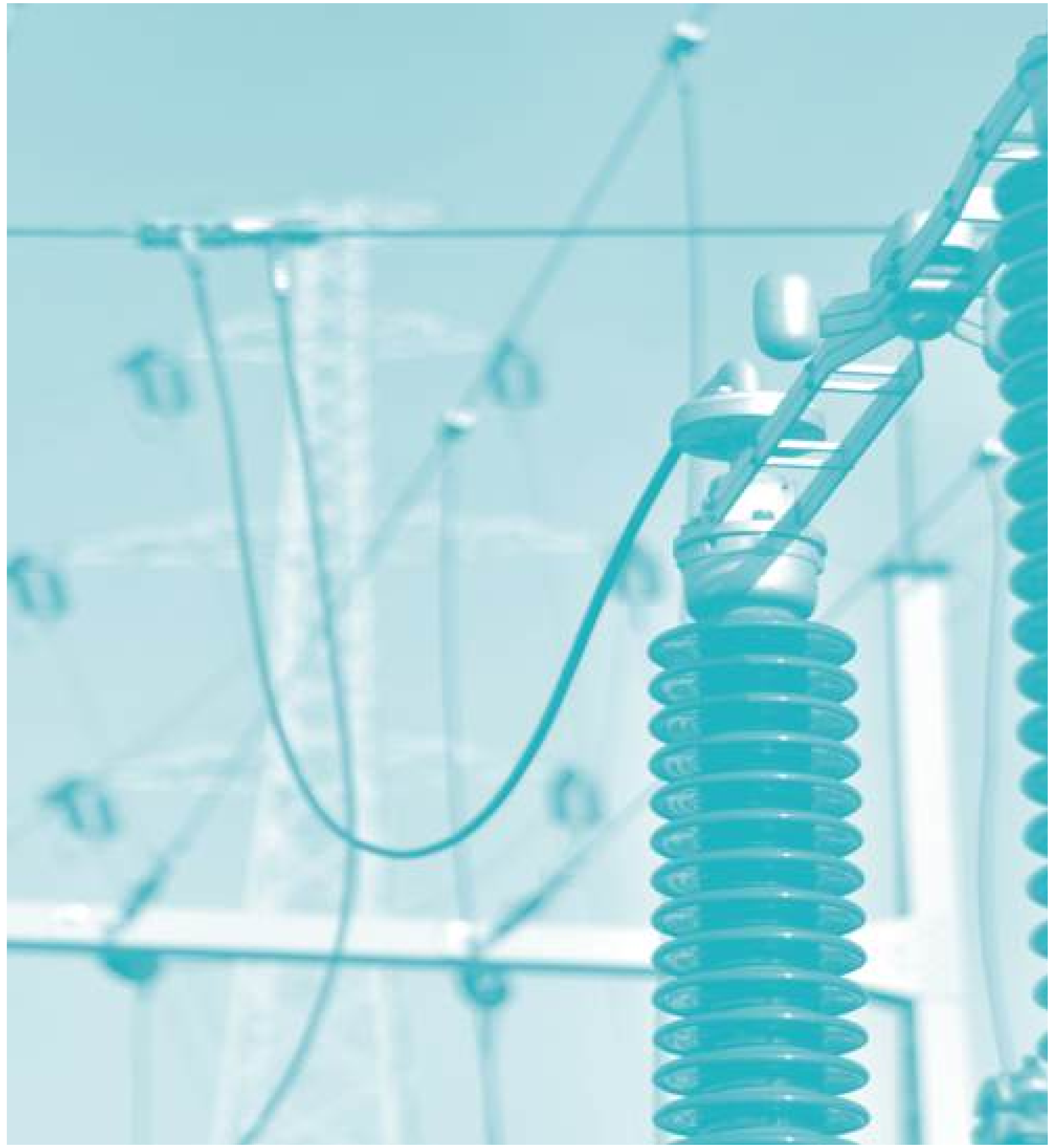
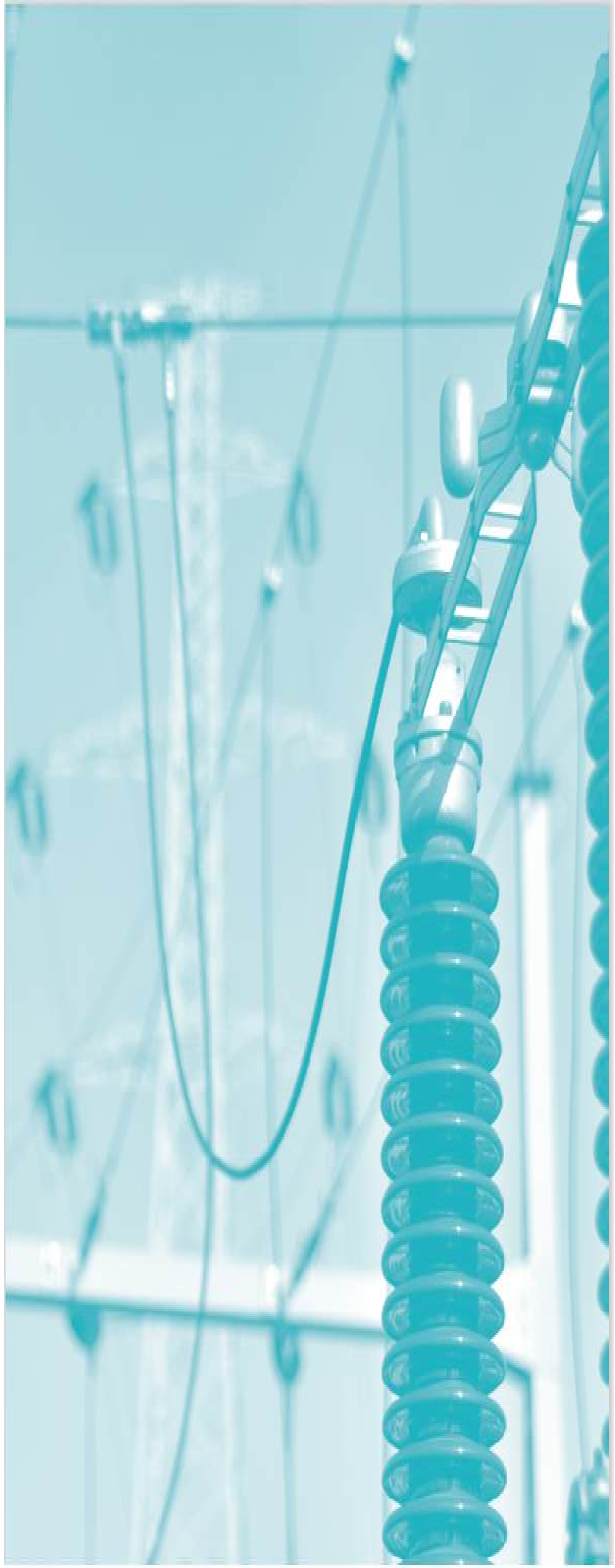




Energy Market Monitoring Report

June 2025

SEM committee



Market Results

Summary Dashboard

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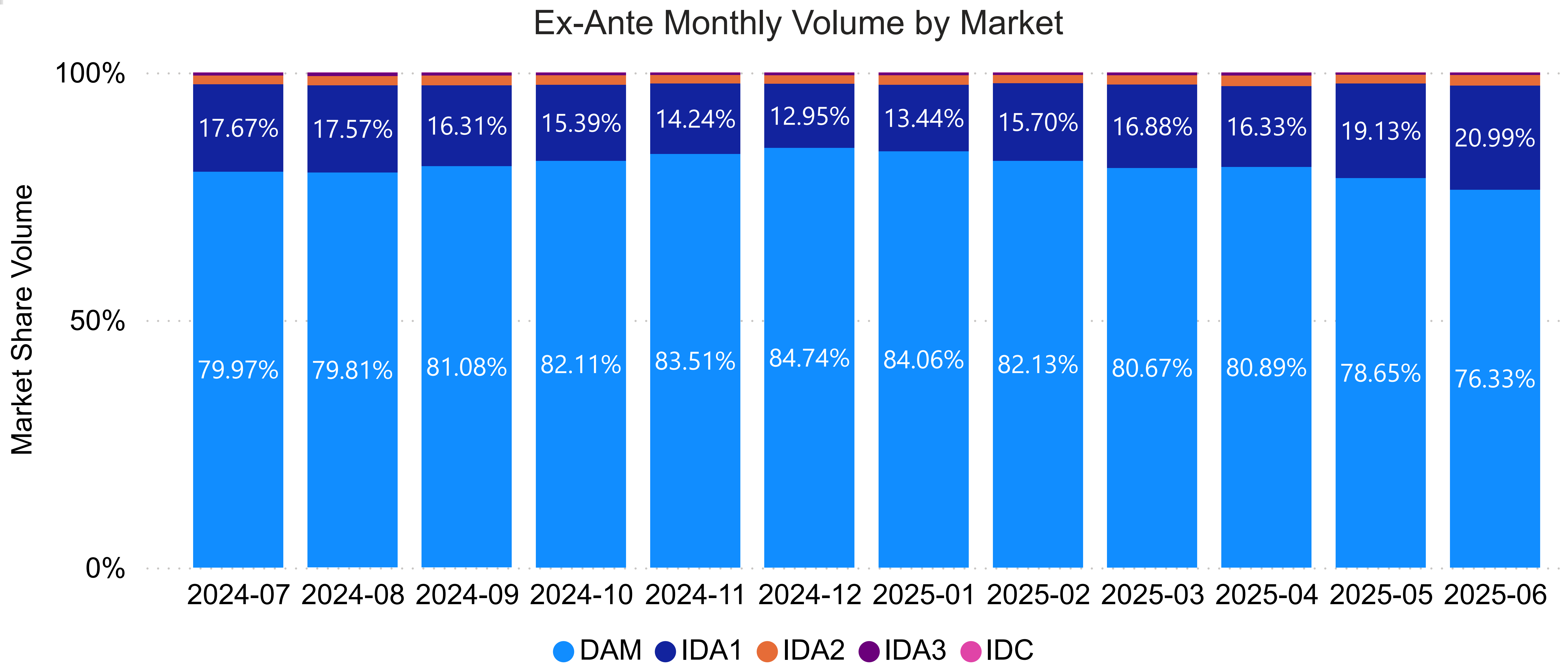
Monthly Averages	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Nov-24	Dec-24	Jan-25	Feb-25	Mar-25	Apr-25	May-25	Jun-25
DAM (€/MWh)	107.74	110.94	100.44	112.73	122.9	146.14	136.99	167.51	140.85	131.8	111.11	108.64	95.21
% Change from previous month	0%	3%	-9%	12%	9%	19%	-6%	22%	-16%	-6%	-16%	-2%	-12%
% Change from previous year	-8%	15%	-6%	1%	-2%	19%	54%	68%	66%	52%	26%	1%	-12%
Actual System Demand (MW)	4193	4279	4255	4467.76	4671	5085	5020	5256	5194	4951	4594	4254	4413
% Change from previous month	-4%	2%	-1%	5%	5%	9%	-1%	5%	-1%	-5%	-7%	-7%	4%
% Change from previous year	0%	4%	2%	3%	3%	4%	3%	2%	5%	2%	0%	-2%	5%
Actual Wind Generation (MW)	1072	883	1437	1263	1668	1448	2040	1948	2509	1615	1278	933	1306
% Change from previous month	20%	-18%	63%	-12%	32%	-13%	41%	-5%	29%	-36%	-21%	-27%	40%
% Change from previous year	22%	-33%	3%	-9%	22%	-20%	-17%	5%	25%	-22%	-15%	4%	22%
Gas Price p/therm	81.51	75.07	84.71	86.94	99.04	111	111.22	122.85	123.04	100.94	84.72	81.82	86.38
% Change from previous month	6%	-8%	13%	3%	14%	12%	0%	10%	0%	-18%	-16%	-3%	6%
% Change from previous year	5%	6%	2%	-5%	-6%	6%	32%	64%	94%	48%	18%	7%	6%
Carbon Price (€/Tonne)	68.29	67.00	70.12	64.86	63.51	67.15	67.05	75.87	76.08	68.39	63.96	71.00	73.14
% Change from previous month	-4%	-2%	5%	-8%	-2%	6%	0%	13%	0%	-10%	-6%	11%	3%
% Change from previous year	-20%	-23%	-17%	-21%	-22%	-12%	-7%	16%	36%	18%	1%	0%	7%
Coal Price ($/tonne)	109.54	105.93	121.36	114.96	119.65	120.84	113.32	109.23	102.88	97.91	101.46	95.80	102.44
% Change from previous month	3%	-3%	15%	-5%	4%	1%	-6%	-4%	-6%	-5%	4%	-6%	7%
% Change from previous year	-3%	-5%	5%	-5%	-9%	-1%	-4%	1%	6%	-12%	-14%	-10%	-6%
EWIC % Import Periods	85.90%	94.59%	85.29%	81.53%	71.32%	78.30%	67.64%	67.88%	43.01%	55.18%	27.15%	78.36%	68.26%
EWIC % Export Periods	3.72%	1.11%	7.56%	5.52%	10.31%	9.03%	11.49%	10.18%	13.91%	2.66%	1.81%	0.77%	2.05%
EWIC % Not Flow Periods	10.38%	4.30%	7.15%	12.95%	18.37%	12.67%	20.87%	21.94%	43.08%	42.16%	71.04%	20.87%	29.69%
Moyle % Import Periods	92.47%	96.77%	80.71%	91.98%	81.08%	82.47%	81.55%	78.53%	64.62%	79.24%	78.16%	93.88%	78.85%
Moyle % Export Periods	7.53%	3.23%	10.44%	7.60%	18.65%	17.50%	18.41%	21.27%	22.43%	6.16%	6.08%	6.08%	16.70%
Moyle % Not Flow Periods	0.00%	0.00%	8.84%	0.42%	0.28%	0.03%	0.03%	0.20%	12.95%	14.60%	15.76%	0.03%	4.44%
Greenlink % Import Periods	NA	NA	NA	NA	NA	NA	NA	NA	68.97%	88.63%	80.17%	93.78%	90.76%
Greenlink % Export Periods	NA	NA	NA	NA	NA	NA	NA	NA	25.04%	9.49%	10.35%	5.58%	7.36%
Greenlink % Not Flow Periods	NA	NA	NA	NA	NA	NA	NA	NA	5.99%	1.88%	9.48%	0.64%	1.88%

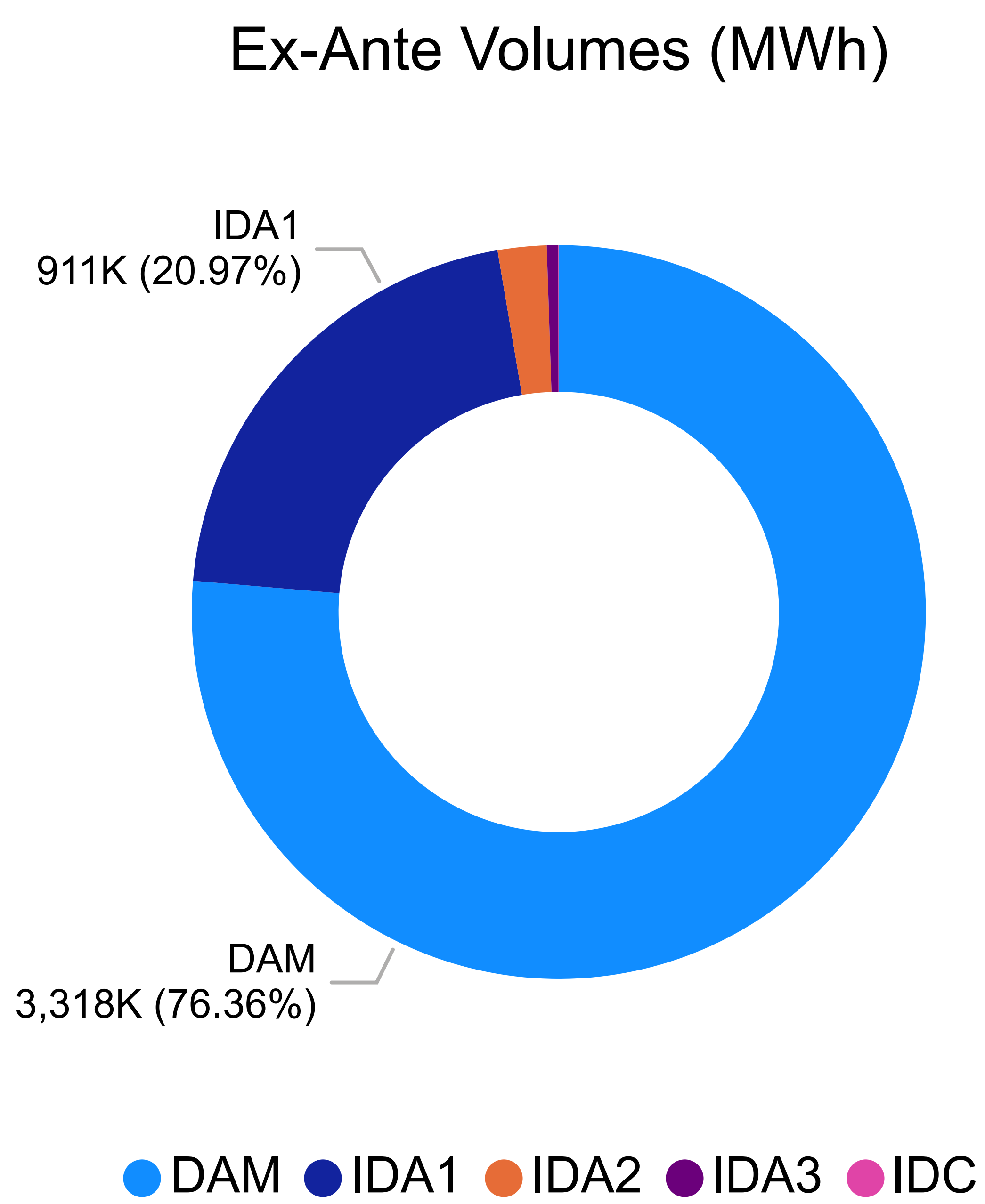
Market Volumes June 2025

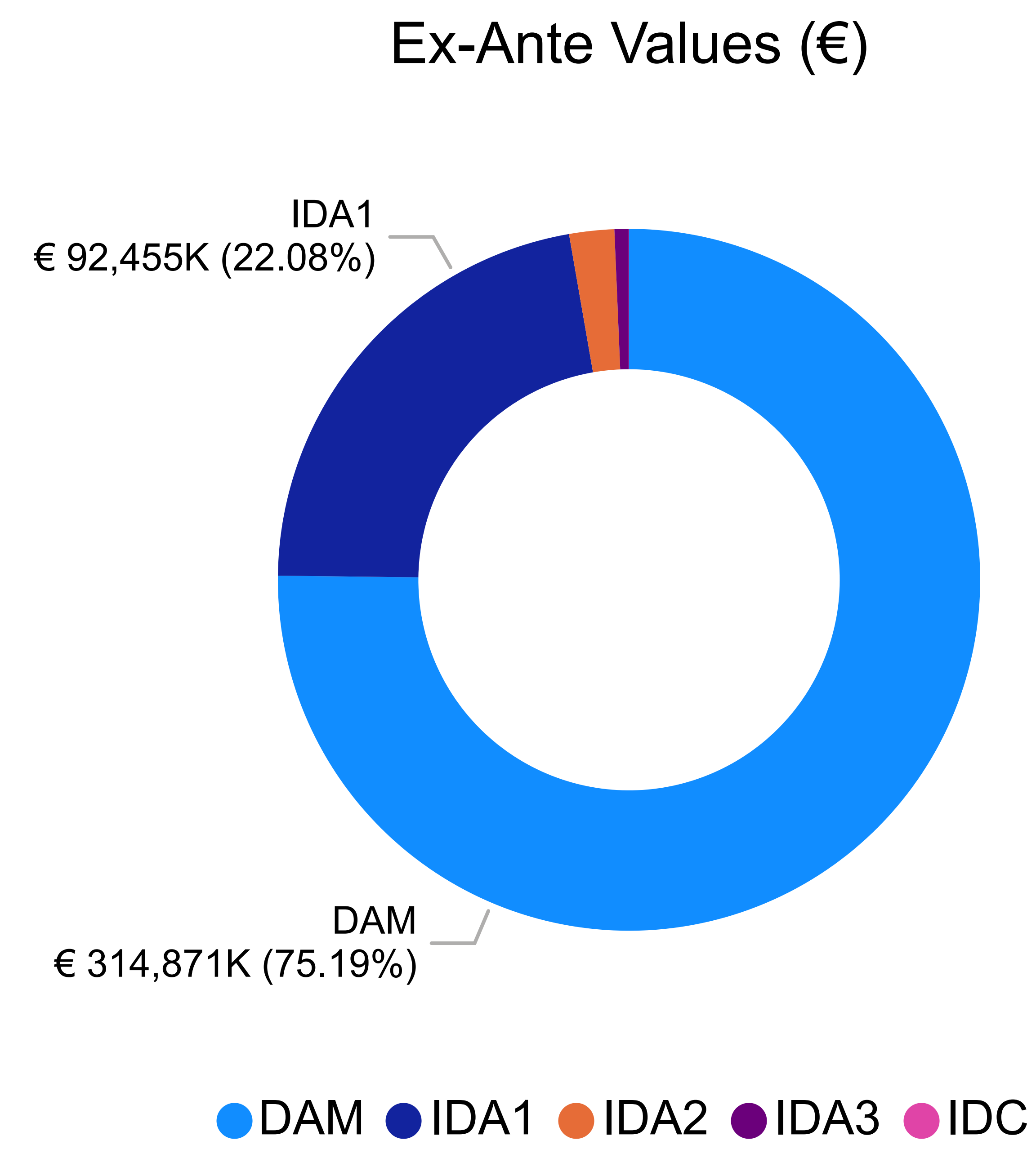
Daily Average Volume	MWh
DAM	110,593
IDA1	30,376
IDA2	3,113
IDA3	736
IDC	24

Total Monthly Volume	MWh
DAM	3,317,780
IDA1	911,276
IDA2	93,392
IDA3	22,078
IDC	655
Total	**4,345,180**

Total Market Value	€
DAM	€ 314,871,279
IDA1	€ 92,454,796
IDA2	€ 8,672,982
IDA3	€ 2,716,027
IDC	€ 72,157
Total	**€ 418,787,241**







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Market Volumes and Values

The Day Ahead Market is, by far, the largest market in the SEM, circa 80-85% of all transactions are cleared in this market. The distribution of volumes across the SEM markets have been broadly constant since the introduction of these trading arrangements in October 2018.

Generally, in power markets, market participants will prefer to lock their positions well ahead of delivery time given the increased volatility in prices closer to real time.

Another important factor is associated with the TSO dispatch arrangements. The vast majority of wind generation in the SEM is cleared at the Day Ahead stage. That might also explain to some extent the additional volumes cleared in this market.

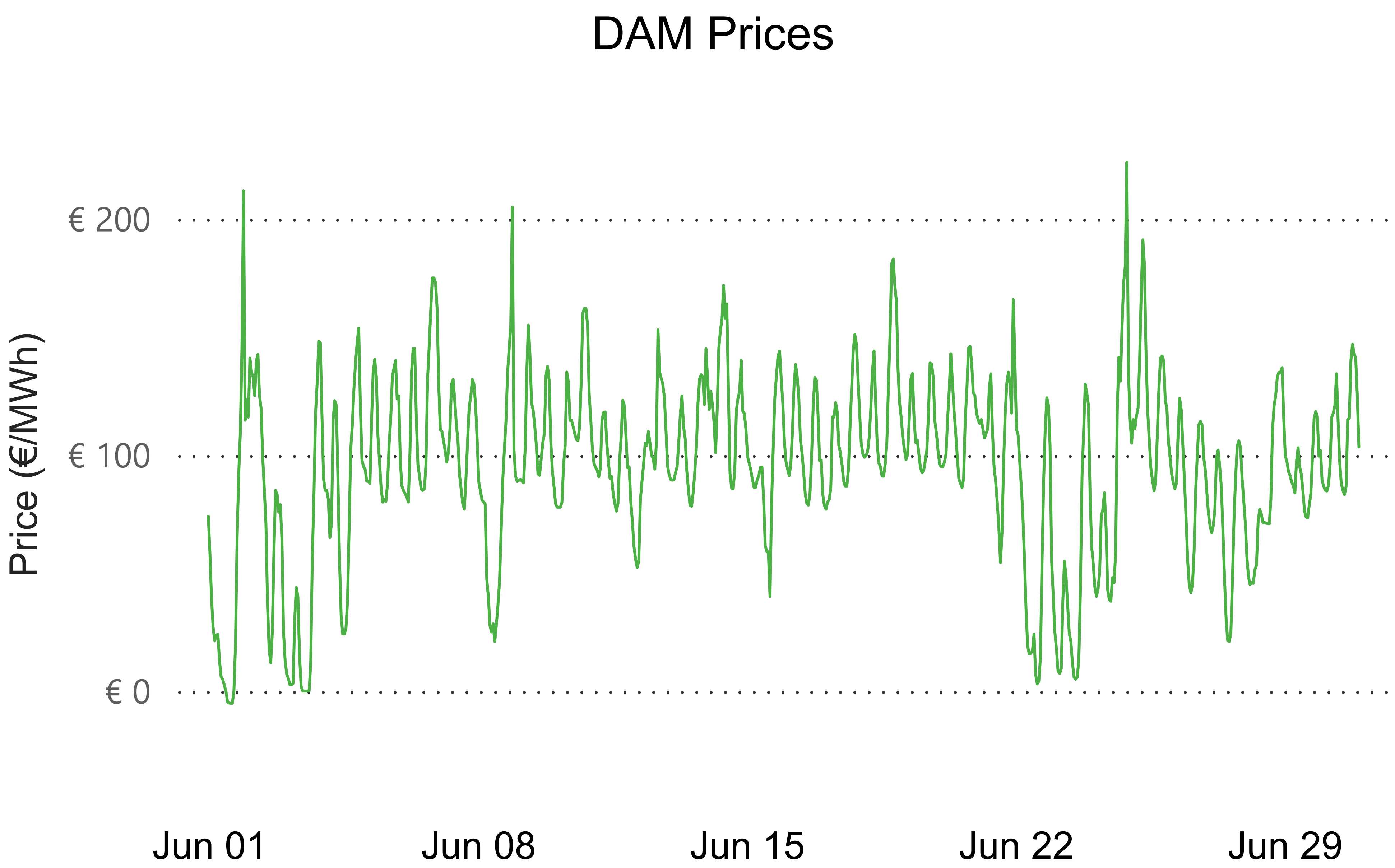
Day Ahead Market
June 2025

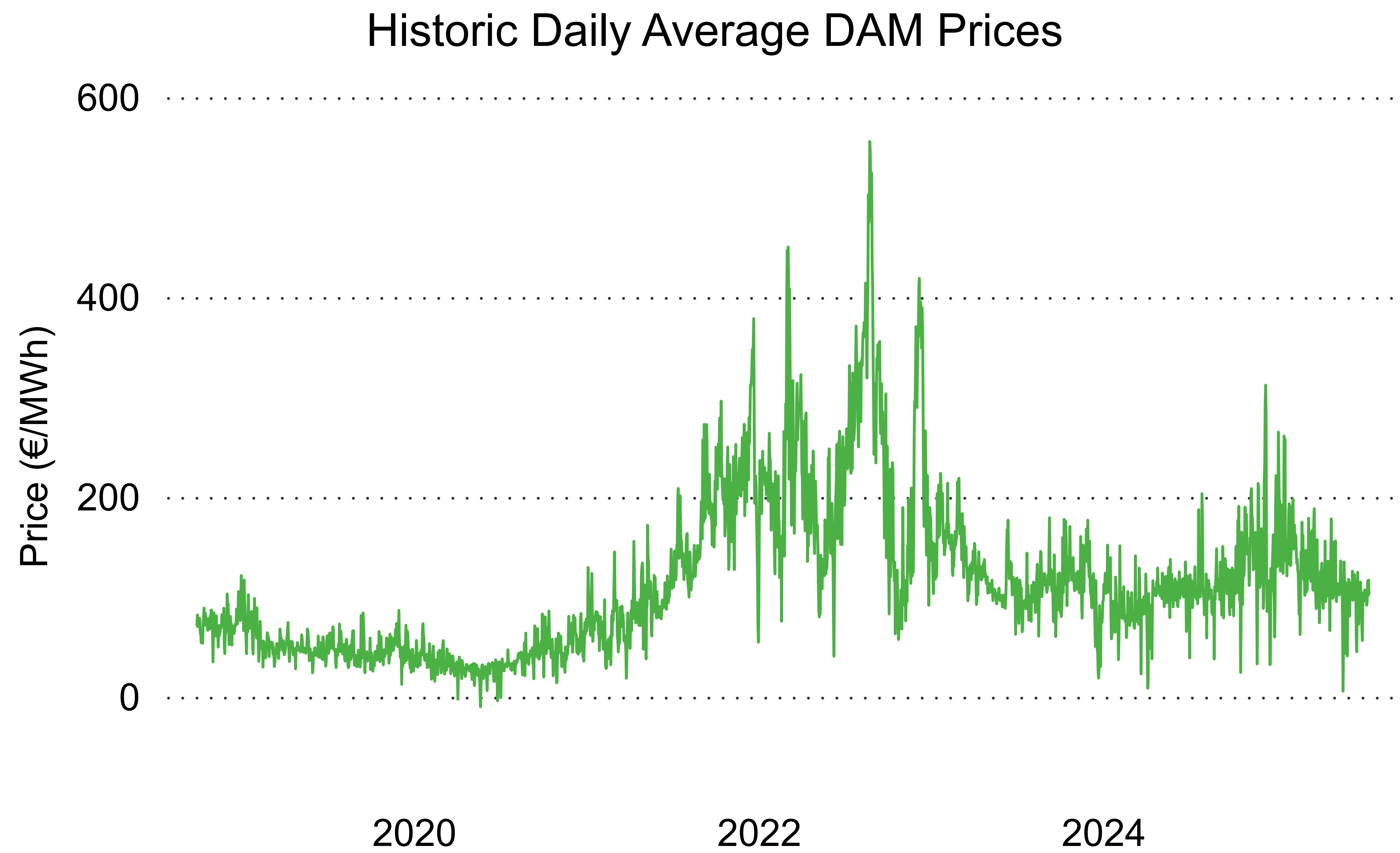
€ 95.21
Average DAM Price

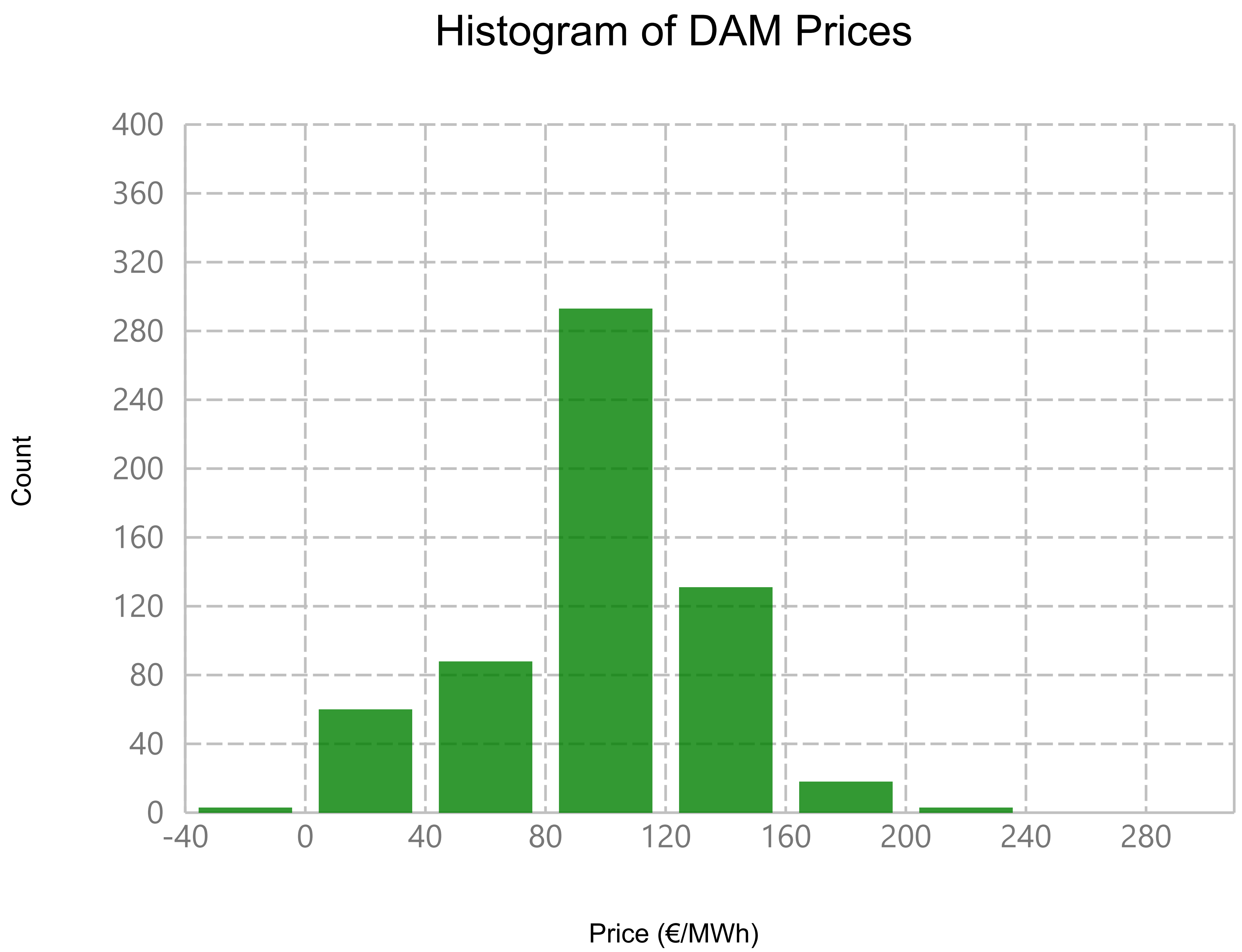
-€ 5.17
Min DAM Price

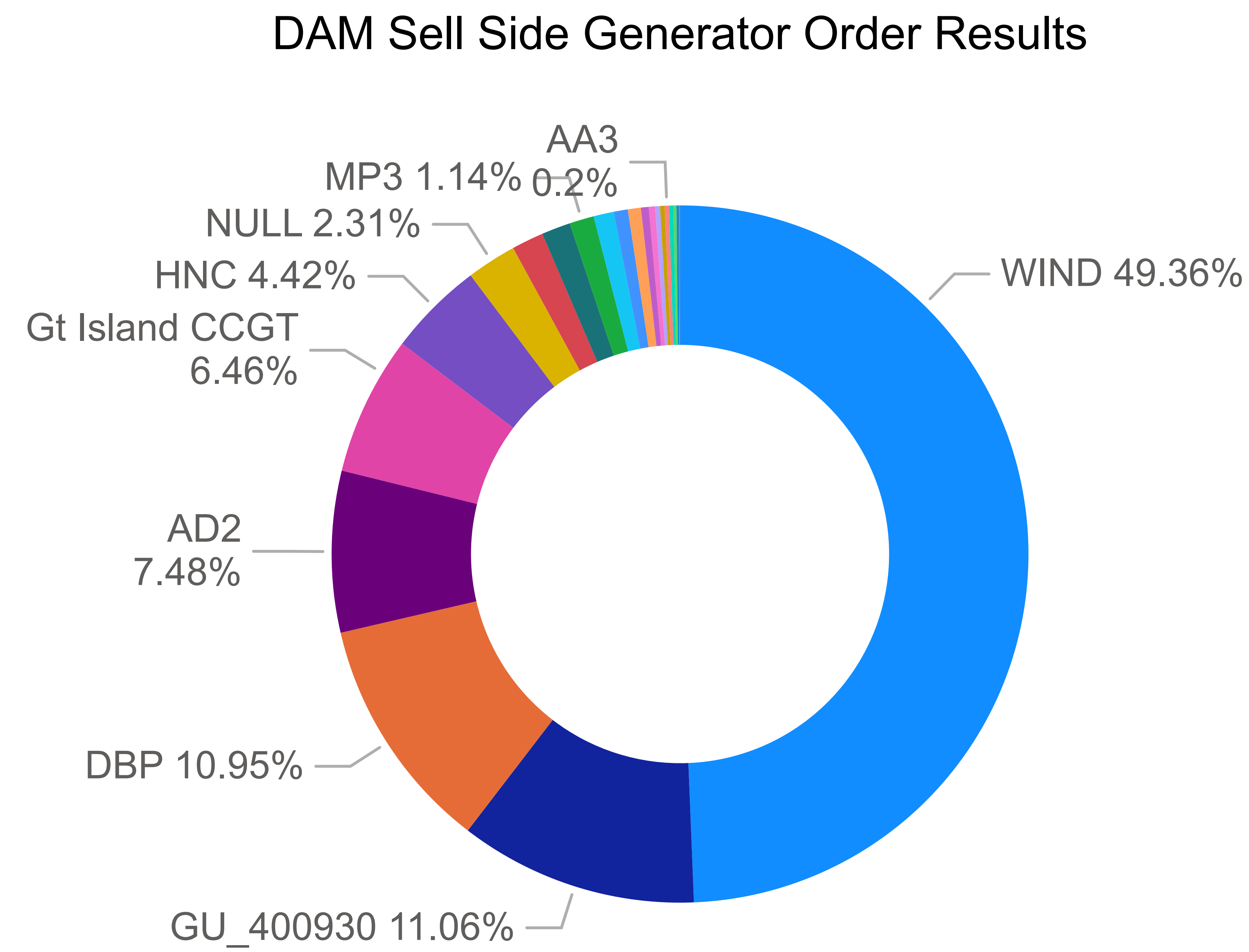
€ 224.00
Max DAM Price

The most frequent price range for April was between €80 and €120.









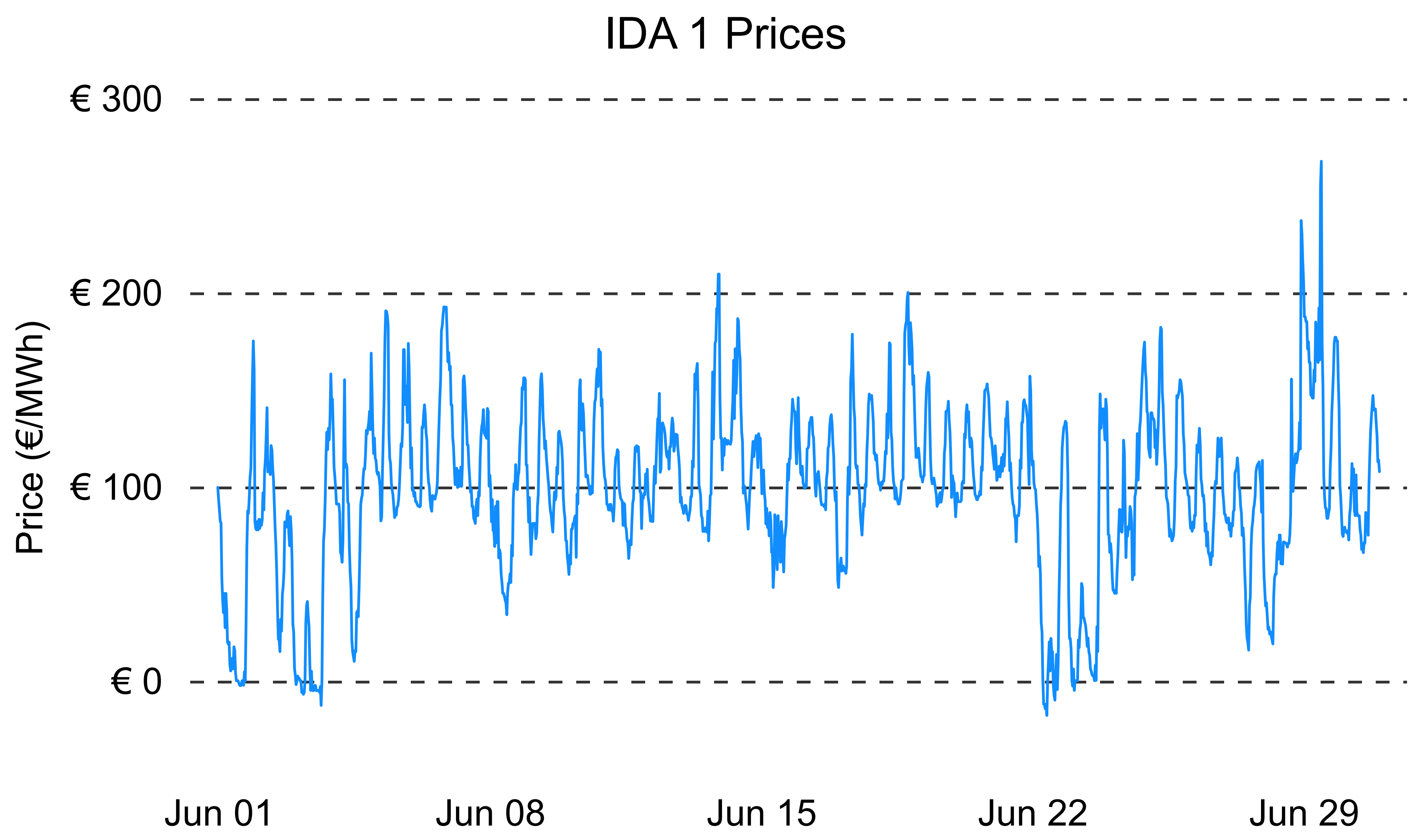
Intraday Market June 2025

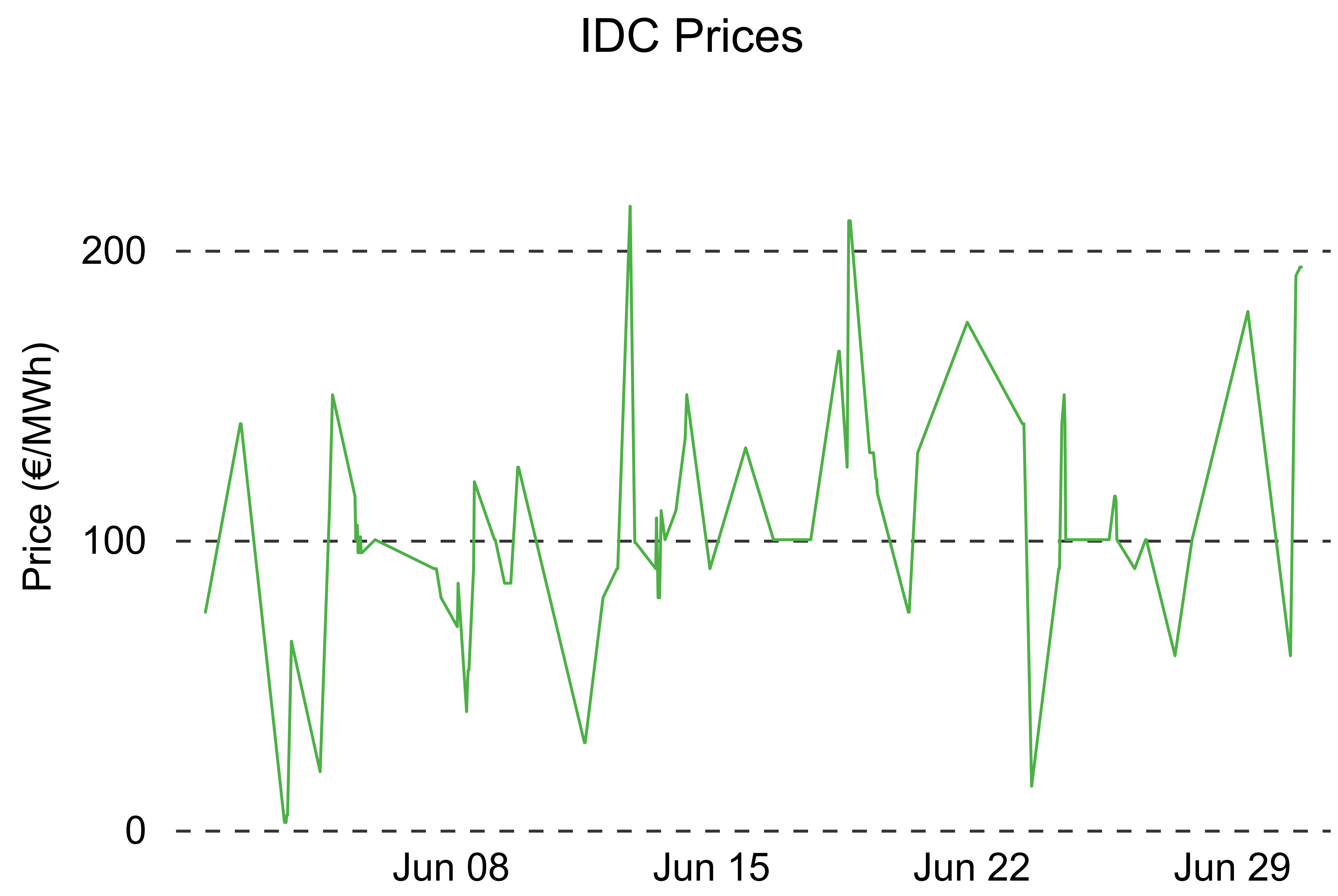
€ 98.35
Average IDA1 Price

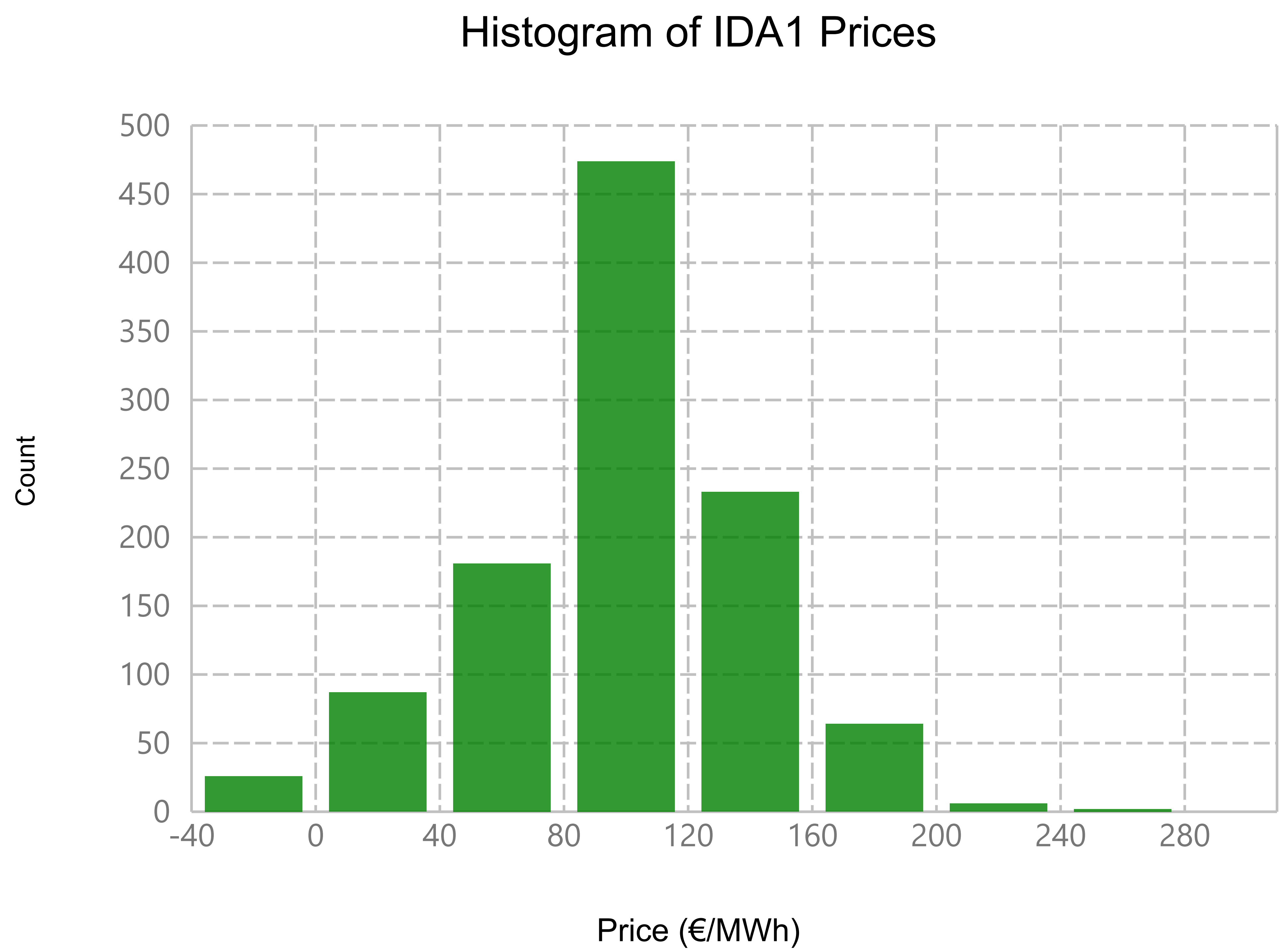
-€ 17.89
Min IDA1 Price

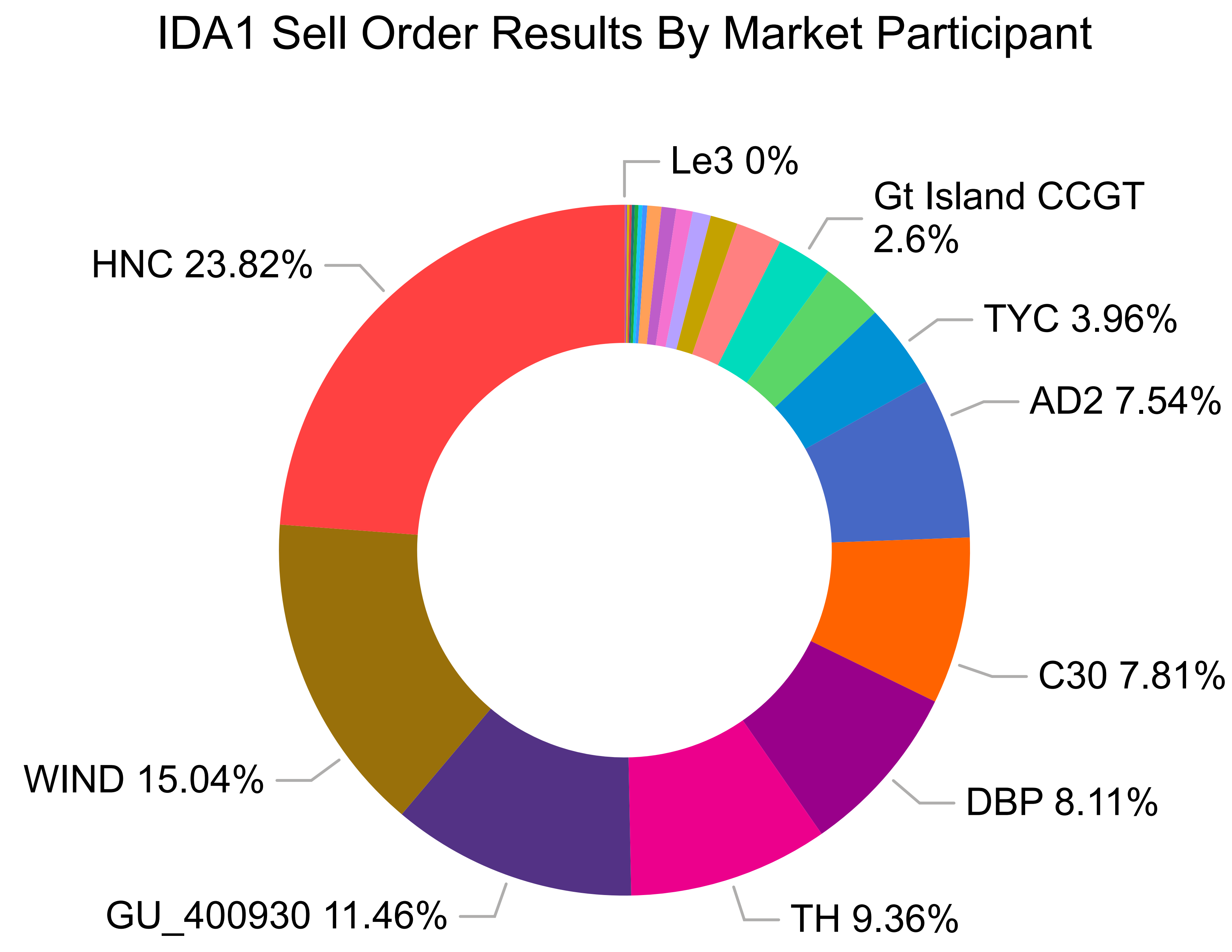
€ 267.51
Max IDA1 Price

The most frequent price range for April was between €80 and €120.









SEM vs GB DAM June 2025

SEM Day Ahead Price

€ 95.21
Average DAM Price

-€ 5.17
Min DAM Price

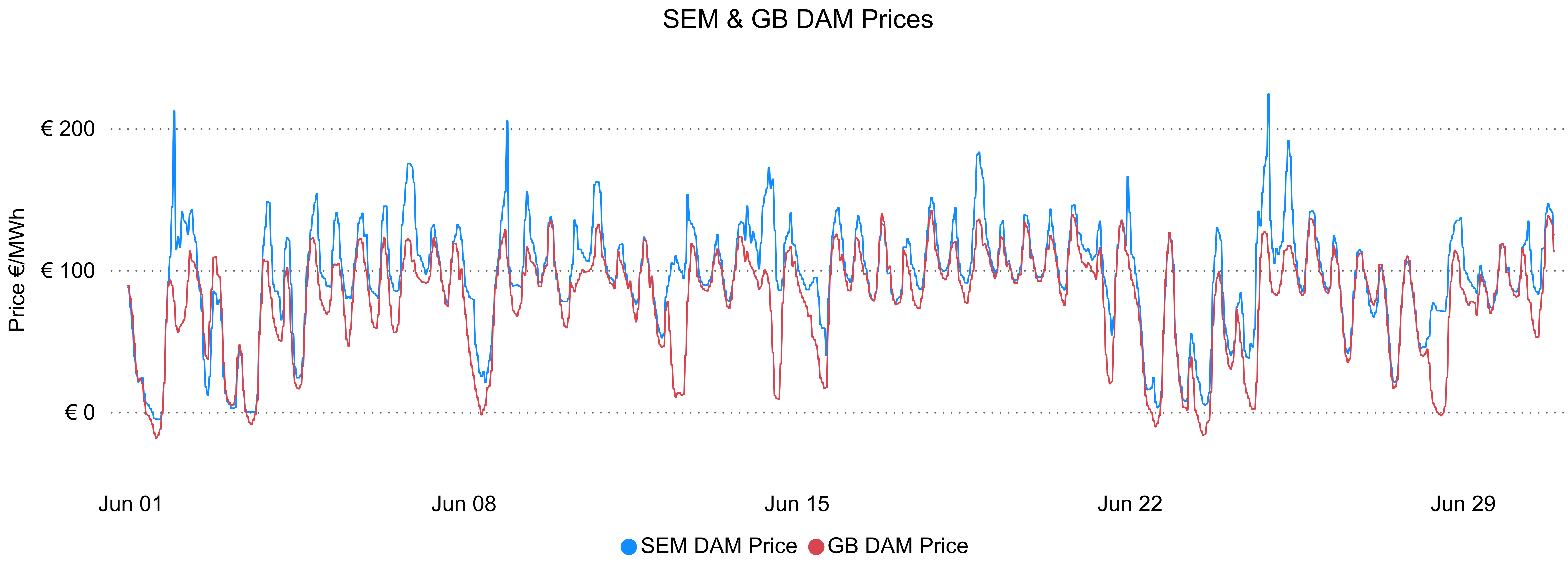
€ 224.00
Max DAM Price

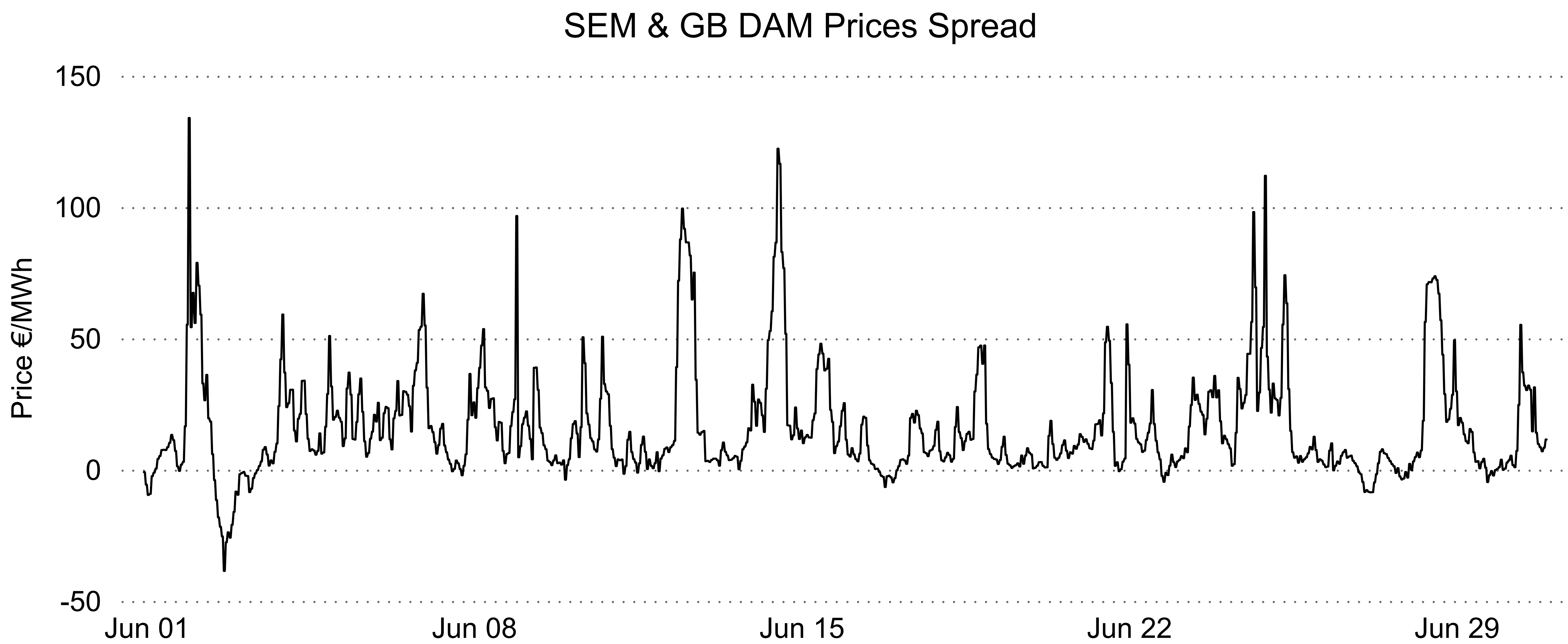
GB Day Ahead Price

€ 78.98
Average Price

-€ 18.31
Min Price

€ 141.99
Max Price





SEM-GB Price Differential

The charts show that the SEM and GB prices appear to follow the same general trend. Significant spreads can be observed on several occasions.

Periods of significant spreads between the two markets are generally correlated with periods of very low wind in the SEM.

SEM Interconnectors
June 2025

As illustrated, the profile of interconnector flows were predominantly importing power across the month. This reflects the predominantly higher prices in the SEM compared with GB.

Export flows on interconnectors were also observed occasionally when strong wind output resulted in oversupply in the SEM.

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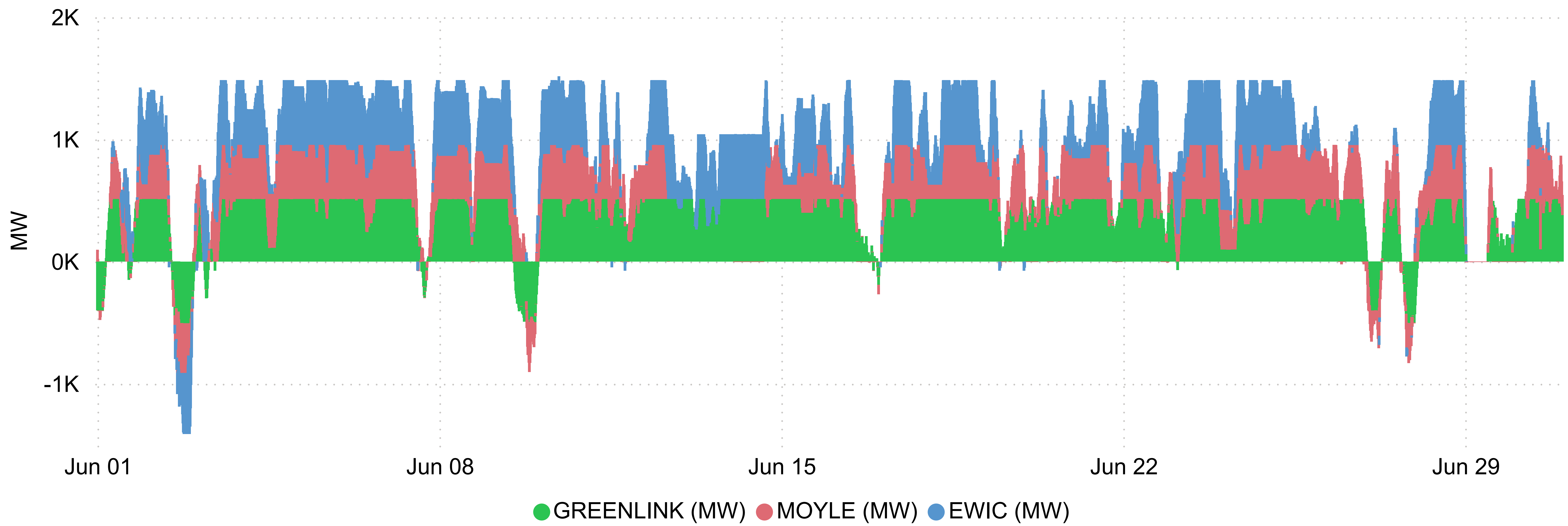
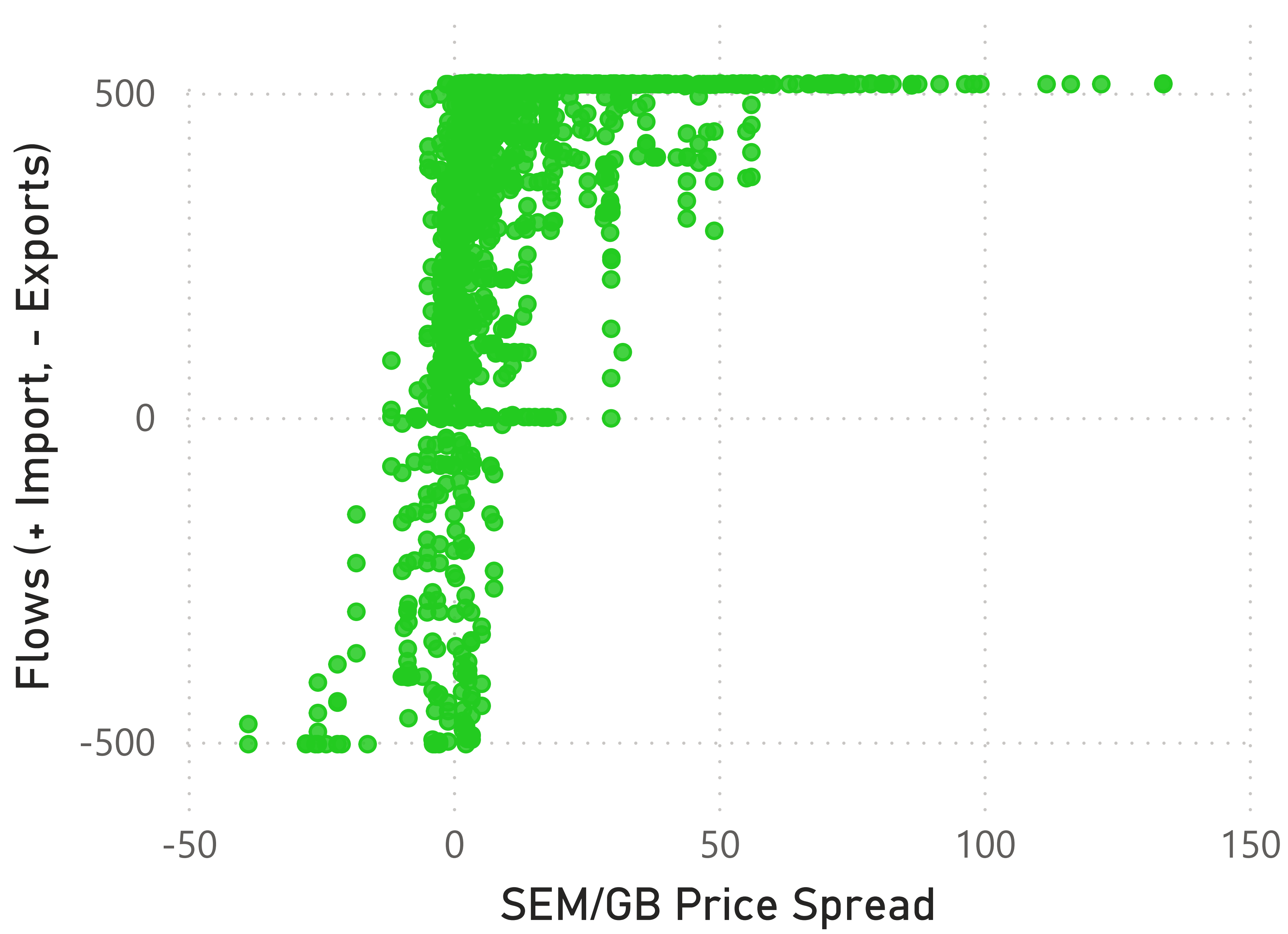
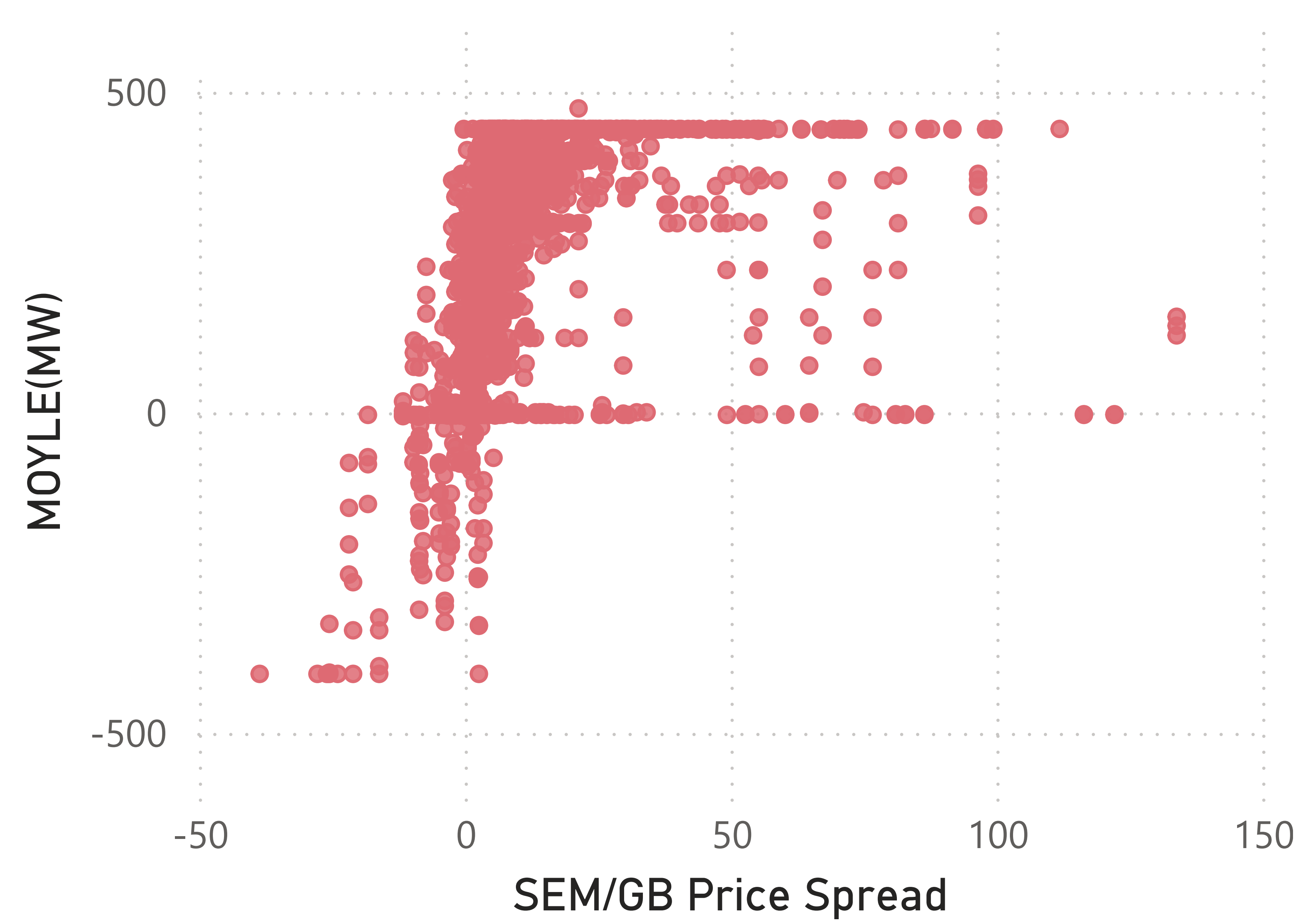
SEM Interconnector Flows



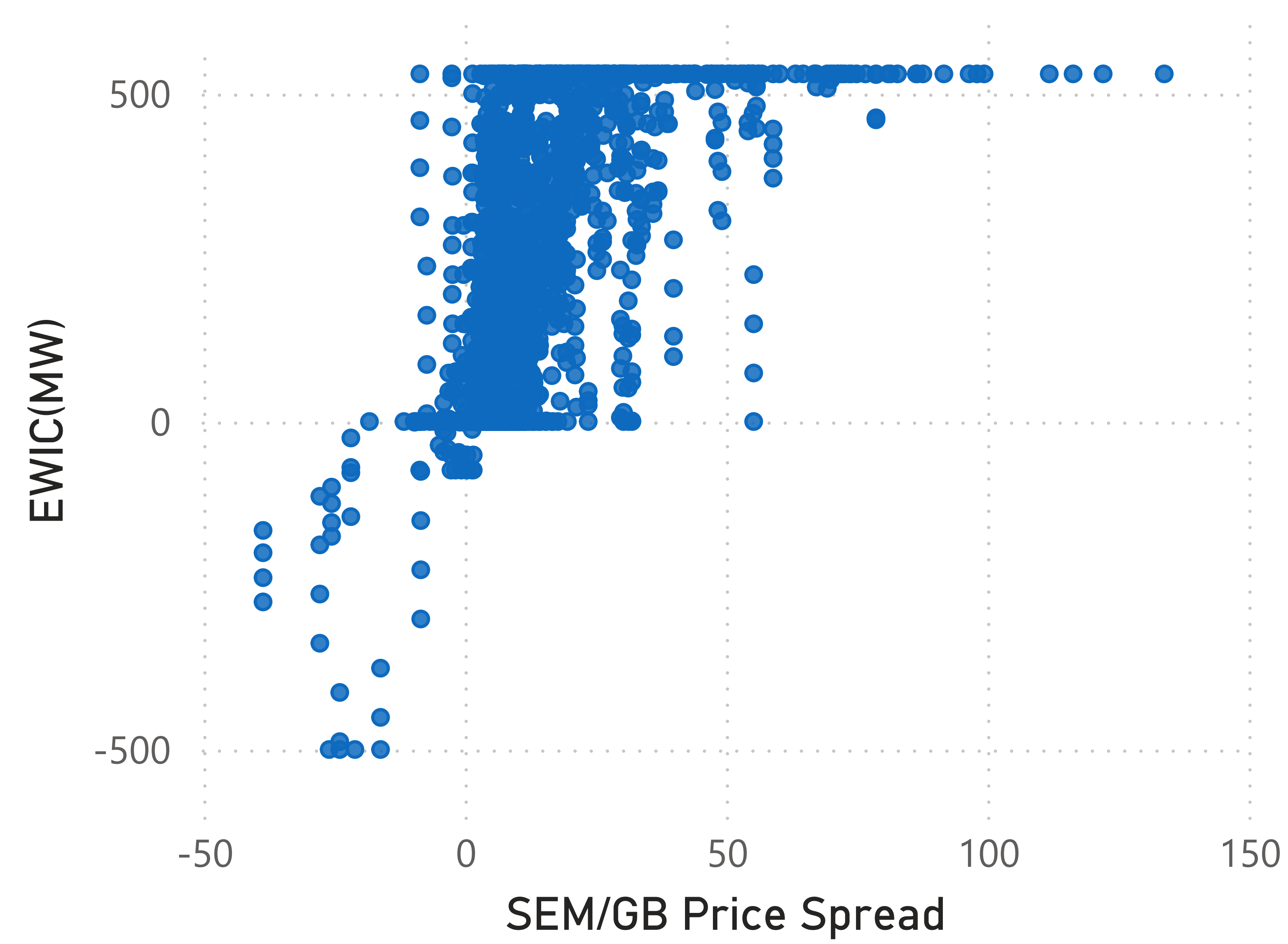
Greenlink Flows vs SEM/GB Price Spread



Moyle Flows vs SEM/GB Price Spread



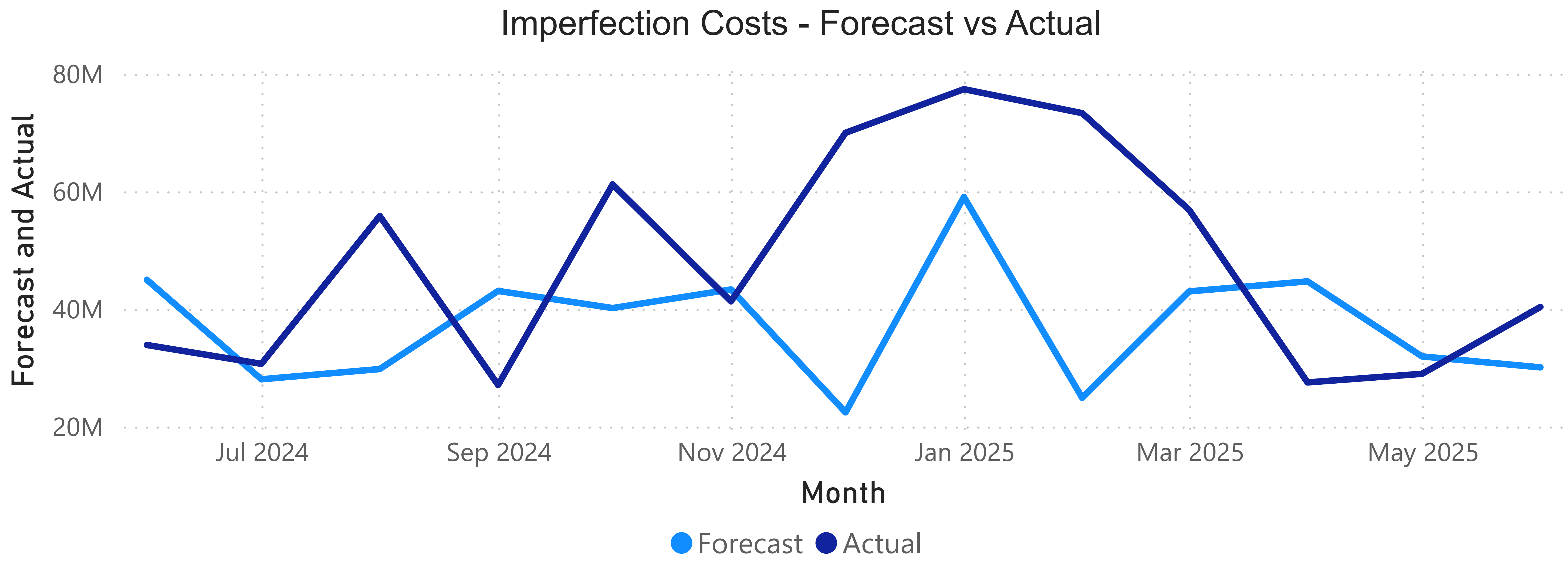
EWIC Flows vs SEM/GB Price Spread



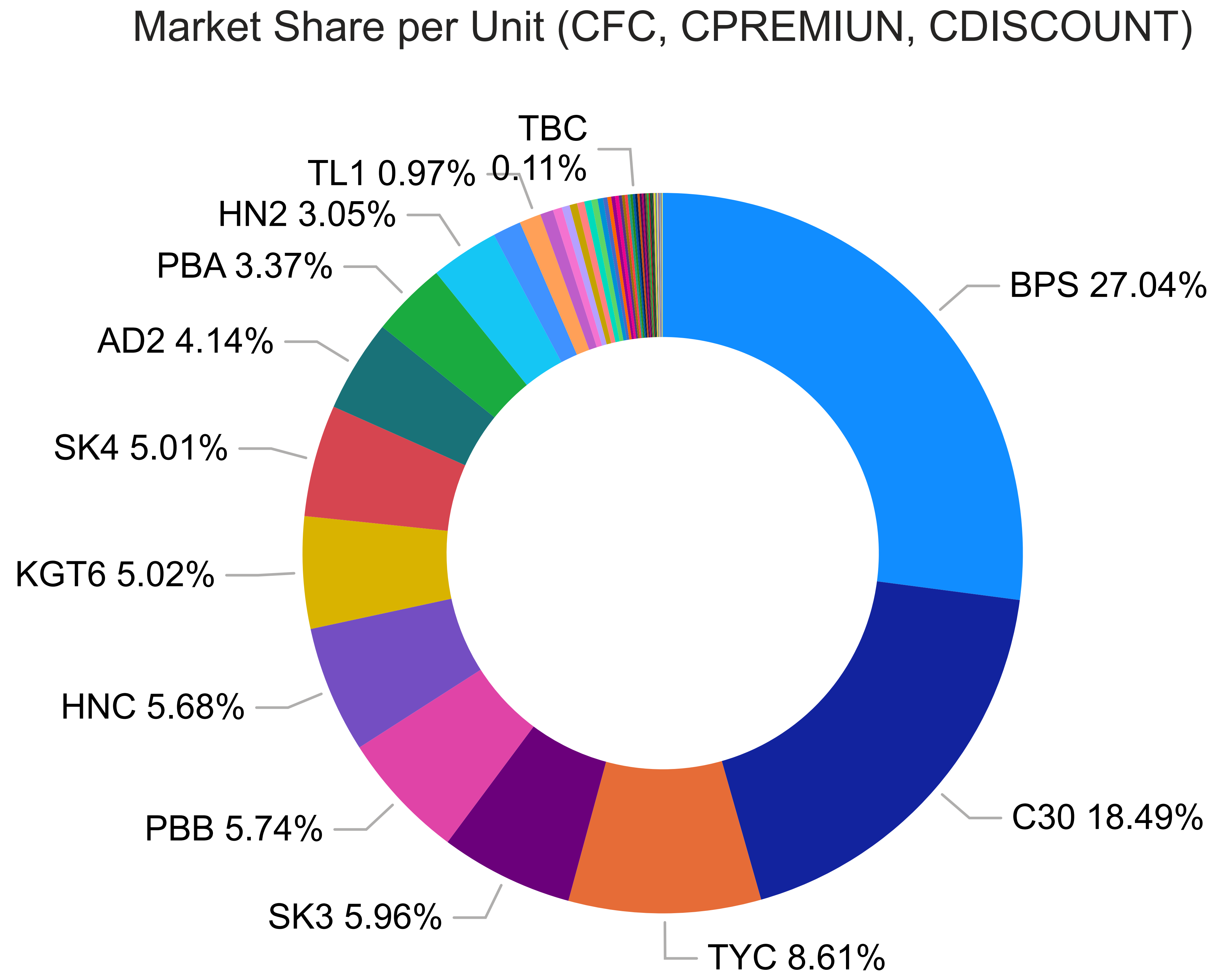
Balancing Market June 2025

Where power stations are run differently from the market schedule, it is termed “constraint". Subject to the Trading and Settlement Code and Firm Access, Constraint payments keep generators financially neutral for the difference between the market schedule and what actually happened when generating units were dispatched.

Generators can be constrained ‘on' or ‘up' if the market schedule indicated they were to be run at lower levels than actually happened. Or they could be constrained ‘down' or ‘off' if they were to be run at a higher level than happened in reality. There is always an overall net cost to the system associated with constraints.



Determinant Name	Value €
CABBPO	63,917.85
CAOOPO	-144,753.38
CCURL	-257,332.95
CDISCOUNT	21,891,765.68
CFC	5,184,182.63
CPREMIUM	14,340,829.29
CTEST	-28,461.04
CUNIMB	-719,174.28
Total	**40,330,973.79**



Constraints Payments

This charts illustrates the distribution of selected Constraint Payments, to specific power plants. BPS (EP Ballylumford) was the largest receiver of these payments for this month followed by C30 (Coolkeeragh).

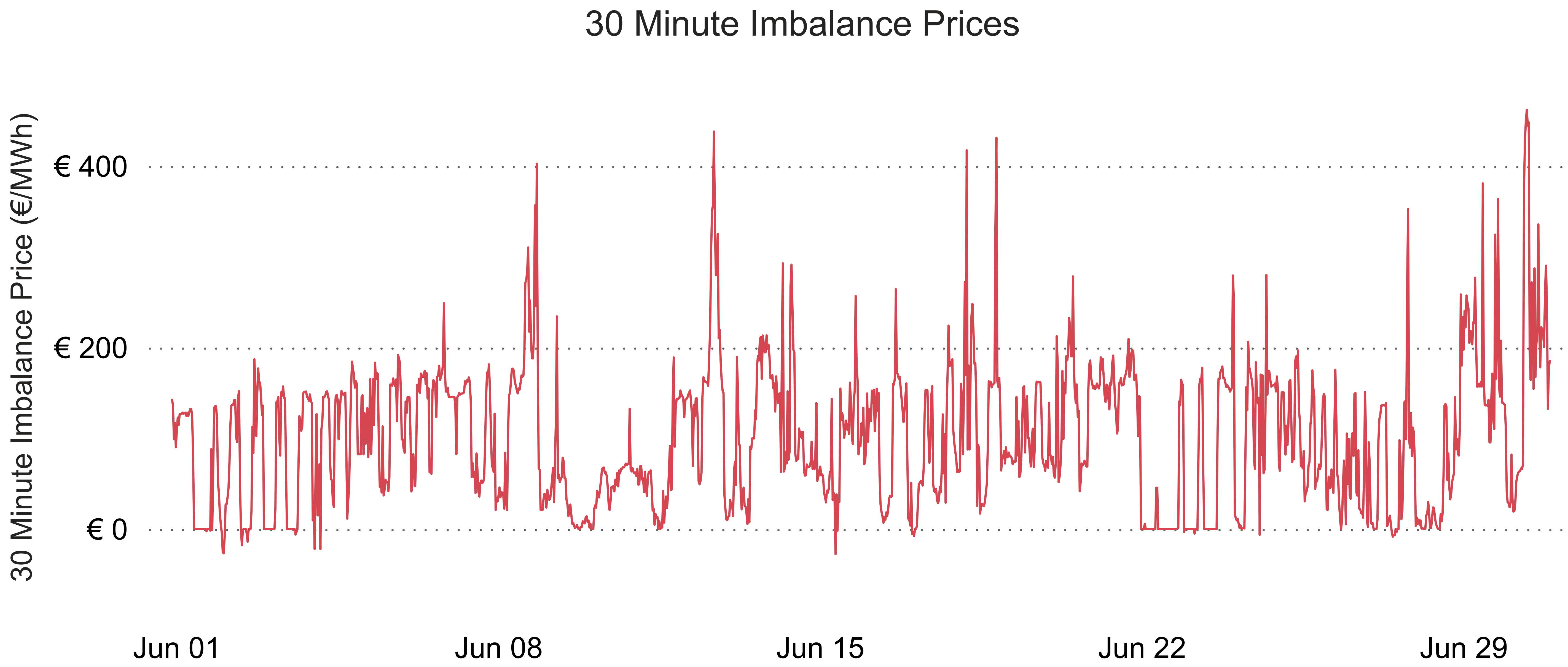
Balancing Market June 2025

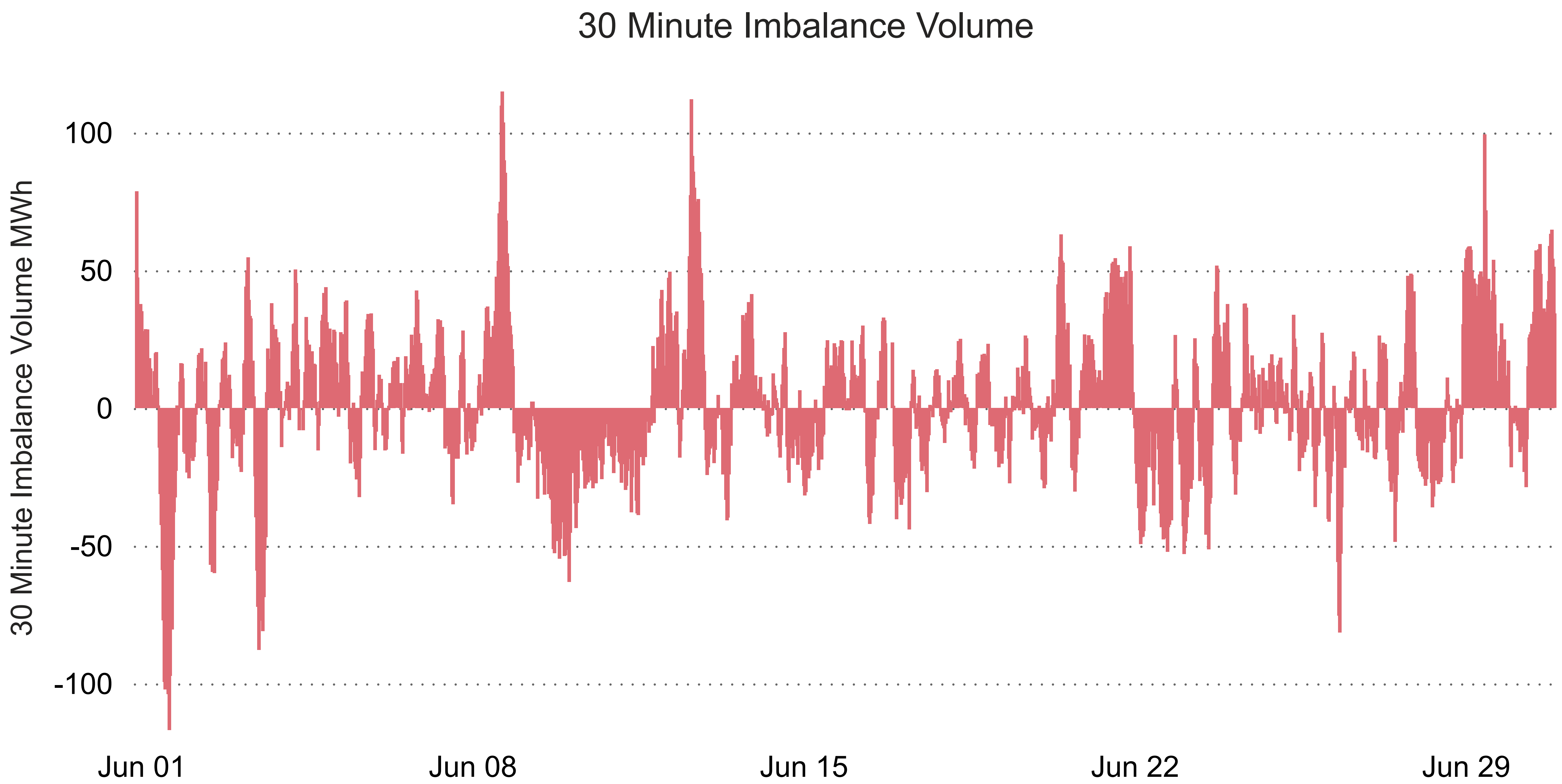
30 Minutes Imbalance Price

€ 99.74
Average Price

-€ 27.78
Lowest Price

€ 461.87
Highest Price

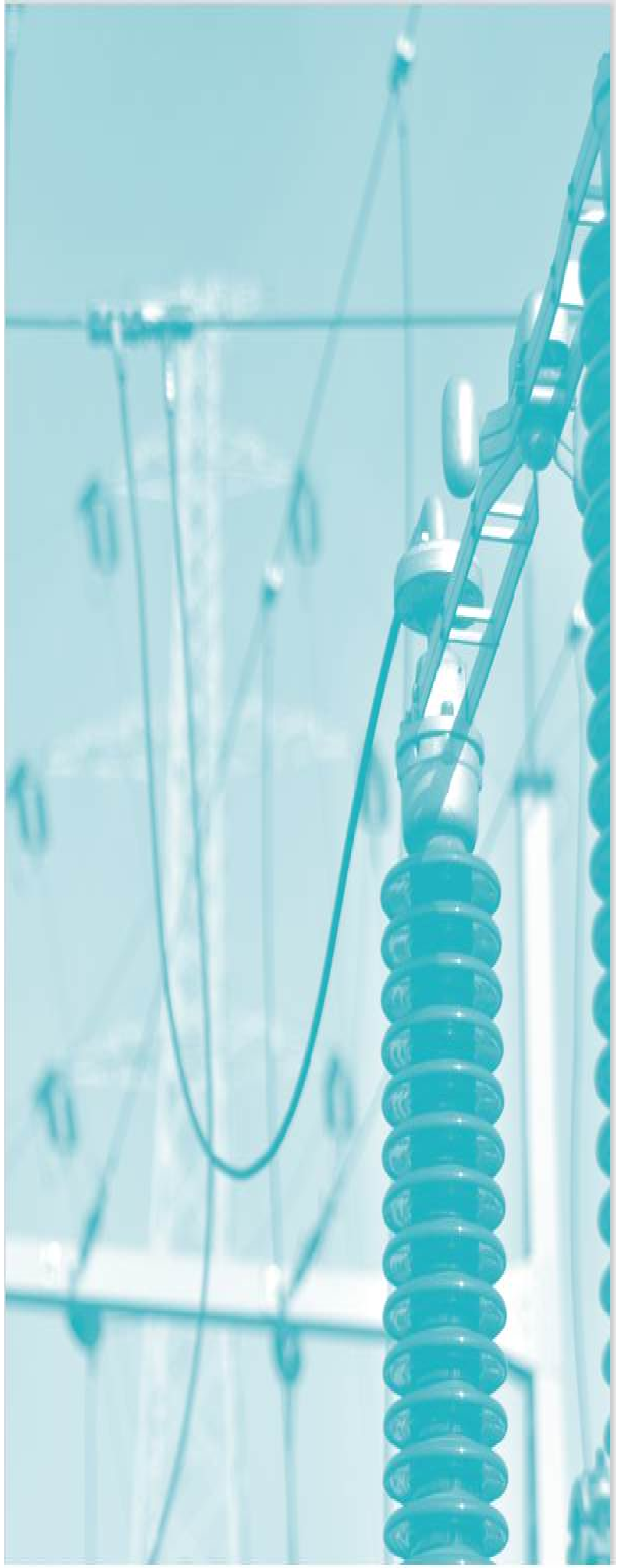




Imbalance Price & Volumes

The average Imbalance (BM) Price this month was higher than the Day Ahead Price. Also, the Balancing Market prices has exhibited a much higher range of prices indicating a higher level of volatility compared to Day Ahead Market Prices. This is an expected characteristic of the Balancing Market.

There were no Reliability Options events this month as the Balancing Market prices have not breached the PSTR level.



Demand and Generation Mix

Demand
June 2025

SEM Demand

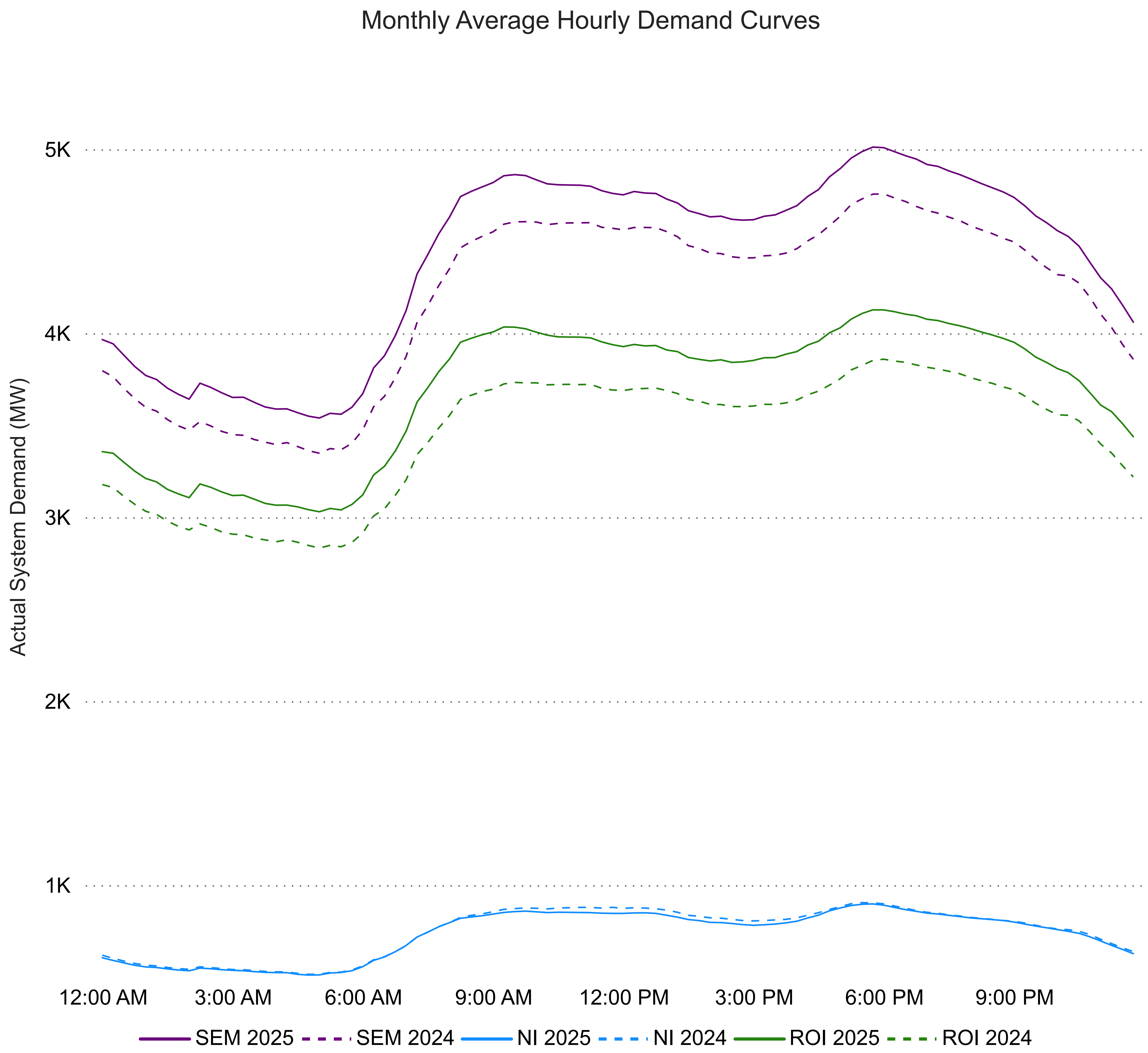
4,413.09 SEM Average 2025	4,193.48 SEM Average 2024
3,539.21 SEM Min 2025	3,347.80 SEM Min 2024
5,011.92 SEM Max 2025	4,757.30 SEM Max 2024

NI Demand

734.62 NI Average 2025	745.74 NI Average 2024
511.17 NI Min 2025	515.30 NI Min 2024
897.93 NI Max 2025	904.77 NI Max 2024

ROI Demand

3,690.15 ROI Average 2025	3,447.75 ROI Average 2024
3,029.56 ROI Min 2025	2,832.13 ROI Min 2024
4,126.92 ROI Max 2025	3,858.83 ROI Max 2024



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SEM Demand

The graph indicates a 5% increase in all-island demand compared to the same period last year.

ROI demand increased by 7% relative to the same period last year.

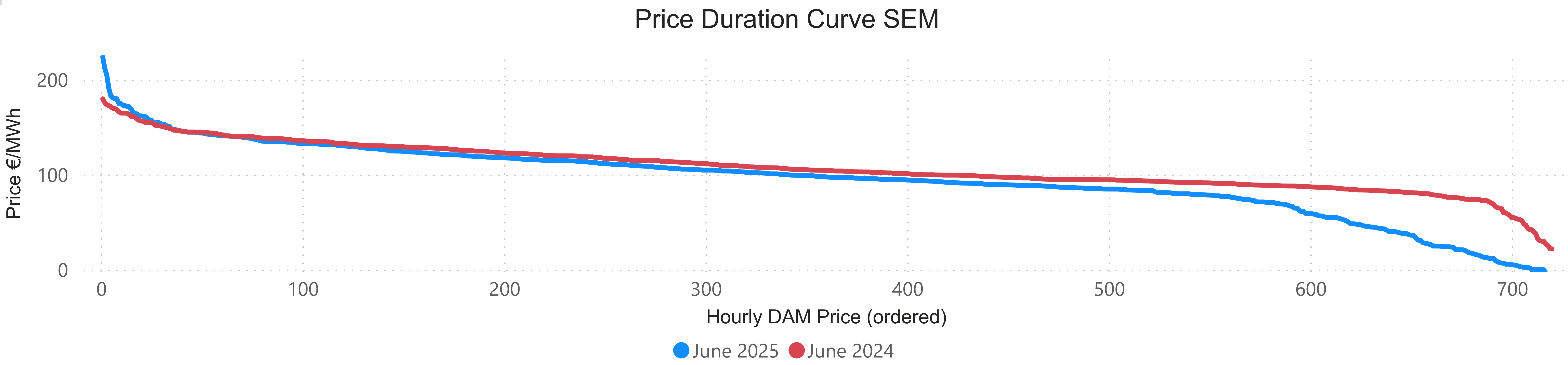
NI demand experienced a 1.5% decrease compared to the same period last year.

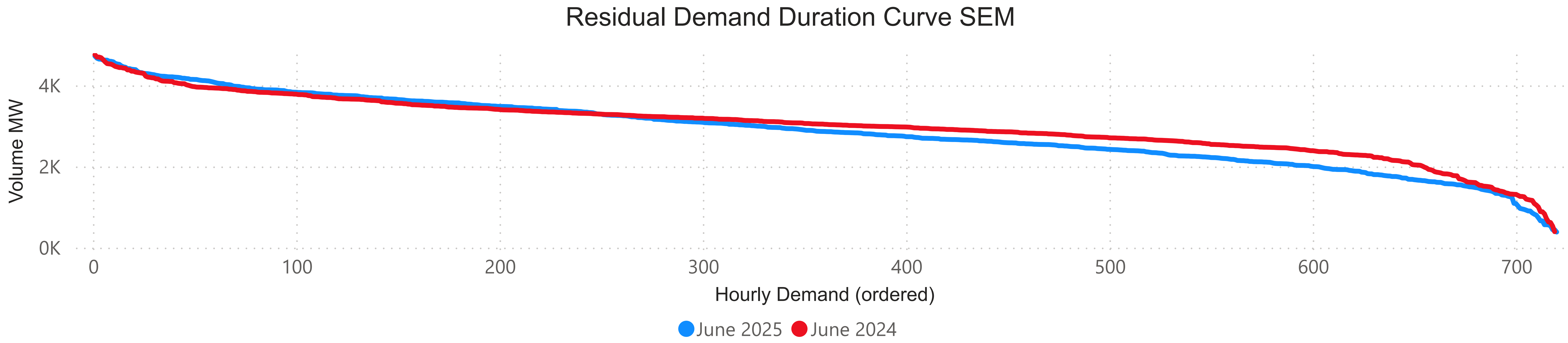
Duration Curves
June 2025

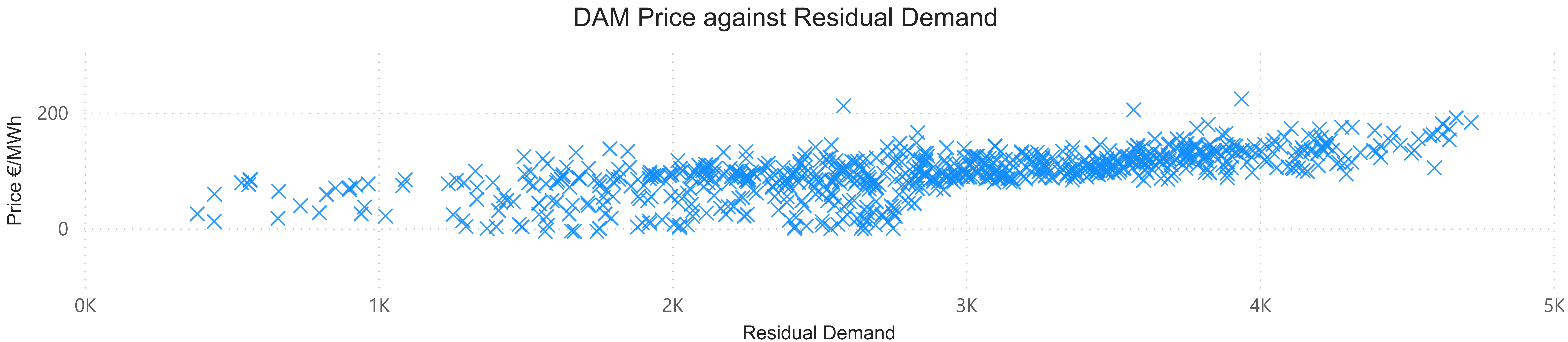
Price Duration
The price duration curve shows the hourly DAM prices across the month ordered from the largest to the smallest.

Residual Duration
The residual demand curve shows the ordered hourly demand level across the month which can't be met by renewable generation.

Price against Residual Demand
Shows the residual demand for each period relative to the DAM price for that period.



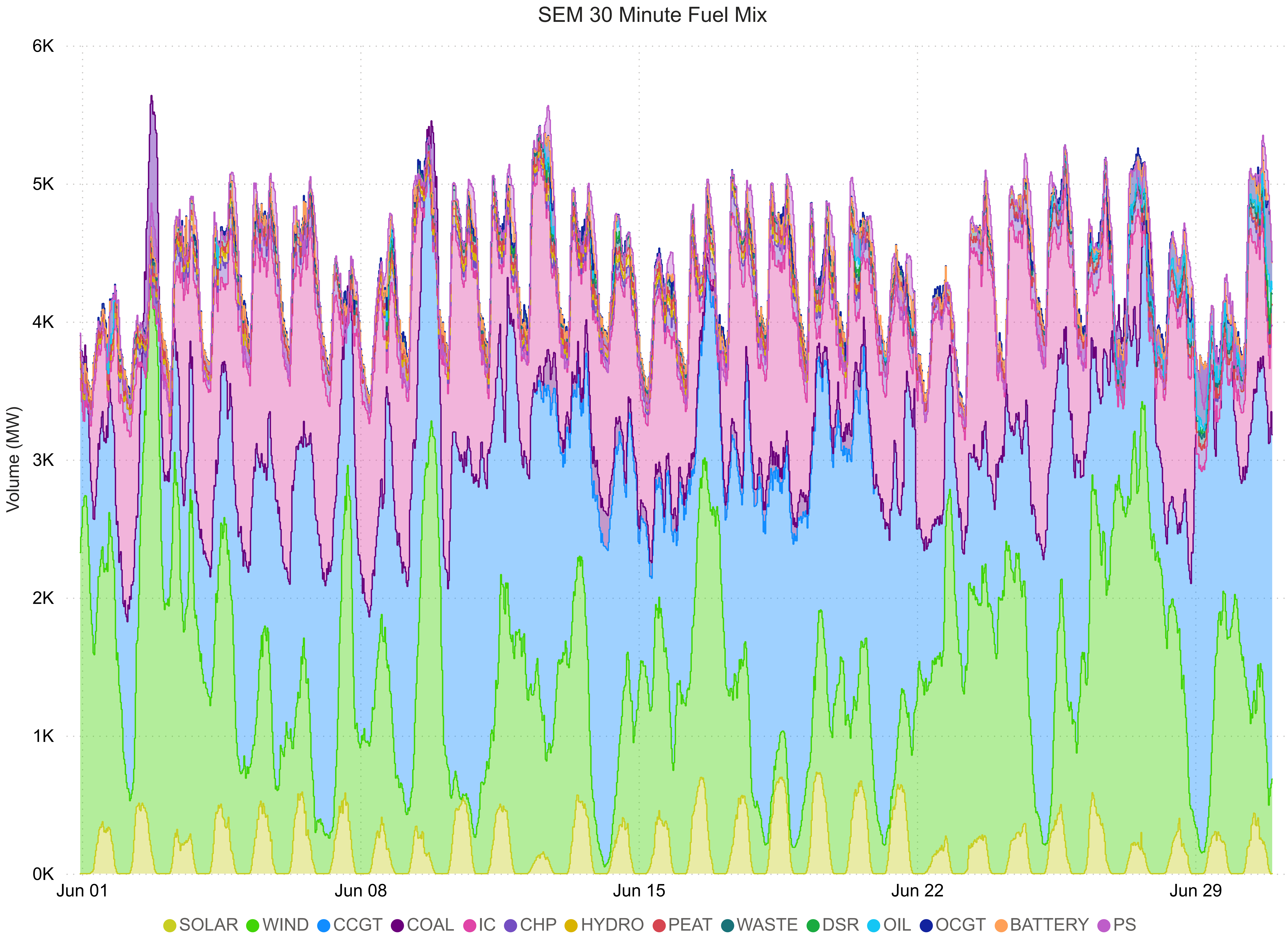




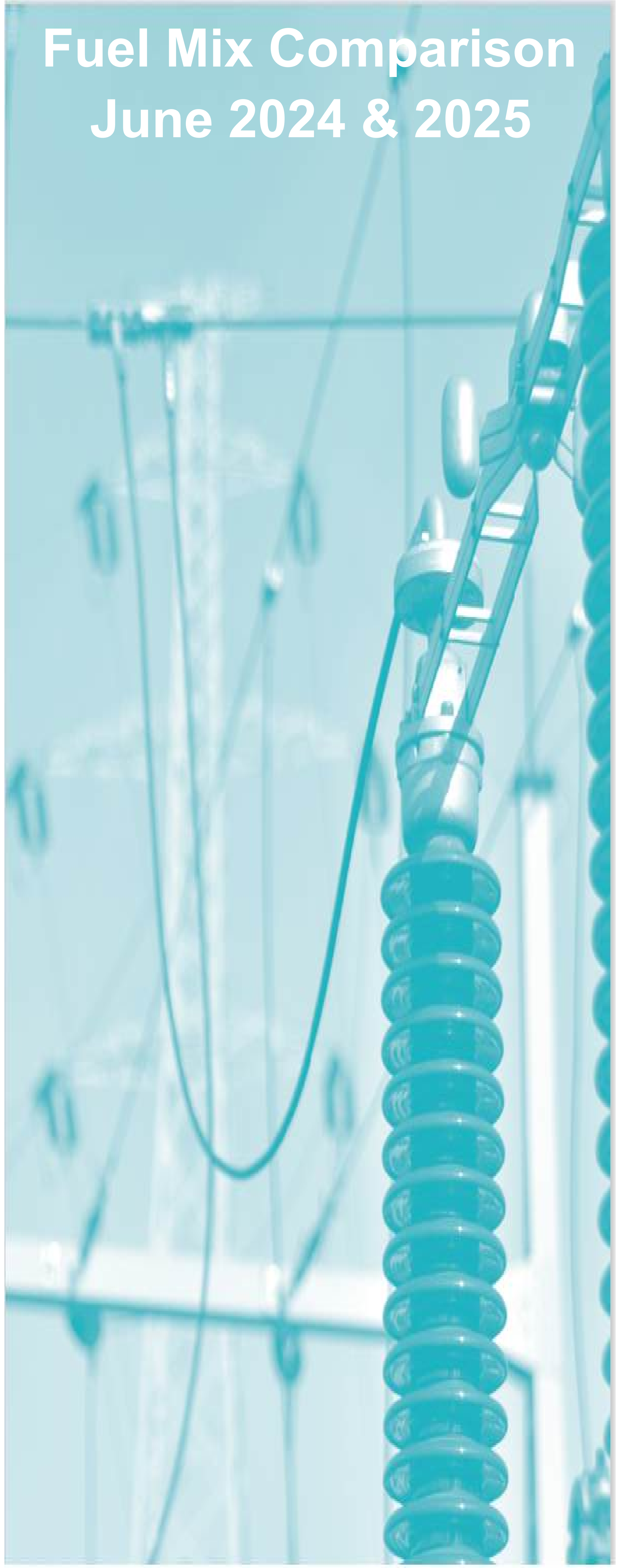
Fuel Mix
June 2025

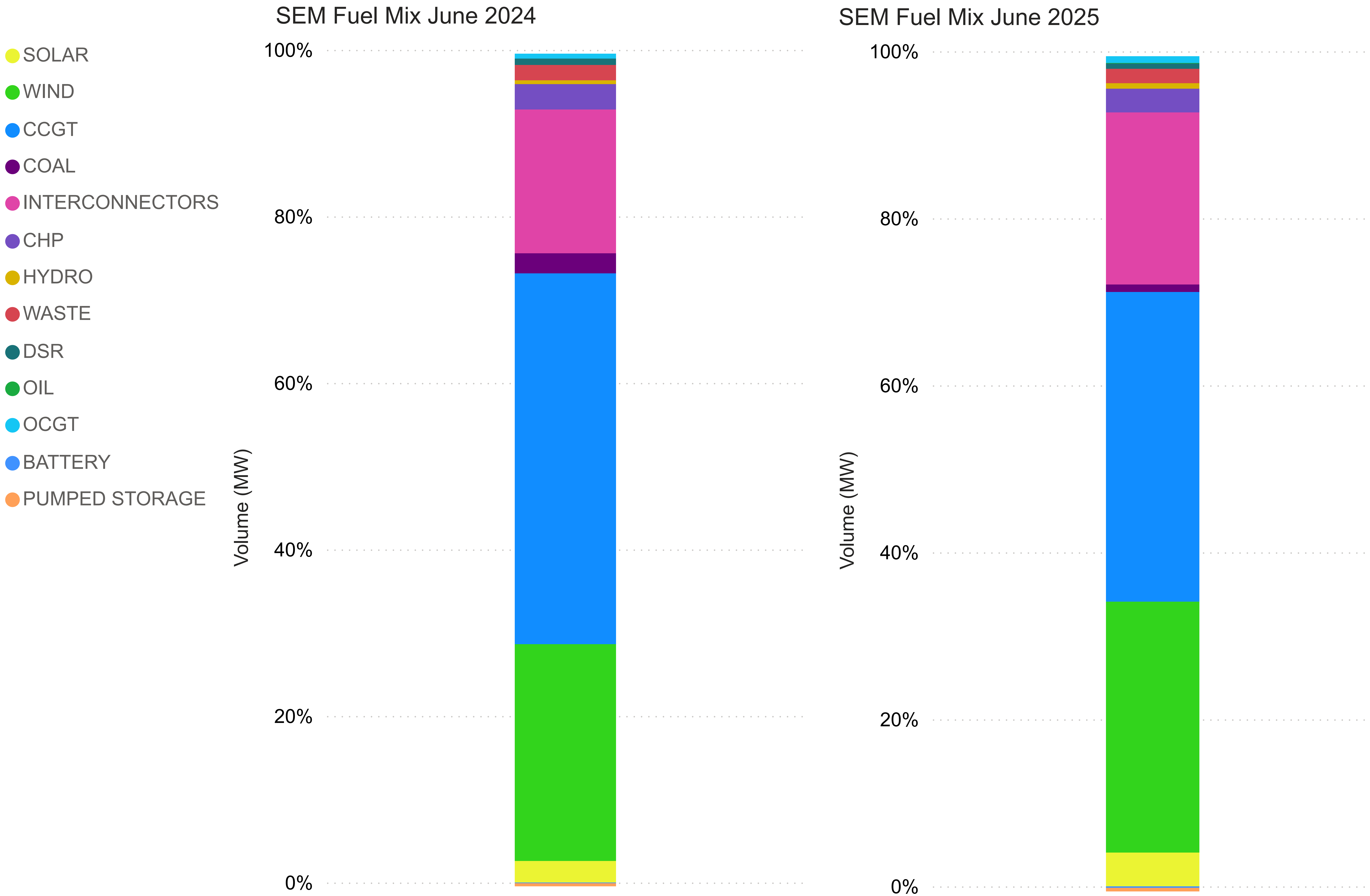
Fuel Type	Avg Monthly	Per. Monthly
CCGT	1615	37.3%
WIND	1308	30.2%
INTERCONNECTORS	897	20.7%
SOLAR	177	4.1%
CHP	124	2.9%
WASTE	75	1.7%
COAL	40	0.9%
OCGT	34	0.8%
DSR	28	0.6%
HYDRO	28	0.6%
PEAT	26	0.6%
OIL	3	0.1%
BATTERY	-8	-0.2%
PUMPED STORAGE	-18	-0.4%

Fuel Type	Max Monthly	Min Monthly
WIND	4119	24
CCGT	2930	707
INTERCONNECTORS	1504	-1407
SOLAR	735	0
OCGT	531	0
OIL	301	0
PUMPED STORAGE	291	-301
COAL	260	0
BATTERY	211	-154
CHP	160	72
PEAT	91	0
WASTE	81	17
HYDRO	76	0
DSR	43	0



Fuel Mix Comparison June 2024 & 2025





North-South Tie Line June 2025

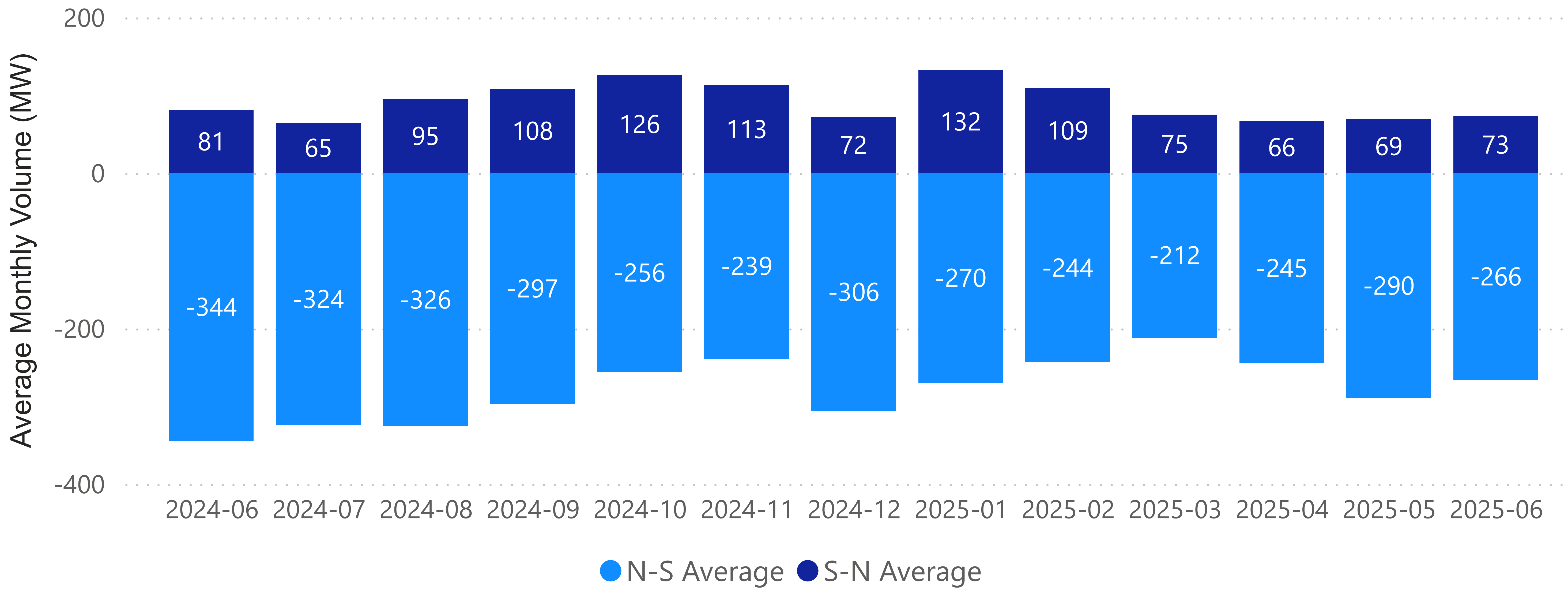
Average Flow NI to ROI (MW)
-266.17

Average Flow ROI to NI (MW)
72.89

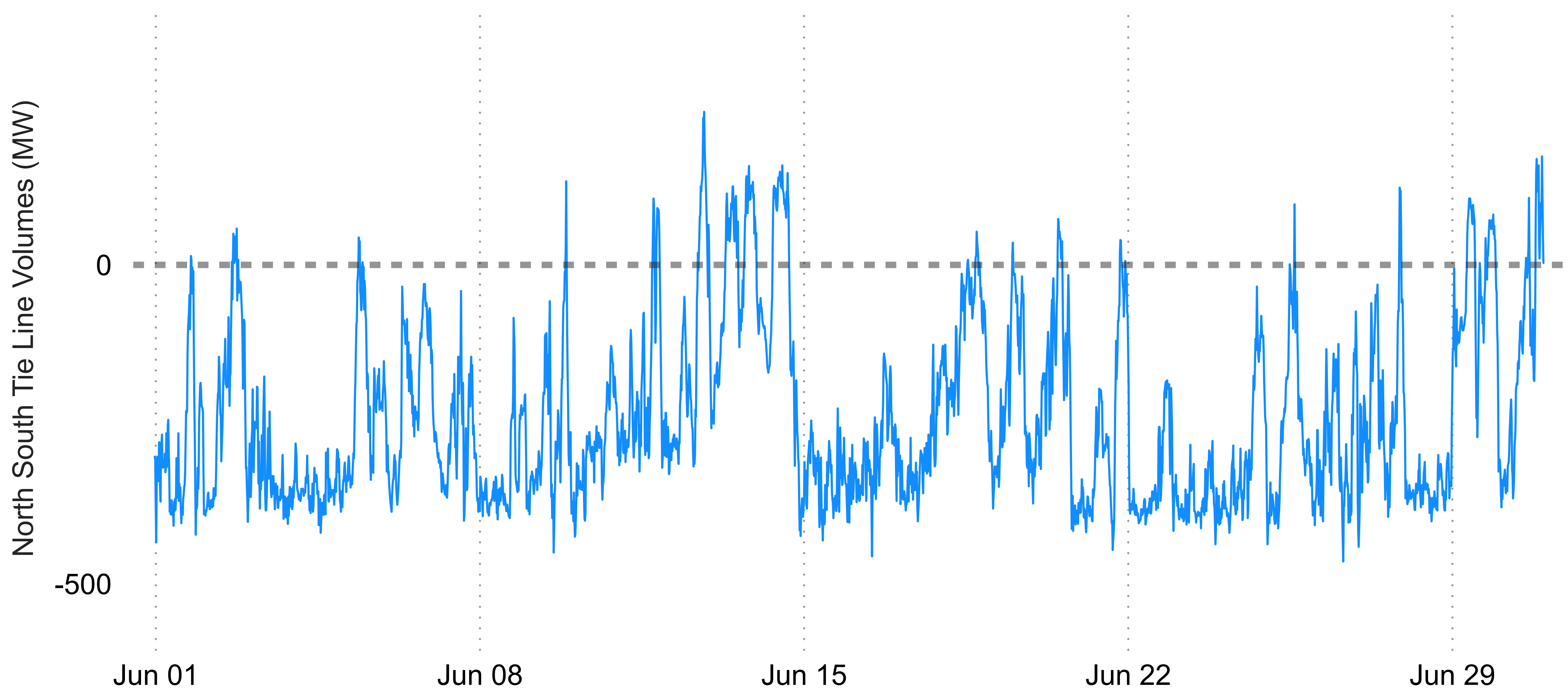
Average Net Flow NI to ROI (MW)
-238.01

-ve flow NI to ROI
+ve flow ROI to NI

Average Flows N-S Tie Line Long Term Trend



North South TIe Line Volumes 15 minute periods



North South Tie Line

Flows across the N-S Tie Line were predominantly in the North to South direction this month. This has been the long term trend. Reasons for this trend are outlined below:

- When wind penetration is high in NI, there is often a surplus of power as the TSOs must run a minimum number of thermal units in NI to address transmission constraints in the system.

- Demand in ROI has been growing at a faster pace than in NI.

Wind Generation June 2025

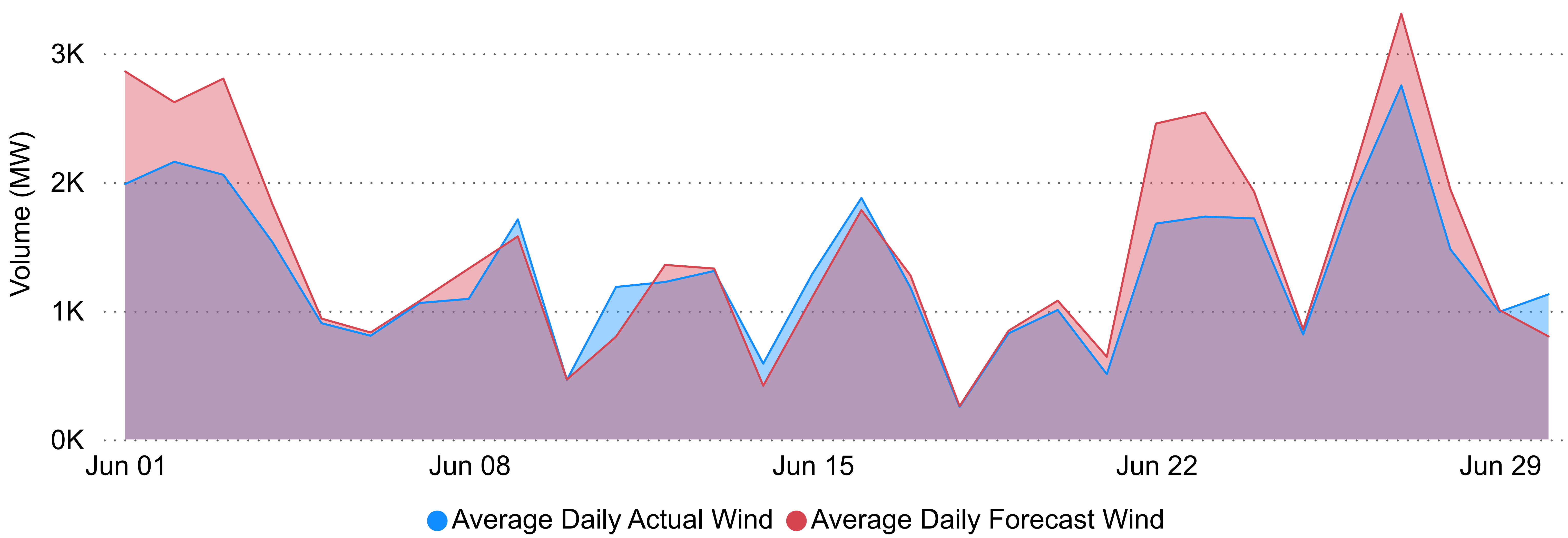
Average Daily Actual Wind (MW)
1,306

Average Daily Forecast Wind (MW)
1,469

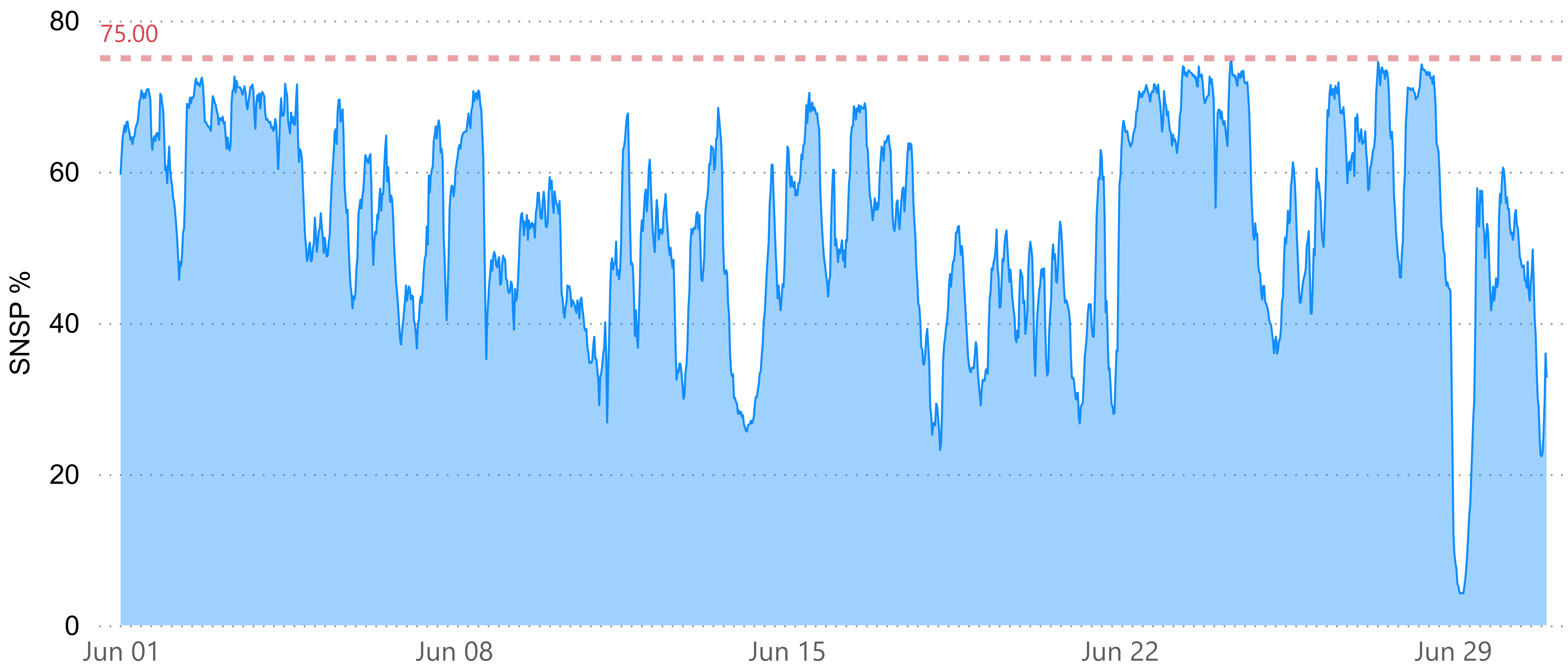
Min SNSP%
4.18

Max SNSP%
74.59

Actual Daily Average Wind Relative to Forecast Daily Average Wind



SNSP %



Wind Generation

Average wind output increased by 40% from last month and by 22% compared to the same period last year.

SNSP

SNSP is closely linked to wind generation and as such follows the same trend across the month.

CO_2 June 2025

CO2 Intensity (gCO2/kWh)

170.40
Average

79
Lowest

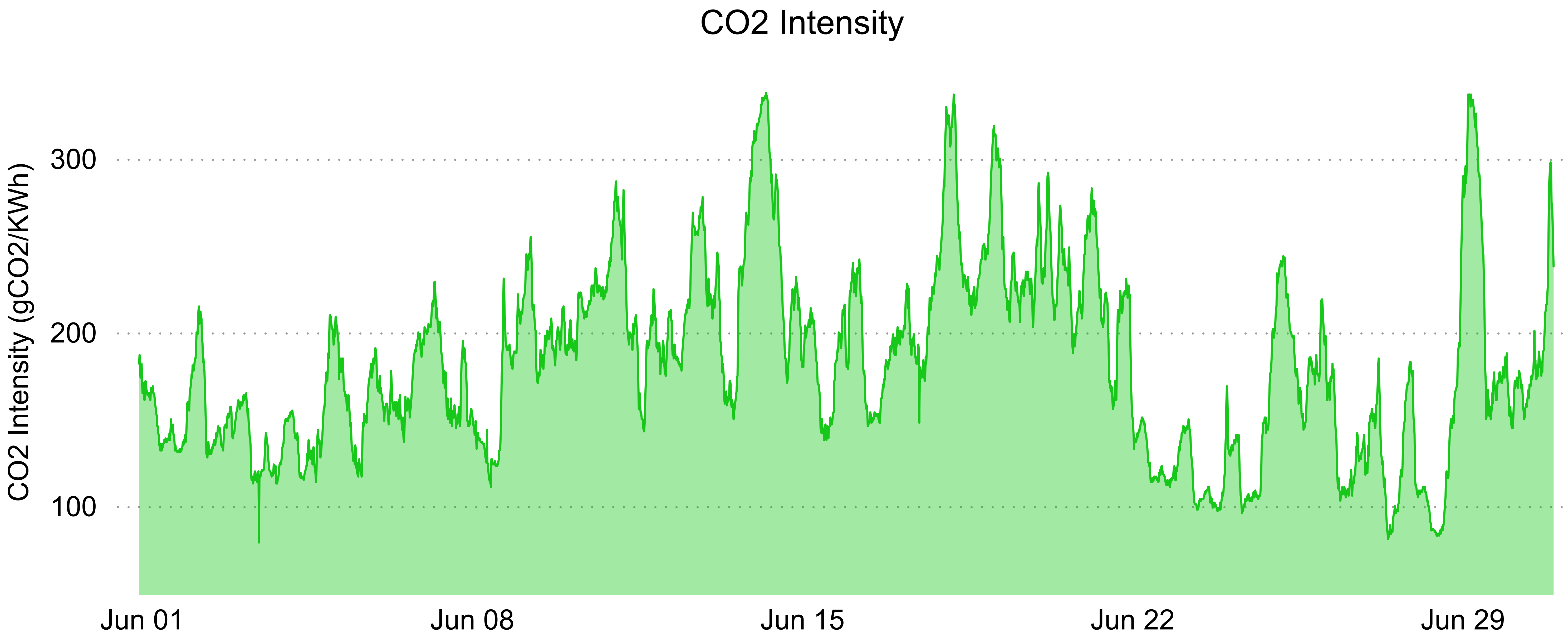
338
Highest

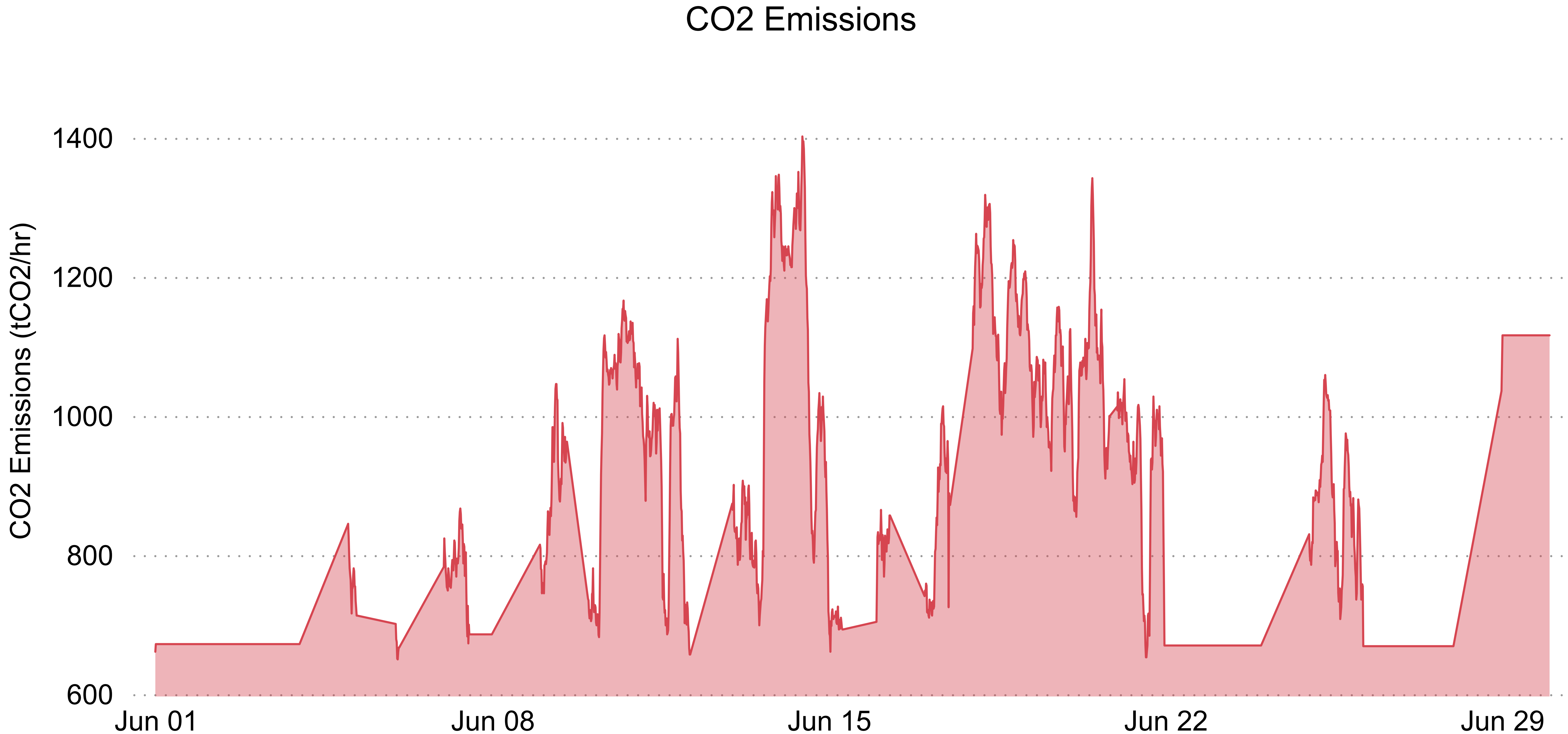
CO2 Emissions (tCO2/hr)

966.15
Average

650
Lowest

1402
Highest



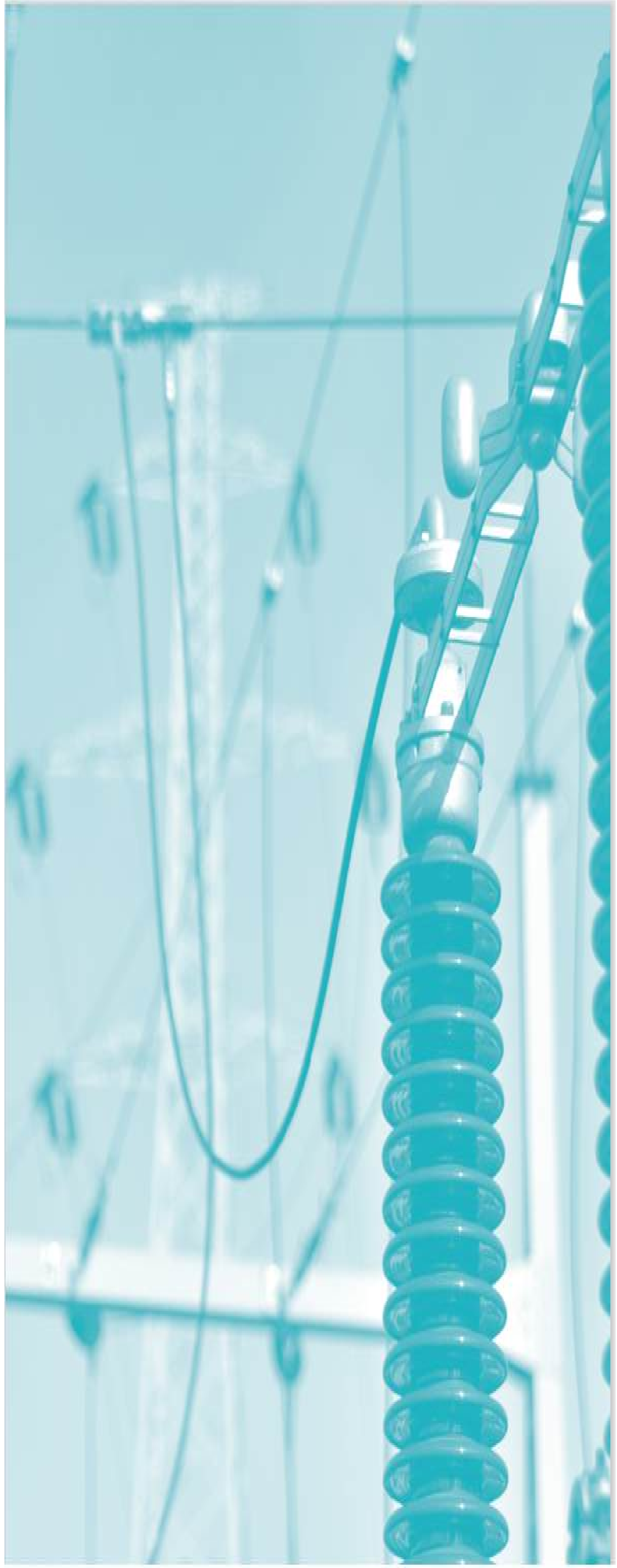


CO_2 Intensity

CO2 Intensity i.e. how many grams of carbon are emitted for every unit of electricity used, should be negatively correlated with the volume of wind output on the system.

CO2 Emissions

CO2 emissions i.e. the estimated total CO2 emissions from all large power stations, follows the same trends as CO2 intensity levels over the course of the month.



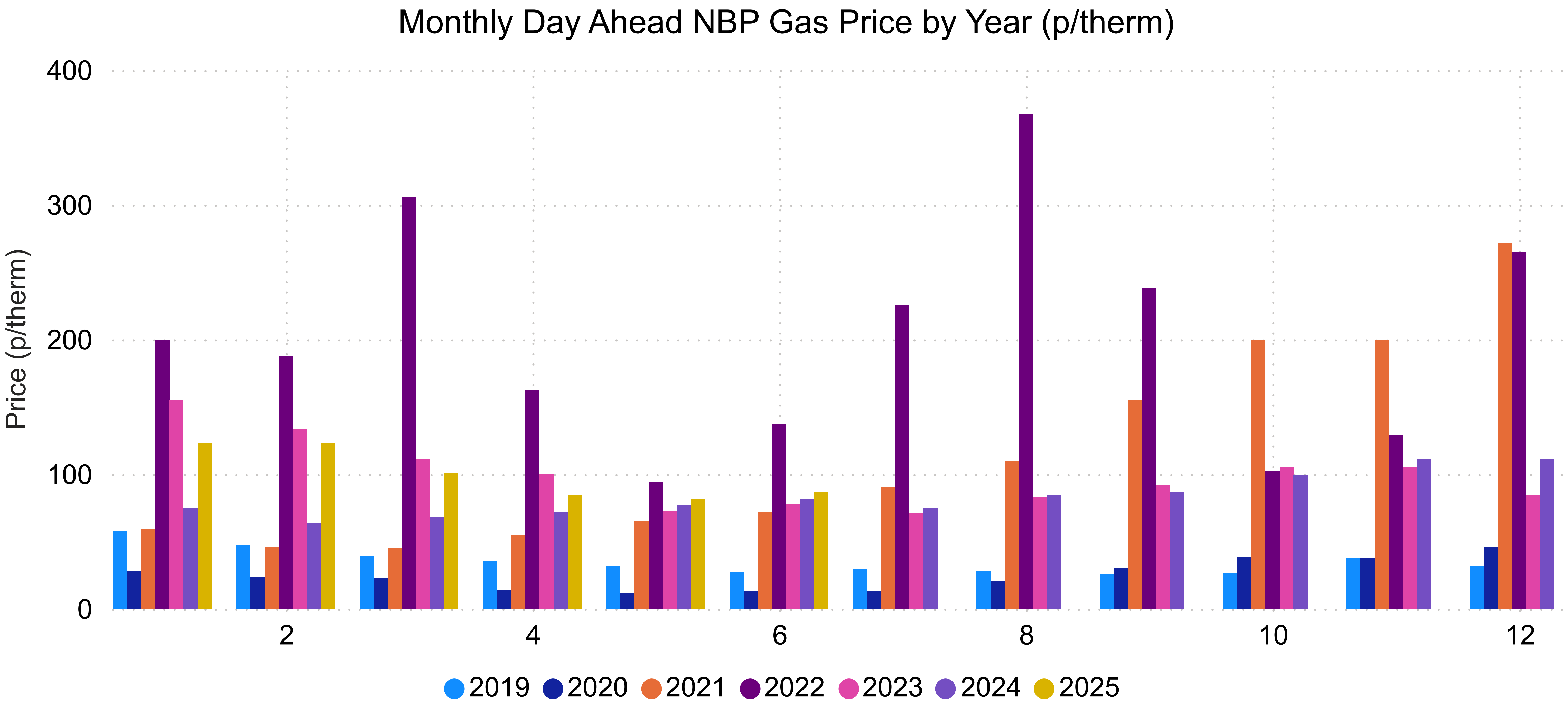
Fuel Costs and Spreads

Gas Price June 2025

86.38
Monthly Average (p/therm)

76.25
Monthly Low (p/therm)

99.10
Monthly High (p/therm)



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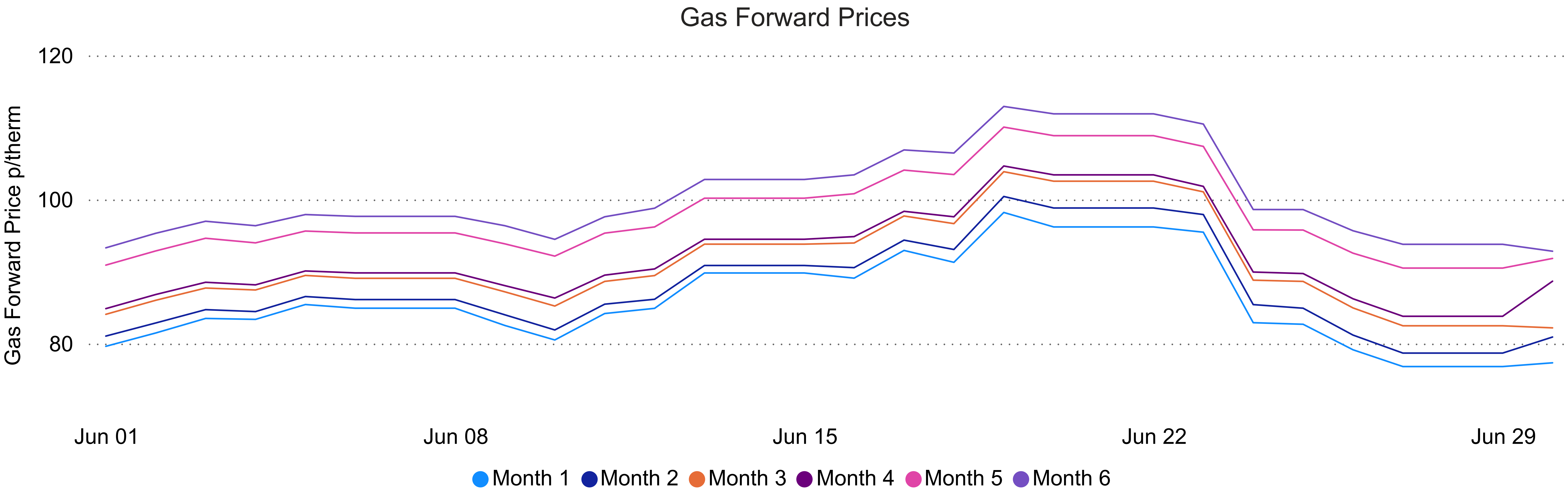
Gas Prices

Gas prices experienced an average increase of 6% compared to the previous month.

Gas Forward Prices

EU gas storage levels at its lowest level in years for June, putting upward pressure on the gas forward prices.



Coal Price June 2025

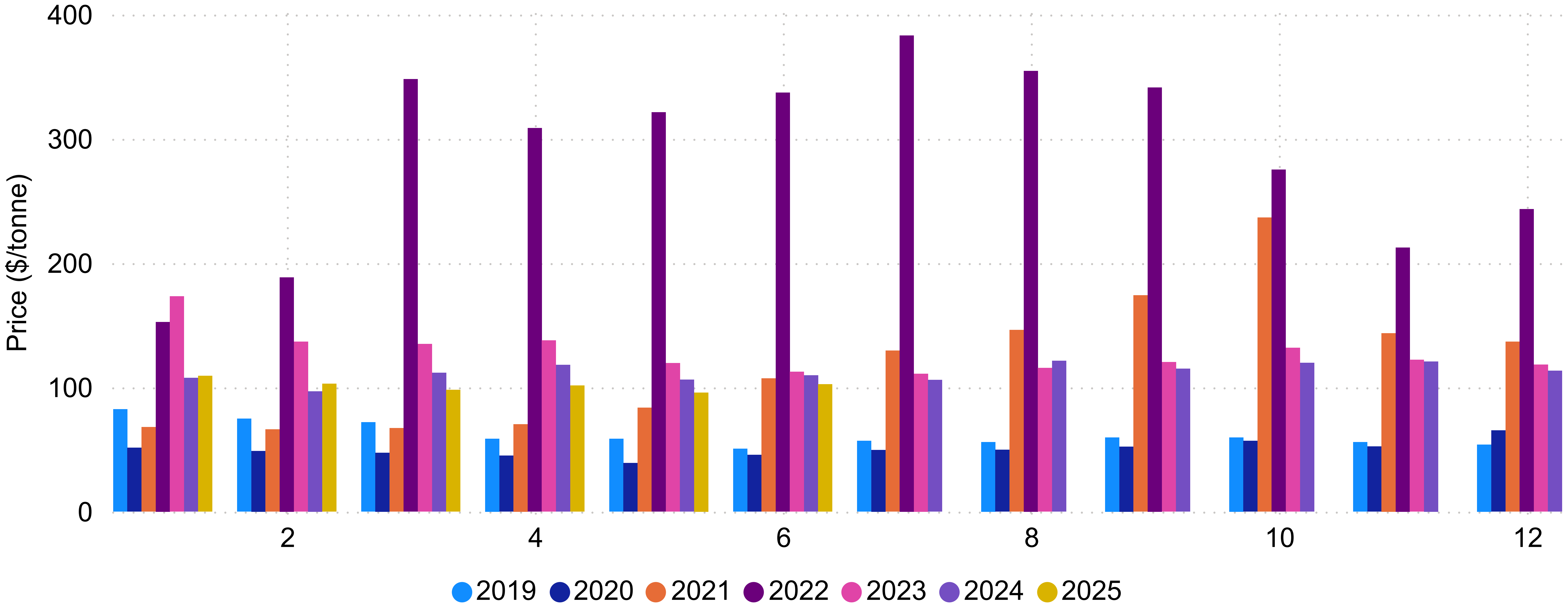
Coal Prices Per Tonne

$102.44
Monthly Average

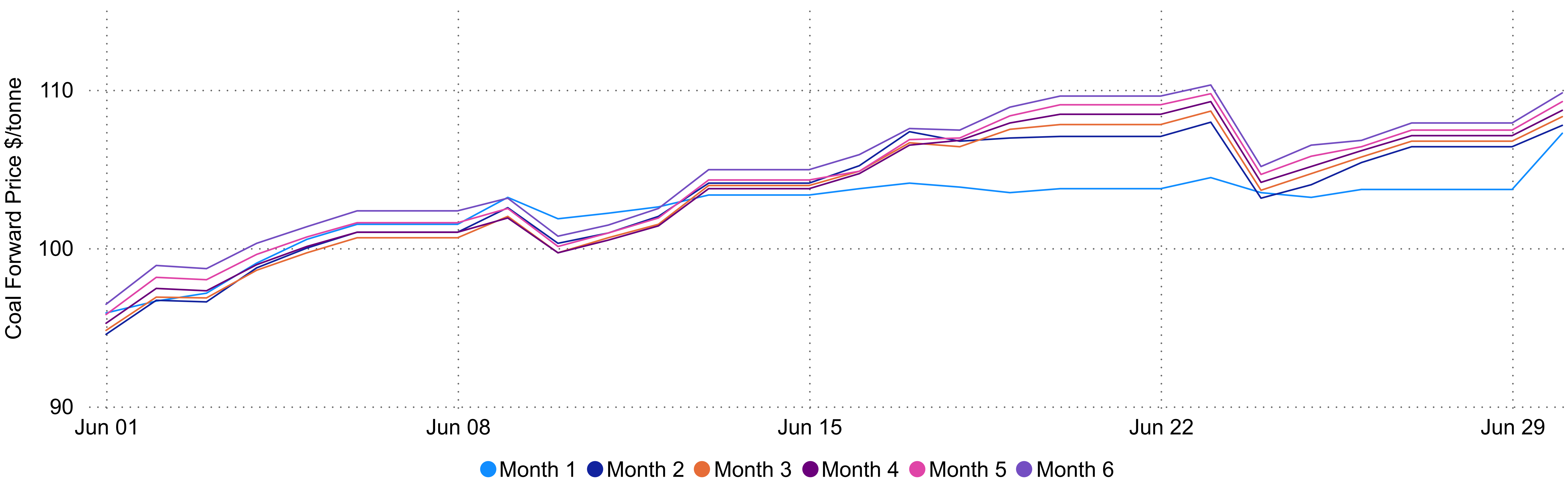
$95.90
Monthly Low

$107.25
Monthly High

Monthly ICE Rotterdam Coal Price by Year ($/tonne)



Coal Forward Prices



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Coal Prices

Coal prices averaged $102.44/tonne, increasing 7% from the previous month and 6% decrease from the last year same period.

Carbon Price June 2025

EU Carbon Prices (€/tonne)

€ 73.14
Monthly Average

€ 69.22
Monthly Low

€ 75.91
Monthly High

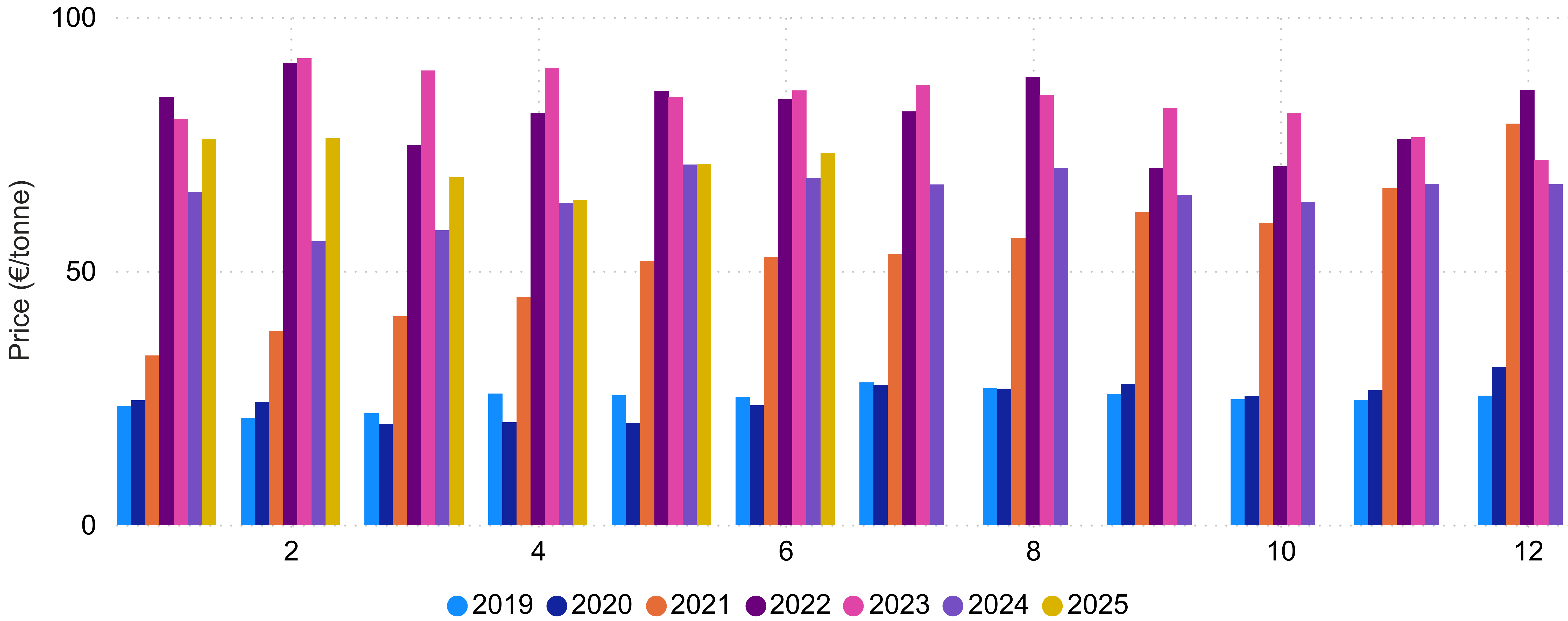
UK Carbon Prices (€/tonne)

€ 60.21
Monthly Average

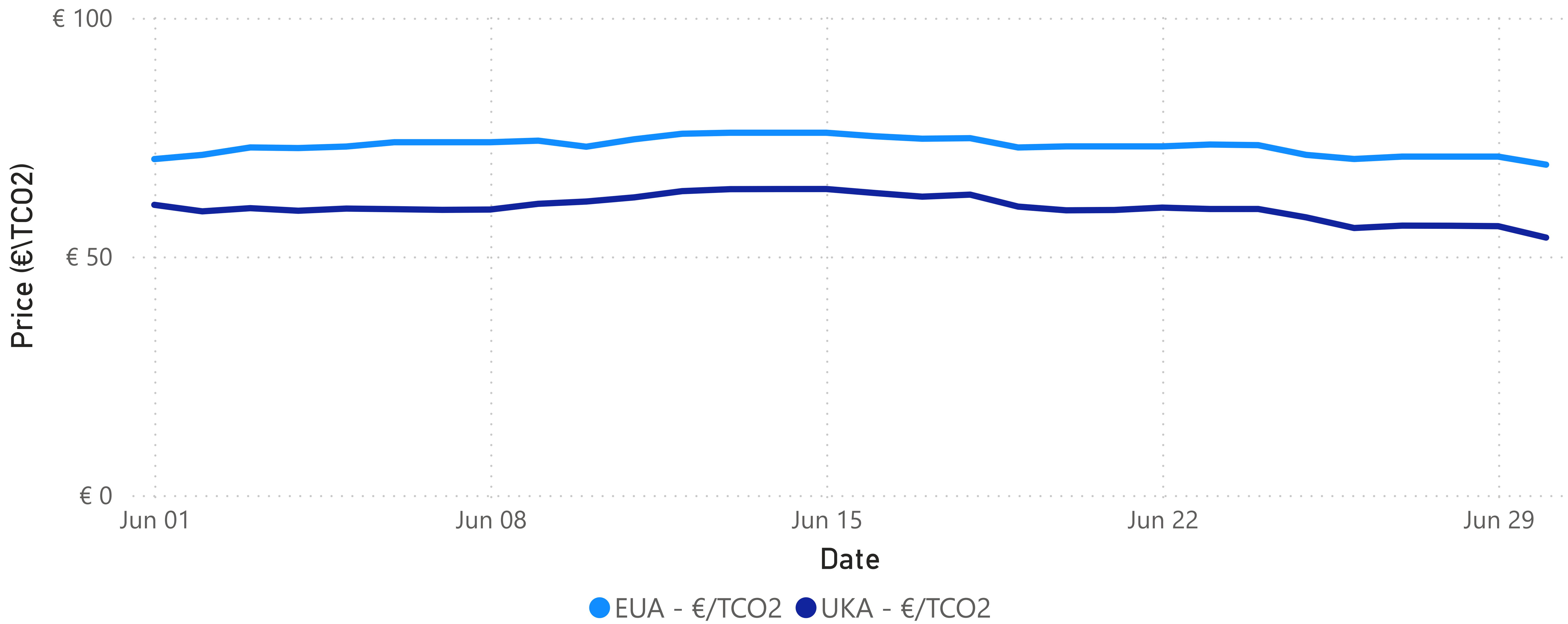
€ 53.94
Monthly Low

€ 64.12
Monthly High

Monthly EU Carbon Permits Price by Year (€/tonne)



UK & EU Carbon Prices



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Carbon Prices

Carbon prices averaged €73.14/tonne, with a 3% increase on average from last month.

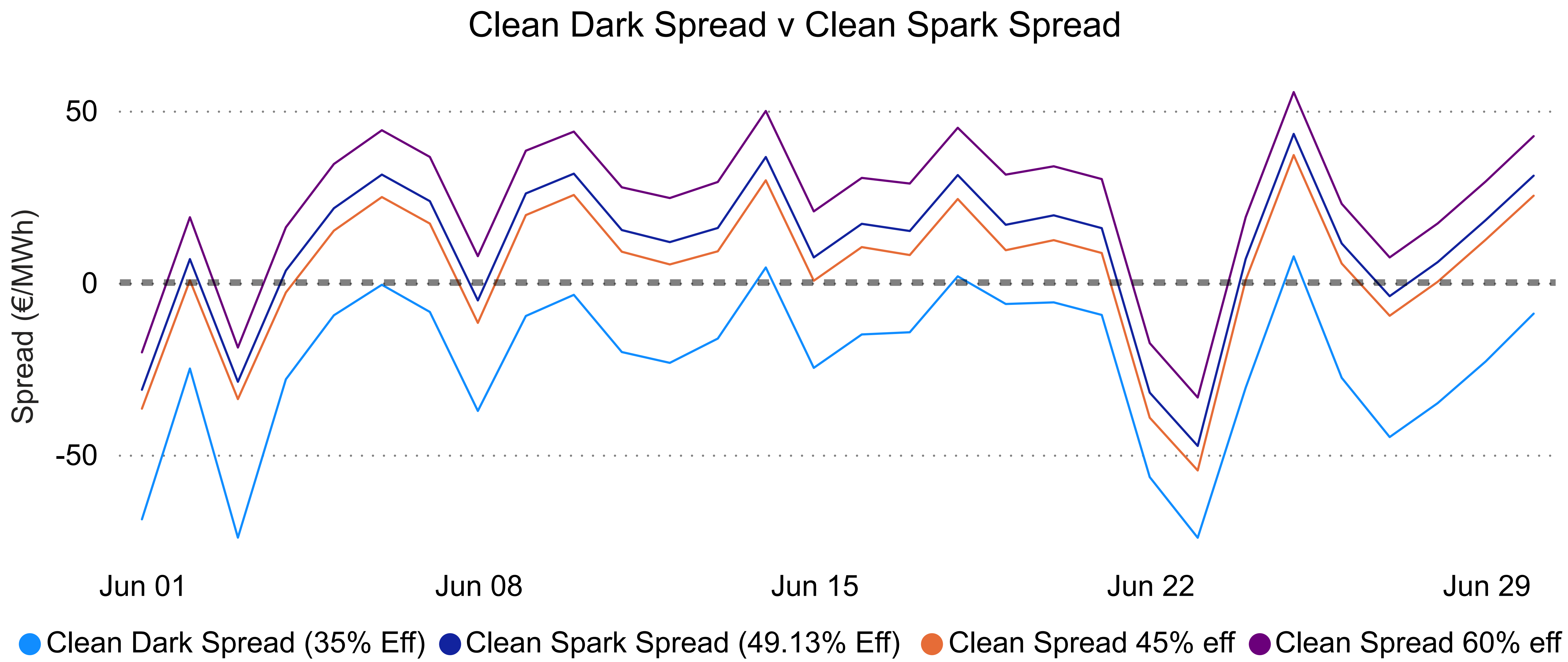
Carbon prices are heavily reliant on wind output levels. However, with above normal temperatures this reduces power-for-heating requirements across Europe and limits stronger gains across the scheme.

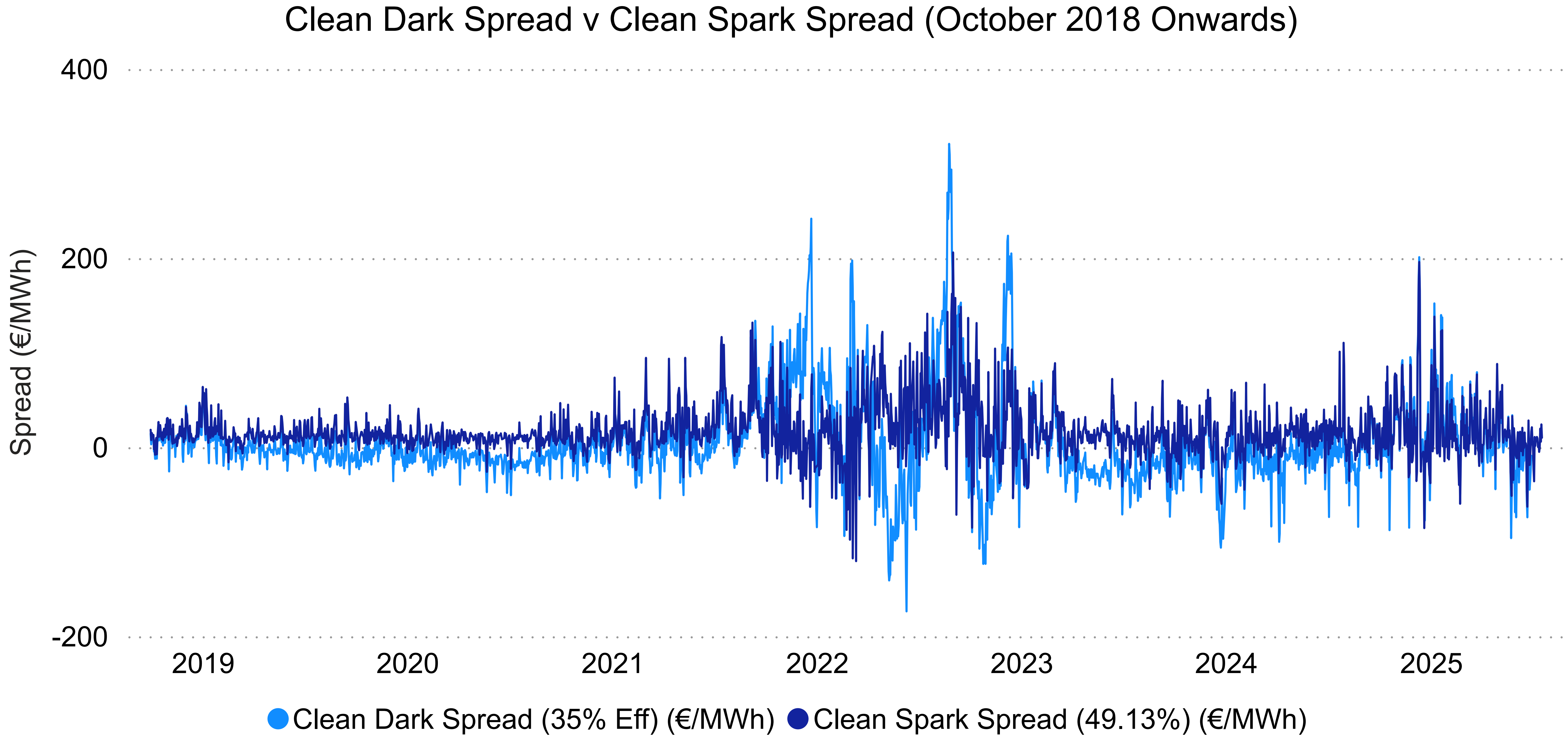
SEM committee

Spark Spreads June 2025

Clean Dark Spread indicates the average revenue a coal power station can expect from generating a unit of electricity during ‘baseload’ operation, after fuel and carbon costs.

Clean Spark Spread indicates the average revenue a gas power station can expect from generating a unit of electricity during ‘baseload’ operation, after fuel and carbon costs.





Clean Dark Spread vs Clean Spark Spread

As expected, gas proved to be more profitable than coal during the month.

Clean Spark Spread remained generally positive throughout the entire duration. However, there were a few occurrences of negative Spark Spread on periods notably after the 22nd June. This is attributed to strong wind generation and lower weekend demand. With a minimum DAM price of €3.00/MWh on the 22nd June and an estimated Short-run marginal cost for a CCGT (49.13% Eff) of €82/MWh, the theoretical Spark Spread would therefore be -€79/MWh.