs, TSOs, JAO and market agents) participated. The aim of these sessions is to give all operating parties the opportunity to test whether they are adequately prepared to handle a full decoupling situation including the regional pre- and post-coupling procedures and processes.
- ▶ Regarding the continuous intraday market, OMIE has continued participating in the prioritization of European projects to be implemented in the coming years, as well as in the design and implementation of all the improvements and evolutions of this market, highlighting the incorporation of new intraday market trading zones in quarter-hourly resolution, as done on December 16th 2024 for the Baltic countries.

# Annual report 2024

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## Executive summary / Market results

- ▶ Within the scope of the European continuous intraday market, energy from 25 countries is traded, being managed by 15 assigned market operators. On May 24th 2024, the BRM market operator was also incorporated as a new NEMO appointed in Romania to operate in this continuous intraday market. It is noteworthy that only 4 market operators are in charge of the coordination of the European continuous intraday market, one of them being OMIE.
- ▶ Finally, it should be noted that OMIE continued to operate the daily and intraday markets from the emergency system at certain times in 2024, in collaboration with agents, system operators and market operators involved in the different markets. In connection with the operation, OMIE has put into operation a new production systems data processing center.

# Annual report 2024

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## Executive summary / Economic results

- ▶ During the year 2024, **all the settlement, billing, collections and payments and guarantees management processes have been in operation normally and without incidents.**
- ▶ During the year, adaptations were made to the settlement processes arising from the entry into operation in February 2024 of a second central counterparty in France against which to settle energy flows through the interconnection between Spain and France as a result of the coupling of the day ahead market, as well as the entry into operation of the new European intraday auctions (IDAs) in June 2024. Both processes required the modification of the corresponding cross-border settlement agreements with the counterparties established in France, for the economic settlement of the import and export programmes as well as the congestion incomes resulting from the market coupling.
- ▶ During 2024, OMIE's commitment to **electronic guarantees** has been consolidated with the entry of new financial institutions with the capacity to issue this type of guarantee. Likewise, during the year a higher level of automation has been incorporated into the guarantee management processes, allowing participants to **formalize guarantees with greater agility** in a year in which the guarantee's operations have remained at very high values.
- ▶ The use of the **advance payment** mechanism made available to agents by OMIE at the end of 2021, has kept showing as a **useful tool to mitigate the volume of guarantees required to operate in the market** at times of market price increases, as happened during the second half of the year.

## Annual report 2024

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### Executive summary / Economic results

- ▶ The economic volume of purchases in the markets managed by OMIE in 2024 was €16,224 million, 26.1% less than the previous year.
- ▶ The economic volume of purchases in the Spanish zone during 2024 was €12,652 million, while in the Portuguese zone it was €3,573 million, decreasing respectively by 25.2% and 29.2% compared to previous year.
- ▶ The final average price of the national demand of the Spanish electricity system for 2024 was 76.33 €/MWh, 23.7% less than the previous year.
- ▶ The daily and intraday markets have accounted for 84.70% of this final price, while the remaining 15.30% corresponds to the cost of system adjustment services and other processes managed by the system operator.
- ▶ The congestion income generated in the Spain-France interconnection in 2024 was €450 million, 10.8% less than the previous year. There were price difference between both zones 67.5% of the hours.
- ▶ The congestion income generated in the Spain-Portugal interconnection in 2024 was €22 million, 27.7% less than the previous year. There were price difference between the zones 6.2% of the hours.

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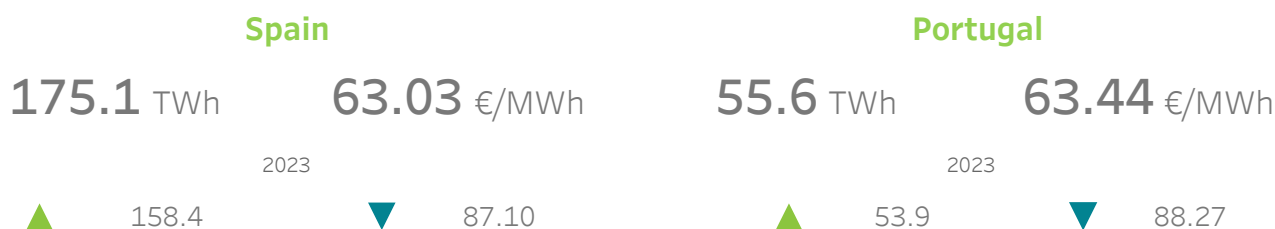
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## Executive summary / Economic results

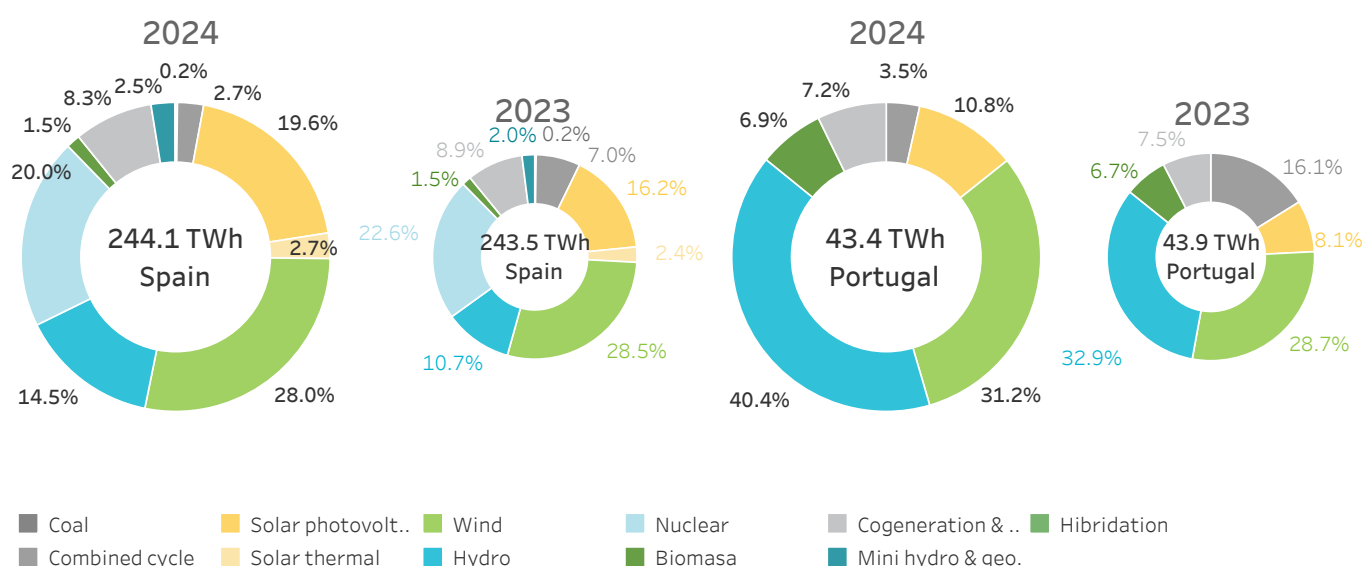
- ▶ The economic volume of the energy exchanges from MIBEL through the interconnection with France has risen to €1,070 million for imports and 442 million for exports, having an increase of 11.4% in the first case and a reduction of 56.2% in the second compared to the previous year.
- ▶ Through the interconnection with Morocco, the economic volume of imports has risen to €24 million and that of exports to €159 million, having a reduction of 33,3% in the first case and a reduction of 19.0% in the second compared to last year.
- ▶ The weekly average payments made to creditor agents on the market, in 2024, was €182 million, decreasing by 28.9% compared to the previous year.
- ▶ The settlement system of the market has efficiently managed the continuous participation increase in the market of direct consumers and retailers in the recent years, keeping this tendency during last year. The number of debtor agents in 2024 stayed, on average, at 369, while that of creditor agents at 107.
- ▶ During 2024, 182,144 purchase invoices and 104,140 sales invoices were issued for energy markets managed by OMIE, 4.8% and 13.1% higher respectively compared to the values of the previous year.

## Day-ahead market

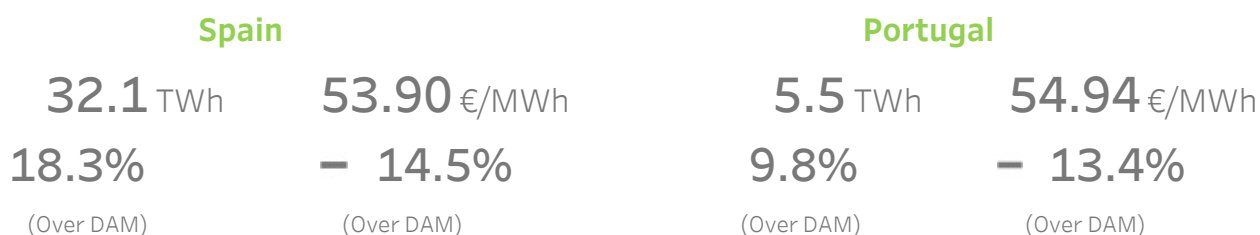
Energy and price day-ahead matched program (Programa Diario Base de Casación, PDBC)



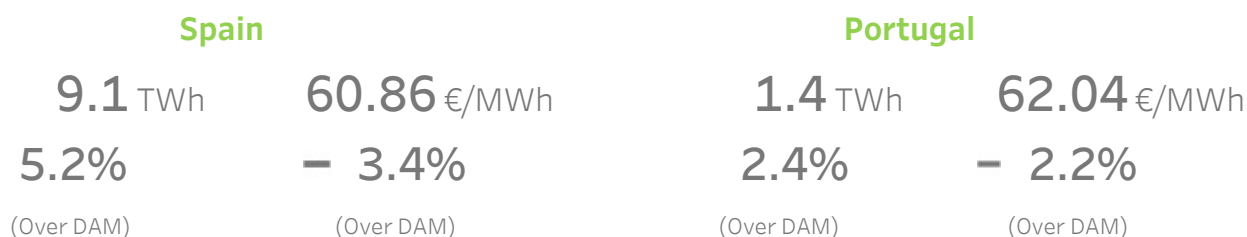
Tecnology day-ahead operations program (Programa Diario Base de Funcionamiento, PDBF)



## Intraday auction market



## Intraday continuos market



For the intraday continuous market, the energy and trades for each country include all the trades in which at least one of the agents involved in the trade belongs to that country.

The prices shown for the day-ahead market and the intraday auctions market are arithmetic average prices.

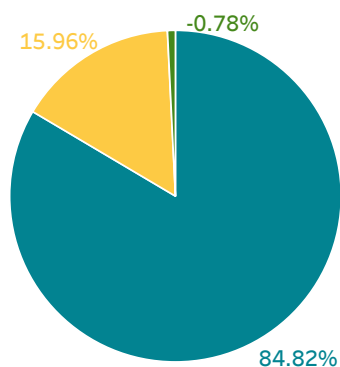
The prices shown for the intraday continuous market are weighted average prices.

## Economic volume 2024 (Millions of €)

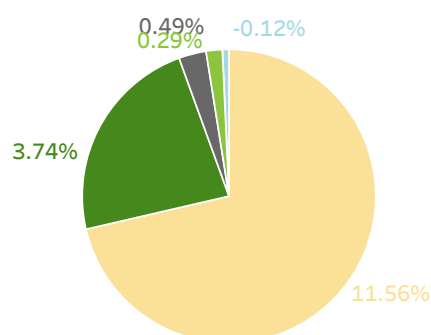
	Spain		Portugal	
<b>Day-ahead market</b>	10,299 M€	▼ 23.05%	3,293 M€	▼ 27.16%
	13,306 M€	Variation 2024 - 2023	4,521 M€	Variation 2024 - 2023
	Last year		Last year	
<b>Intraday auctions market</b>	1,799 M€	▼ 35.65%	232 M€	▼ 48.13%
	2,795 M€	Variation 2024 - 2023	447 M€	Variation 2024 - 2023
	Last year		Last year	
<b>Continuous intraday market</b>	554 M€	▼ 26.06%	48 M€	▼ 29.22%
	749 M€	Variation 2024 - 2023	68 M€	Variation 2024 - 2023
	Last year		Last year	
<b>Congestion income</b>	22 M€	▼ 27.71%	329 M€	▼ 34.88%
	30 M€	Variation 2024 - 2023	504 M€	Variation 2024 - 2023
	Last year		Last year	
<b>% Hours with price difference</b>	6.23 %		67.47 %	

## Final average price of the Spanish electricity system

### Components - National demand



- Day-ahead market
- Others:
- Importe participación servicios
- Constraints
- Secondary band and ADRS
- Intraday market
- Other SO processes
- Capacity payments



### National demand

76.33 €/MWh

100.02 €/MWh  
Last year  
▼ 23.69%  
Variation 2024 - 2023

### Free market

76.19 €/MWh

99.92 €/MWh  
Last year  
▼ 23.75%  
Variation 2024 - 2023

### Reference retailers

77.95 €/MWh

101.13 €/MWh  
Last year  
▼ 22.92%  
Variation 2024 - 2023

## Annual report 2024

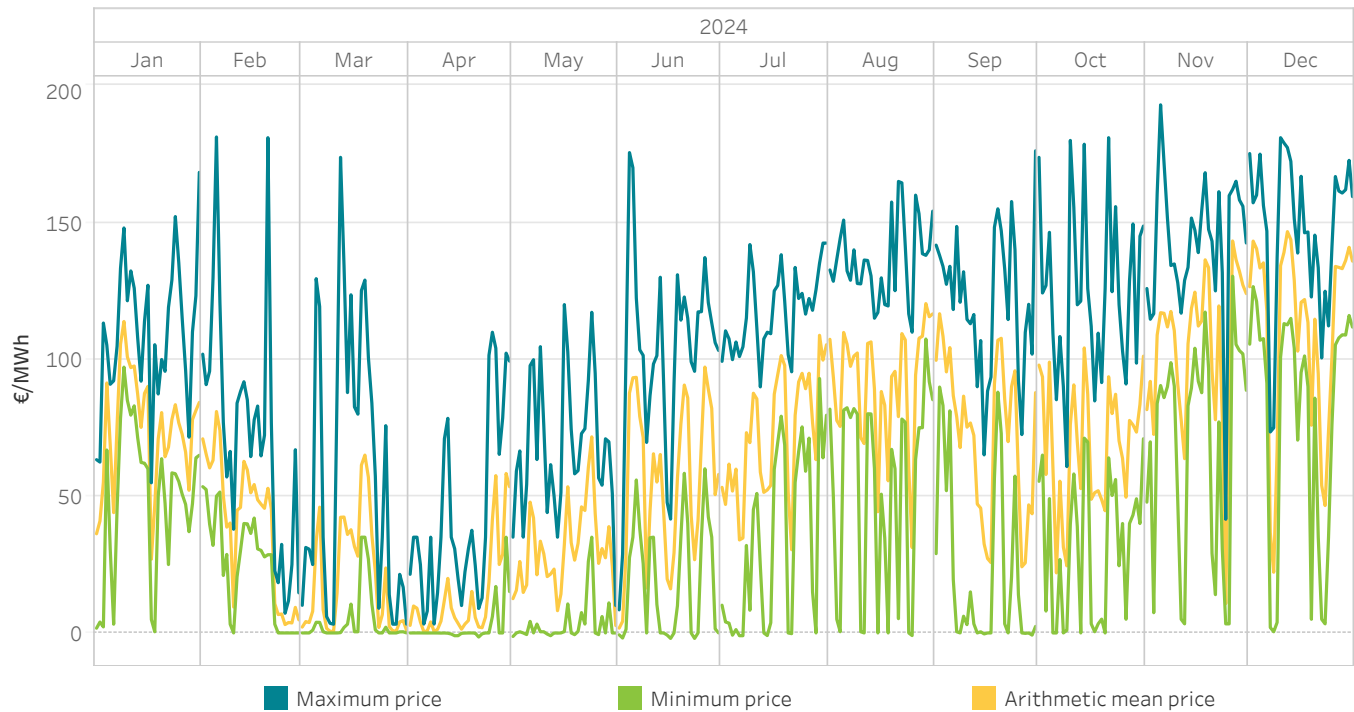
# 1.

## Day-ahead market

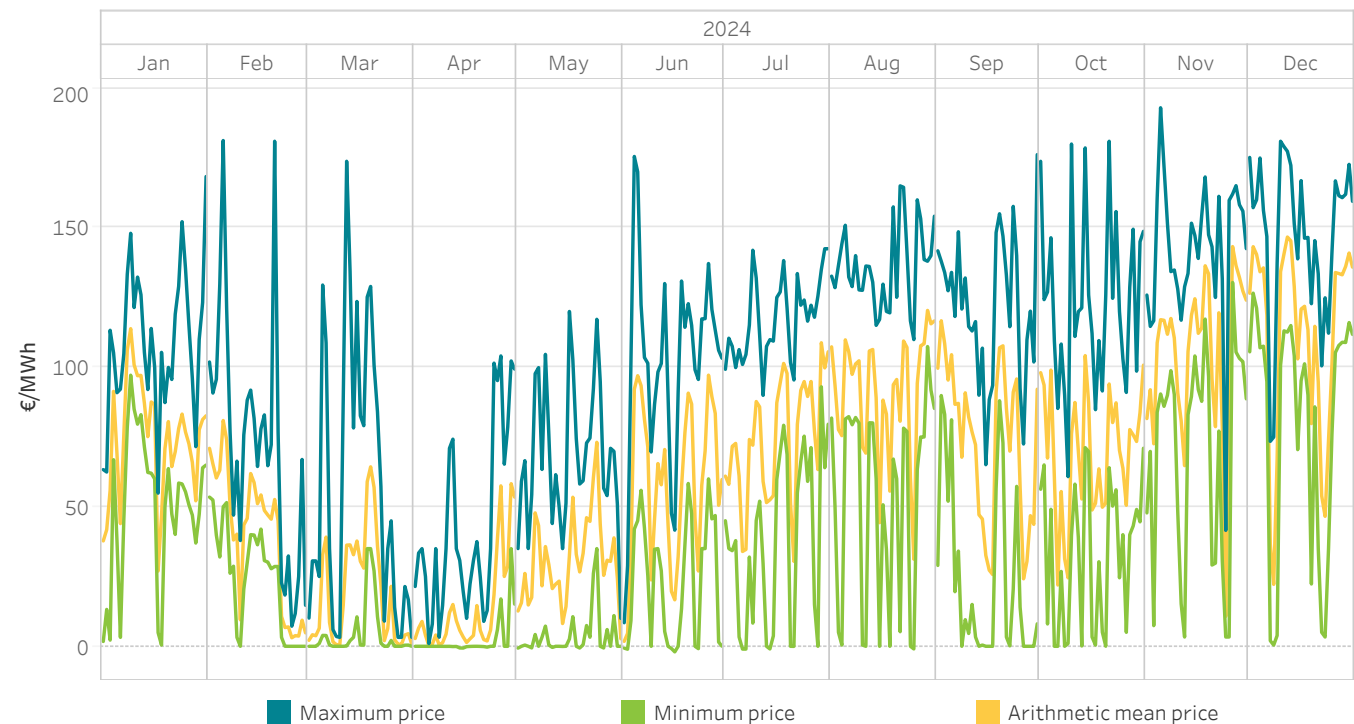
- Prices and energies on the day-ahead market
- Technologies on the day-ahead market
- Matched energy for acquisition units



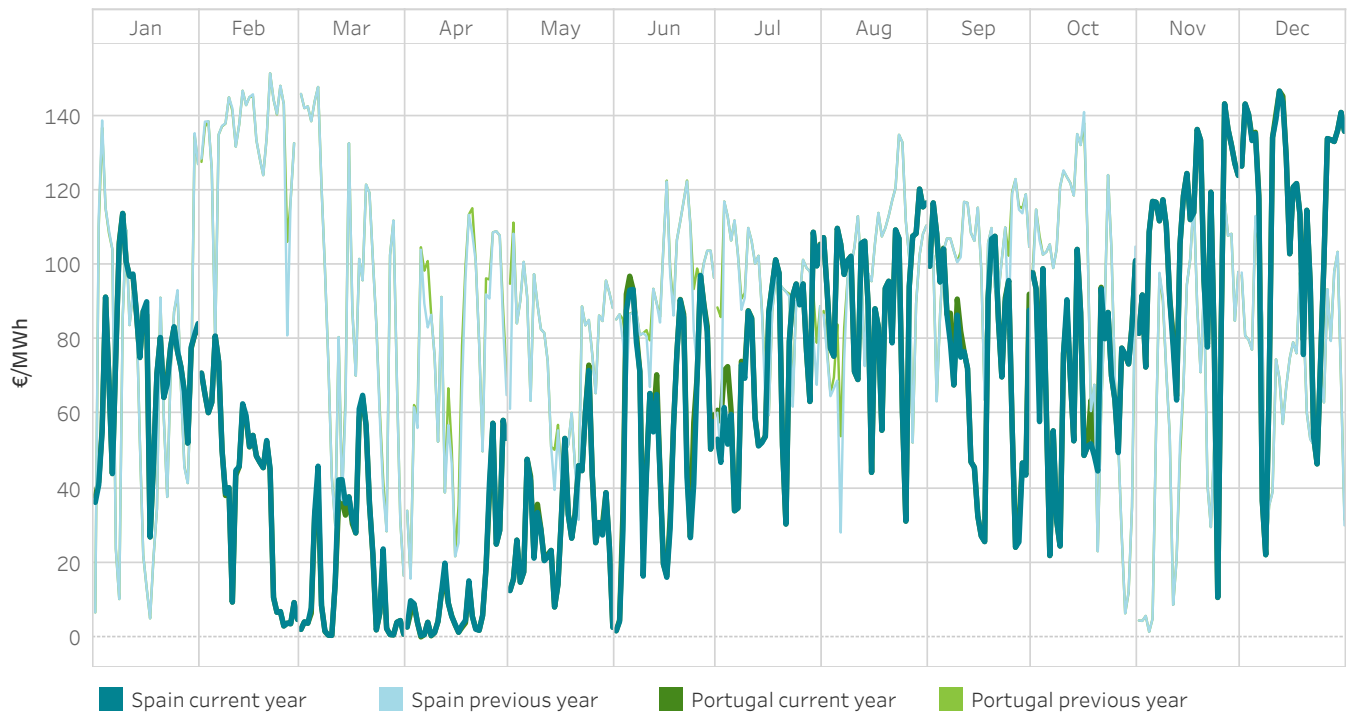
**1.1 Maximum, minimum and arithmetic mean price on the day-ahead market**  
In Spain



**1.2 Maximum, minimum and arithmetic mean price on the day-ahead market**  
In Portugal



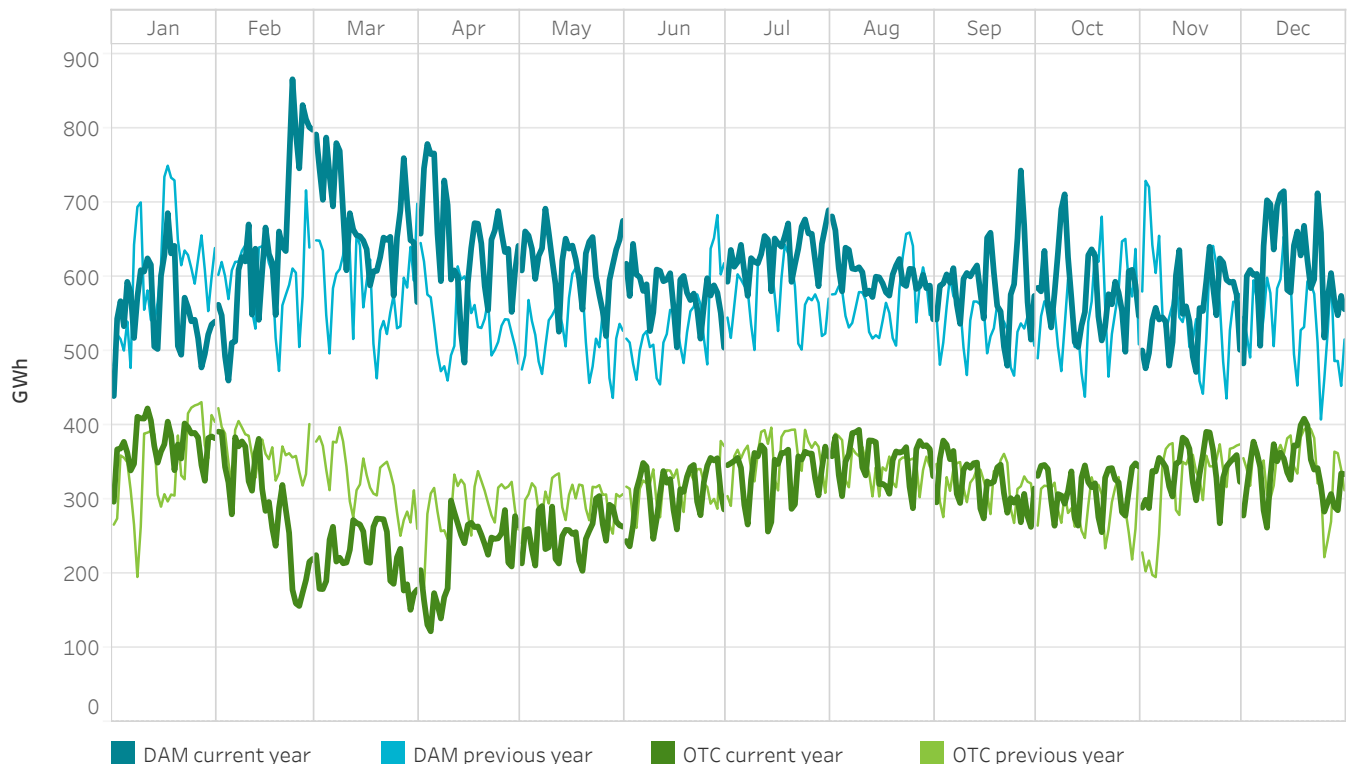
### 1.3 Day-ahead arithmetic mean prices for 2024 compared to 2023 In Spain and Portugal



### 1.4 Energy negotiated on the day-ahead market and over the counter contracts (OTC) for 2024 compared to 2023 In Spain and Portugal

In Spain and Portugal

The negotiated energy is calculated as the addition of the acquisitions plus the net exports.



1.5 Prices [€/MWh] and energies [GWh] on the day-ahead market  
In Spain

Año de study	Mes de study	Arithmetic mean price	Maximum price	Minimum price	Market energy	OTC energy
2024	January	74.10	168.35	0.43	12,604.0	11,481.3
	February	40.00	181.26	0.00	14,485.5	8,341.8
	March	20.28	173.82	0.00	16,025.9	6,806.2
	April	13.67	109.90	-1.50	15,429.5	5,621.7
	May	30.40	120.00	-1.29	15,555.7	6,536.1
	June	56.08	175.55	-2.00	14,076.0	7,922.1
	July	72.31	142.48	-1.01	15,908.4	8,974.1
	August	91.05	165.01	-0.95	14,833.9	9,300.9
	September	72.62	176.21	-0.79	14,275.2	8,073.2
	October	68.54	181.00	-0.01	14,078.7	8,244.5
	November	104.43	193.00	3.32	12,751.7	8,615.9
	December	111.24	181.00	0.44	15,058.6	8,612.2
Interannual results		63.03	193.00	-2.00	175,083.1	98,530.1

Año de estudio	Period	Arithmetic mean price	Maximum price	Minimum price	Market energy	OTC energy
2023	January-December	87.10	220.00	0.00	158,449.8	118,149.1
2024	January-December	63.03	193.00	-2.00	175,083.1	98,530.1

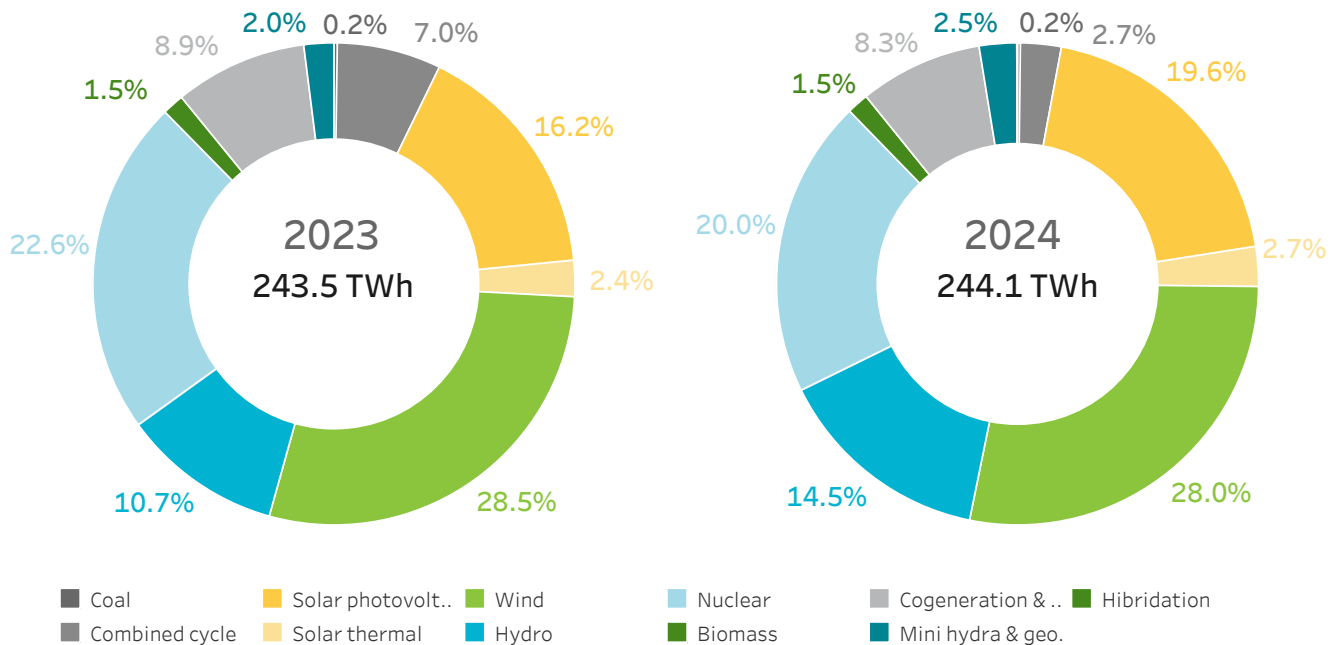
1.6 Prices [€/MWh] and energies [GWh] on the day-ahead market  
In Portugal

Año de study	Mes de study	Arithmetic mean price	Maximum price	Minimum price	Market energy	OTC energy
2024	January	74.08	168.35	0.43	5,346.7	157.2
	February	39.86	181.26	0.00	4,824.5	122.8
	March	19.26	173.82	0.00	5,493.0	117.3
	April	13.23	104.06	-0.63	4,642.0	1,200.4
	May	30.74	120.00	-0.66	4,477.3	1,388.4
	June	58.11	175.55	-2.00	4,105.3	1,383.2
	July	74.12	142.48	-1.01	4,467.1	1,537.5
	August	91.11	165.01	-0.95	4,215.8	1,670.1
	September	73.63	176.21	0.00	4,236.3	1,538.4
	October	69.41	181.00	-0.01	4,690.0	1,532.0
	November	104.60	193.00	3.32	4,434.4	1,575.8
	December	111.54	181.00	0.44	4,677.6	1,852.1
Interannual results		63.44	193.00	-2.00	55,609.9	14,075.2

Año de estudio	Period	Arithmetic mean price	Maximum price	Minimum price	Market energy	OTC energy
2023	January-December	88.27	220.00	0.00	53,901.2	1,504.1
2024	January-December	63.44	193.00	-2.00	55,609.9	14,075.2

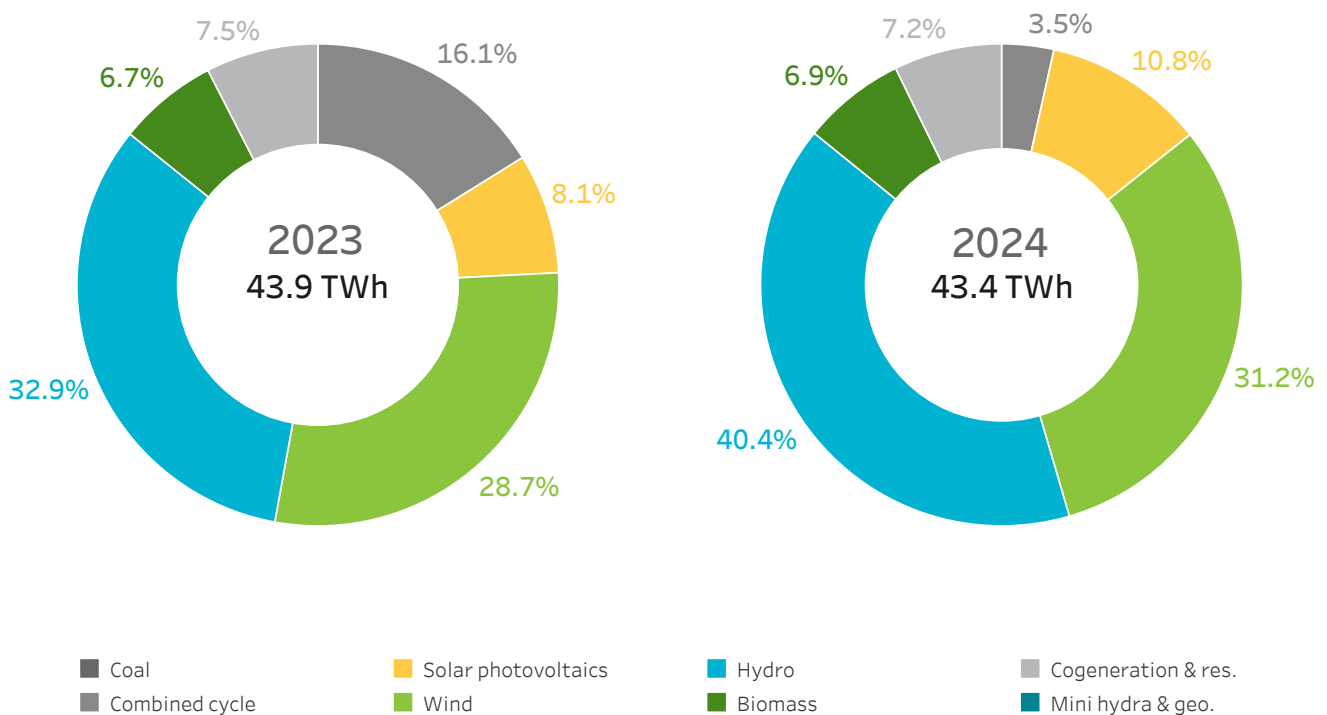
## 1.7 Technologies in the day-ahead operations program (Programa Diario Base de Funcionamiento, PDBF)

In Spain



## 1.8 Technologies in the day-ahead operations program (Programa Diario Base de Funcionamiento, PDBF)

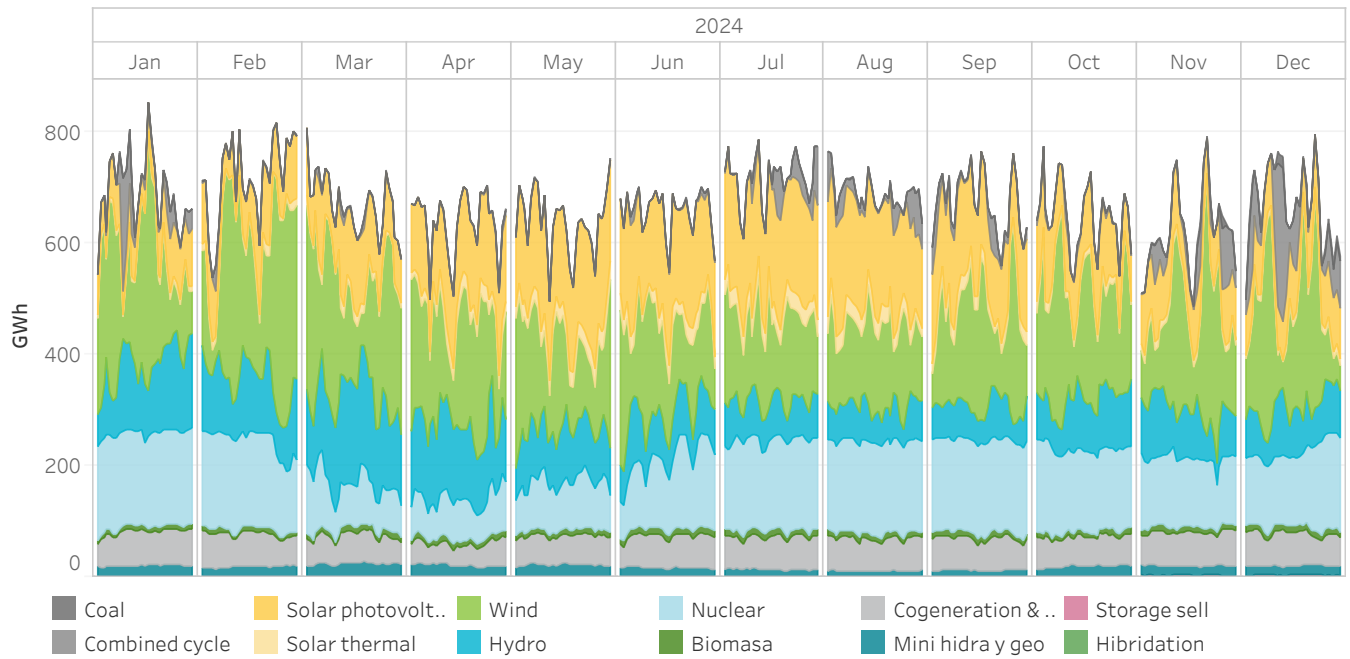
In Portugal



## 1.9 Energy classified by technology in the day-ahead operations program (Programa Diario Base de Funcionamiento, PDBF)

In Spain

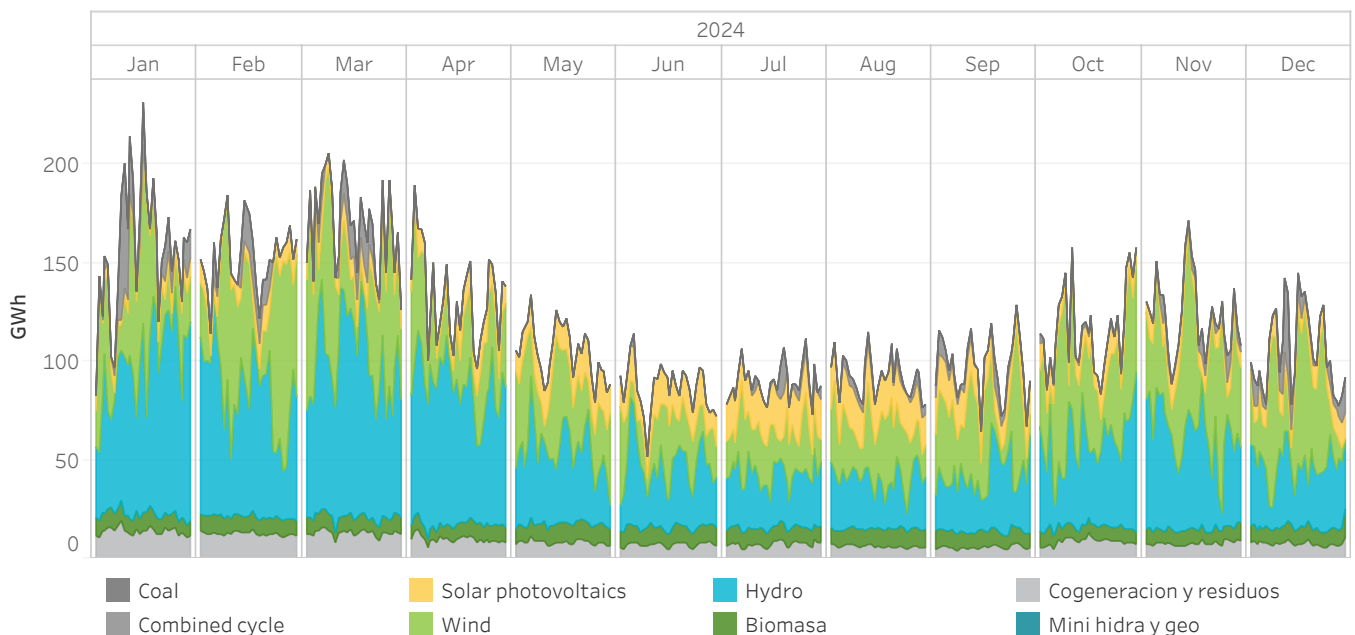
"Other renewables" includes the energy negotiated by cogeneration, waste, biomass, geothermics and minihydraulic.



## 1.10 Energy classified by technology in the day-ahead operations program (Programa Diario Base de Funcionamiento, PDBF)

In Portugal

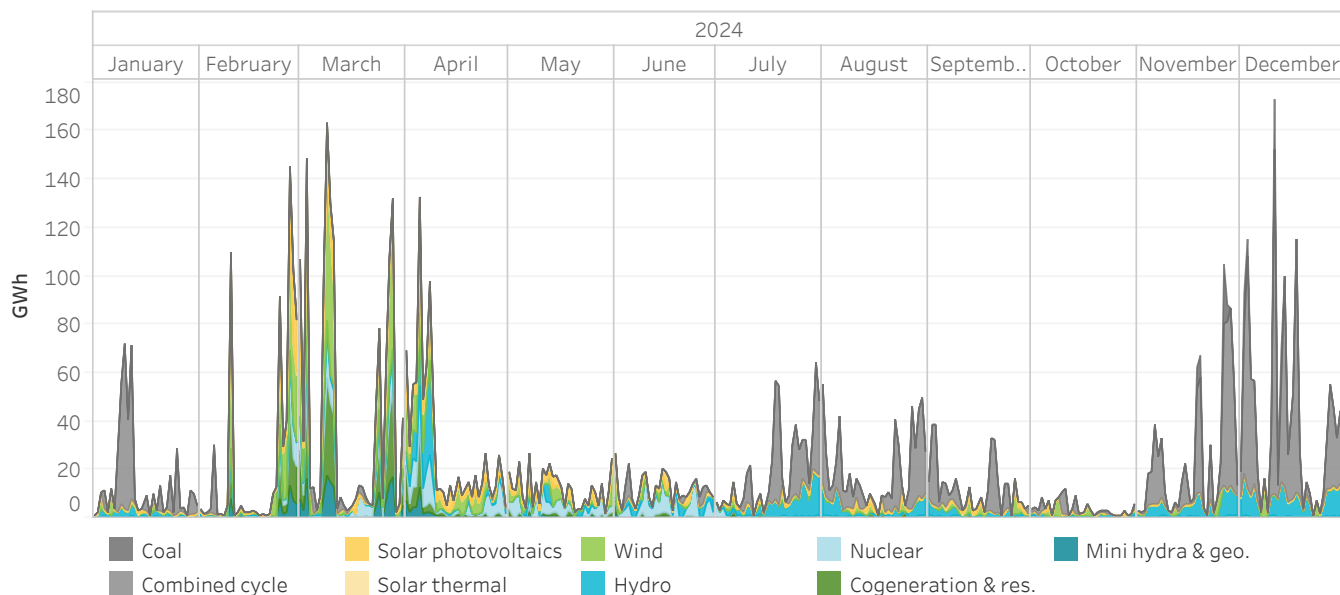
"Other renewables" includes the energy negotiated by cogeneration, waste, biomass, geothermics and minihydraulic.



## 1.11 Energy classified by technology at 95% of the marginal day-ahead market price

In Spain

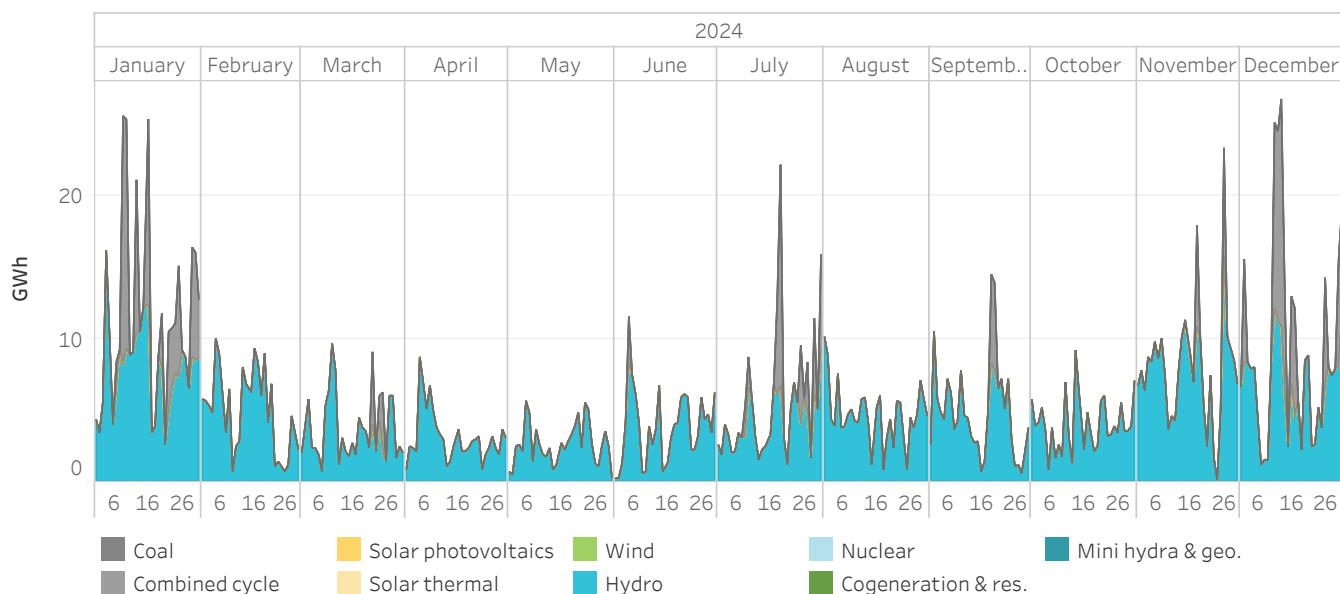
Energy matched classified by technology in the day-ahead market with bid price offered at a price greater than or equal to the 95% of the marginal price, including complex bids. The graph does not show the technologies setting the marginal price. This information is shown in graph 1.13.



## 1.12 Energy classified by technology at 95% of the marginal day-ahead market price

In Portugal

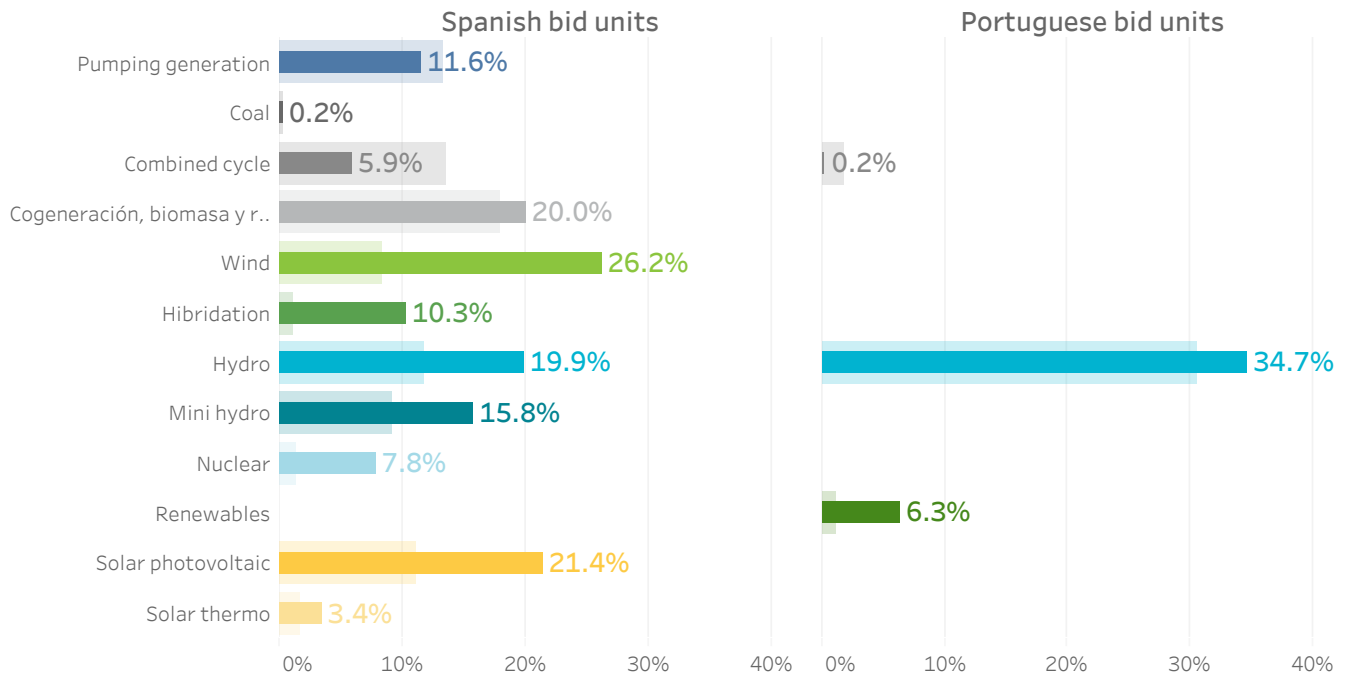
Energy matched classified by technology in the day-ahead market with bid price offered at a price greater than or equal to the 95% of the marginal price, including complex bids. The graph does not show the technologies setting the marginal price. This information is shown in graph 1.14.



## 1.13 Percentage of hours in which each technology sets a price

In Spain

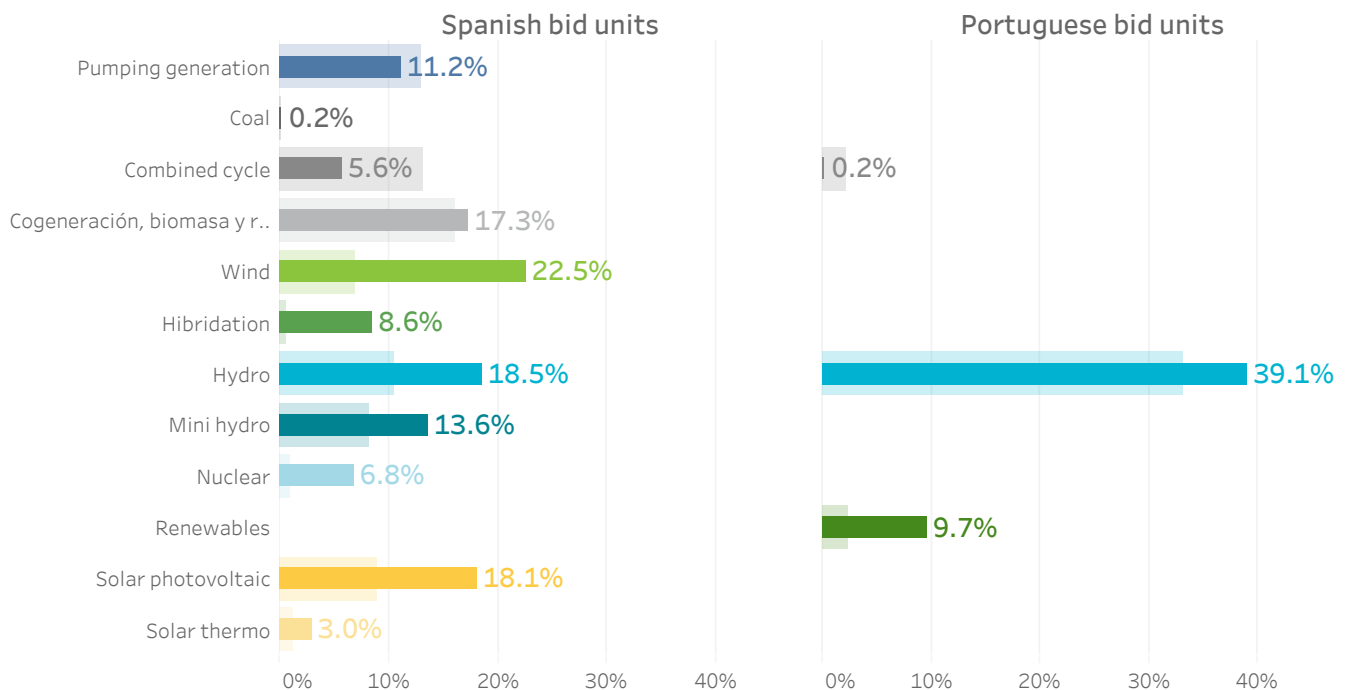
The previous year is shown in a lighter and thicker bar in the back of the graph.



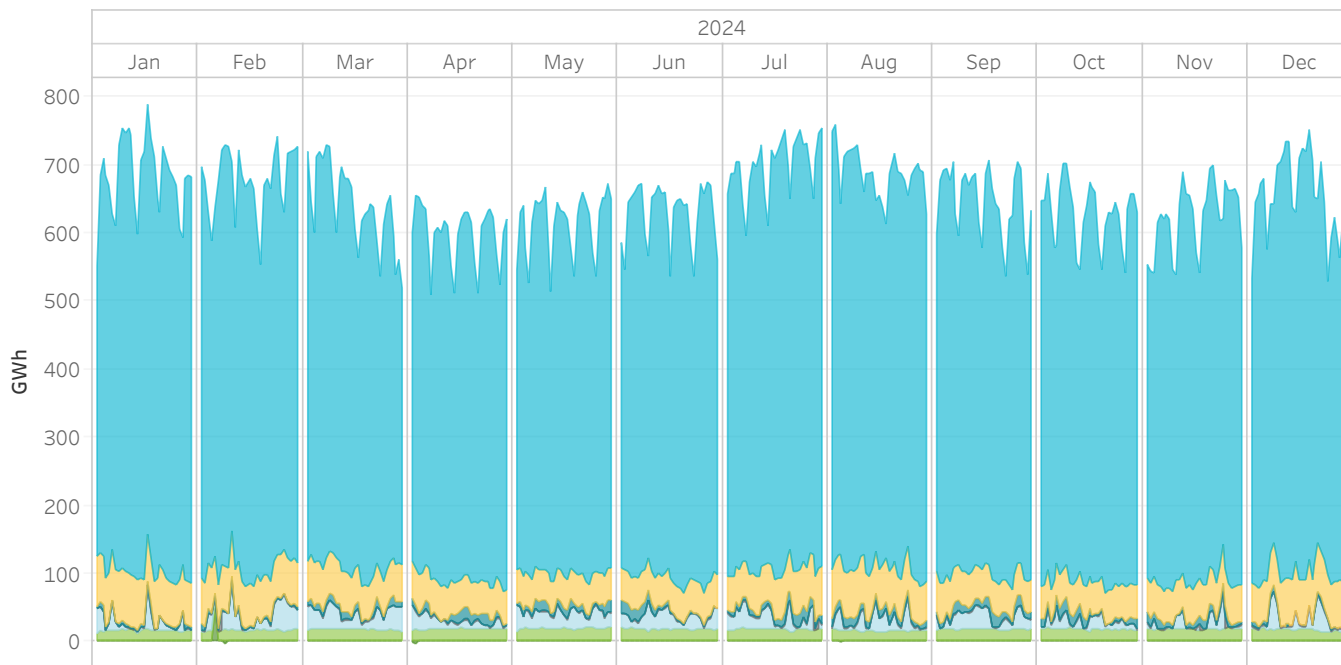
## 1.14 Percentage of hours in which each technology sets a price

In Portugal

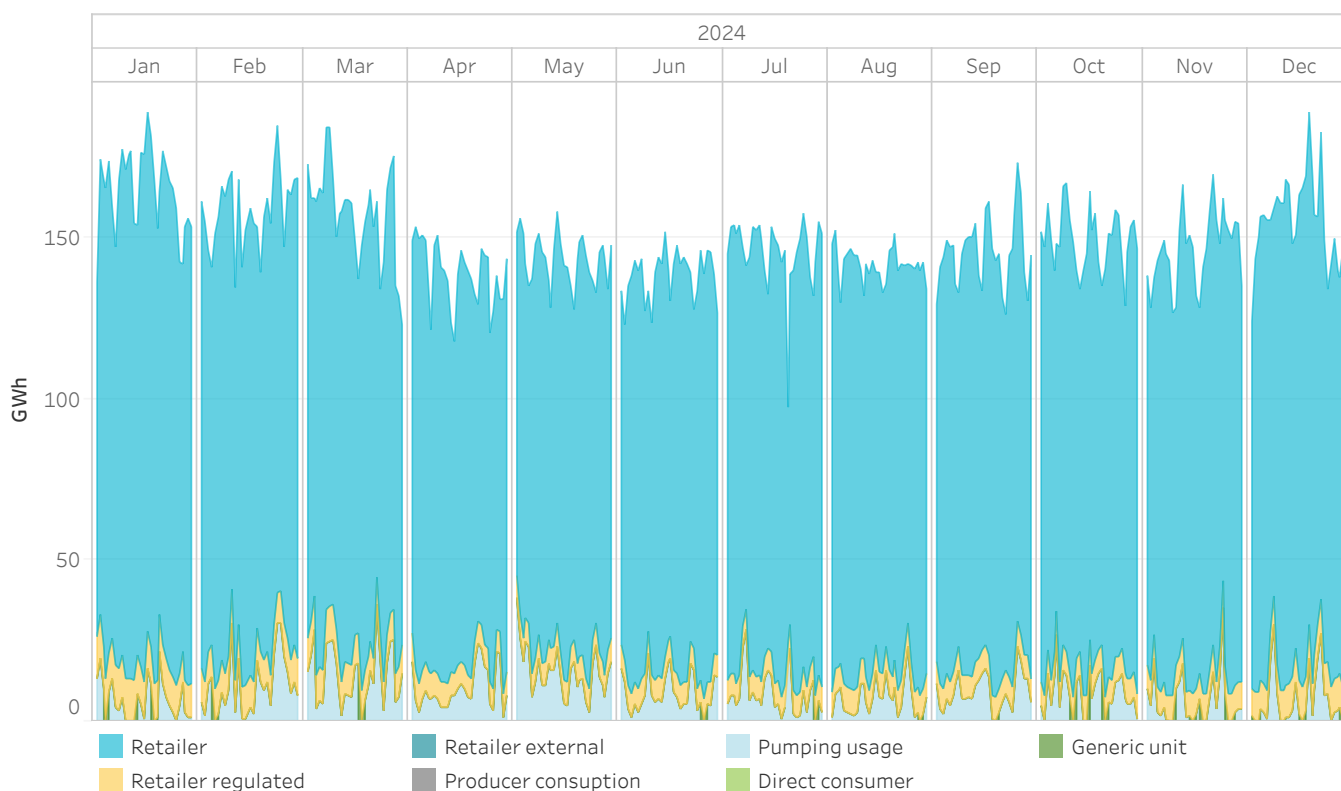
The previous year is shown in a lighter and thicker bar in the back of the graph.



## 1.15 Matched energy for acquisition units in the day-ahead operational program (Programa Diario Base de Funcionamiento, PDBF) In Spain



## 1.16 Matched energy for acquisition units in the day-ahead operational program (Programa Diario Base de Funcionamiento, PDBF) In Portugal



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# 2.

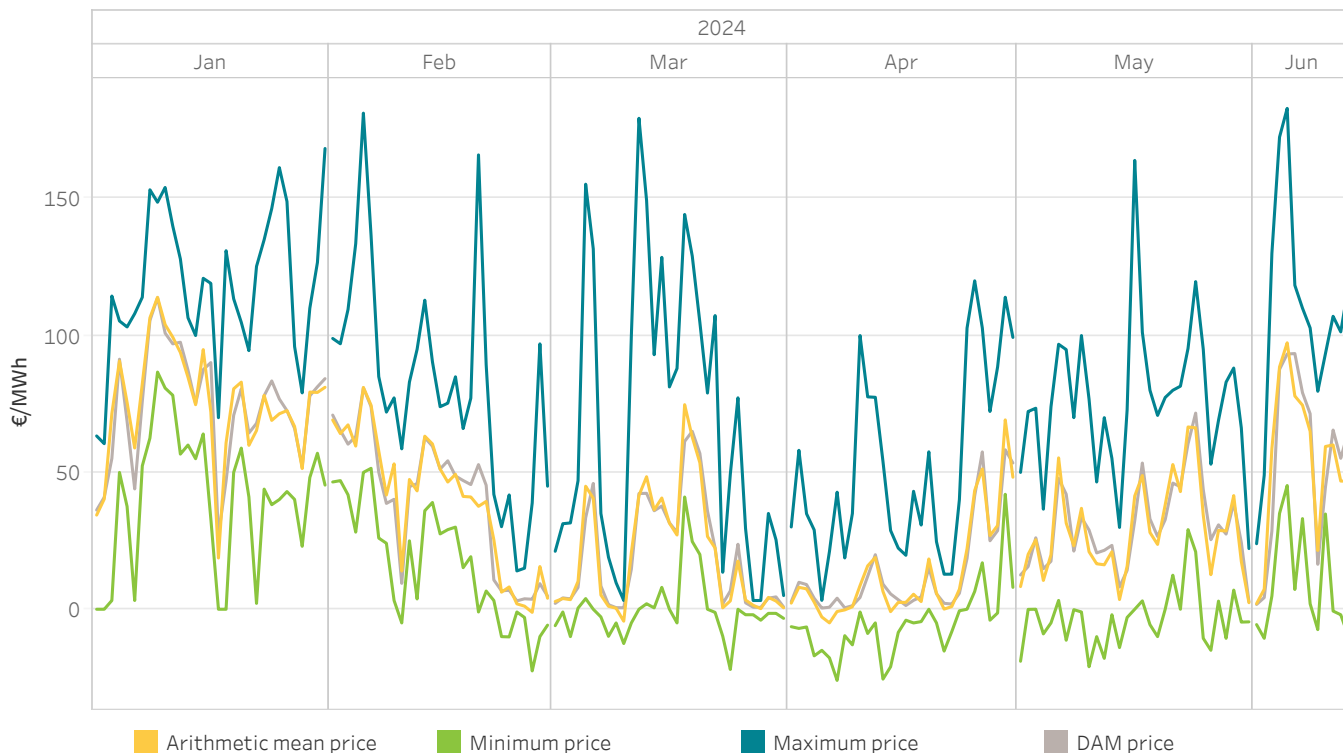
## Intraday auction market

- Prices and energies on the intraday auction market
- Technologies on the intraday auction market



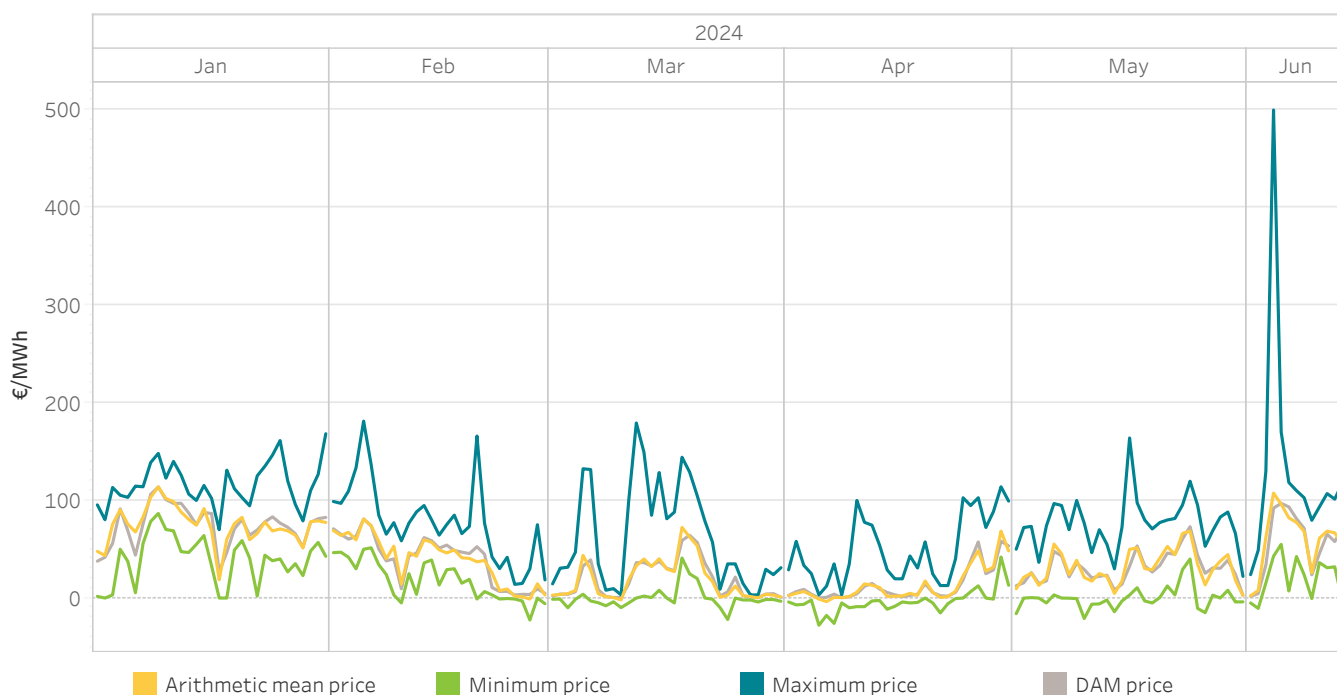
## 2.1 Maximum, minimum and arithmetic mean prices on the intraday regional auction market

In Spain



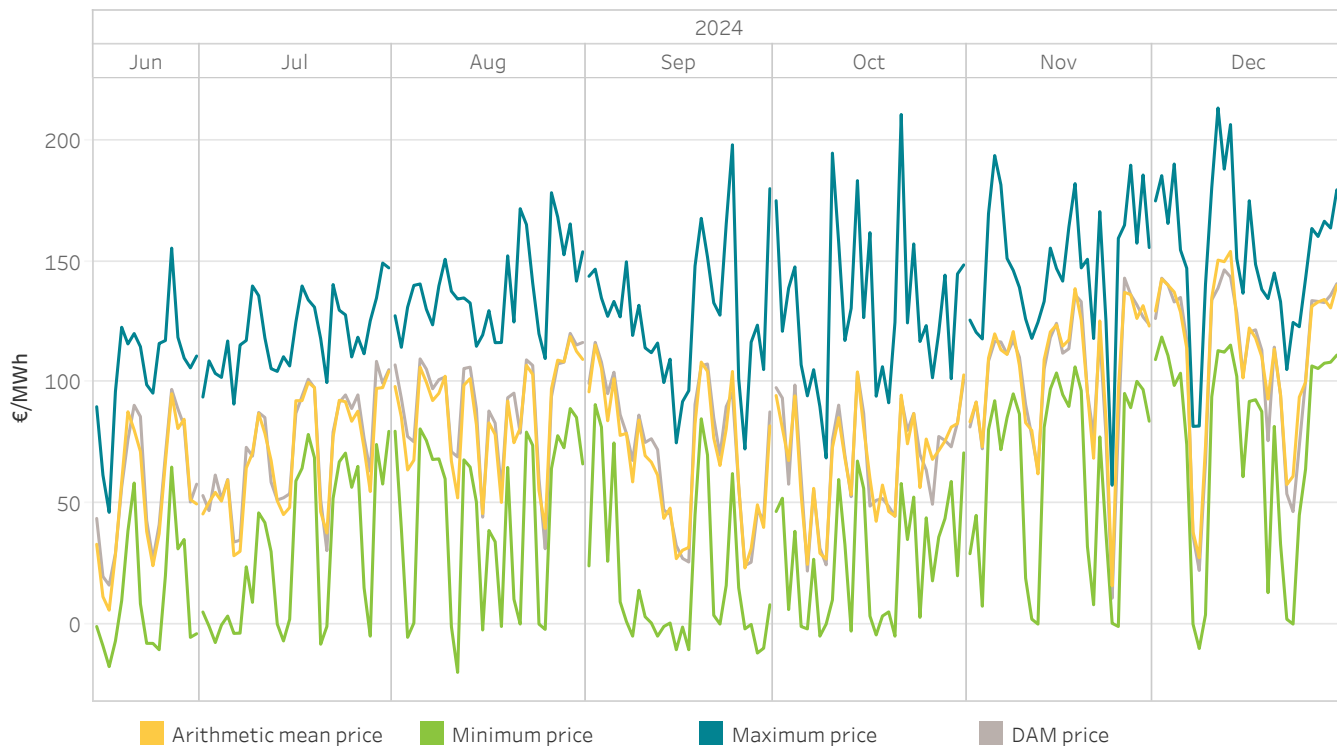
## 2.2 Maximum, minimum and arithmetic mean prices on the intraday regional auction market

In Portugal



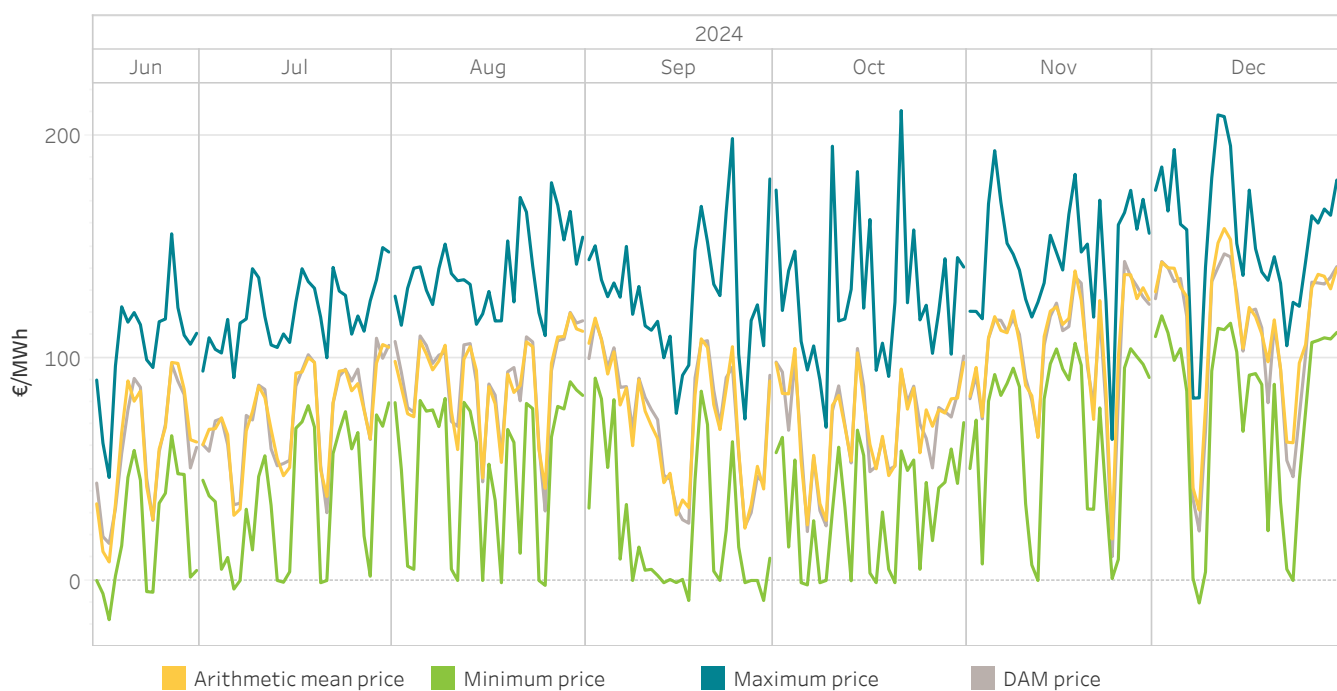
## 2.3 Maximum, minimum and arithmetic mean prices on the intraday auction market IDAs

In Spain



## 2.4 Maximum, minimum and arithmetic mean prices on the intraday auction market IDAs

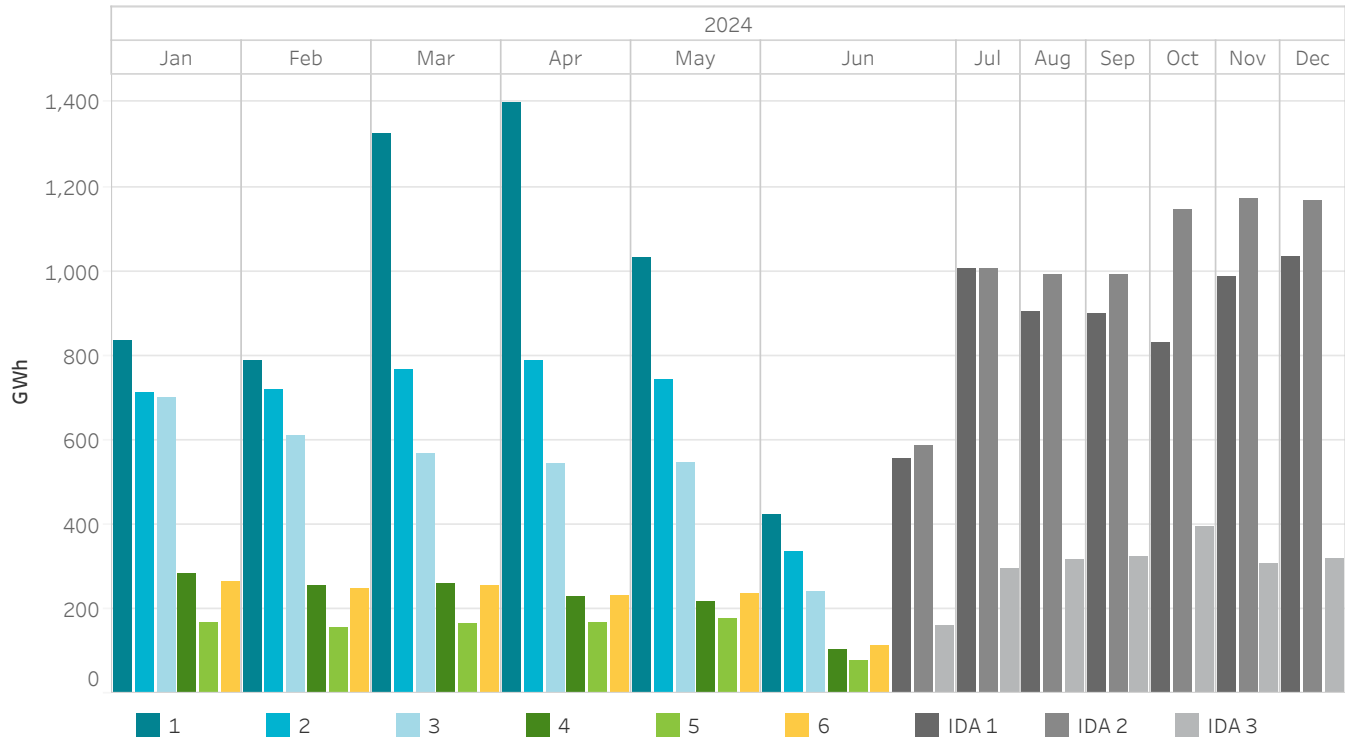
In Portugal



2.5 Monthly energy by session on the intraday auction market

In Spain

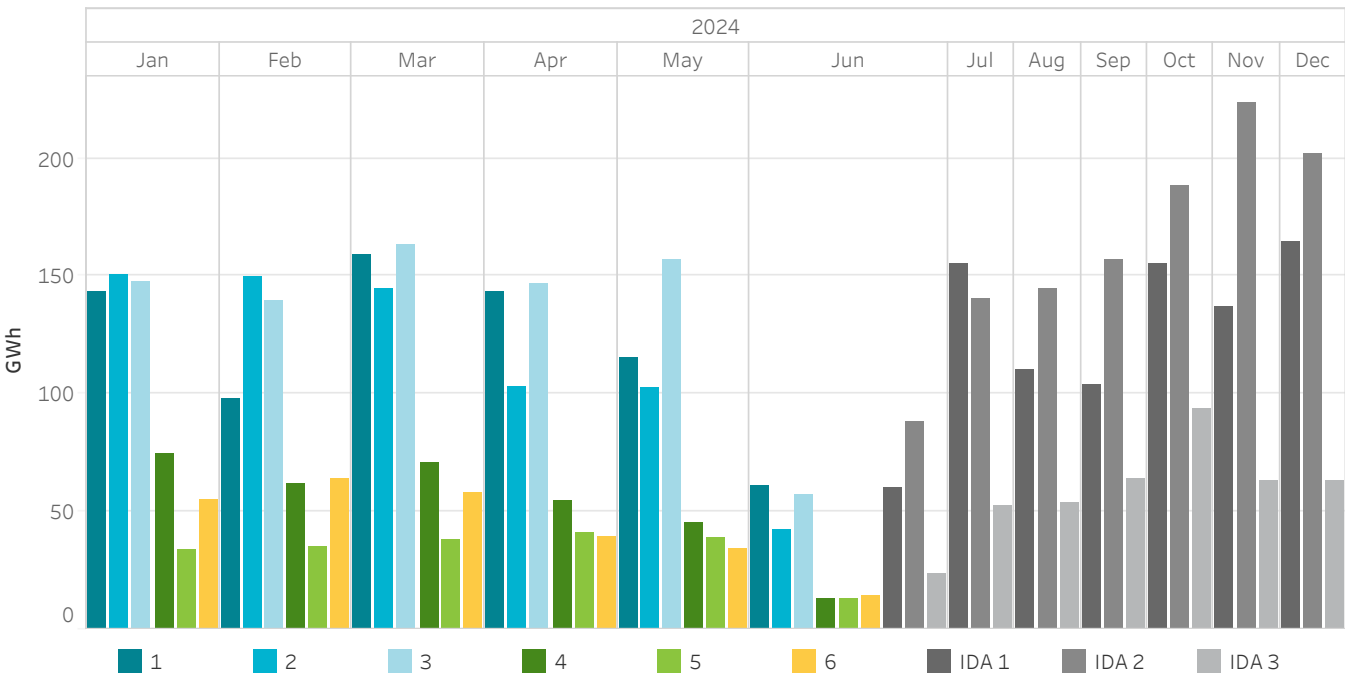
The negotiated energy is calculated as the addition of the acquisitions made in Spain plus the net exports.  
The 3 European auctions (IDAs) started on 06/14/2024.



2.6 Monthly energy by session on the intraday auction market

In Portugal

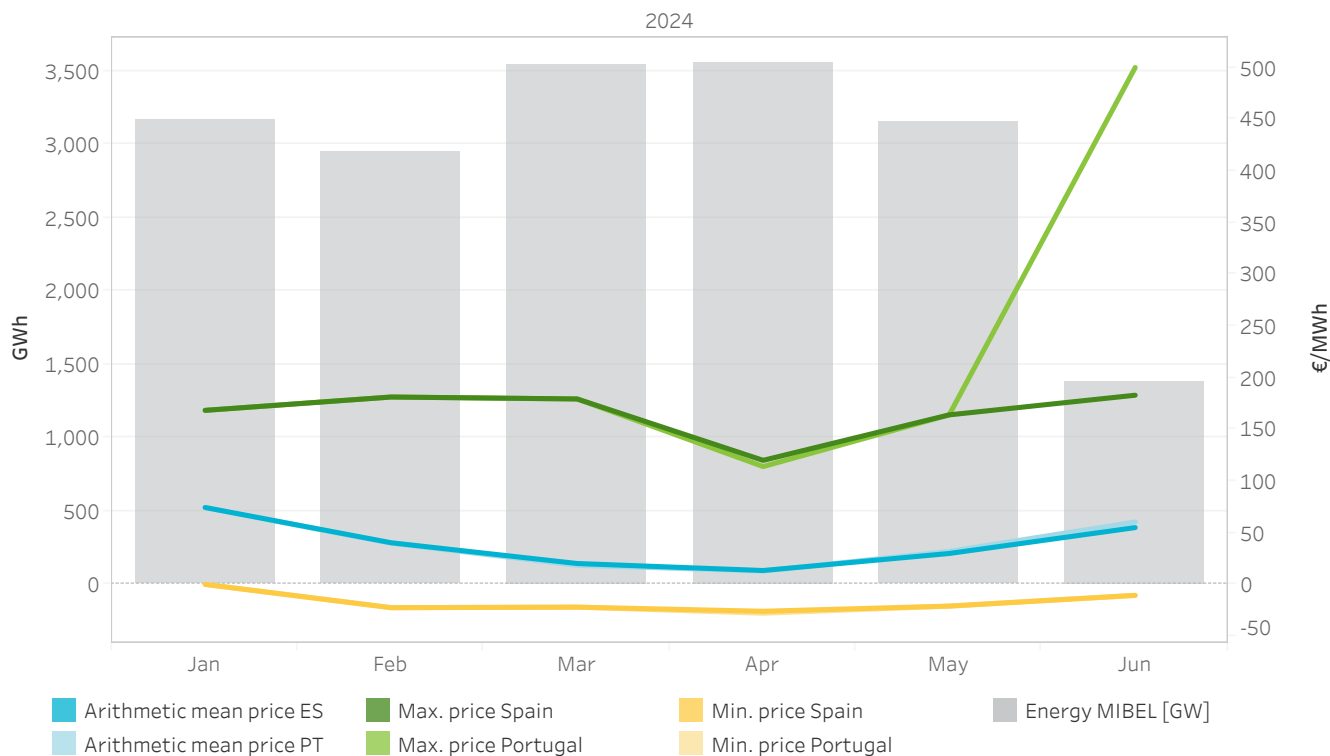
The negotiated energy is calculated as the addition of the acquisitions made in Portugal plus the net exports.  
The 3 European auctions (IDAs) started on 06/14/2024.



## 2.7 Prices and energy in the intraday regional auction markets

In Spain, Portugal and MIBEL

The maximum and minimum prices refer to hourly prices. The energy negotiated is calculated as the sum of acquisitions and net exports from each area.



## 2.8 Prices [€/MWh] and energy [GWh] in the intraday regional auction markets

In Spain, Portugal and MIBEL

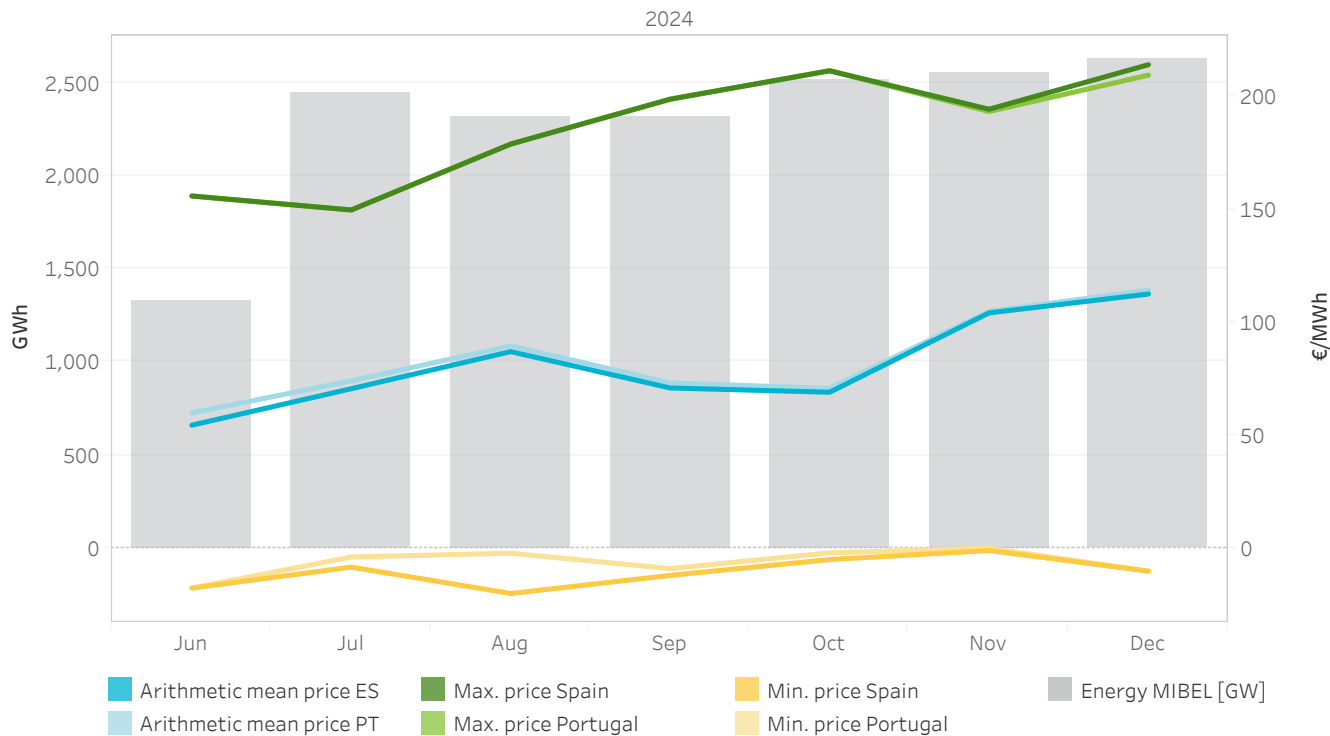
The maximum and minimum prices refer to hourly prices. The energy negotiated is calculated as the sum of acquisitions and net exports from each area.

	Arithmetic mean price ES	Arithmetic mean price PT	Max. price Spain	Max. price Portugal	Min. price Spain	Min. price Portugal	Energy Spain	Energy Portugal	Energy MIBEL [GWh]
January	74.40	74.22	168.35	168.35	0.00	0.00	2,964.42	606.75	3,158.96
February	40.27	39.84	181.26	181.26	-22.53	-22.53	2,777.49	548.69	2,943.83
March	20.20	18.49	179.38	179.38	-22.00	-22.00	3,342.42	636.97	3,547.68
April	13.42	12.98	120.00	114.00	-26.00	-27.88	3,355.46	527.53	3,552.10
May	29.90	31.94	163.99	163.99	-21.00	-21.00	2,947.49	495.93	3,154.17
June	54.95	60.38	183.00	500.00	-10.62	-10.62	1,289.27	203.59	1,388.26
Annual total	37.25	37.54	183.00	500.00	-26.00	-27.88	16,676.55	3,019.46	17,745.00

## 2.9 Prices and energy in the intraday auction markets IDAs

In Spain, Portugal and MIBEL

The maximum and minimum prices refer to hourly prices. The energy negotiated is calculated as the sum of acquisitions and net exports from each area.



## 2.10 Prices [€/MWh] and energy [GWh] in the intraday auction markets

IDAs

In Spain, Portugal and MIBEL

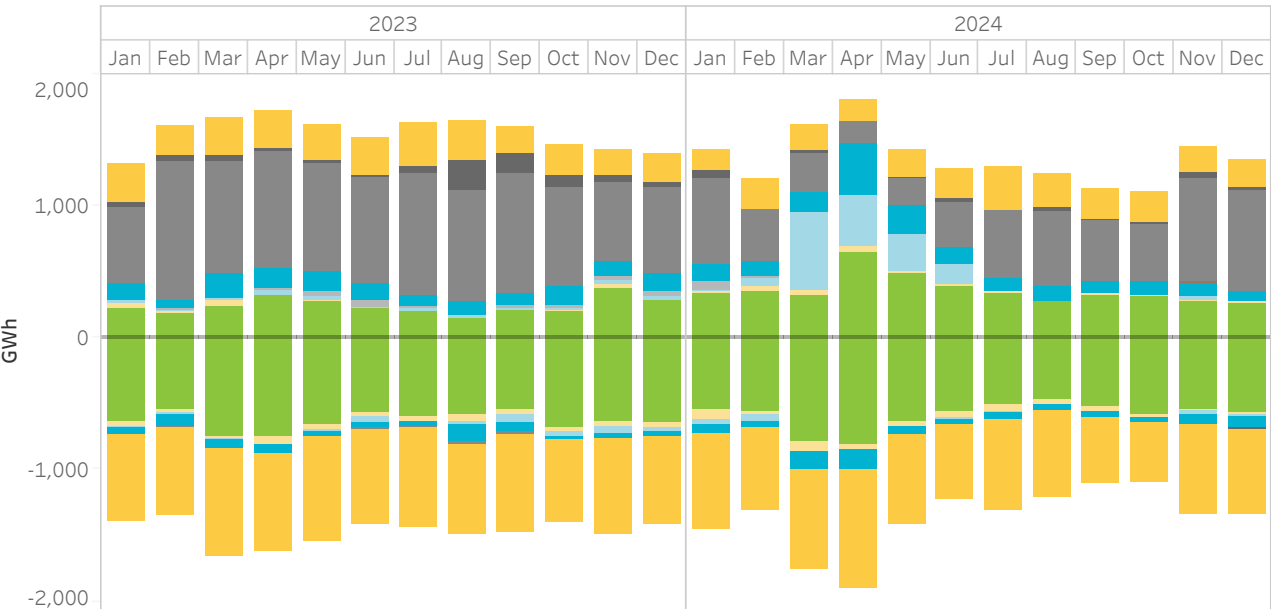
The maximum and minimum prices refer to hourly prices. The energy negotiated is calculated as the sum of acquisitions and net exports from each area.

	Arithmetic mean price ES	Arithmetic mean price PT	Max. price Spain	Max. price Portugal	Min. price Spain	Min. price Portugal	Energy Spain [GW]	Energy Portugal [GW]	Energy MIBEL [GW]
June	54.38	59.81	155.66	155.66	-17.62	-17.62	1,303.56	172.22	1,326.19
July	70.50	73.97	149.48	149.48	-8.34	-3.86	2,310.44	347.75	2,439.70
August	86.89	89.46	178.61	178.61	-20.00	-2.20	2,212.09	308.33	2,317.33
September	70.83	73.05	198.44	198.44	-12.00	-9.00	2,215.31	324.25	2,317.37
October	68.94	70.64	211.00	211.00	-5.00	-2.00	2,373.82	437.11	2,515.09
November	104.00	104.69	194.00	193.00	-1.00	0.00	2,461.76	423.68	2,555.46
December	112.34	114.09	213.69	209.07	-10.12	-10.12	2,519.20	430.25	2,619.65
Annual total	83.11	85.45	213.69	211.00	-20.00	-17.62	15,396.18	2,443.59	16,090.79

**2.11 Energy negotiated on the intraday auction market classified by technology**

In Spain

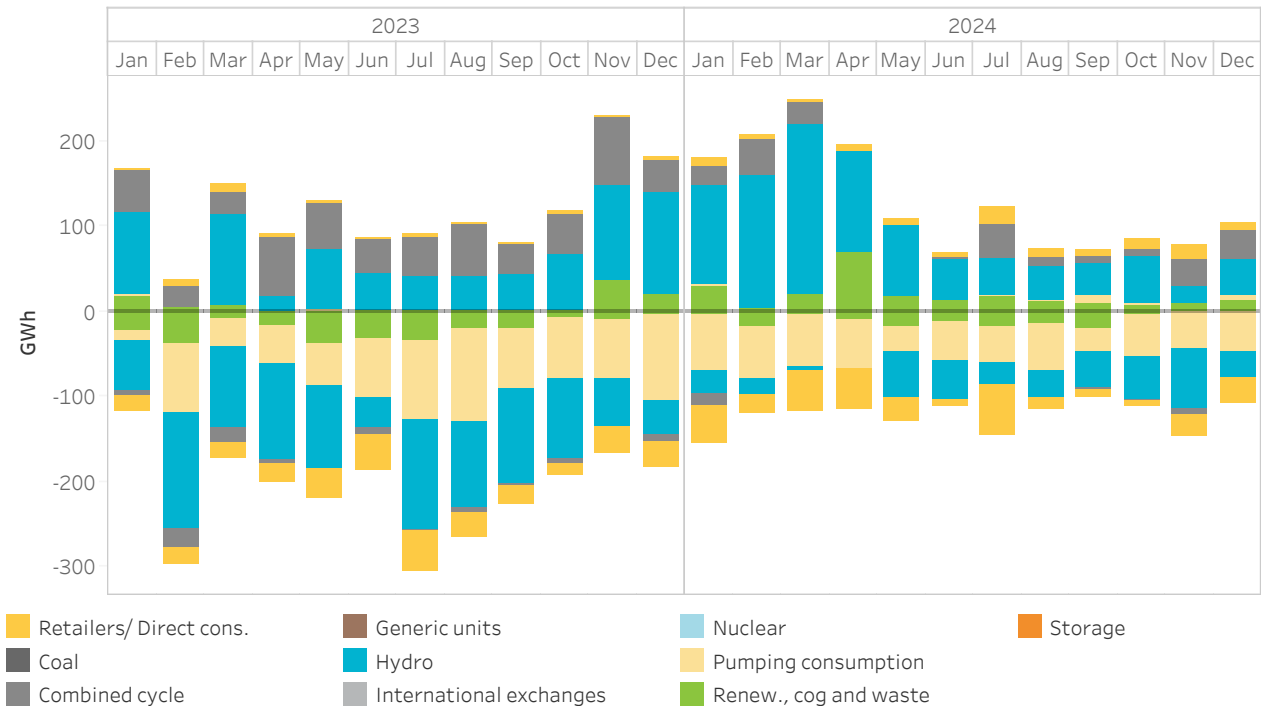
The positive values represent energy sales and the negative values represent energy purchases.  
The 3 European auctions (IDAs) started on 06/14/2024.



**2.12 Energy negotiated on the intraday auction market classified by technology**

In Portugal

The positive values represent energy sales and the negative values represent energy purchases.  
The 3 European auctions (IDAs) started on 06/14/2024.



## Annual report 2024

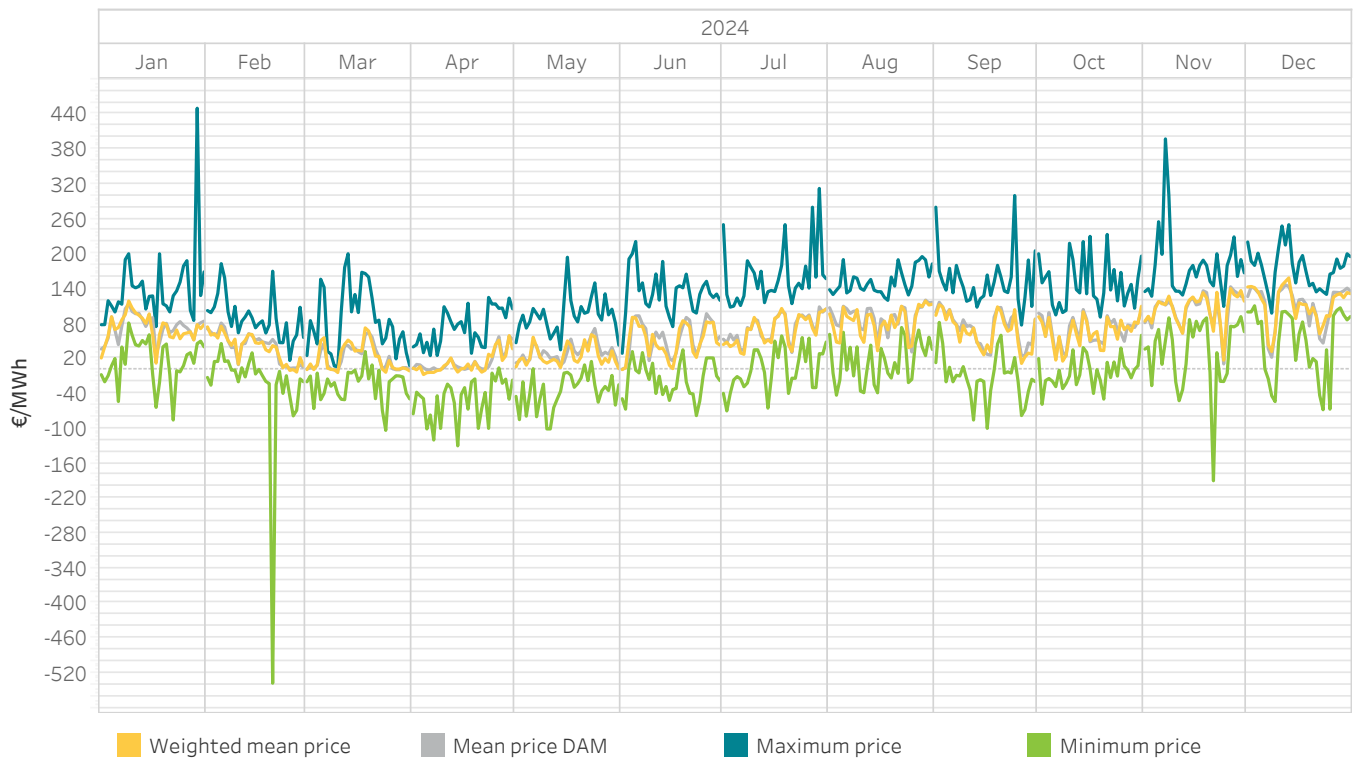
### 3. Intraday continuous market

- Prices and energies on the intraday continuous market
- Technologies on the intraday continuous market
- Negotiation on the intraday continuous market



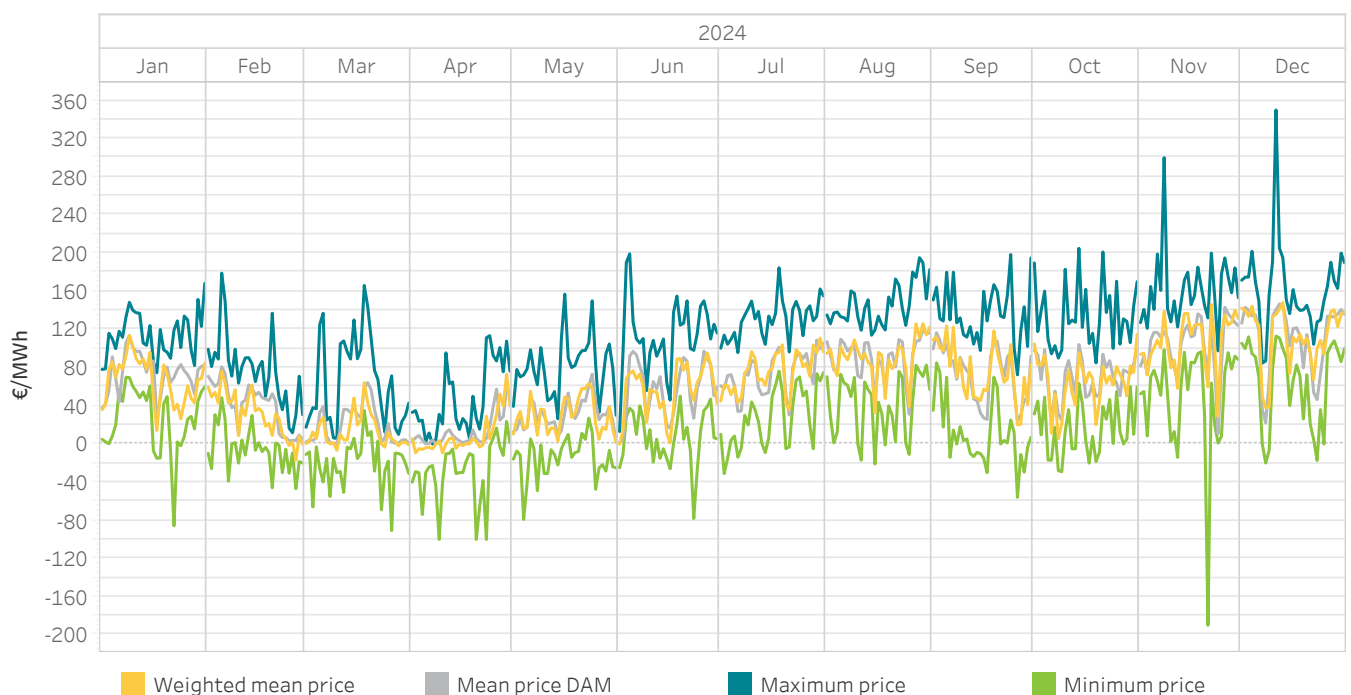
### 3.1 Maximum, minimum and weighted mean price on the intraday continuous market

In España

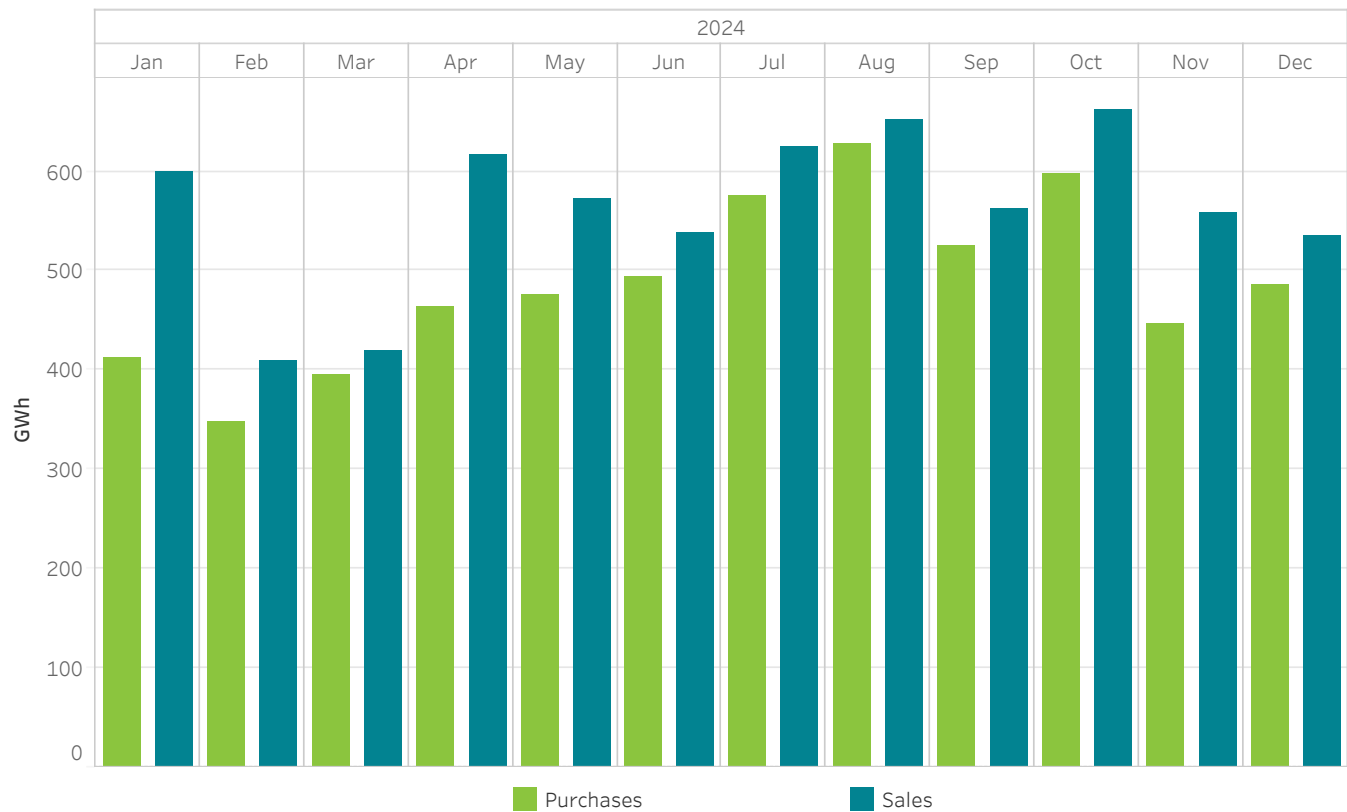


### 3.2 Maximum, minimum and weighted mean price on the intraday continuous market

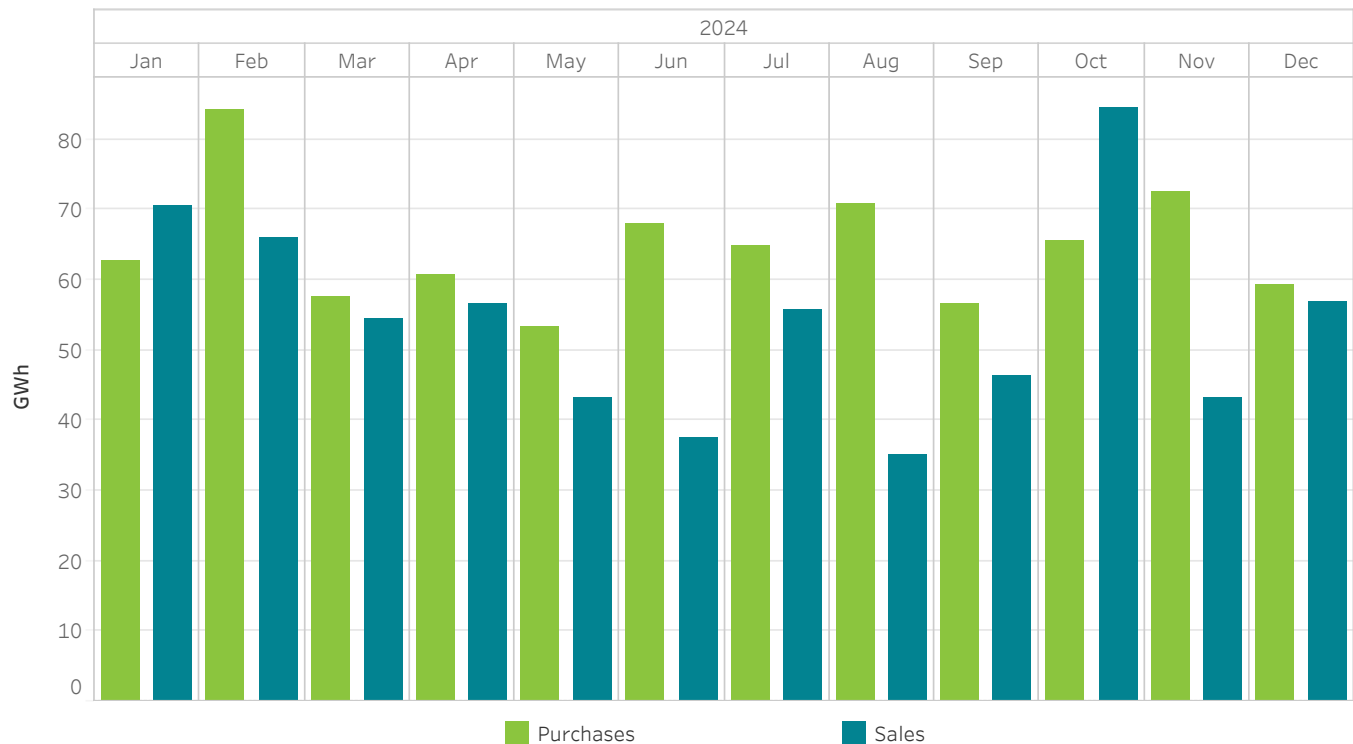
In Portugal



**3.3 Monthly energy negotiated on the intraday continuous market**  
In Spain



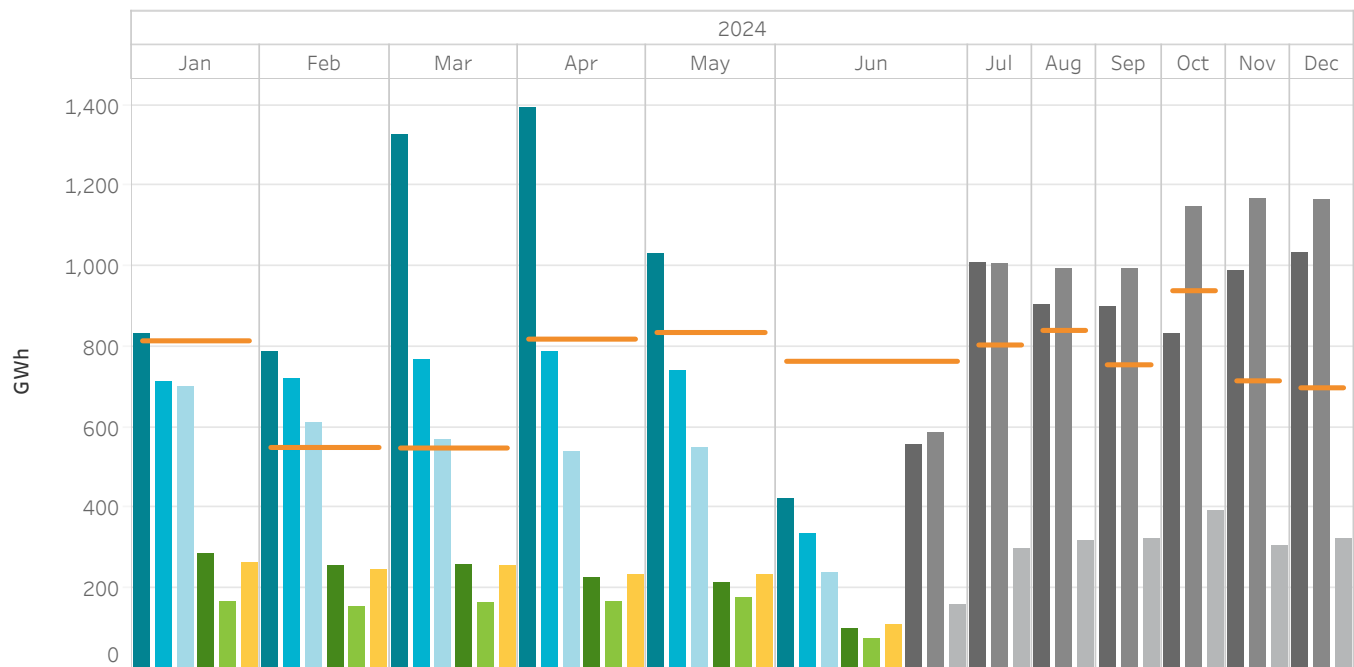
**3.4 Monthly energy negotiated on the intraday continuous market**  
In Portugal



3.5 Energy negotiated on the intraday continuous market compared to auction sessions

In Spain

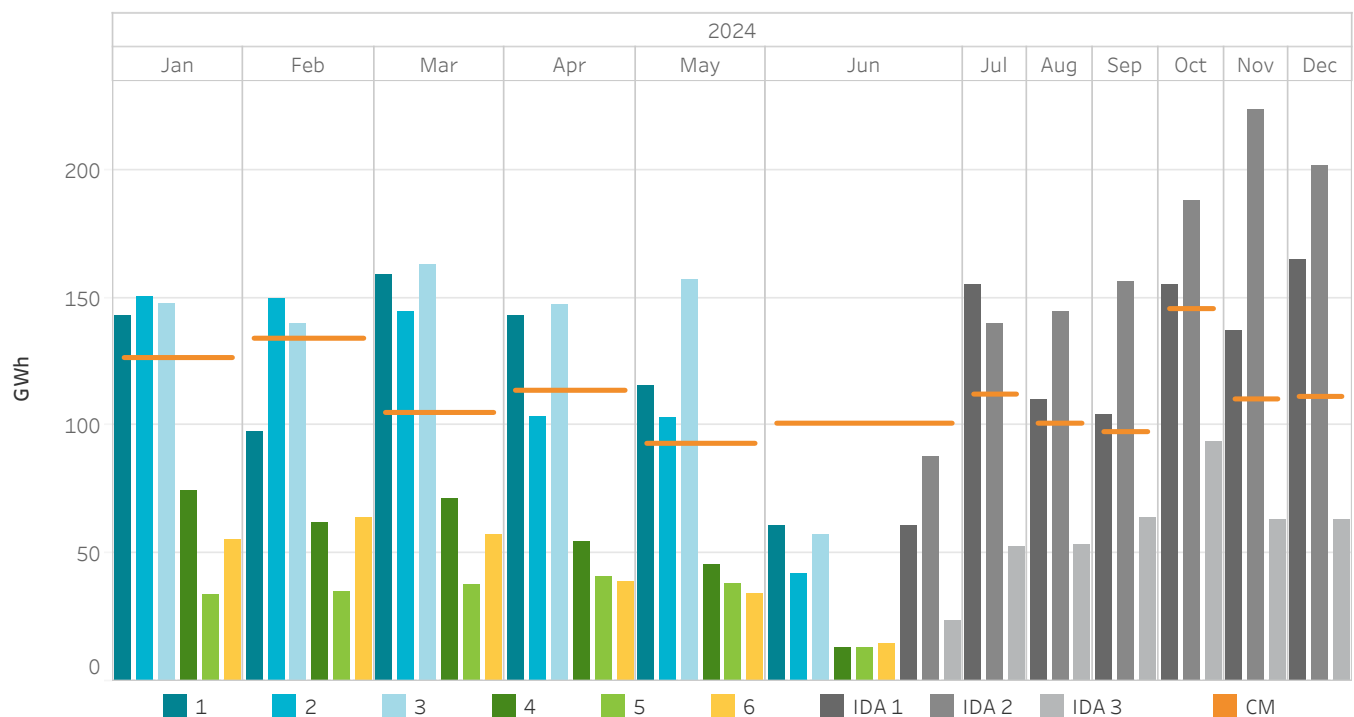
The negotiated energy is calculated as the addition of the acquisitions made in Spain plus the net exports.



3.6 Energy negotiated on the intraday continuous market compared to auction sessions

In Portugal

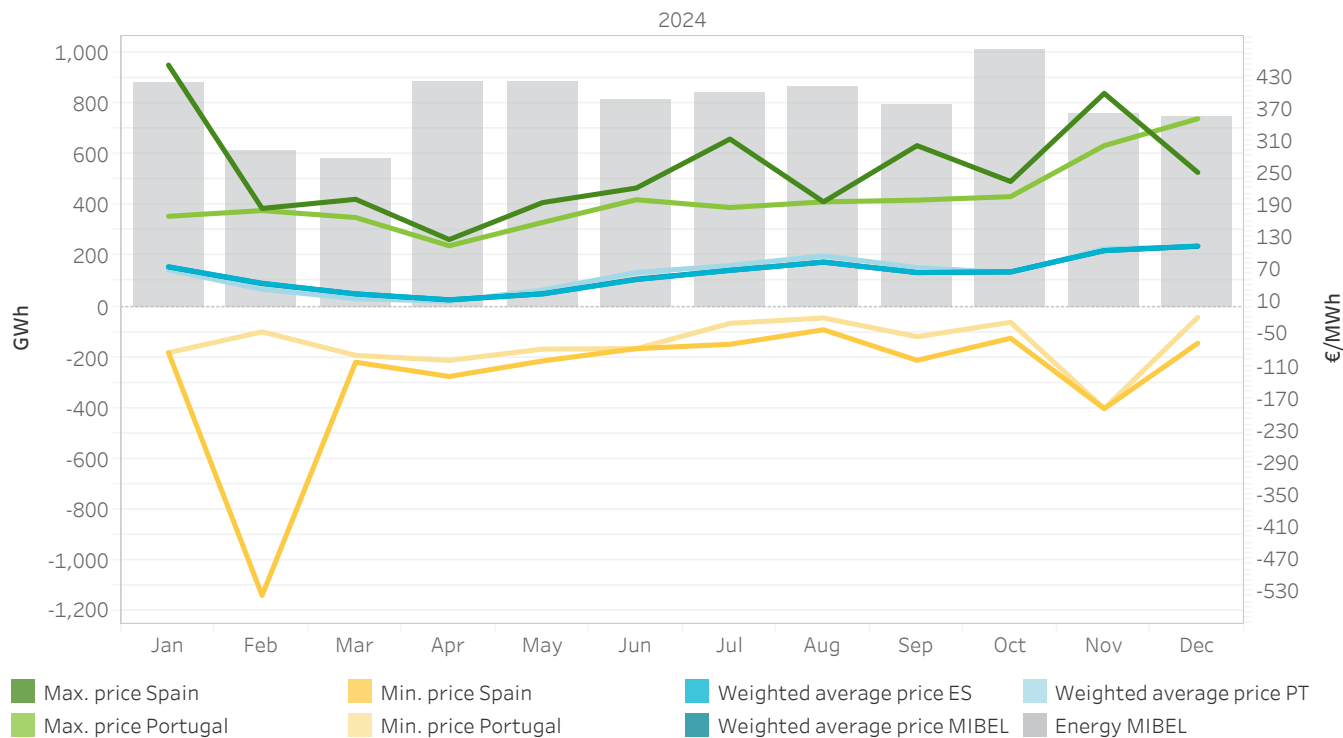
The negotiated energy is calculated as the addition of the acquisitions made in Portugal plus the net exports.



### 3.7 Prices and energies on the intraday continuous market

In Spain, Portugal and MIBEL

The maximum and minimum prices refer to hourly prices. The energy negotiated is calculated as the sum of acquisitions and net exports from each area.



### 3.8 Prices [€/MWh] and energies [GWh] on the intraday continuous market

In Spain, Portugal and MIBEL

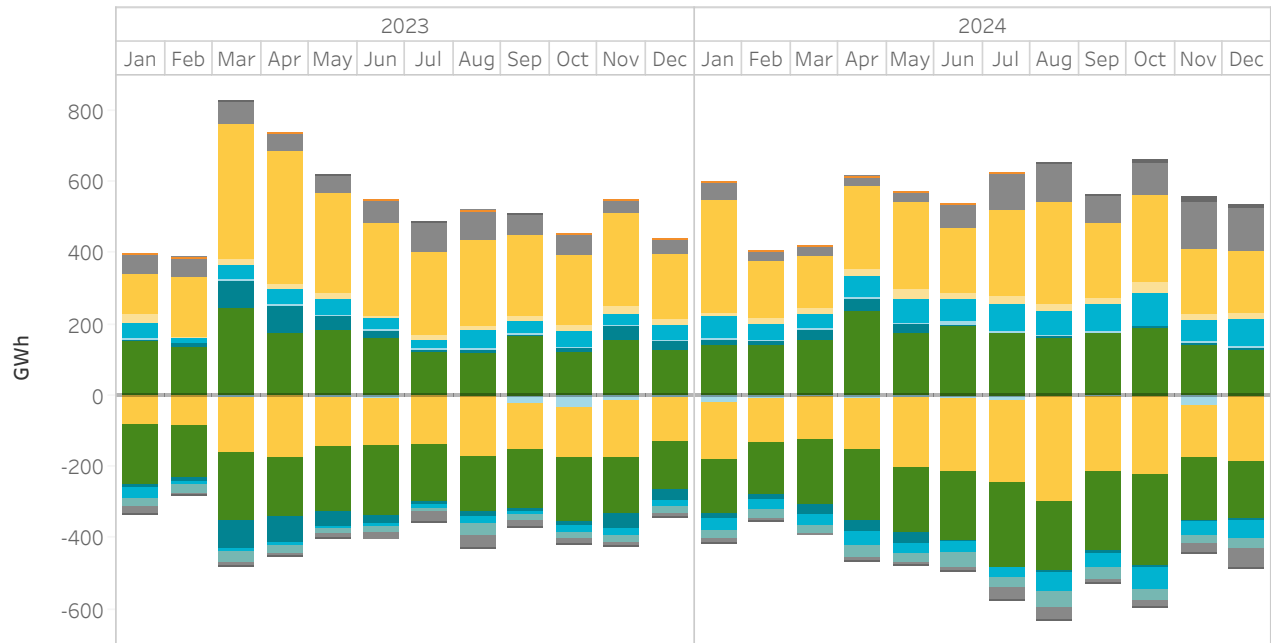
The maximum and minimum prices refer to hourly prices. The energy negotiated is calculated as the sum of acquisitions and net exports from each area.

	Precio medio ponderado ES	Precio medio ponderado PT	Max. price Spain	Max. price Portugal	Min. price Spain	Min. price Portugal	Energy Spain	Energy Portugal	Energy MIBEL
January	74.26	68.30	450.00	168.35	-85.65	-85.65	815.4	126.6	884.8
February	43.65	32.30	183.00	179.00	-537.77	-46.79	550.5	134.2	613.8
March	23.89	14.97	200.00	166.07	-103.40	-90.70	549.2	105.2	581.5
April	12.87	10.04	125.00	113.50	-130.00	-100.00	819.6	113.9	890.6
May	23.75	31.14	194.00	157.00	-101.00	-79.00	836.1	93.1	890.9
June	50.38	63.64	221.01	199.23	-78.07	-78.07	764.5	101.0	813.2
July	67.57	76.65	312.22	184.69	-70.01	-31.00	805.1	112.4	843.4
August	83.00	94.60	195.20	195.20	-43.00	-21.01	841.3	101.0	867.6
September	63.53	72.79	300.00	198.44	-99.94	-55.92	755.9	97.7	793.6
October	64.80	63.47	233.15	205.00	-58.69	-29.03	939.9	145.8	1,017.3
November	104.28	107.75	397.28	300.00	-189.98	-189.98	716.0	110.5	762.0
December	112.98	111.79	249.96	350.00	-68.00	-19.95	698.7	111.4	748.0
Annual tot.	60.86	62.04	450.00	350.00	-537.77	-189.98	9,092.1	1,352.7	9,706.6

3.9 Transactions classifies by technologies on the intraday continuous market

In Spain

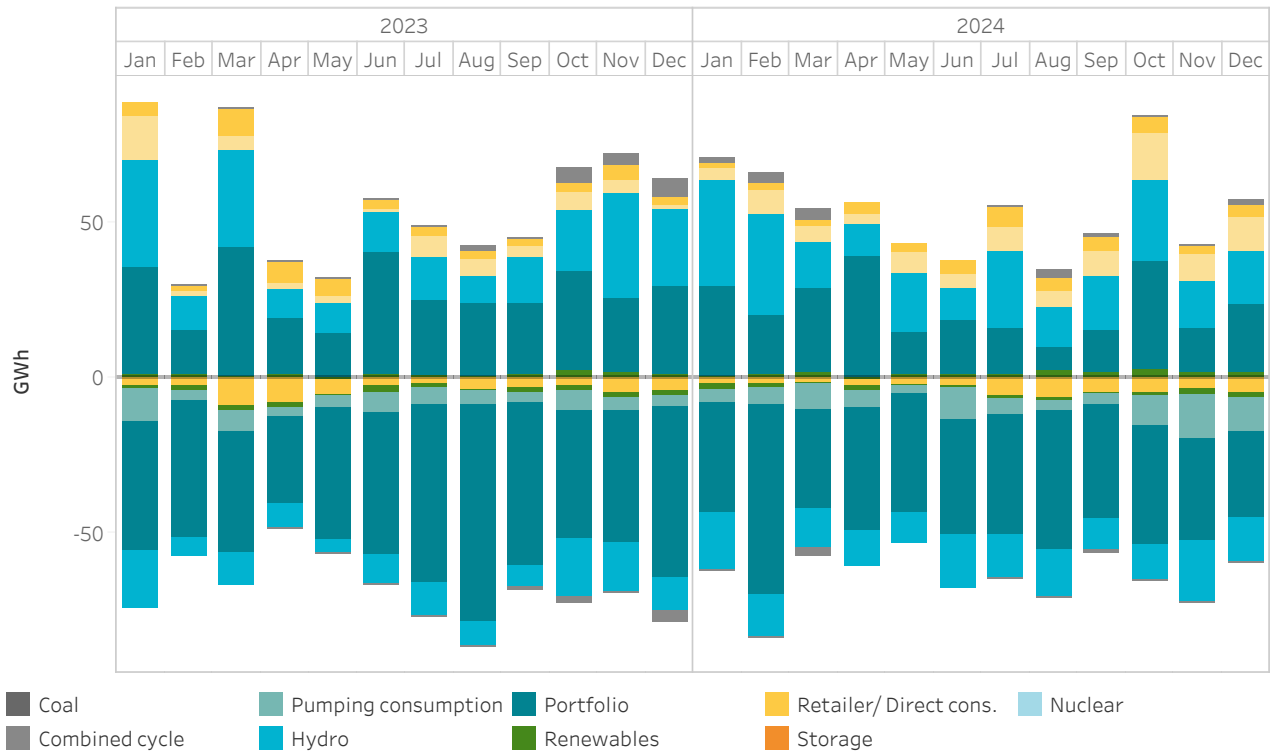
The positive values represent energy sales and the negative values represent energy purchases.



3.10 Transactions classifies by technologies on the intraday continuous market

In Portugal

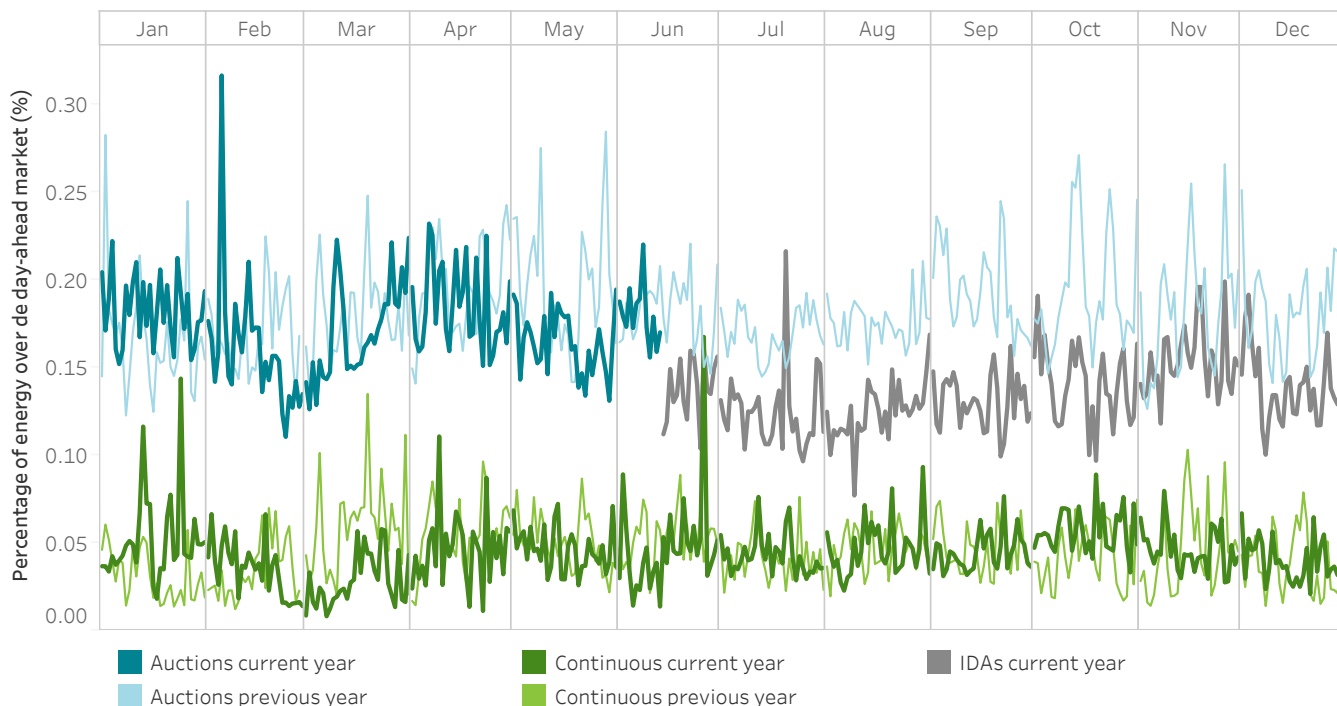
The positive values represent energy sales and the negative values represent energy purchases.



### 3.11 Percentage of energy negotiated on the intraday markets over the energy negotiated on the day-ahead market

MIBEL

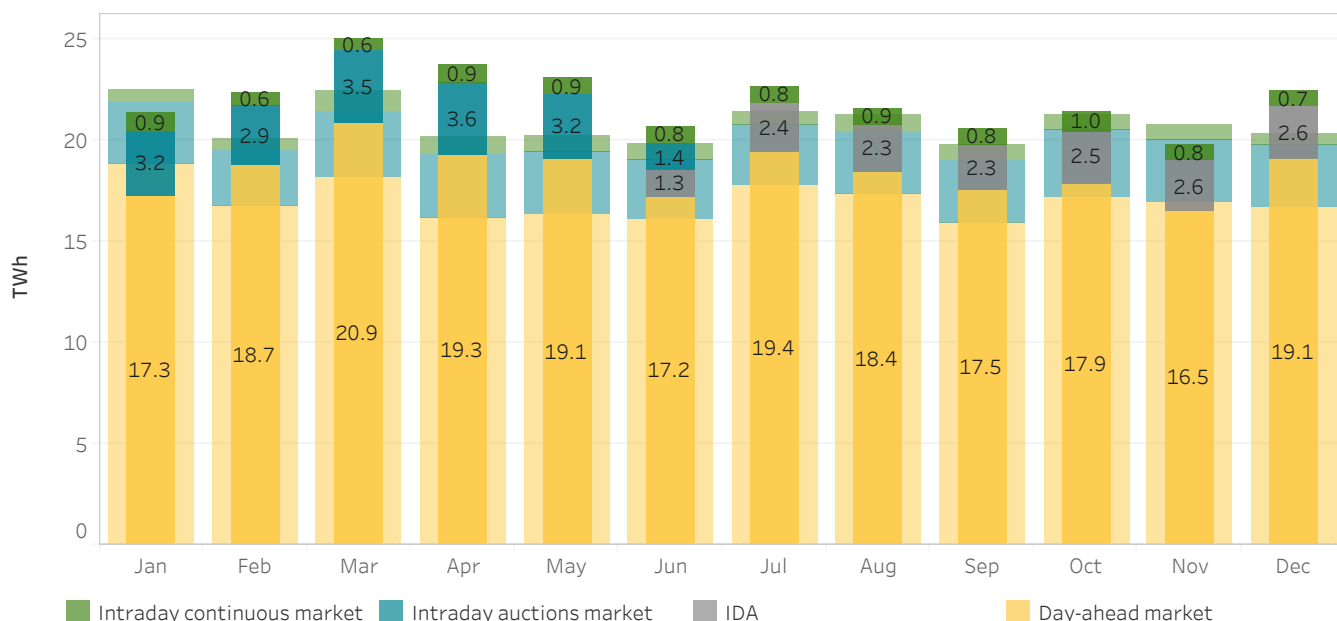
The energy negotiated is calculated as the sum of acquisitions and net exports from each area.



### 3.12 Energy negotiated on the intraday markets compared to the day-ahead market

MIBEL

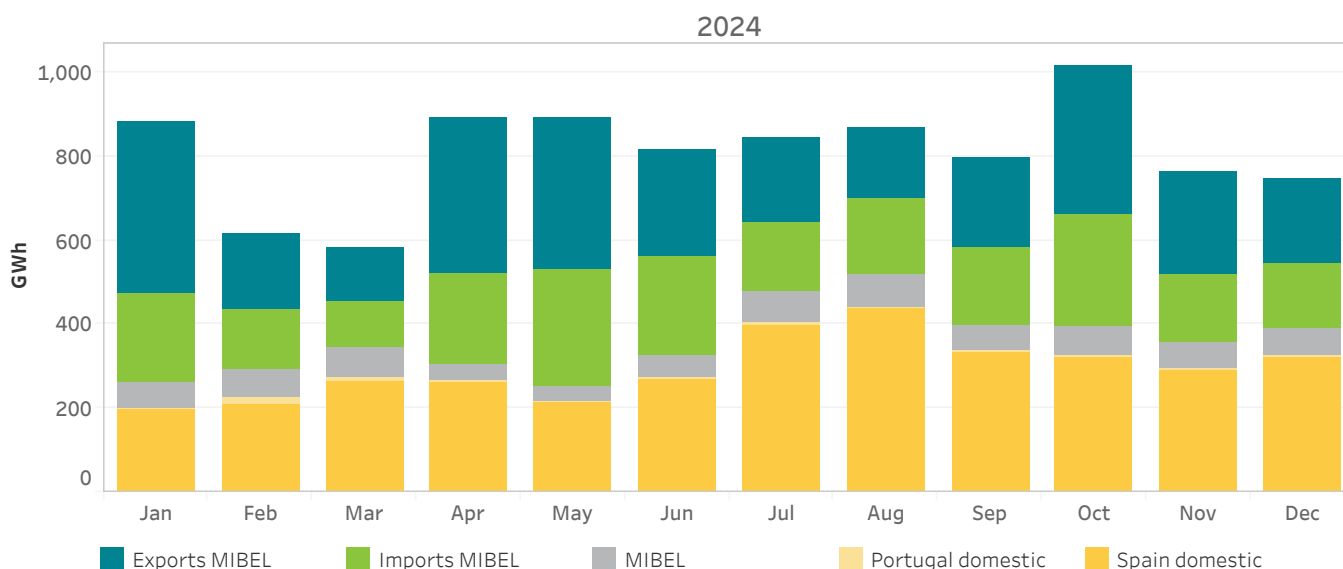
The energy negotiated is calculated as the sum of acquisitions and net exports from each area. The light-colored columns indicate values of the series for the same period from the prior year.



### 3.13 Energy negotiated on the intraday continuous market by negotiation area

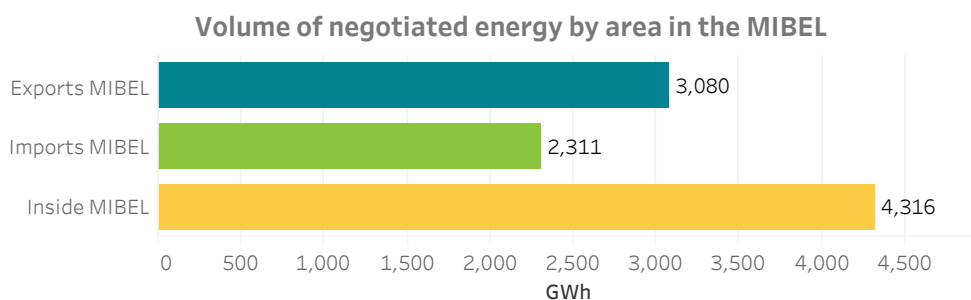
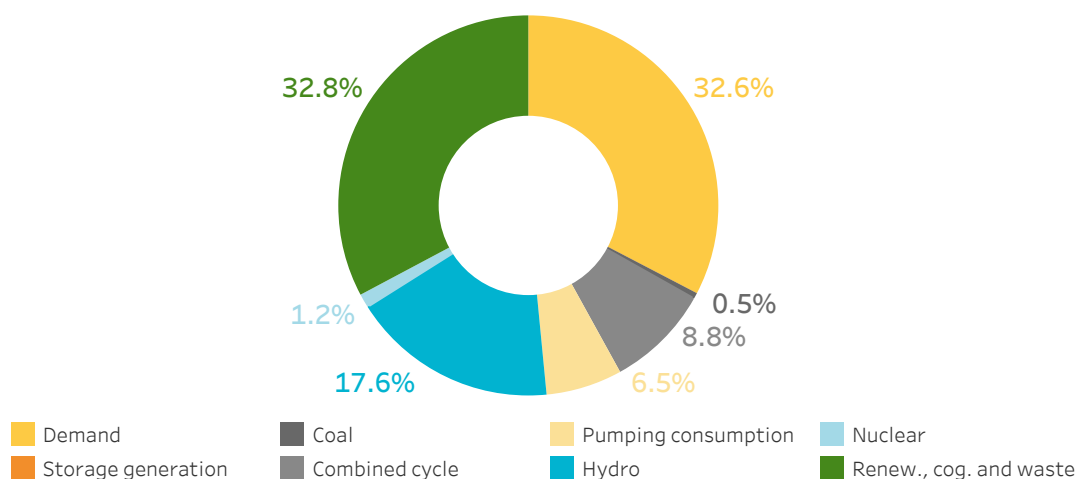
In Spain, Portugal and MIBEL

The energy negotiated is calculated as the sum of acquisitions and net exports from each area



### 3.14 Technologies in the intraday continuous program (Programa Intradiario Básico de Casación Incremental Continuo, PIBCIC) and energy volume by negotiation area

MIBEL



## Annual report 2024

# 4.

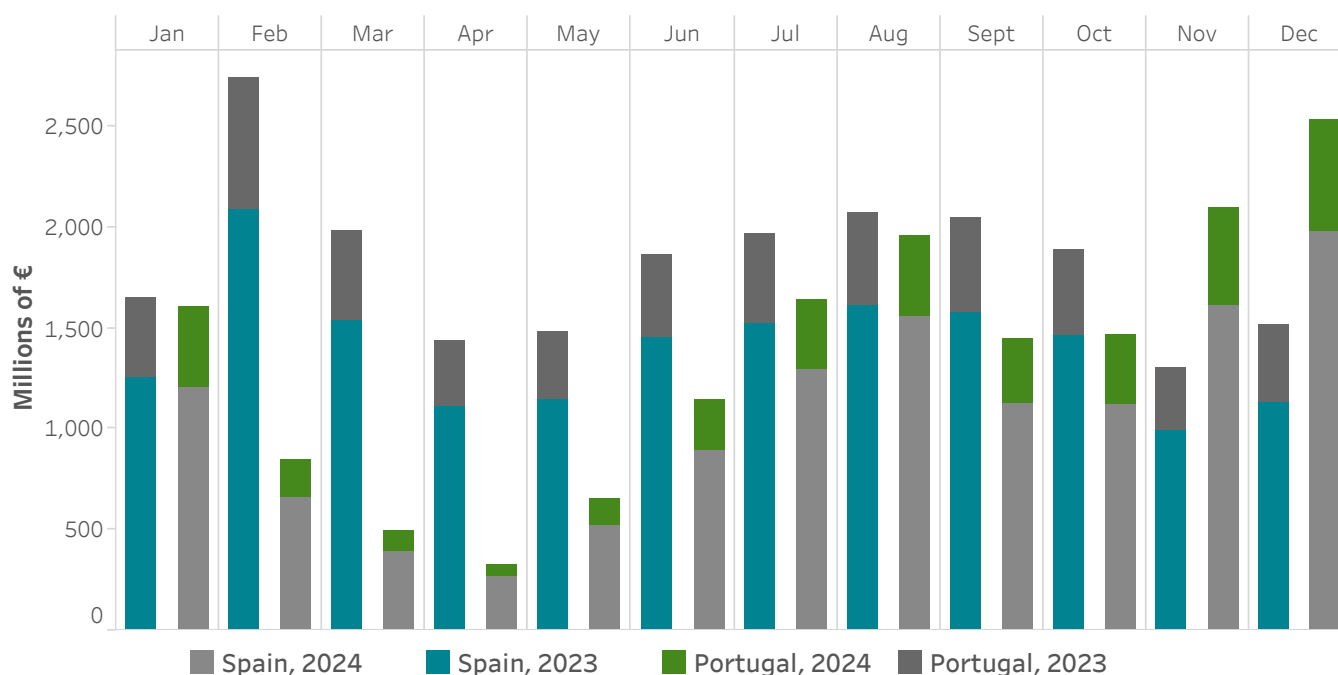
## Economic market results

- Economic purchase volume on the MIBEL
- Congestion economic management
- Final price components



## 4.1 Economic volume of the purchases negotiated on the MIBEL (Millions of €)

The Spanish area includes exports across the borders with France, Morocco and Andorra.

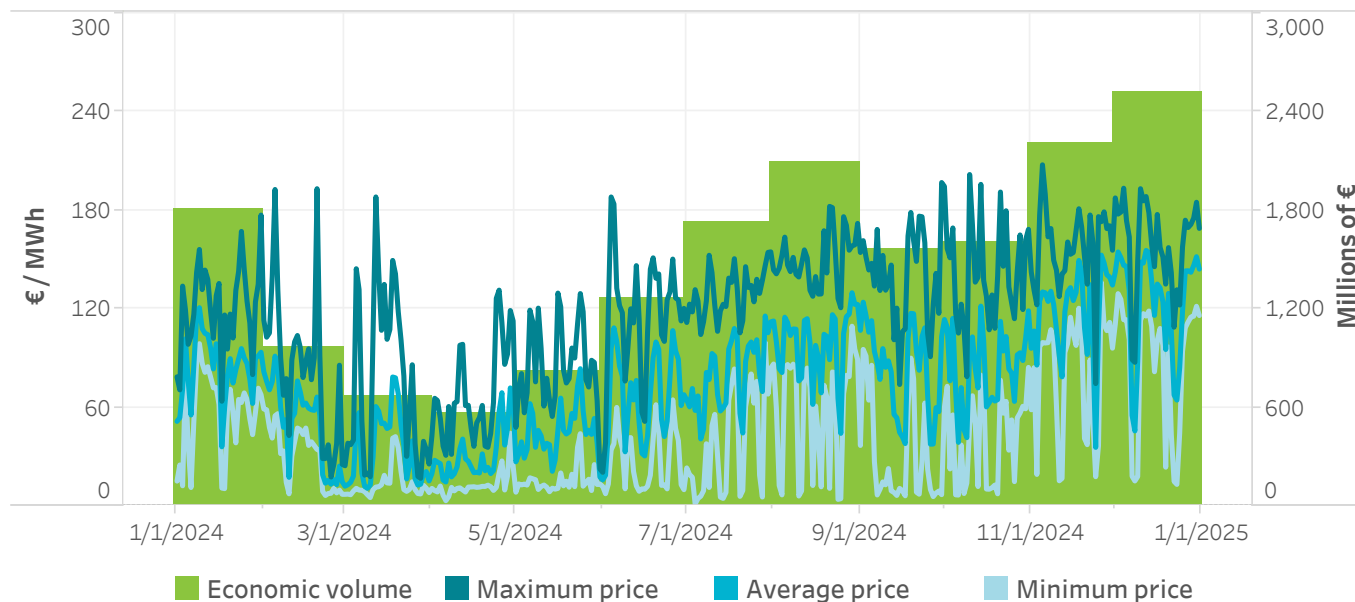


Economic volume (Millions of €)									
Month	Spain				Portugal				Total
	Day-ahead market	Intraday auctions market	Continu. intraday market	Total Country	Day-ahead market	Intraday auctions market	Continu. intraday market	Total Country	
Jan	940	205	62	1,207	371	28	4	403	1,610
Feb	529	106	24	659	173	12	3	188	847
Mar	323	58	14	395	91	6	1	98	493
Apr	213	44	15	272	51	5	1	57	329
May	417	78	22	517	124	13	2	138	655
Jun	720	134	39	892	233	20	4	257	1,149
Jul	1,085	158	53	1,296	321	18	5	344	1,640
Aug	1,303	188	66	1,557	372	22	7	400	1,957
Sept	932	151	48	1,131	293	18	4	314	1,446
Oct	905	156	62	1,124	310	22	4	337	1,461
Nov	1,300	245	72	1,618	440	35	8	483	2,100
Dec	1,631	275	78	1,984	513	33	6	553	2,537
Year 2024	10,299	1,799	554	12,652	3,293	232	48	3,573	16,224

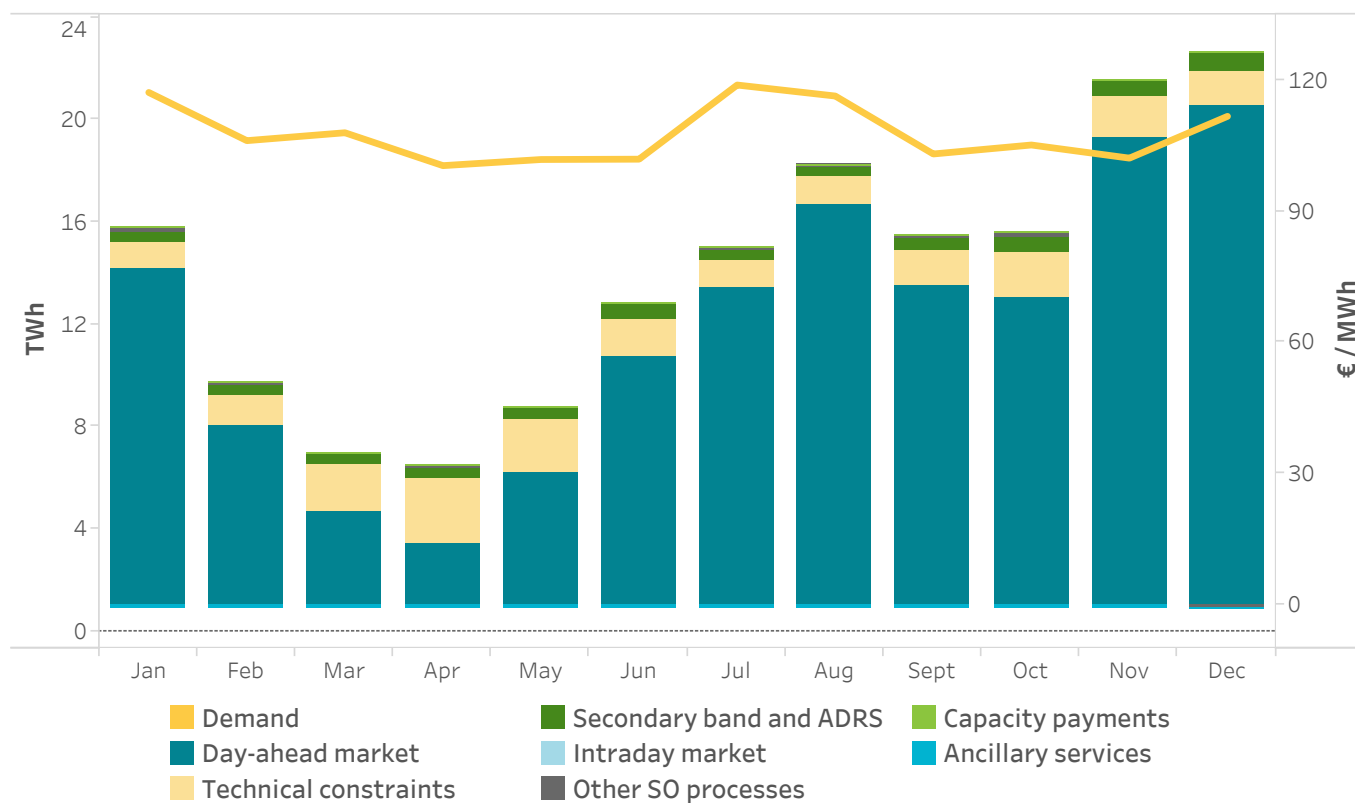
4.2 Congestion income



### 4.3 Final average price and economic volume of the Spanish electricity system - National demand



### 4.4 Components of the final average price of the Spanish electricity system - National demand



## 4.5 Components of the final average price of the Spanish electricity system (€/MWh)

	Reference retailers		Free market		National demand	
	€/MWh	%	€/MWh	%	€/MWh	%
Day-ahead market	65.40	83.89	64.69	84.90	64.74	84.82
Constraints	8.81	11.30	8.83	11.59	8.83	11.56
Secondary band and ADRS	2.83	3.63	2.86	3.75	2.86	3.74
Intraday market	0.00	0.00	-0.10	-0.13	-0.09	-0.12
Other SO processes	0.63	0.81	0.35	0.46	0.37	0.49
Capacity payments	0.29	0.38	0.21	0.28	0.22	0.29
Ancillary services	0.00	0.00	-0.65	-0.85	-0.60	-0.78
<b>Total</b>	<b>77.95</b>	<b>100.00</b>	<b>76.19</b>	<b>100.00</b>	<b>76.33</b>	<b>100.00</b>

### National demand (€/MWh)

Month	Day-ahead market	Technical constraints	Secondary band and ADRS	Intraday market	Other SO processes	Capacity payments	Ancillary services	Average final price
January	76.87	6.05	2.48	-0.08	0.58	0.35	-0.57	85.68
February	40.77	7.20	2.38	-0.09	0.43	0.33	-0.61	50.41
March	21.36	10.55	2.26	-0.05	0.42	0.19	-0.57	34.16
April	14.10	14.88	2.20	-0.13	0.67	0.16	-0.67	31.20
May	30.15	12.12	2.56	-0.07	0.28	0.15	-0.67	44.51
June	56.87	8.19	3.68	-0.11	0.27	0.15	-0.62	68.42
July	72.64	6.22	2.23	-0.07	0.28	0.31	-0.57	81.04
August	91.34	6.58	2.17	-0.13	0.52	0.16	-0.54	100.10
September	72.92	8.09	2.69	-0.09	0.73	0.16	-0.62	83.88
October	70.12	10.37	3.69	-0.07	0.96	0.16	-0.66	84.57
November	106.87	9.09	3.84	-0.10	0.01	0.19	-0.60	119.30
December	114.24	7.80	4.24	-0.08	-0.63	0.28	-0.51	125.32

Year	Day-ahead market	Technical constraints	Secondary band and ADRS	Intraday market	Other SO processes	Capacity payments	Ancillary services	Average final price
2023	88.89	8.20	2.62	-0.10	0.26	0.24	-0.31	100.02
2024	64.74	8.83	2.86	-0.09	0.37	0.22	-0.60	76.33

## Free market (€/MWh)

Month	Day-ahead market	Technical constraints	Secondary band and ADRS	Intraday market	Other SO processes	Capacity payments	Ancillary services	Average final price
January	76.84	6.04	2.47	-0.09	0.52	0.35	-0.63	85.51
February	40.72	7.20	2.38	-0.09	0.39	0.33	-0.66	50.26
March	21.43	10.54	2.26	-0.06	0.40	0.18	-0.62	34.13
April	14.08	14.87	2.19	-0.14	0.64	0.15	-0.72	31.06
May	30.20	12.11	2.56	-0.07	0.27	0.14	-0.72	44.48
June	57.02	8.17	3.69	-0.13	0.26	0.14	-0.67	68.48
July	72.71	6.21	2.24	-0.07	0.25	0.31	-0.62	81.02
August	91.52	6.57	2.18	-0.15	0.48	0.15	-0.59	100.16
September	72.96	8.08	2.69	-0.10	0.71	0.15	-0.67	83.82
October	70.09	10.36	3.69	-0.07	0.94	0.15	-0.71	84.44
November	106.85	9.09	3.84	-0.10	0.01	0.18	-0.66	119.21
December	114.21	7.80	4.25	-0.09	-0.64	0.28	-0.57	125.24

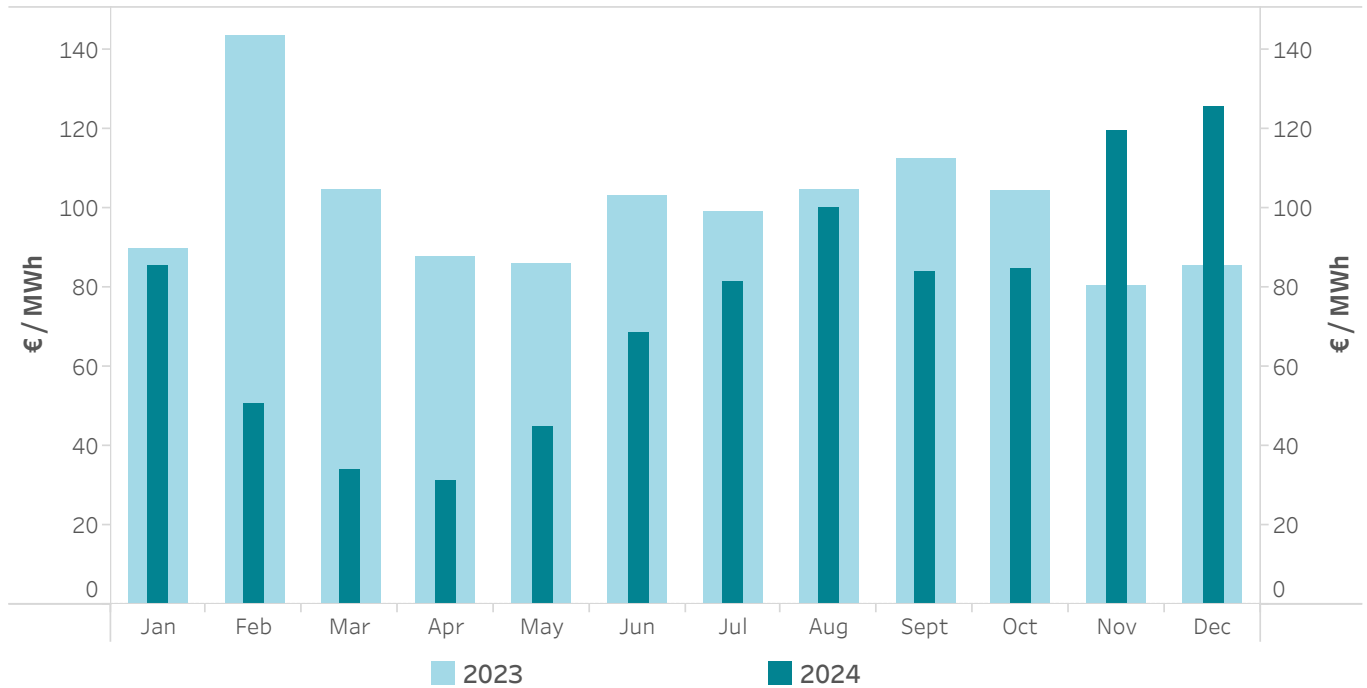
Year	Day-ahead market	Technical constraints	Secondary band and ADRS	Intraday market	Other SO processes	Capacity payments	Ancillary services	Average final price
2023	88.90	8.19	2.61	-0.11	0.22	0.23	-0.33	99.92
2024	64.69	8.83	2.86	-0.10	0.35	0.21	-0.65	76.19

## Reference retailers (€/MWh)

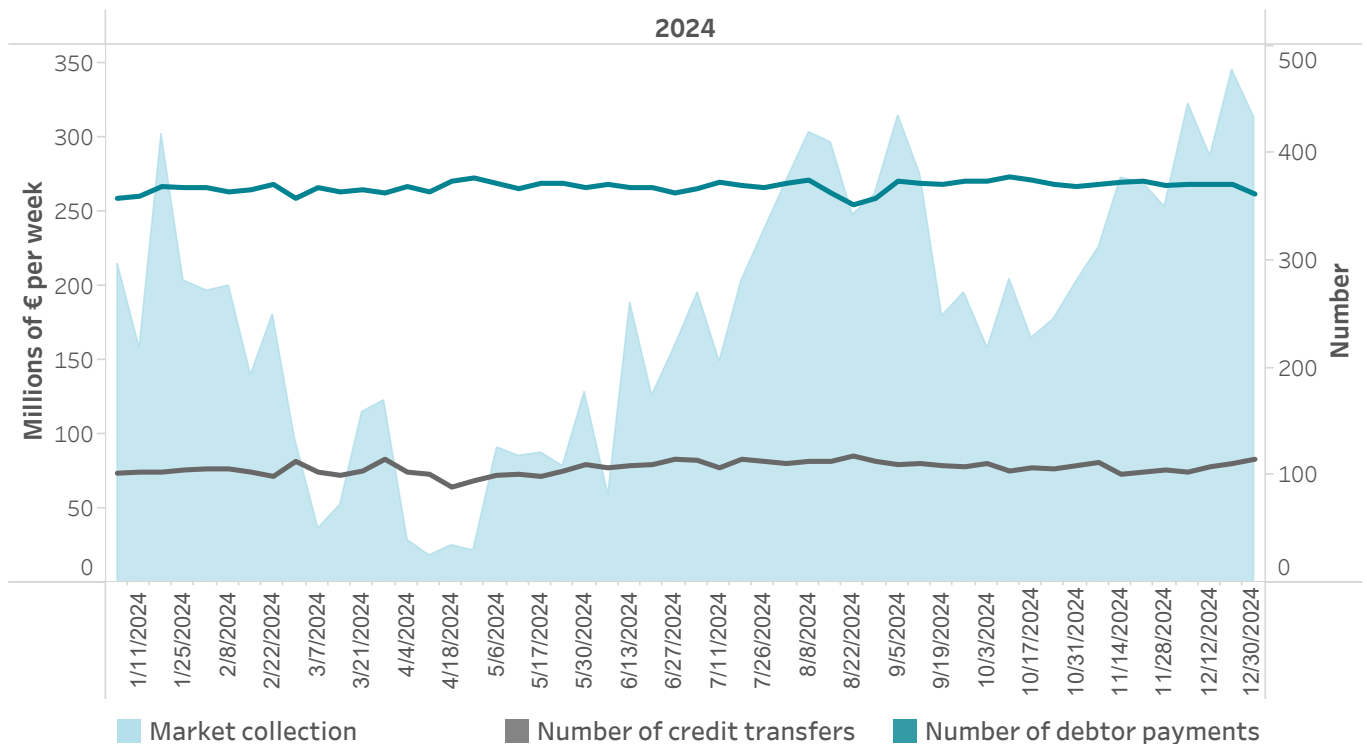
Month	Day-ahead market	Technical constraints	Secondary band and ADRS	Intraday market	Other SO processes	Capacity payments	Ancillary services	Average final price
January	77.09	6.15	2.53	-0.01	1.14	0.35	0.00	87.27
February	41.24	7.22	2.41	-0.06	0.84	0.33	0.00	51.99
March	20.70	10.64	2.22	-0.01	0.57	0.28	0.00	34.41
April	14.31	14.99	2.24	0.00	1.07	0.30	0.00	32.91
May	29.46	12.21	2.55	-0.01	0.45	0.28	0.00	44.94
June	54.98	8.44	3.57	0.05	0.44	0.27	0.00	67.75
July	71.90	6.30	2.16	0.02	0.65	0.30	0.00	81.34
August	89.46	6.71	2.14	0.00	0.91	0.27	0.00	99.49
September	72.42	8.26	2.62	0.02	0.93	0.28	0.00	84.53
October	70.50	10.49	3.66	0.01	1.21	0.31	0.00	86.17
November	107.05	9.11	3.84	-0.01	0.09	0.28	0.00	120.38
December	114.48	7.76	4.15	0.00	-0.61	0.28	0.00	126.07

Year	Day-ahead market	Technical constraints	Secondary band and ADRS	Intraday market	Other SO processes	Capacity payments	Ancillary services	Average final price
2023	88.78	8.35	2.66	-0.01	0.79	0.32	0.00	101.13
2024	65.40	8.81	2.83	0.00	0.63	0.29	0.00	77.95

## 4.6 Final average price of the Spanish electricity system - National demand



## 4.7 Tendency of collections on the market



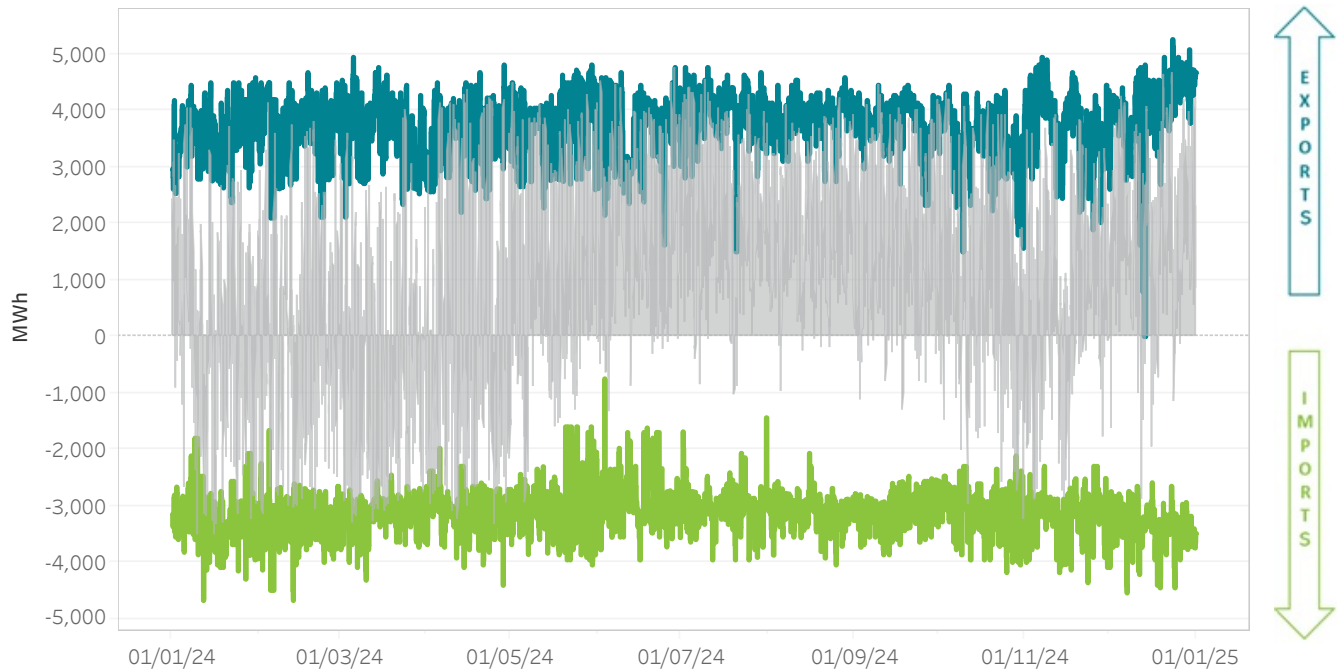
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# 5. International exchanges

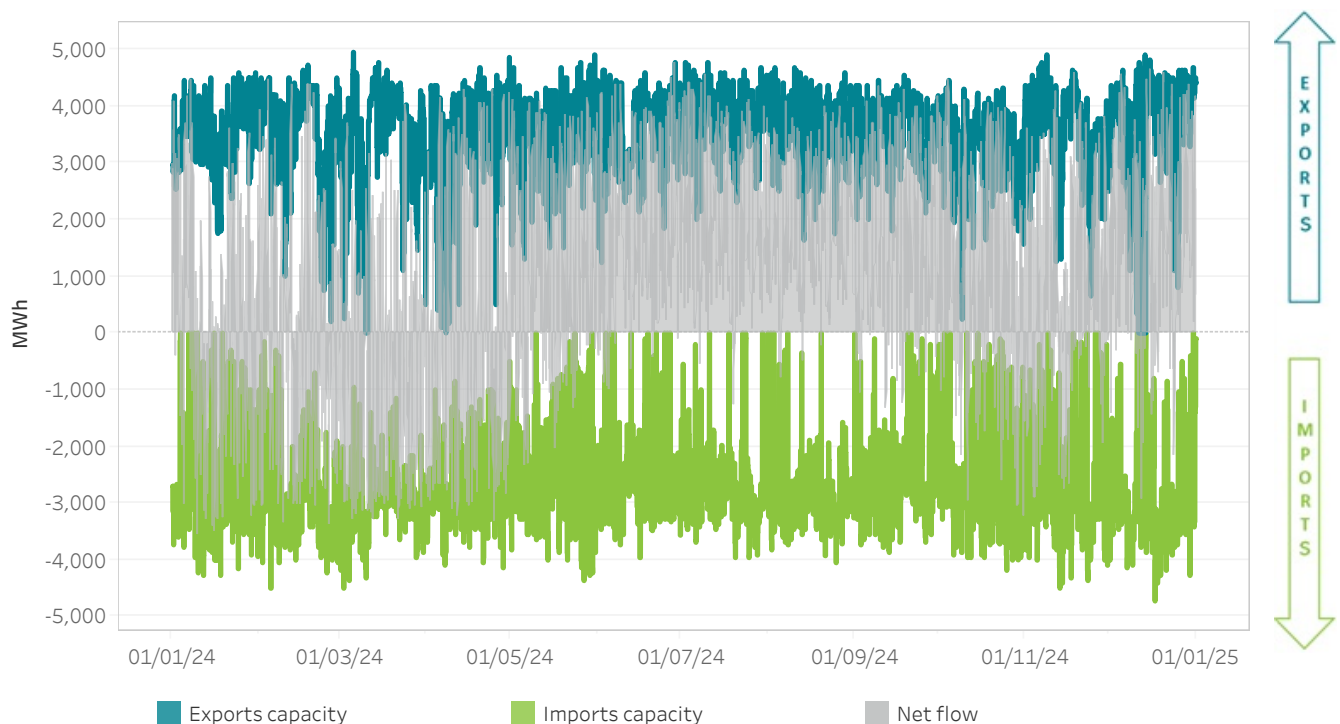
- Interconnector flows after the day-ahead market and the intraday continuous market
- Market coupling
- Economic volumes exchanged in the MIBEL



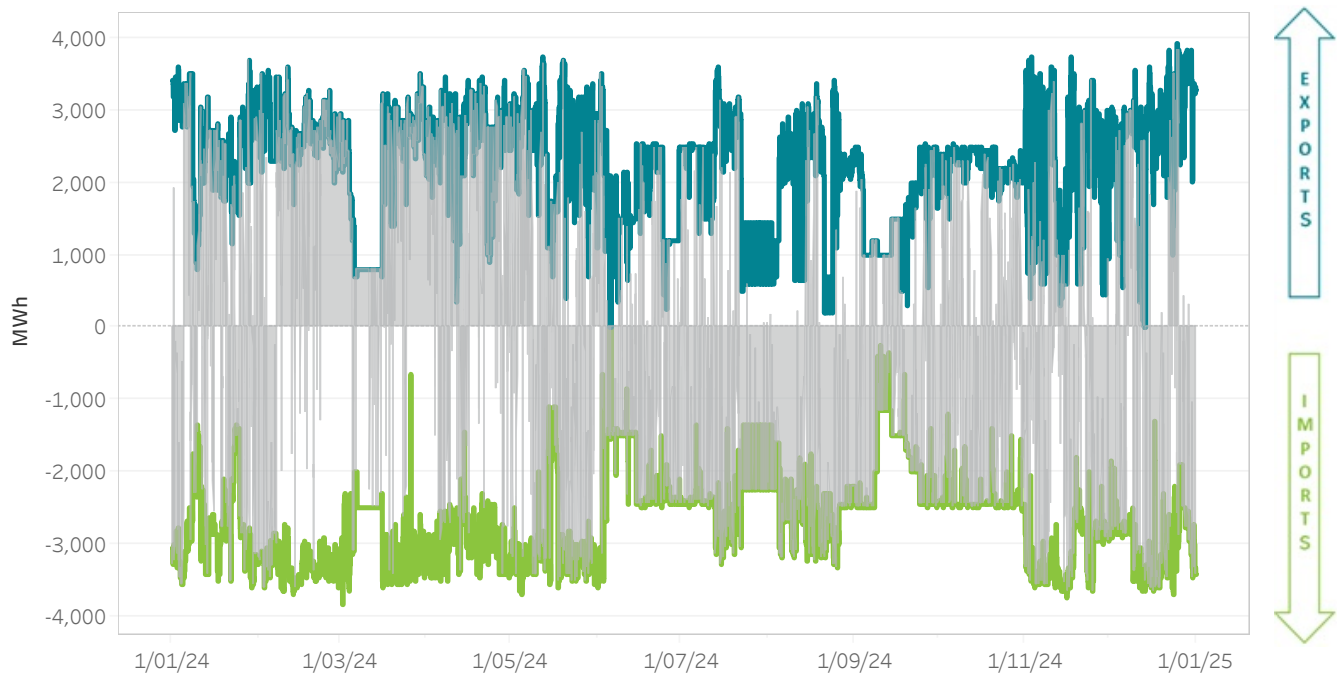
## 5.1 Interconnection flow and capacity with Portugal in the day-ahead operations program (Programa diario base de funcionamiento, PDBF)



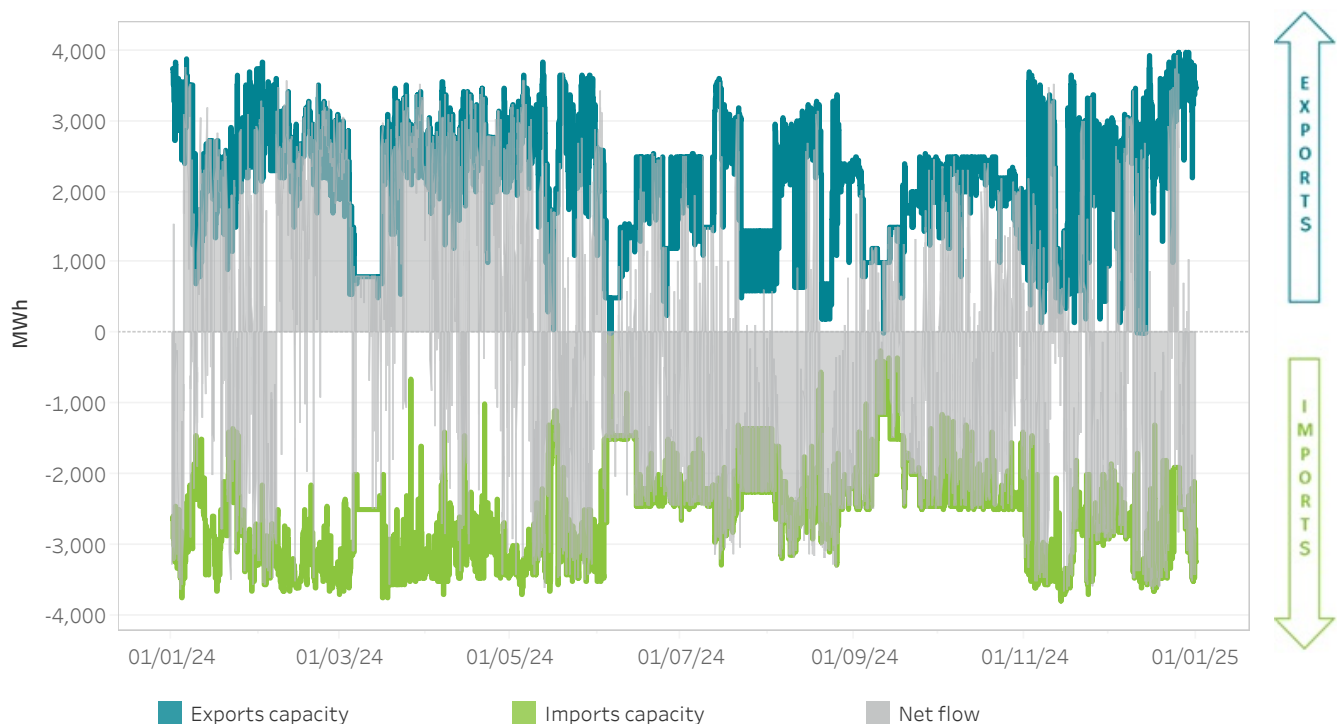
## 5.2 Interconnection flow and capacidad with Portugal in the final hourly program (Programa horario final, PHFC) after the continuous market



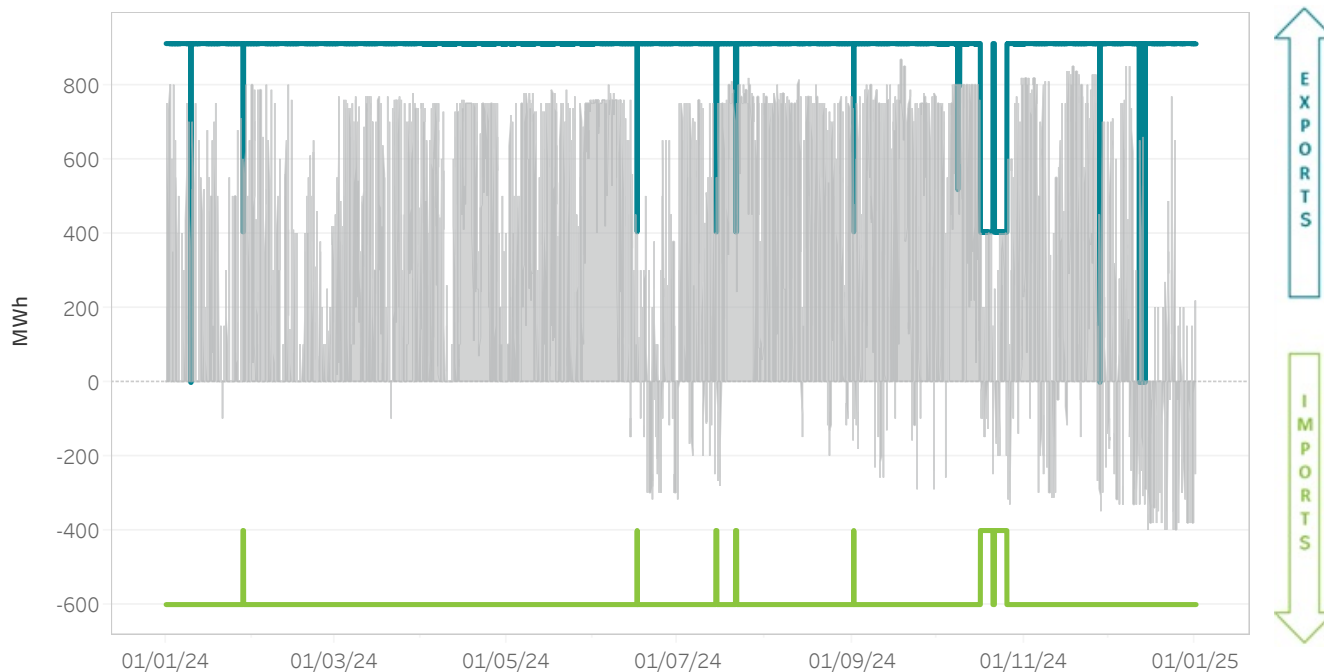
### 5.3 Interconnection flow and capacity with France in the day-ahead operations program (Programa diario base de funcionamiento, PDBF)



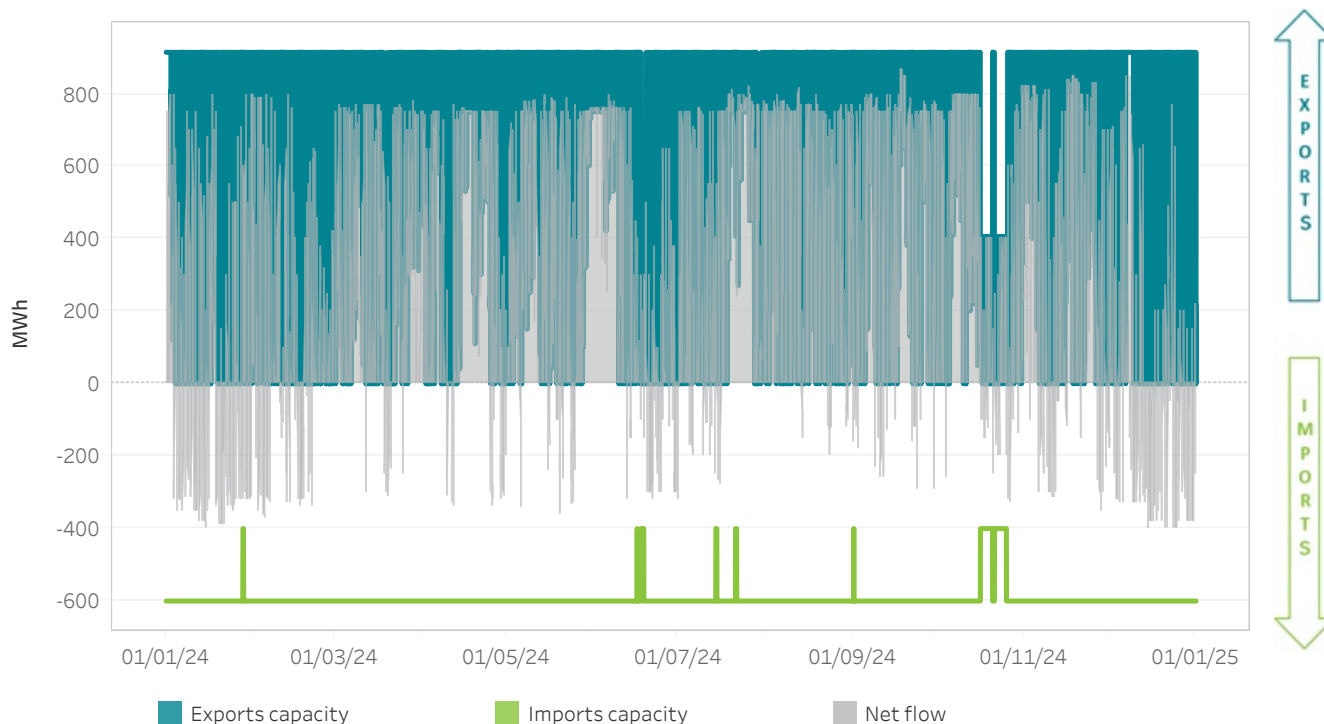
### 5.4 Interconnection flow and capacidad with France in the final hourly program (Programa horario final, PHFC) after the continuous market



## 5.5 Interconnection flow and capacity with Morocco in the day-ahead operations program (Programa diario base de funcionamiento, PDBF)

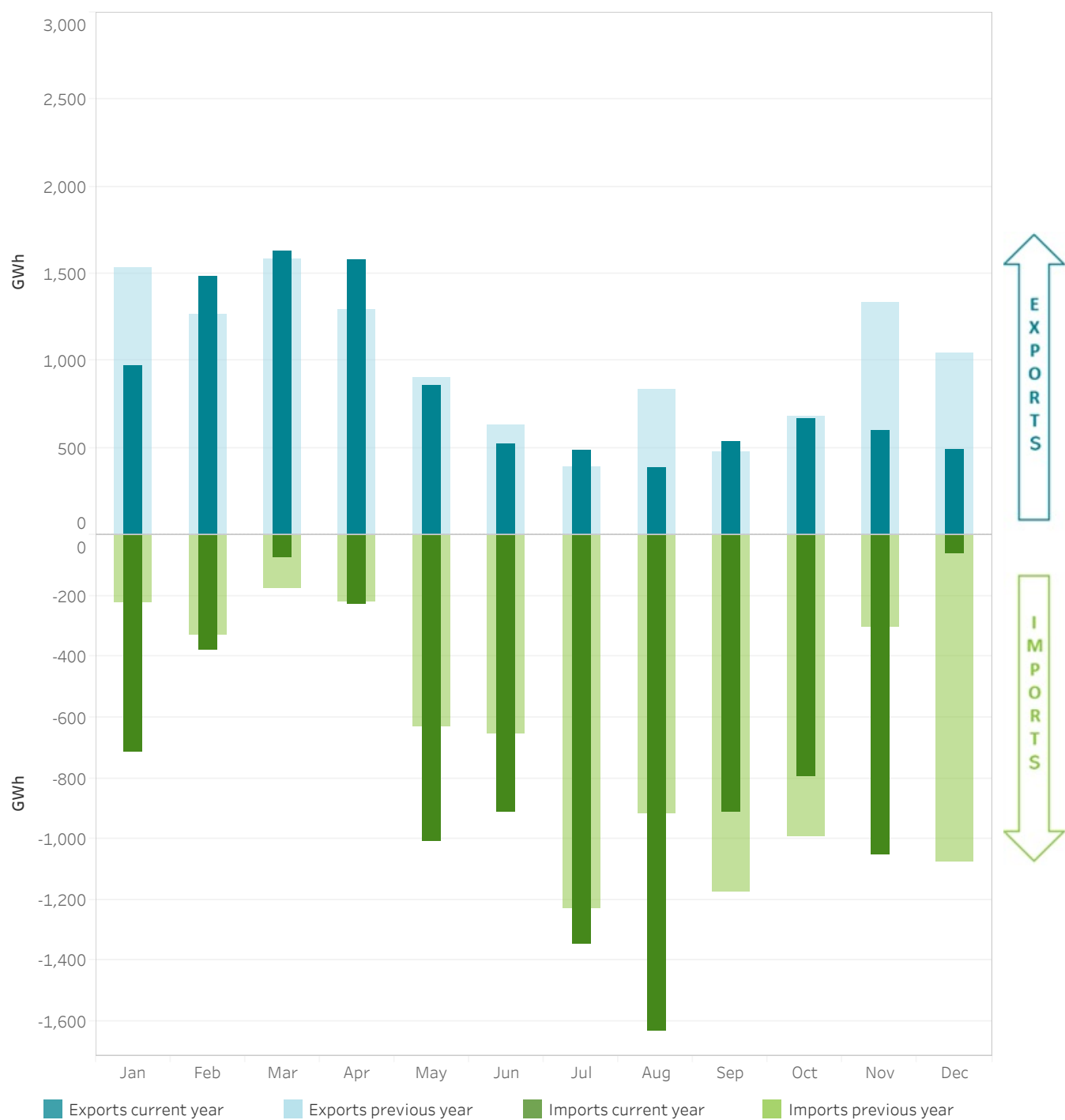


## 5.6 Interconnection flow and capacidad with Morocco in the final hourly program (Programa horario final, PHFC) after the continuous market



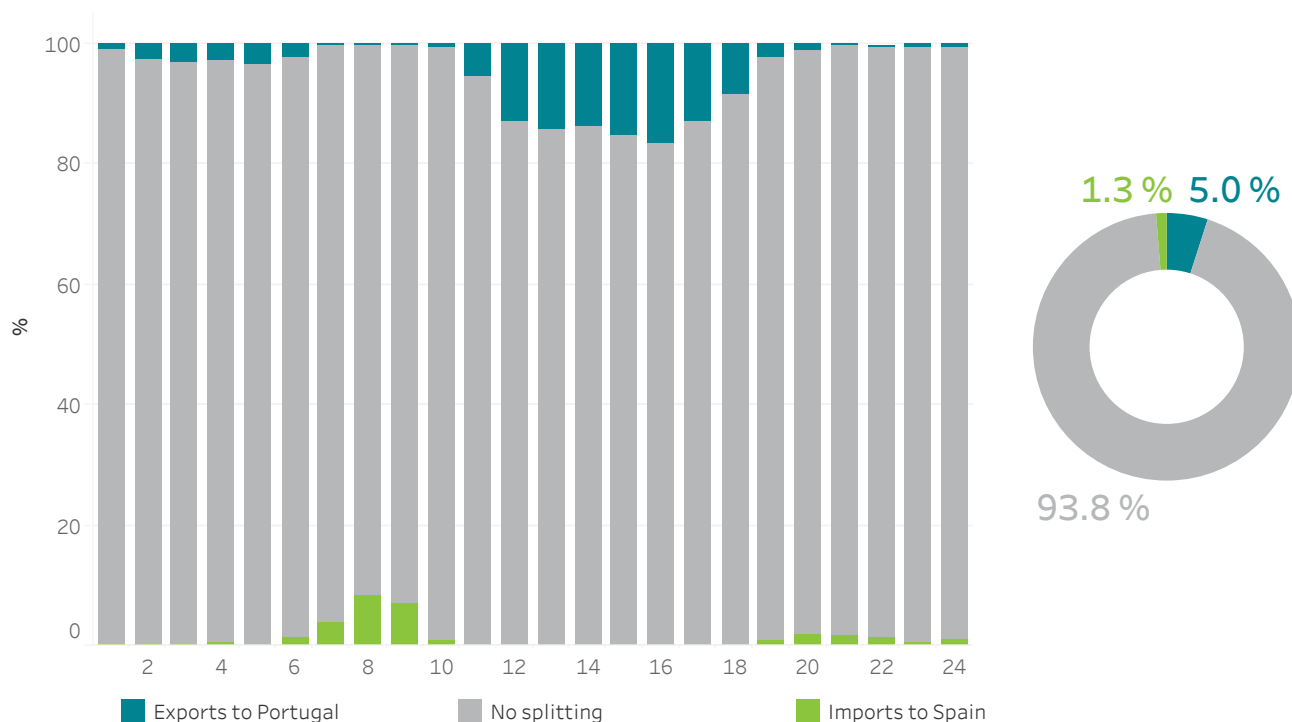
5.7 Accumulation of final import and export positions after the markets  
MIBEL

	2024	2023
Exports [GWh]	10,203.5	11,937.0
Imports [GWh]	9,103.8	7,914.1



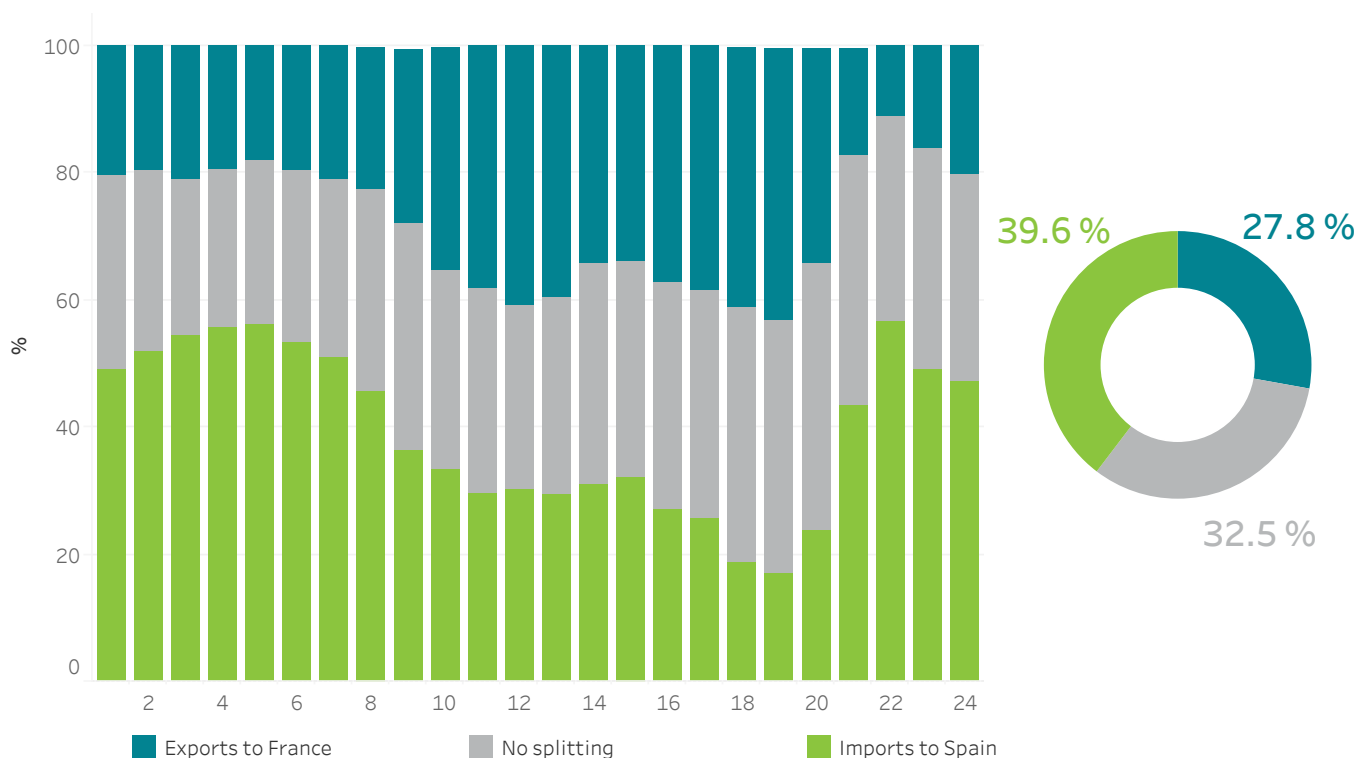
## 5.8 Market coupling on the Spain/Portugal border

The circular graph indicates the percentage, over the total number of periods, of the market coupling and, where there is no coupling, the flow of the interconnection. The bar graph breaks down this data by period.



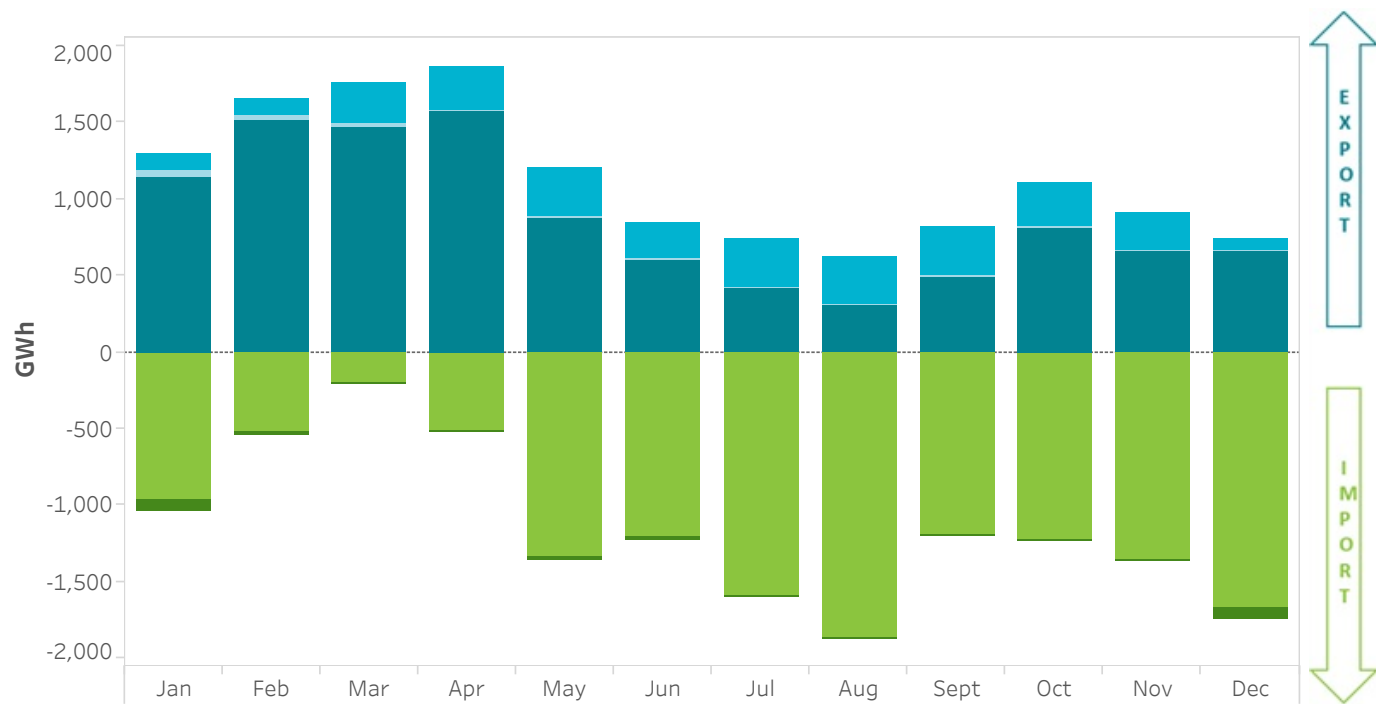
## 5.9 Market coupling on the Spain/France border

The circular graph indicates the percentage, over the total number of periods, of the market coupling and, where there is no coupling, the flow of the interconnection. The bar graph breaks down this data by period.



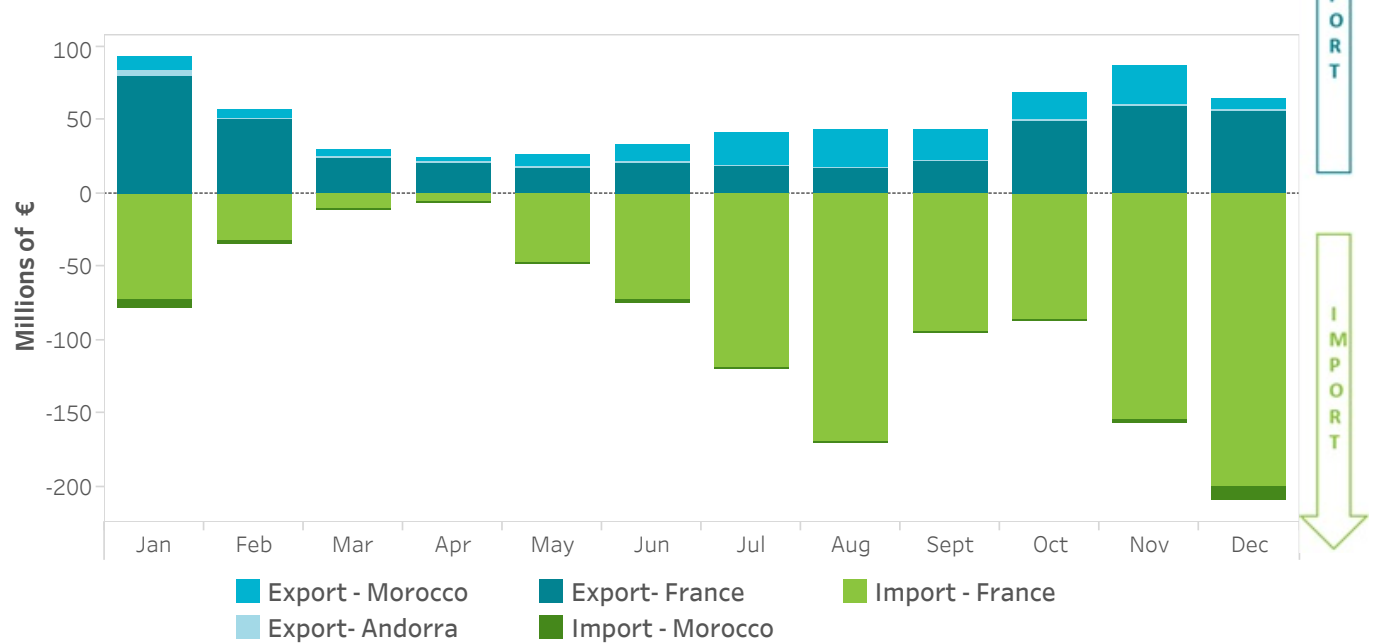
5.10 Monthly energies exchanged on the MIBEL borders

The graph represents the energy imported and exported in the markets managed by OMIE.



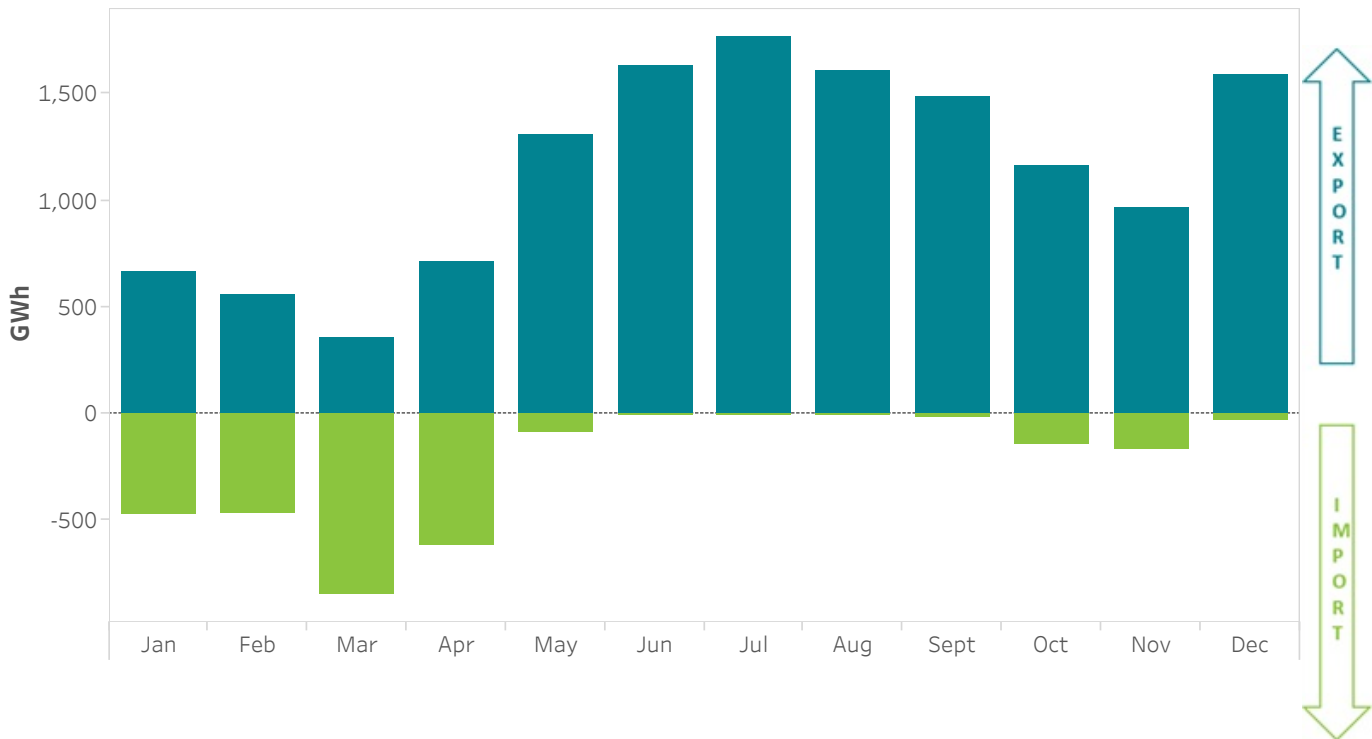
5.11 Monthly economic volumes exchanged on the MIBEL borders

The graph represents the economic volume of imports and exports in the markets managed by OMIE.



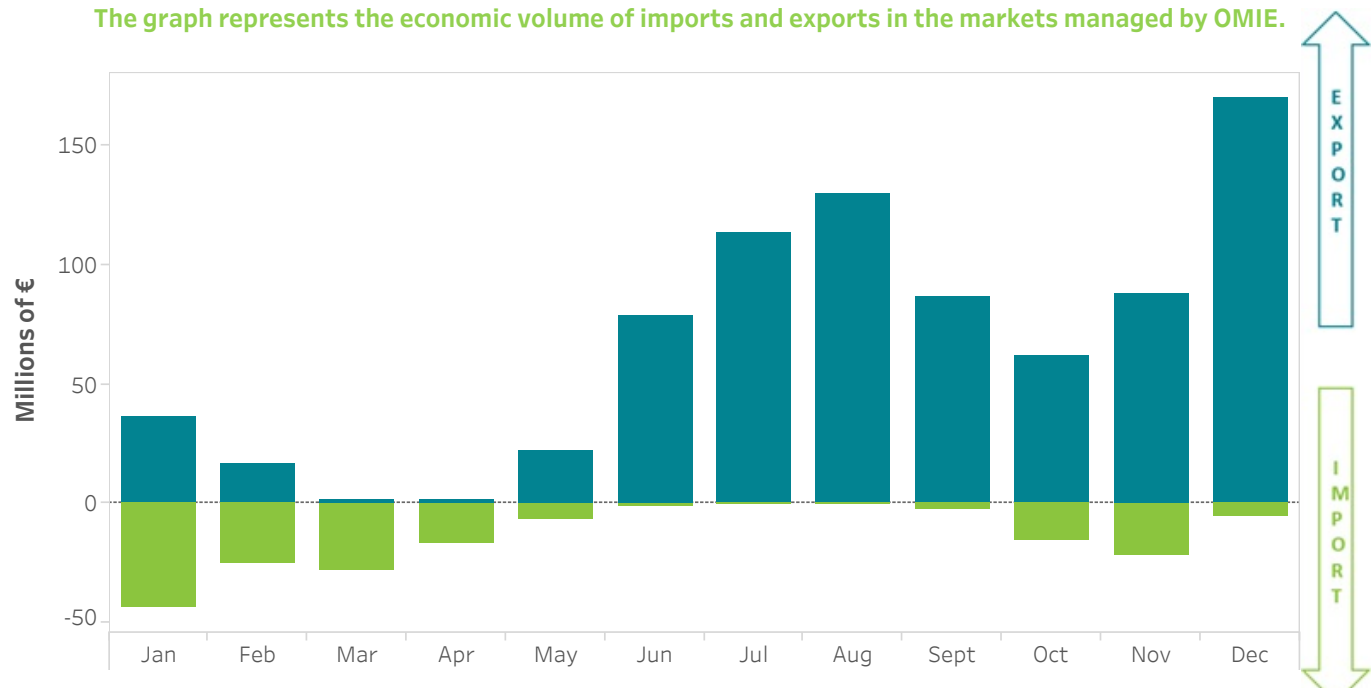
### 5.12 Monthly energies exchanged on the border with Portugal

The graph represents the energy imported and exported in the markets managed by OMIE.



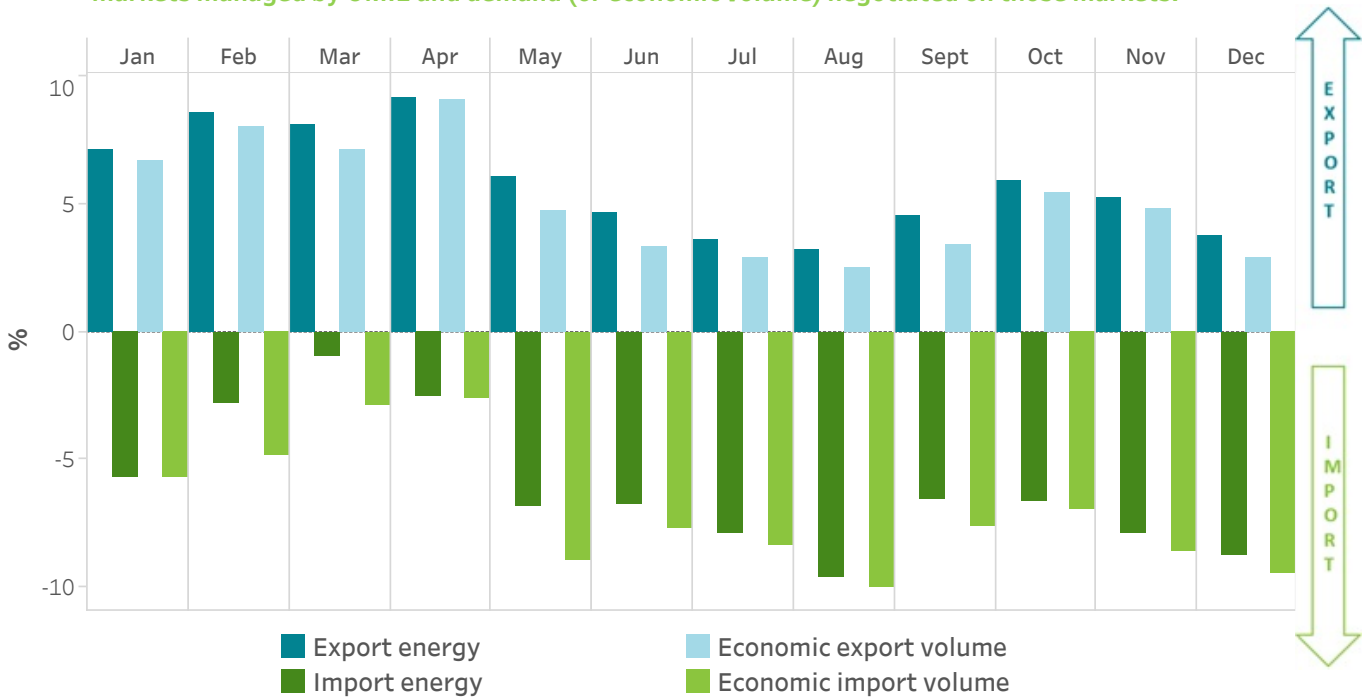
### 5.13 Monthly economic volumes exchanged on the border with Portugal

The graph represents the economic volume of imports and exports in the markets managed by OMIE.

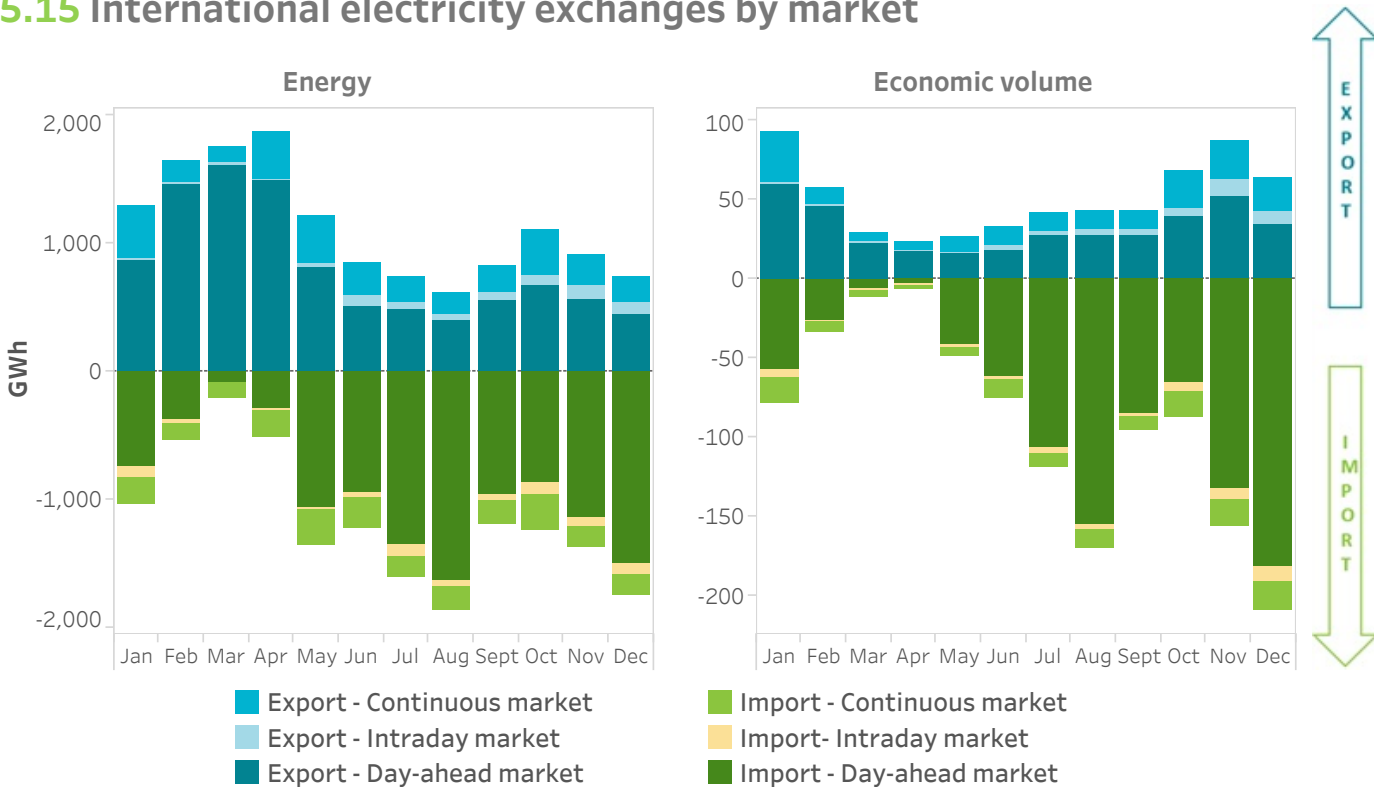


## 5.14 Impact of imports and exports on the MIBEL on market demand

The graph represents the ratio between energy (or economic volume) of imports or exports on markets managed by OMIE and demand (or economic volume) negotiated on those markets.



## 5.15 International electricity exchanges by market



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# 6.

## International markets

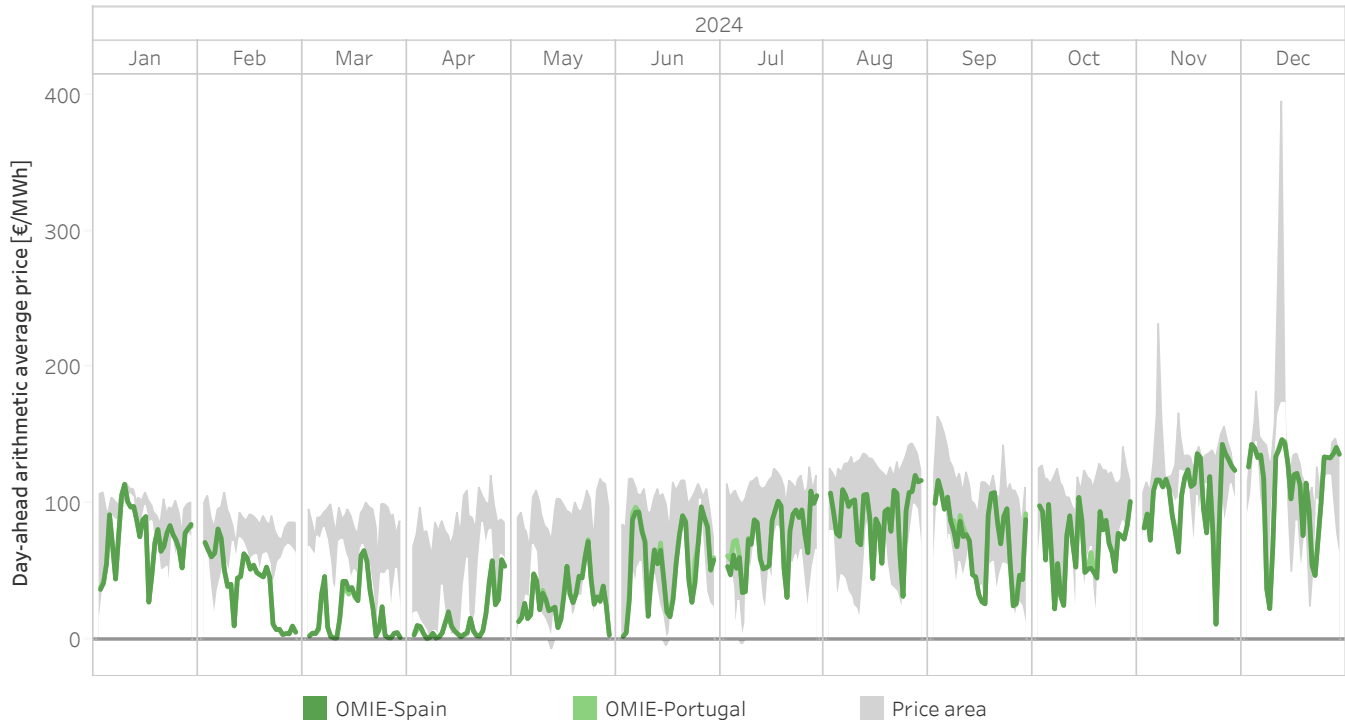
- Prices and energy in the international markets
- Maps



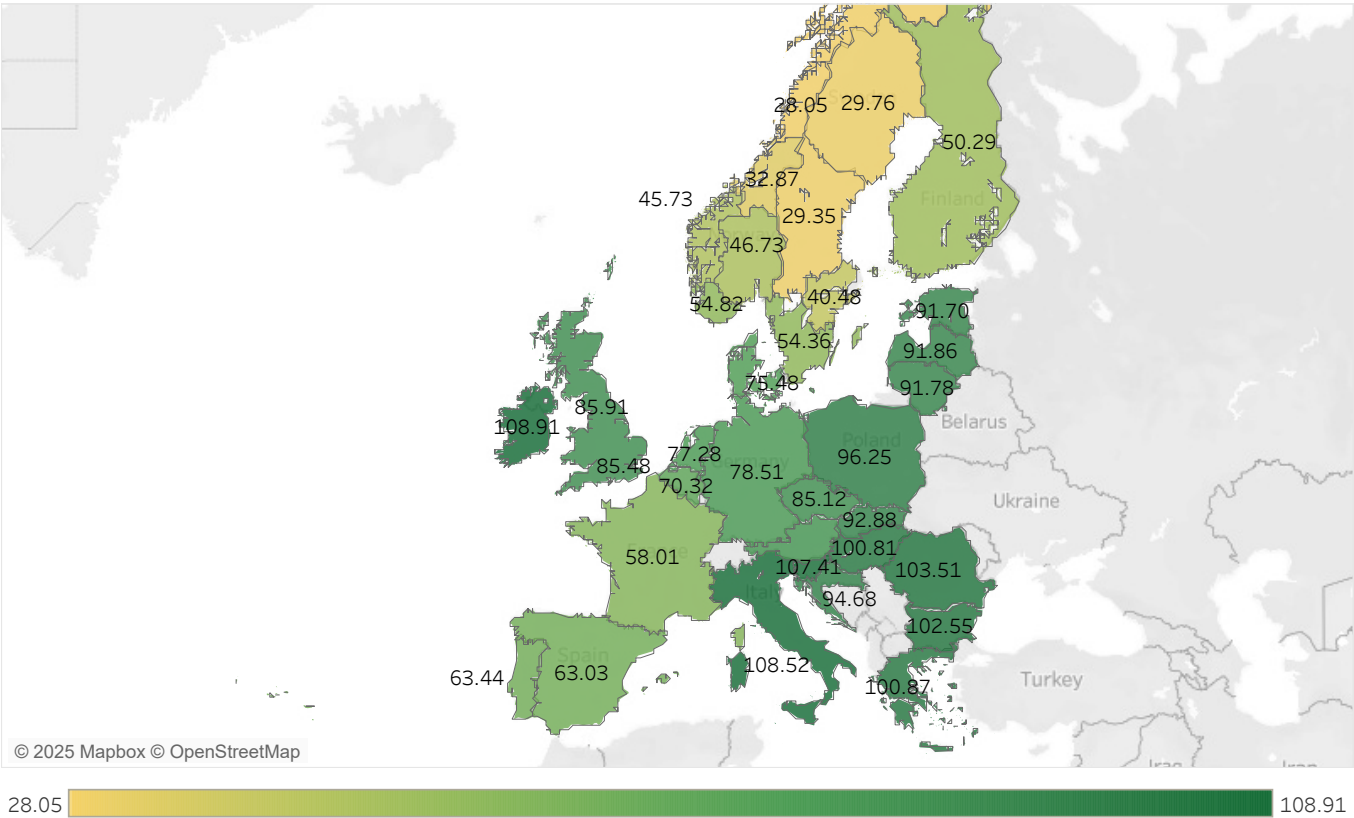
### 6.1 Day-ahead average prices of the main European market operators

Spain and Portugal

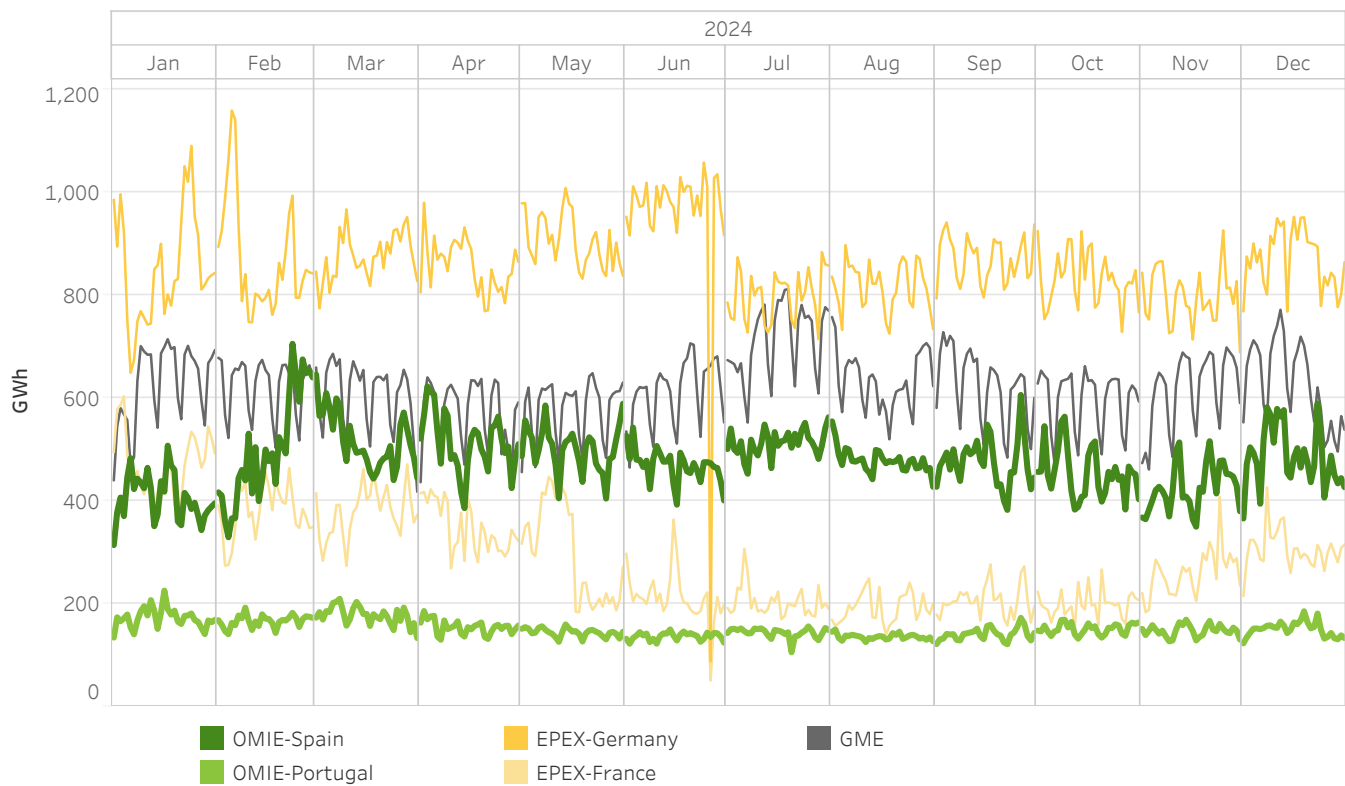
The "Price area" shows the difference between the maximum and the minimum day-ahead average price between the following markets: EPEX-Germany, EPEX-France, EPEX-Netherlands and GME.



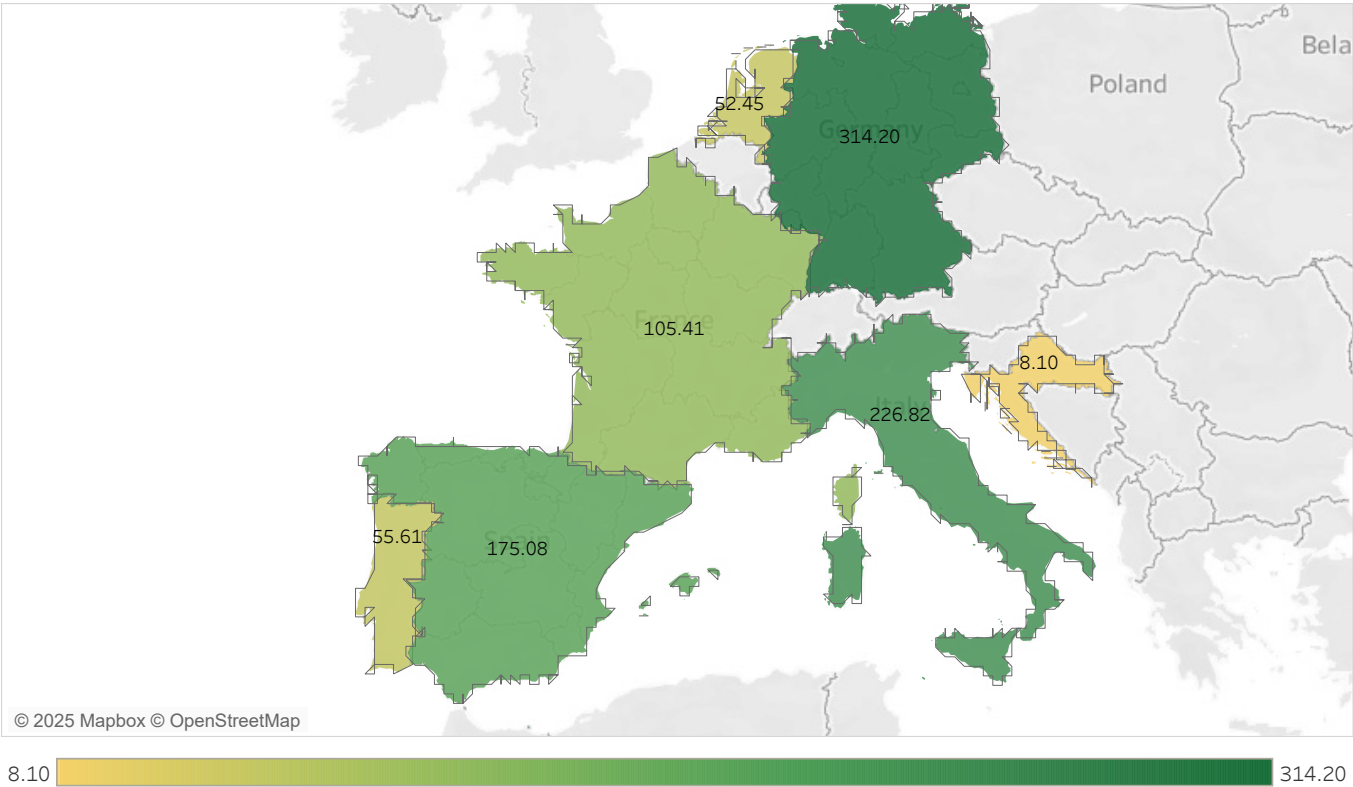
### 6.2 Average prices in the European price areas for 2024 in €/MWh



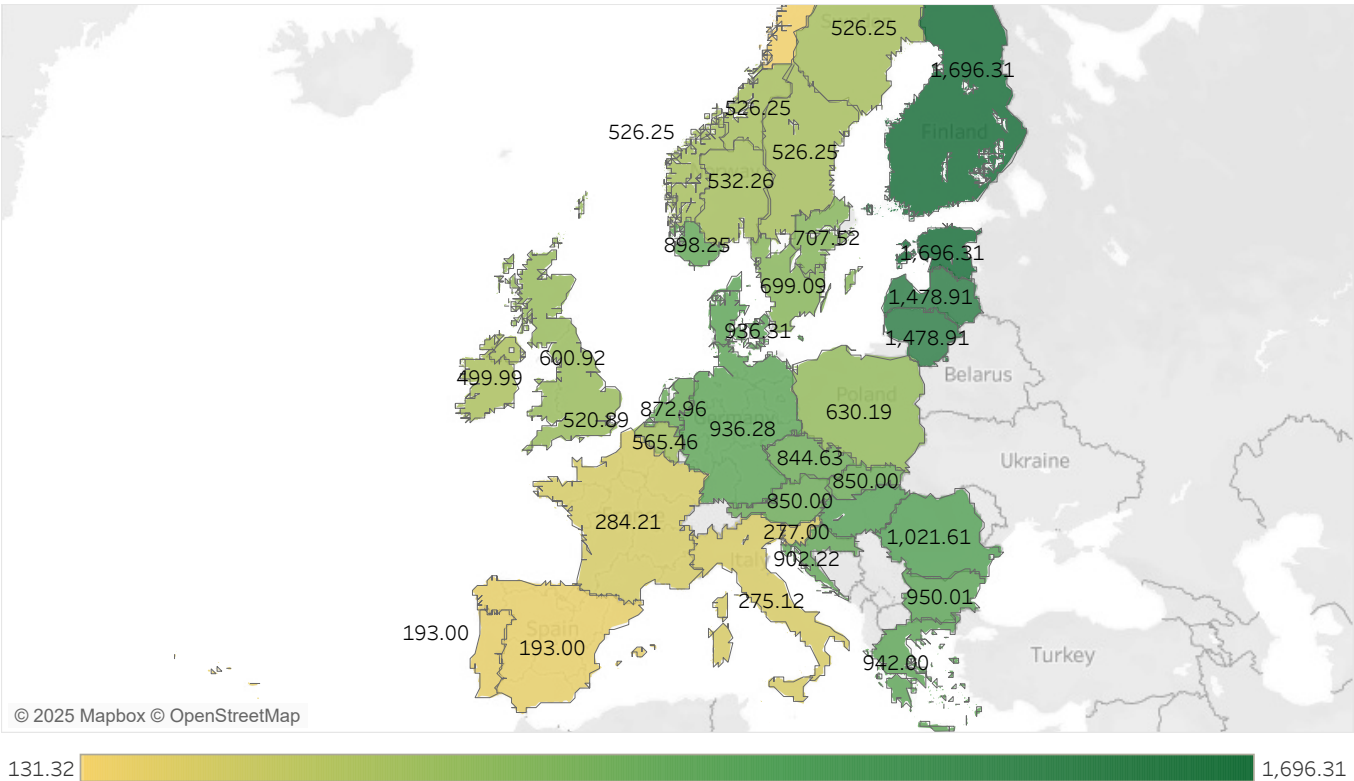
6.3 Day-ahead energy negotiated by the main European market operators



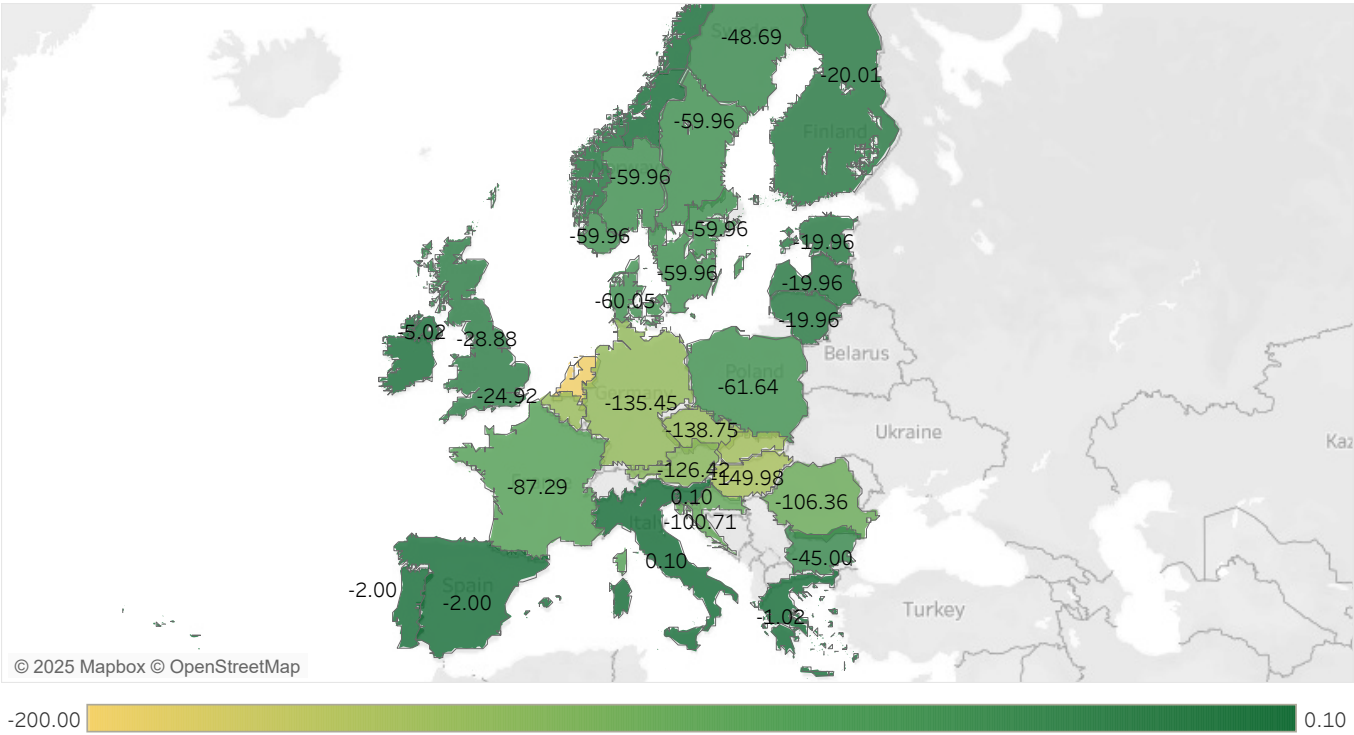
6.4 Energy in the main European price areas for 2024 in TWh



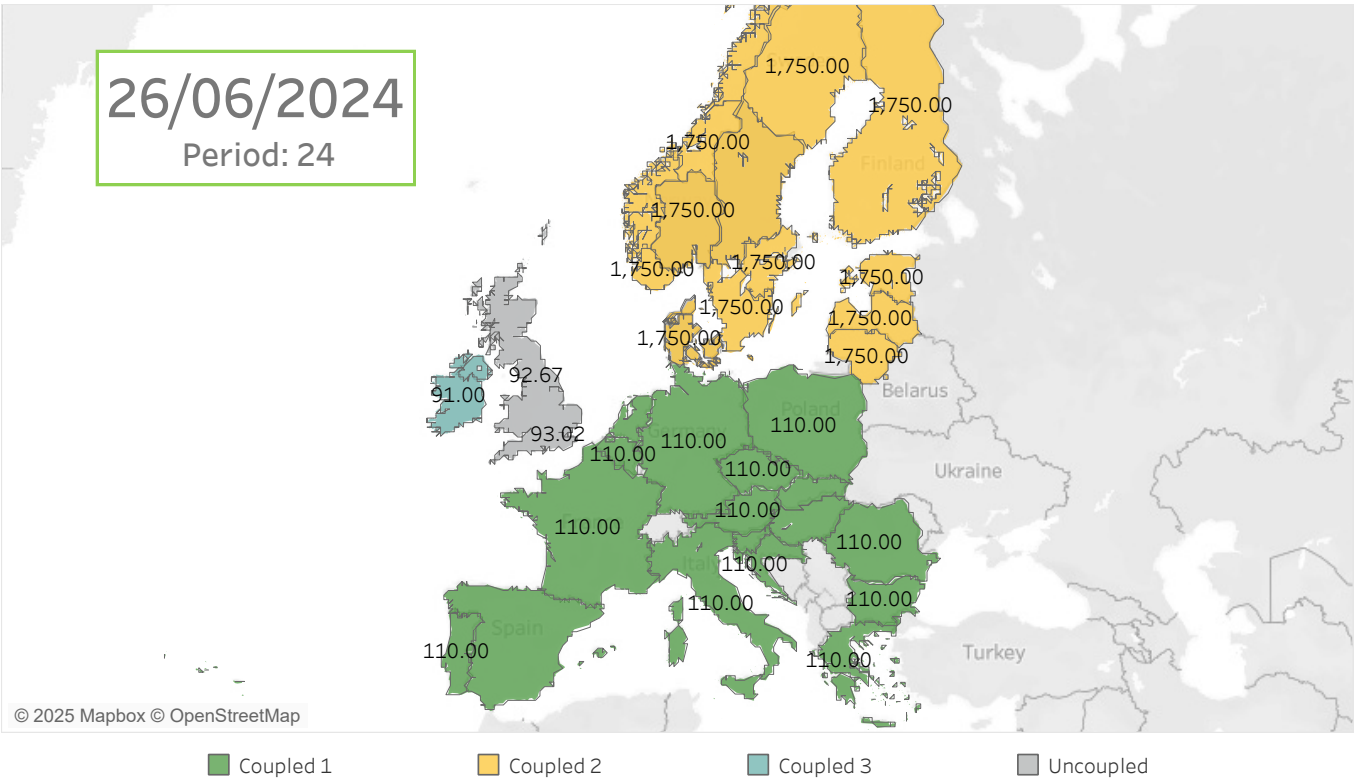
6.5 Hourly maximum prices [€/MWh] in the main European market operators for 2024



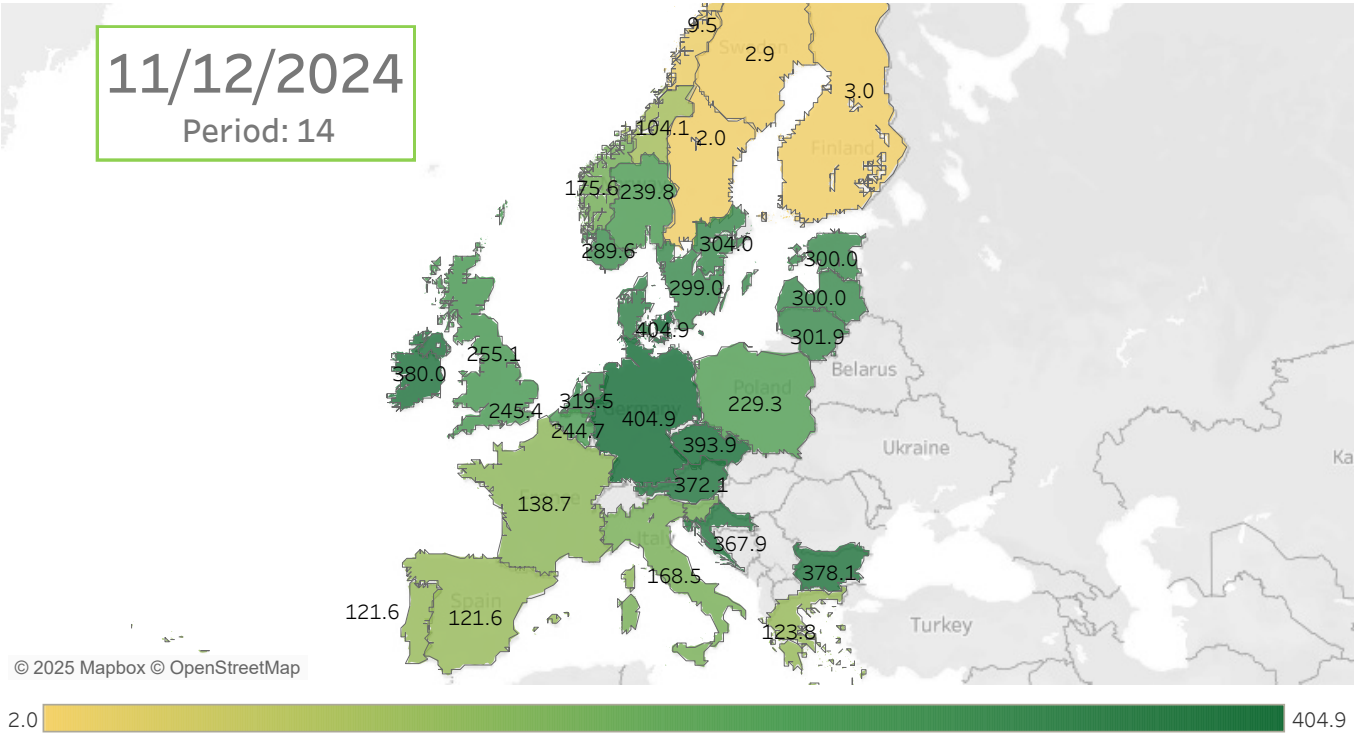
6.6 Hourly minimum prices [€/MWh] in the main European market operators for 2024



6.7 Period of maximum price coupling [€/MWh] in the main European market operators for 2024



6.8 Period of minimum price coupling [€/MWh] in the main European market operators for 2024



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### Appendix

- Day-ahead market
- Intraday auction market
- Intraday continuous market



### Day-ahead market

The purpose of the day-ahead market, as an integral part of the electric power production market, is to carry out electric power transactions for the following day through the submission of electric power sale and purchase bids by market agents.

The day-ahead market is managed by the European market operators: OMIE, EPEX SPOT, GME, Nord Pool, TGE, OPCOM and OTE through the PCR project. The purpose of this project is to implement a market coupling system that calculates electricity prices across Europe, and to allow the allocation of cross-border capacity in short-term markets.

The resulting daily market schedule is the Base Daily Matching Schedule (PBDC). The system operator incorporates into this schedule the bilaterals declared in the system operator and the resulting schedule is the Base Daily Operating Schedule (PDBF). Finally, once the system operator has applied the technical constraints to the PDBF, the resulting schedule is the Final Viable Daily Schedule (PDVD).

### Intraday market

Intraday markets are an important tool for market participants to adjust, through the submission of power purchase and sale bids, their resulting day-ahead market schedule according to their expected real-time needs. The importance of efficient intraday markets has increased in recent years as a result of the growing intermittent generation capacity.

#### **Intraday Market for Regional Auctions**

The purpose of the intraday auction market is to meet, through the submission of bids for the sale and purchase of electricity by market agents, the adjustments to the Definitive Viable Daily Program, the scheduling basis of which is the result of the daily market.

The intraday auction market is currently structured in six sessions with different programming horizons for each session and manages the price areas of Portugal and Spain, and the free capacity of the interconnections: Spain-Portugal, Spain-Morocco and Spain-Andorra.

The resulting program for each intraday auction market session is the Basic Intraday Incremental Cassation Program (PIBCI). Based on this program, the system operator publishes the resulting program, the Final Hourly Program (FHP).

#### **European intraday auction market (IDAs)**

The purpose of the Intraday Capacity Auctions (IDA) markets is to meet, through the submission of bids for the sale and purchase of electricity by market agents, the adjustments to the Final Viable Daily Program whose scheduling basis is the result of the daily market.

The European intraday auction market is currently structured in three sessions with different scheduling horizons for each session. In these markets the volume of energy and the price for each hour are determined by the intersection between supply and demand, the model being agreed and approved by all European markets.

El programa resultado de cada sesión del mercado intradiario de subasta es el Programa Intradiario Básico de Casación Incremental (PIBCI). El operador del sistema, en base a este programa, publica el programa resultante el Programa Horario Final (PHF).

### **Continuous Intraday Market (XBID)**

The continuous intraday market, like the intraday auction market, offers the possibility for market agents to manage their energy imbalances with 2 fundamental differences with respect to the auction market:

- Brokers can benefit from market liquidity at the regional level in Spain and Portugal and from liquidity available in markets in other areas of Europe, provided that cross-border transport capacity is available between the zones.
- Adjustment can be made up to one hour before the time of power delivery.

The continuous intraday market is managed by the market operators OMIE, EPEX spot, BSP and Nord Pool in response to market needs, who launched the initiative called XBID Market Project to create an integrated European cross-border intraday market. The purpose of this project is to couple the European intraday markets and allow energy trading between the different areas of Europe on a continuous basis, increasing the overall efficiency of transactions in these markets at the European level. This initiative represents the Single Intraday Coupling (SIDC) solution that will allow the creation of an integrated European intraday market.

The schedule resulting from each round of the continuous intraday market is the Basic Intraday Continuous Incremental Matching Basic Continuous Intraday Schedule (PIBCIC). The system operator, based on this schedule, publishes the resulting schedule called the Continuous Final Hourly Continuous Schedule (PHFC).



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