

Energy Market Monitoring Report

August 2023



Market Results

Summary Dashboard

Monthly Averages	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23	Jul-23	Aug-23
DAM (€/MWh)	283.25	136.09	143.12	276.52	162.16	159.19	145.25	125.57	105.19	117.11	96.24	106.46
% Change from previous month	-27%	-52%	5%	93%	-41%	-2%	-9%	-14%	-16%	11%	-18%	11%
% Change from previous year	45%	-37%	-30%	10%	-20%	-9%	-50%	-42%	-27%	-36%	-64%	-73%
Actual System Demand (MW)	4197	4330	4733	4885	4885	4782	4833	4469	4276	4189	4101	4185
% Change from previous month	2%	3%	9%	3%	0%	-2%	1%	-8%	-4%	-2%	-2%	2%
% Change from previous year	-2%	-1%	0%	2%	1%	-1%	3%	1%	2%	0%	0%	2%
Actual Wind Generation (MW)	1081	2047	2233	1647	1987	2026	1748	1545	884	878	1316	1401
% Change from previous month	32%	89%	9%	-26%	21%	2%	-14%	-12%	-43%	-1%	50%	6%
% Change from previous year	24%	33%	45%	-16%	18%	-27%	12%	8%	-38%	-22%	54%	71%
Gas Price p/therm	235.85	102.32	128.91	264.54	155.16	133.65	110.96	100.32	72.41	77.87	70.76	82.87
% Change from previous month	-36%	-57%	26%	105%	-41%	-14%	-17%	-10%	-28%	8%	-9%	17%
% Change from previous year	52%	-49%	-35%	-3%	-22%	-29%	-64%	-38%	-24%	-44%	-68%	-77%
Carbon Price (€/Tonne)	70.29	70.46	75.84	85.61	79.91	91.82	89.41	89.98	84.18	85.51	86.57	84.61
% Change from previous month	-20%	0%	8%	13%	-7%	15%	-3%	1%	-6%	2%	1%	-2%
% Change from previous year	14%	19%	15%	8%	-5%	1%	20%	11%	-1%	2%	6%	-4%
Coal Price (\$/tonne)	341.33	275.16	212.52	243.46	173.25	136.71	134.95	137.83	119.57	112.56	111.02	115.57
% Change from previous month	-4%	-19%	-23%	15%	-29%	-21%	-1%	2%	-13%	-6%	-1%	4%
% Change from previous year	96%	16%	48%	78%	14%	-27%	-61%	-55%	-63%	-67%	-71%	-67%
EWIC % Import Periods	16.25%	30.51%	18.61%	30.58%	49.03%	38.91%	50.00%	50.56%	75.86%	77.72%	67.11%	68.11%
EWIC % Export Periods	41.81%	46.24%	54.10%	35.08%	23.66%	27.19%	16.47%	13.65%	8.28%	4.06%	9.21%	11.96%
EWIC % Not Flow Periods	45.28%	23.25%	27.29%	34.34%	27.32%	33.89%	23.86%	30.80%	15.88%	18.22%	22.68%	19.93%
Moyle % Import Periods	35.35%	40.52%	29.51%	44.19%	62.05%	53.65%	64.68%	77.50%	85.42%	92.22%	84.04%	75.24%
Moyle % Export Periods	63.85%	59.44%	69.83%	55.78%	37.95%	46.02%	25.50%	27.43%	14.58%	7.67%	15.89%	20.33%
Moyle % Not Flow Periods	0.80%	0.03%	0.66%	0.03%	0.00%	0.33%	0.13%	0.07%	0.00%	0.10%	0.07%	4.44%

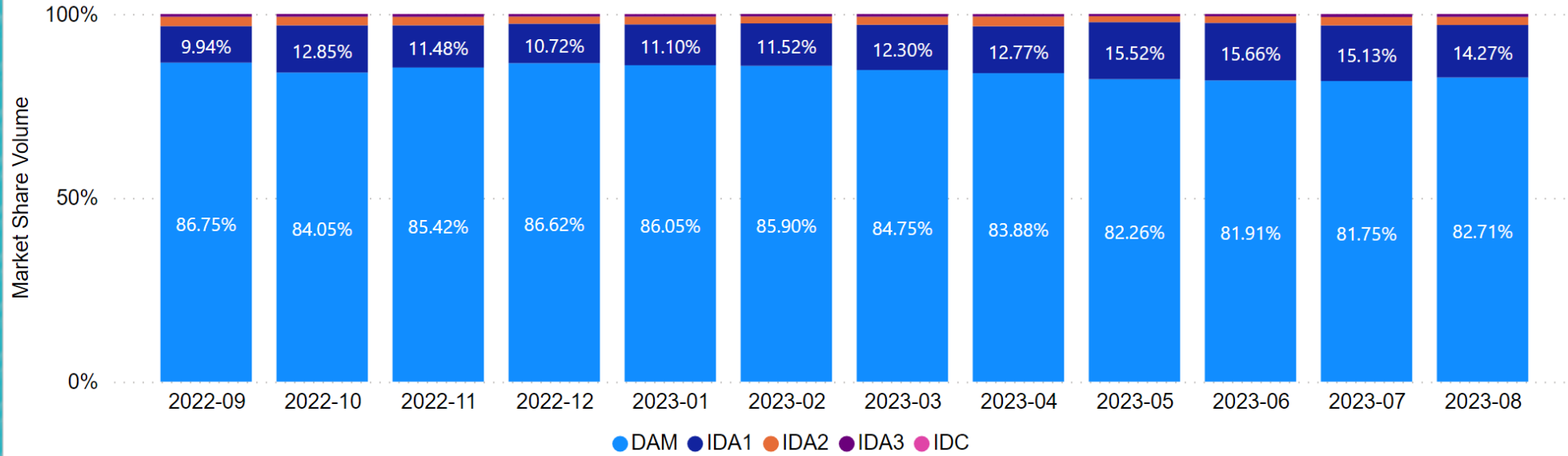
Market Volumes August 2023

Daily Average Volume	MWh
DAM	104,162
IDA1	17,973
IDA2	2,792
IDA3	972
IDC	37

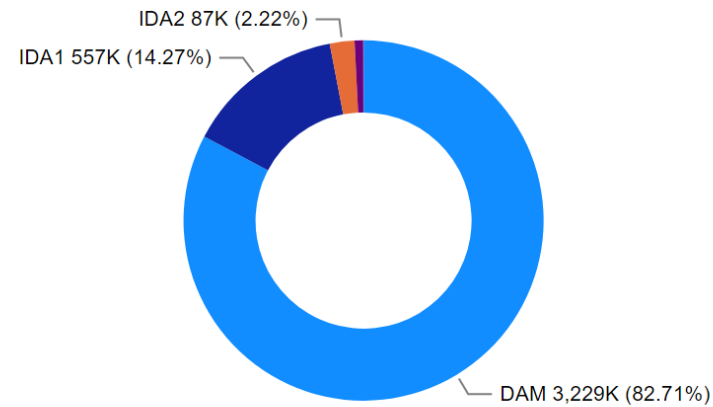
Total Monthly Volume	MWh
DAM	3,229,036
IDA1	557,159
IDA2	86,551
IDA3	30,141
IDC	998
Total	3,903,885

Total Market Value	€
DAM	€ 349,694,059
IDA1	€ 59,353,989
IDA2	€ 9,167,858
IDA3	€ 3,799,974
IDC	€ 124,254
Total	€ 422,140,134

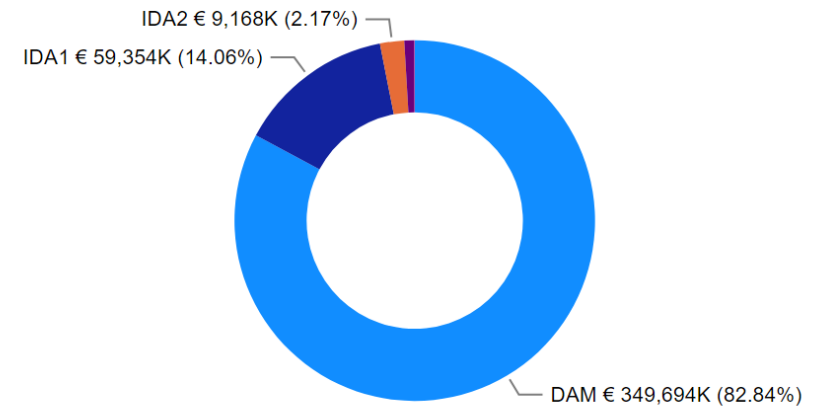
Ex-Ante Monthly Volume by Market



Ex-Ante Volumes (MWh)



Ex-Ante Values (€)

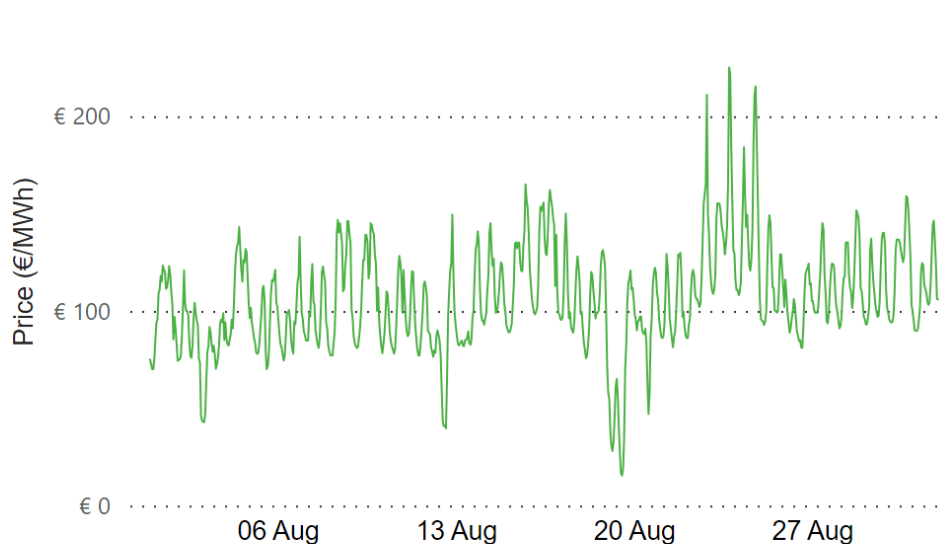


Day Ahead Market August 2023

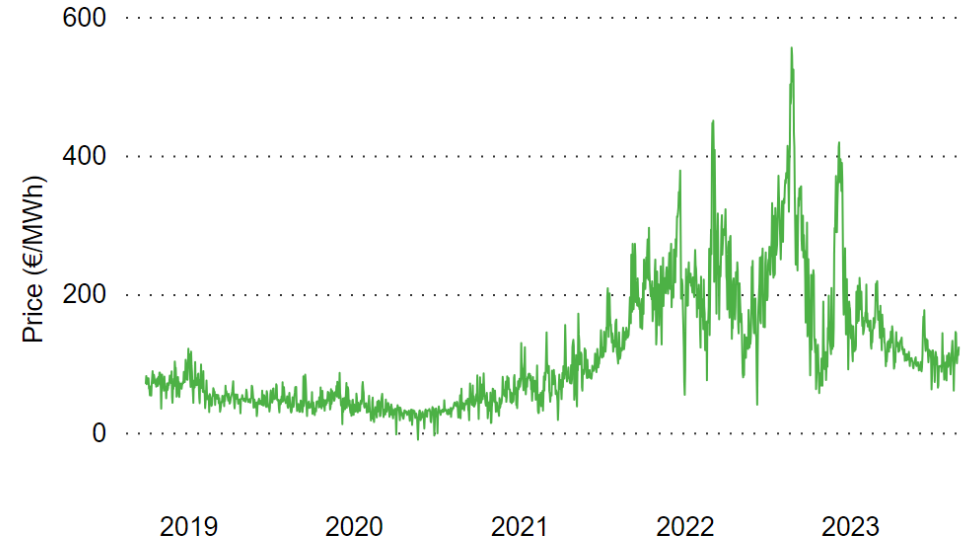
€ 106.46
Average DAM Price
€ 15.39
Min DAM Price
€ 225.00
Max DAM Price

The most frequent price range for August was between €90 and €120

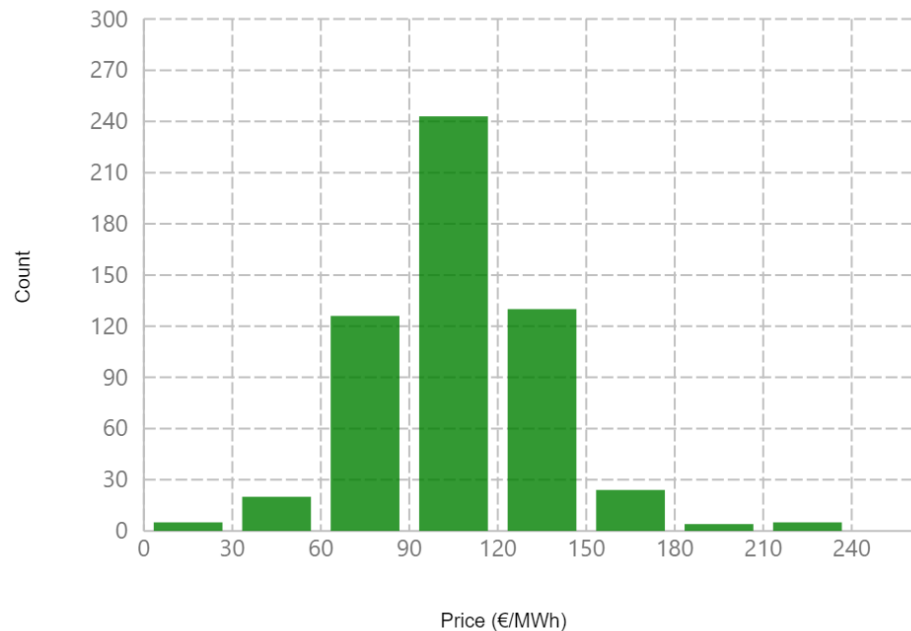
DAM Prices



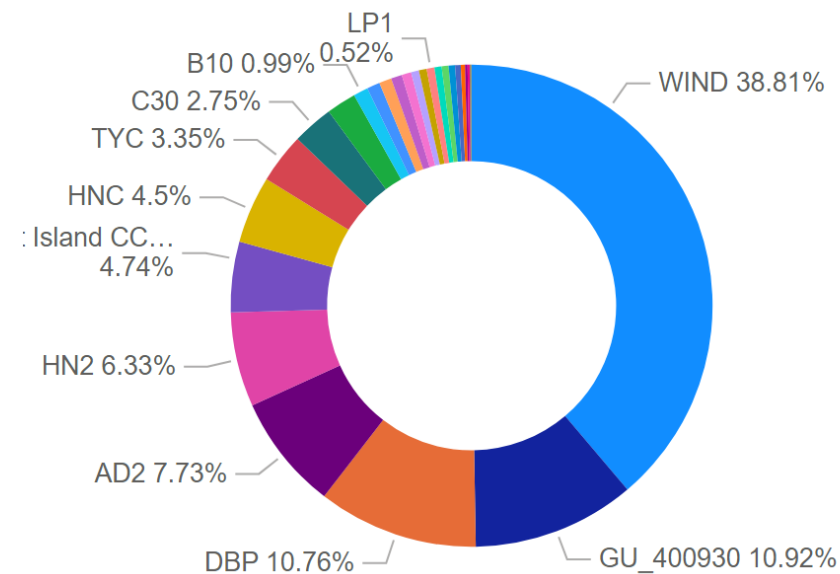
Historic Daily Average DAM Prices



Histogram of DAM Prices



DAM Sell Side Generator Order Results

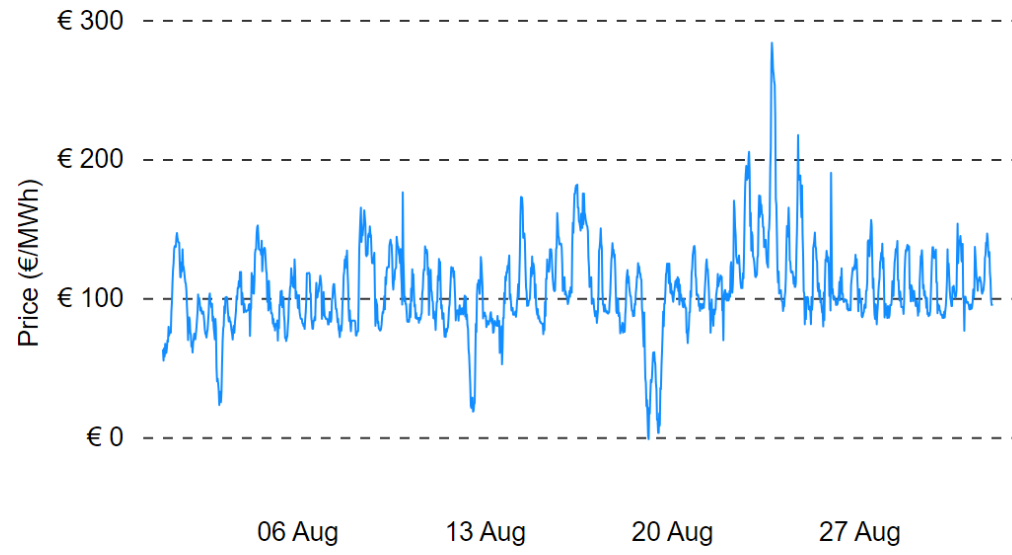


Intraday Market August 2023

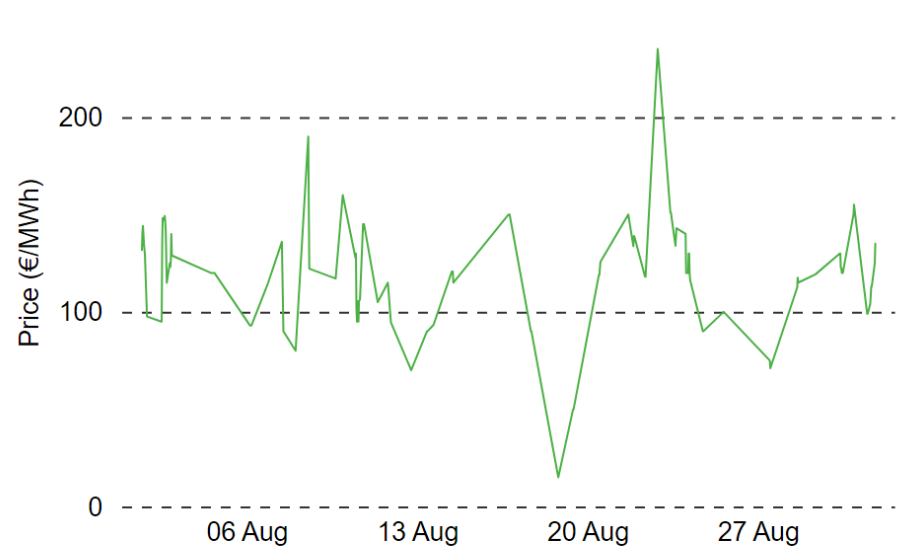
€ 105.81
Average IDA1 Price
-€ 1.50
Min IDA1 Price
€ 283.48
Max IDA1 Price

The most frequent price range for August was between €100 and €150

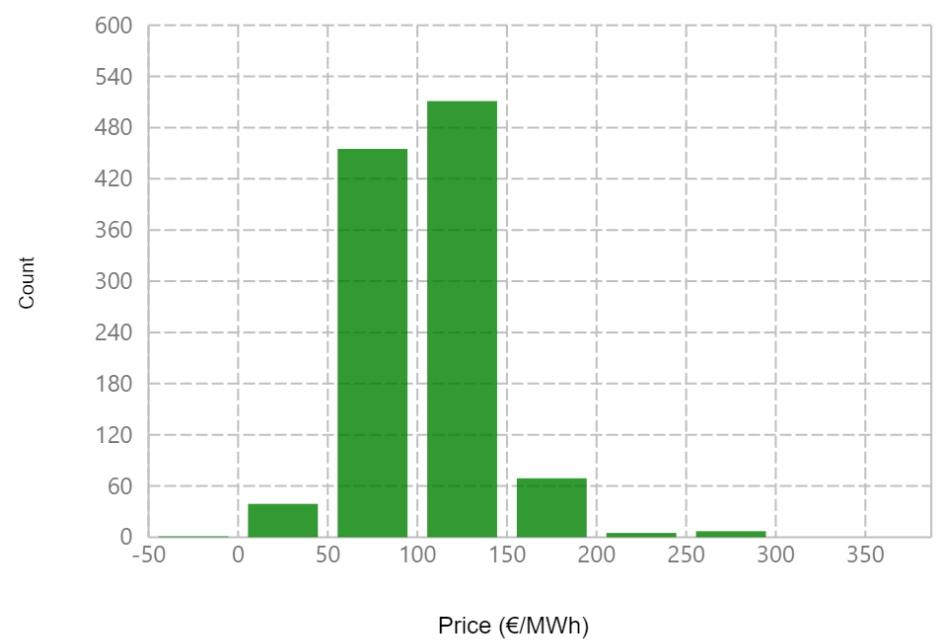
IDA 1 Prices



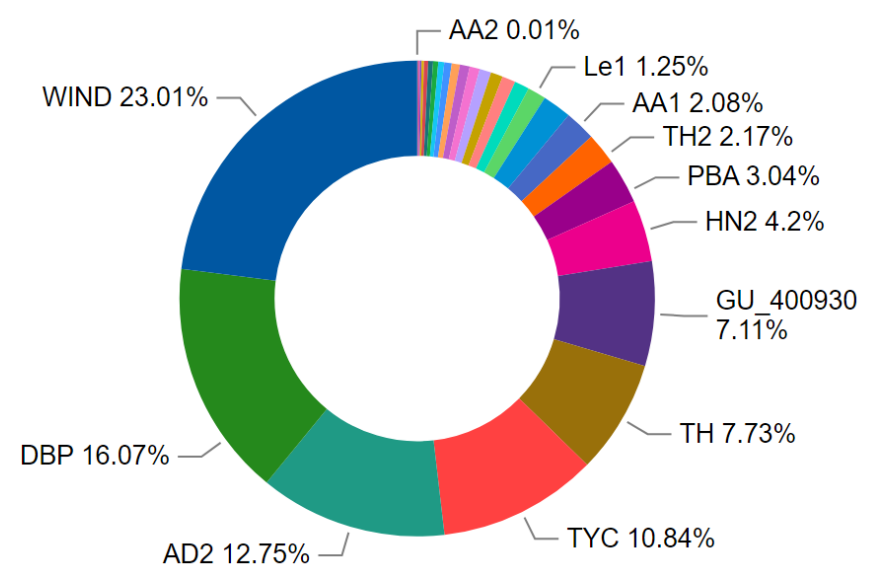
IDC Prices



Histogram of IDA1 Prices



IDA1 Sell Order Results By Market Participant



SEM vs GB

August 2023

SEM Day Ahead Price

€ 106.46
Average Price

€ 15.39
Min Price

€ 225.00
Max Price

GB Day Ahead Price

€ 95.74
Average Price

€ 16.71
Min Price

€ 234.40
Max Price

SEM IDA1 Price

€ 105.81
Average Price

-€ 1.50
Min Price

€ 283.48
Max Price

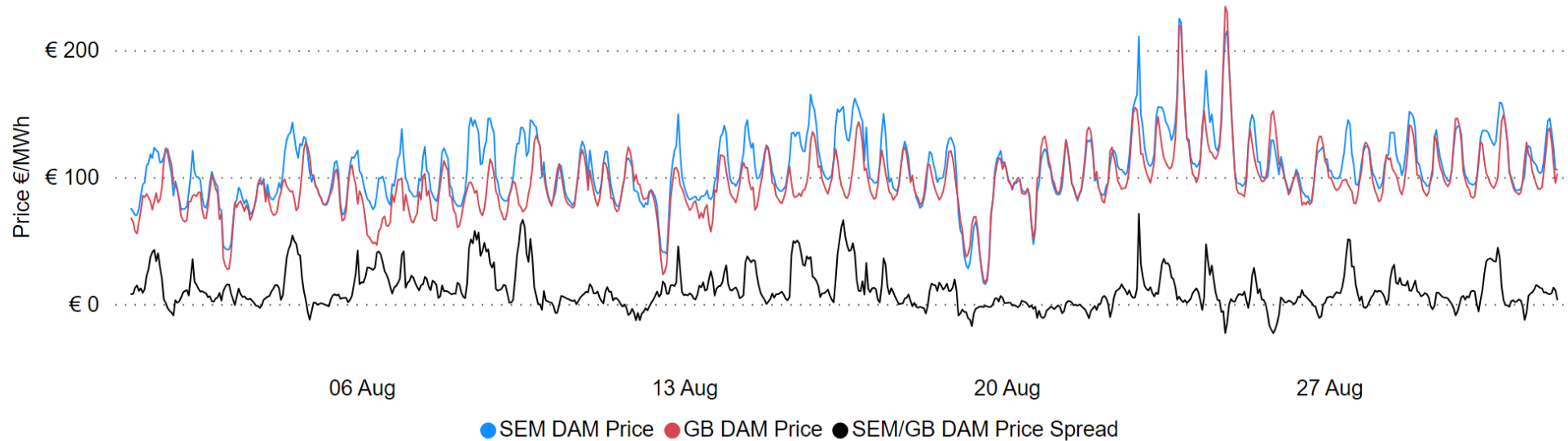
GB IDA1 Prices

€ 97.58
Average Price

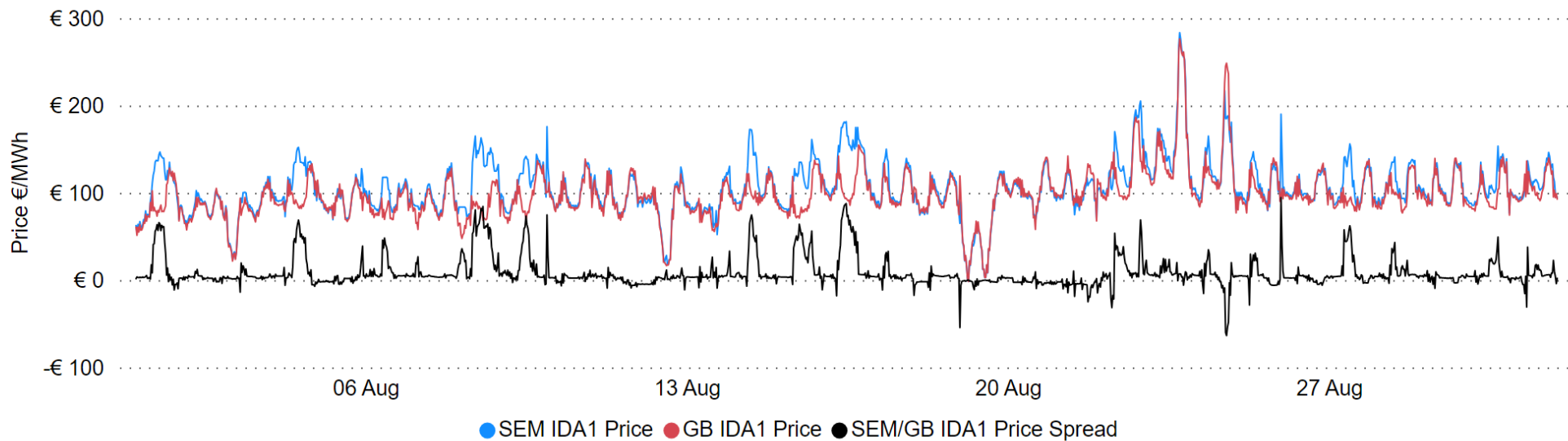
-€ 1.57
Min Price

€ 276.34
Max Price

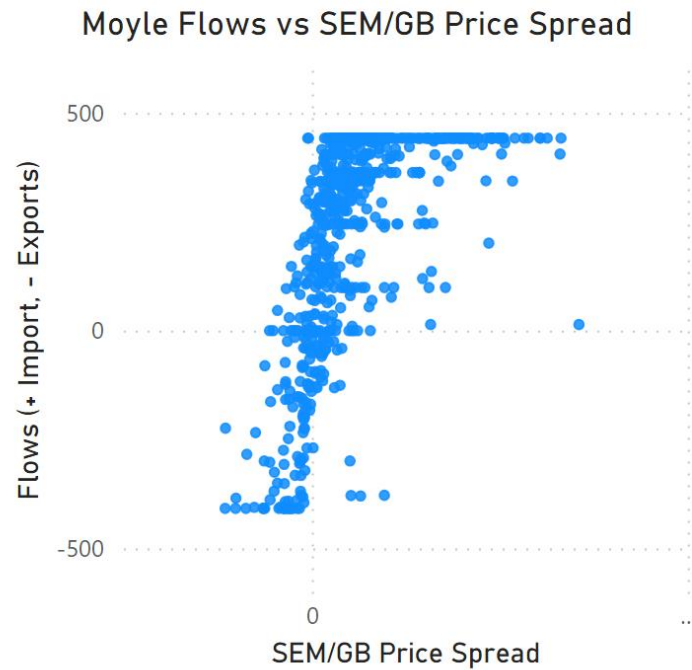
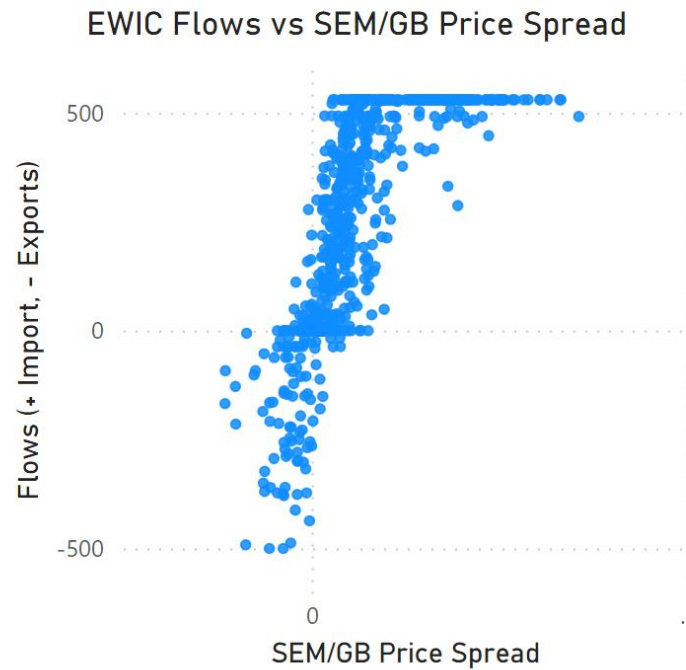
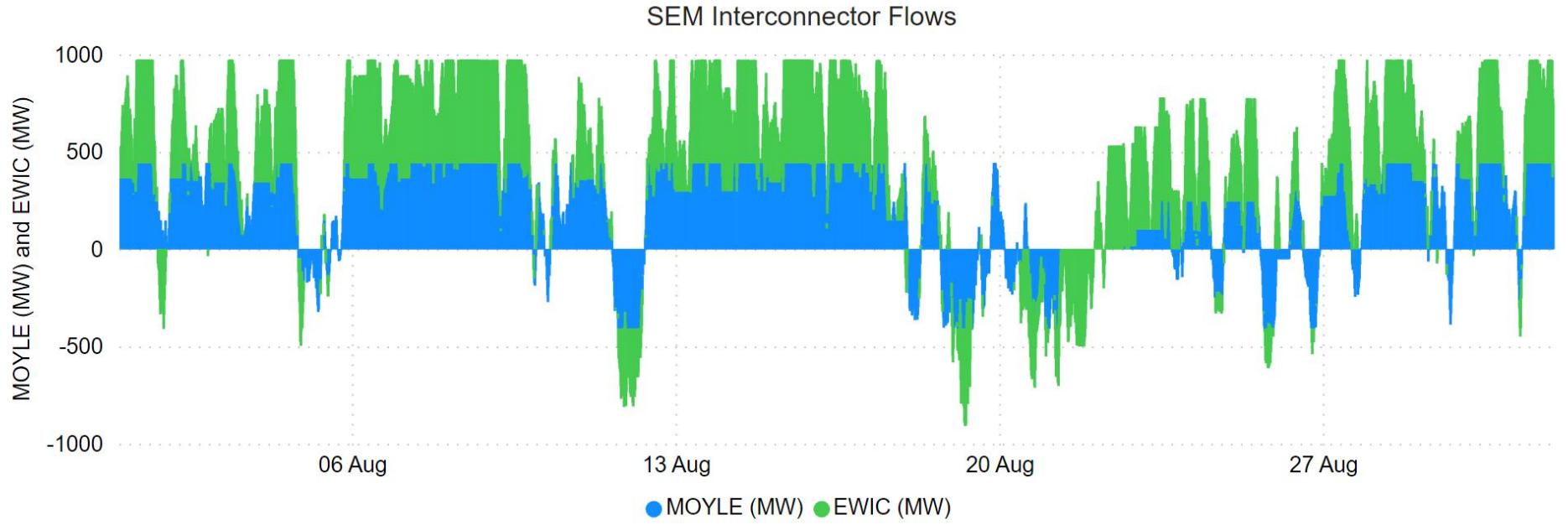
SEM & GB DAM Prices



SEM & GB IDA1 Prices



SEM Interconnectors August 2023

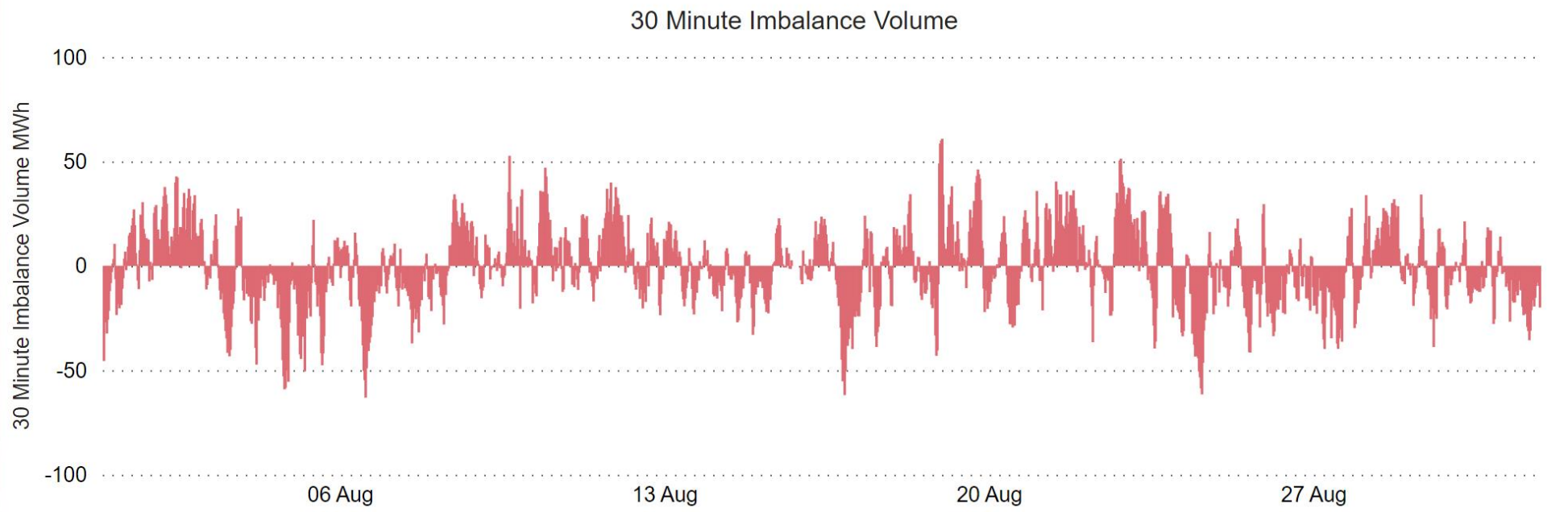
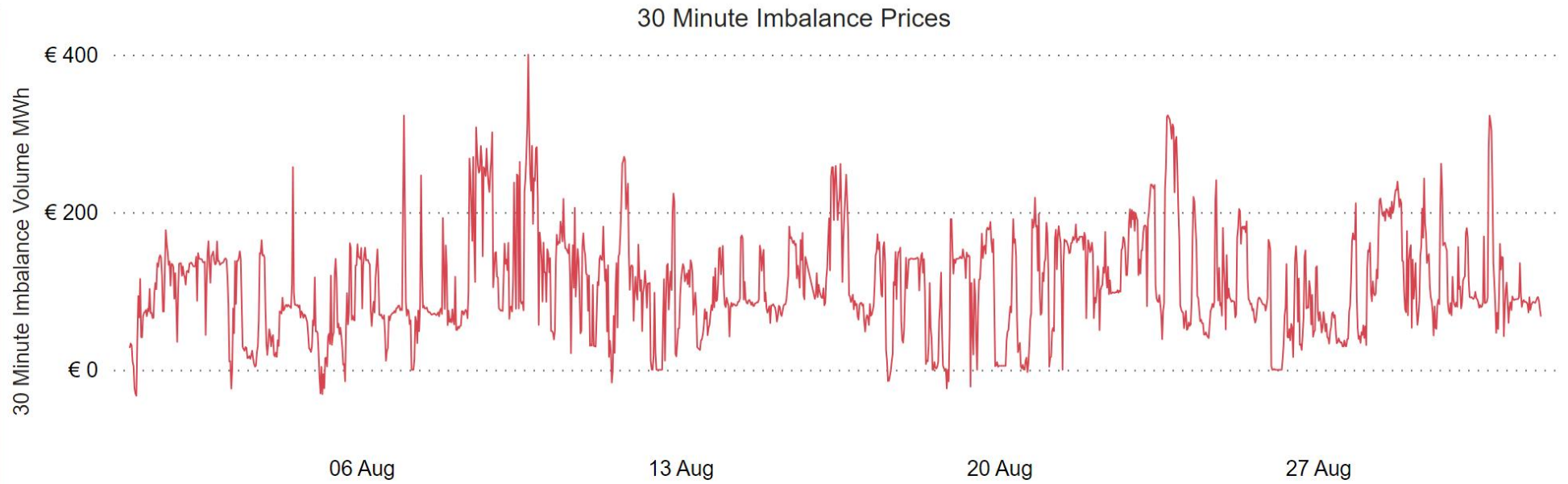


Interconnector Flows

August 2023	MW
Moyle Imports	334
EWIC Imports	355
Moyle Exports	-200
EWIC Exports	-201
SEM Imports	632
SEM Exports	-281
SEM Net Import/Export	429

Balancing Market August 2023

30 Minutes Imbalance Price
€ 106.62
Average Price
-€ 33.04
Lowest Price
€ 399.94
Highest Price



Demand and Generation Mix

Demand August 2023

SEM Demand (MW)

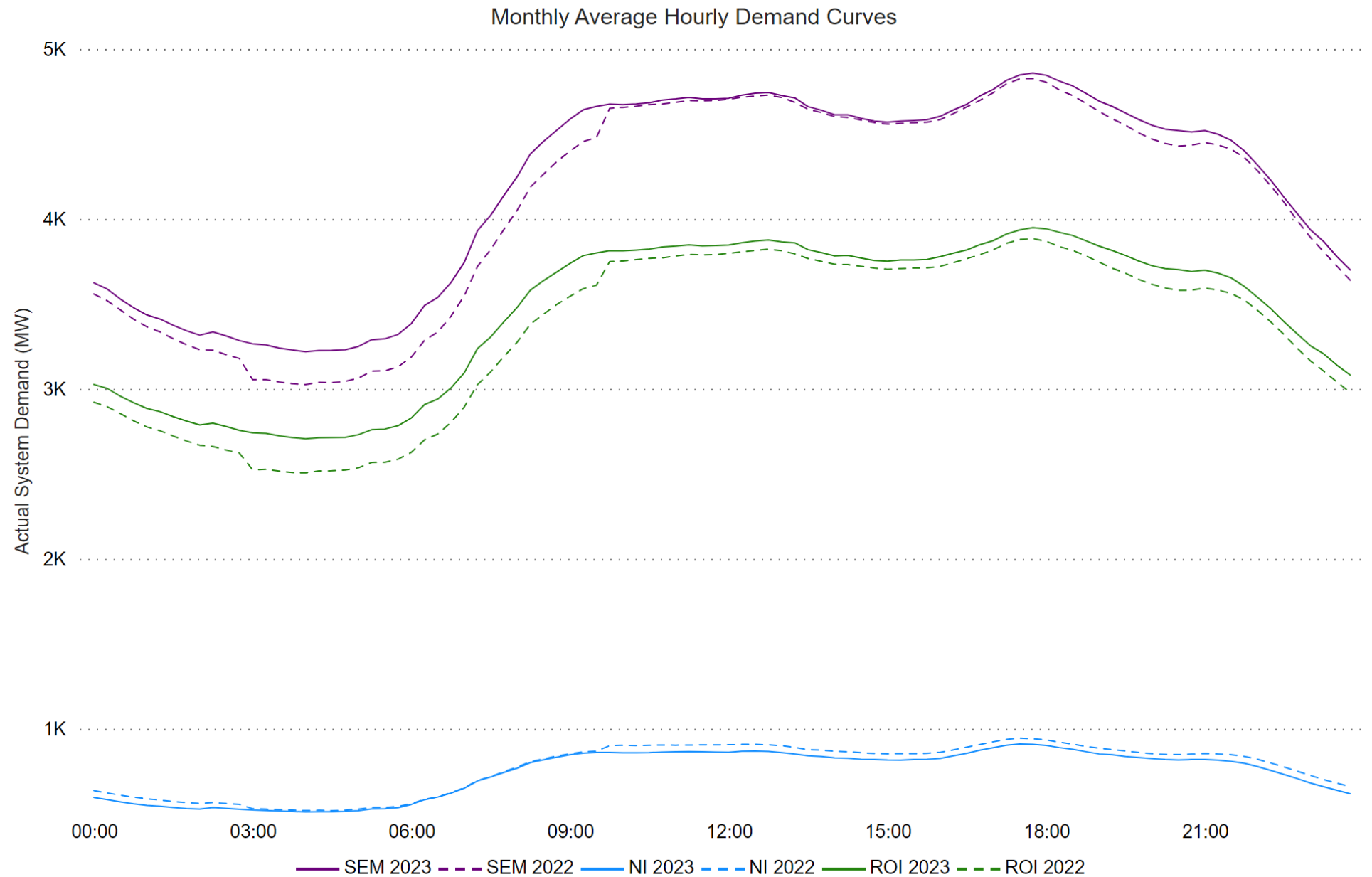
4,184.51	4,099.19
SEM Average 2023	SEM Average 2022
3,219.03	3,025.94
SEM Min 2023	SEM Min 2022
4,858.35	4,826.03
SEM Max 2023	SEM Max 2022

NI Demand (MW)

739.93	768.11
NI Average 2023	NI Average 2022
511.65	518.94
NI Min 2023	NI Min 2022
911.61	945.32
NI Max 2023	NI Max 2022

ROI Demand (MW)

3,444.59	3,331.05
ROI Average 2023	ROI Average 2022
2,707.32	2,506.26
ROI Min 2023	ROI Min 2022
3,948.81	3,884.26
ROI Max 2023	ROI Max 2022

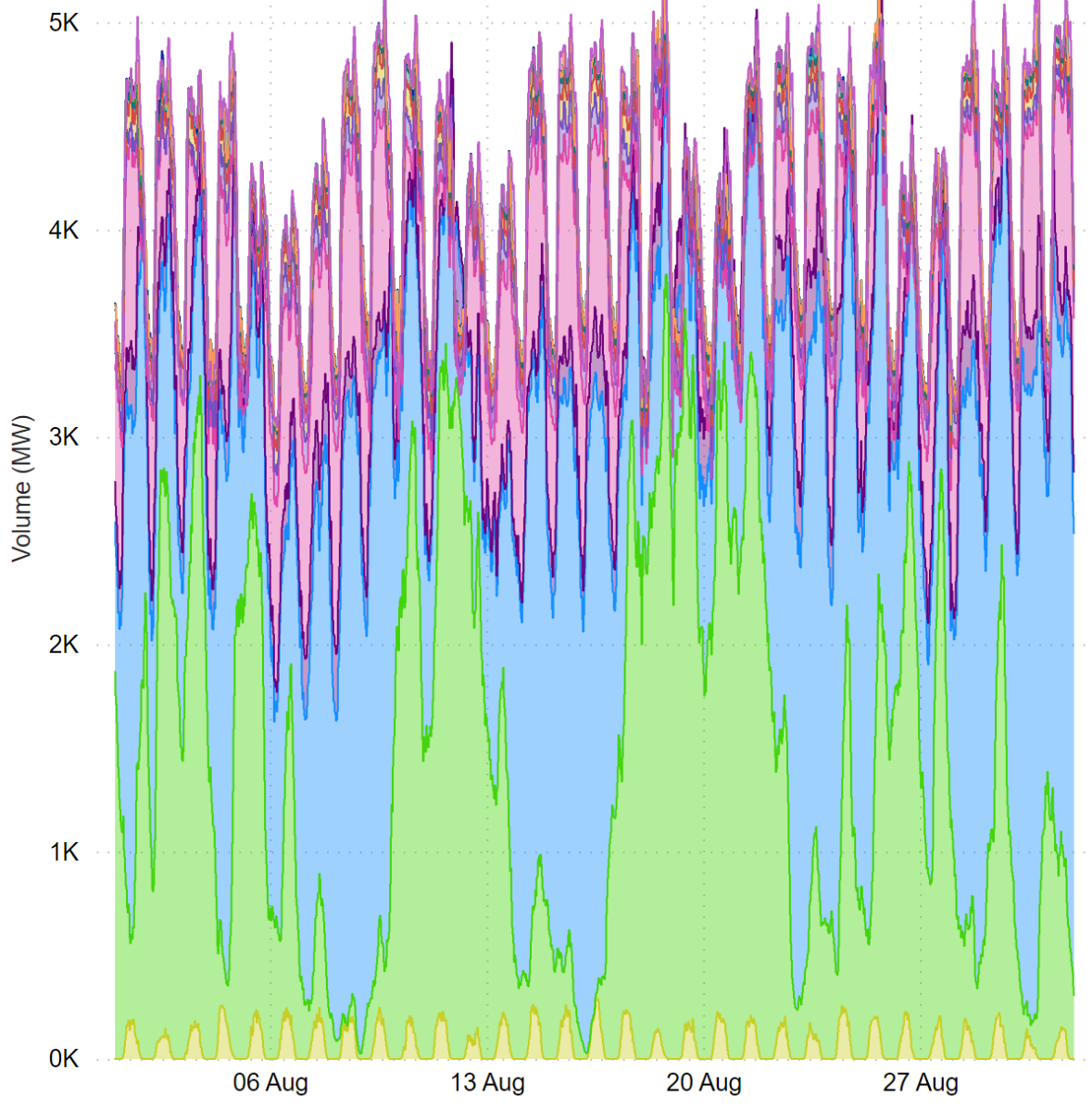


Fuel Mix August 2023

Fuel Type	Average (MW)	%
CCGT	1,708	41.2%
WIND	1,401	33.8%
INTERCONNECTOR	430	10.4%
COAL	215	5.2%
HYDRO	115	2.8%
CHP	125	3.0%
WASTE	77	1.9%
SOLAR	68	1.6%
DSR	28	0.7%
OIL	2	0%
OCGT	1	0%
BATTERY	-4	-0.1%
PUMPED STORAGE	-19	-0.5%

Fuel Type	Max (MW)	Min (MW)
CCGT	3,226	503
WIND	3,777	8
INTERCONNECTOR	980	-900
COAL	515	91
HYDRO	165	53
CHP	161	0
PEAT	0	0
WASTE	80	17
SOLAR	289	0
DSR	202	0
OIL	193	0
OCGT	67	0
BATTERY	71	-65
PUMPED STORAGE	290	-301

SEM 30 Minute Fuel Mix



SEM Fuel Mix August 2022



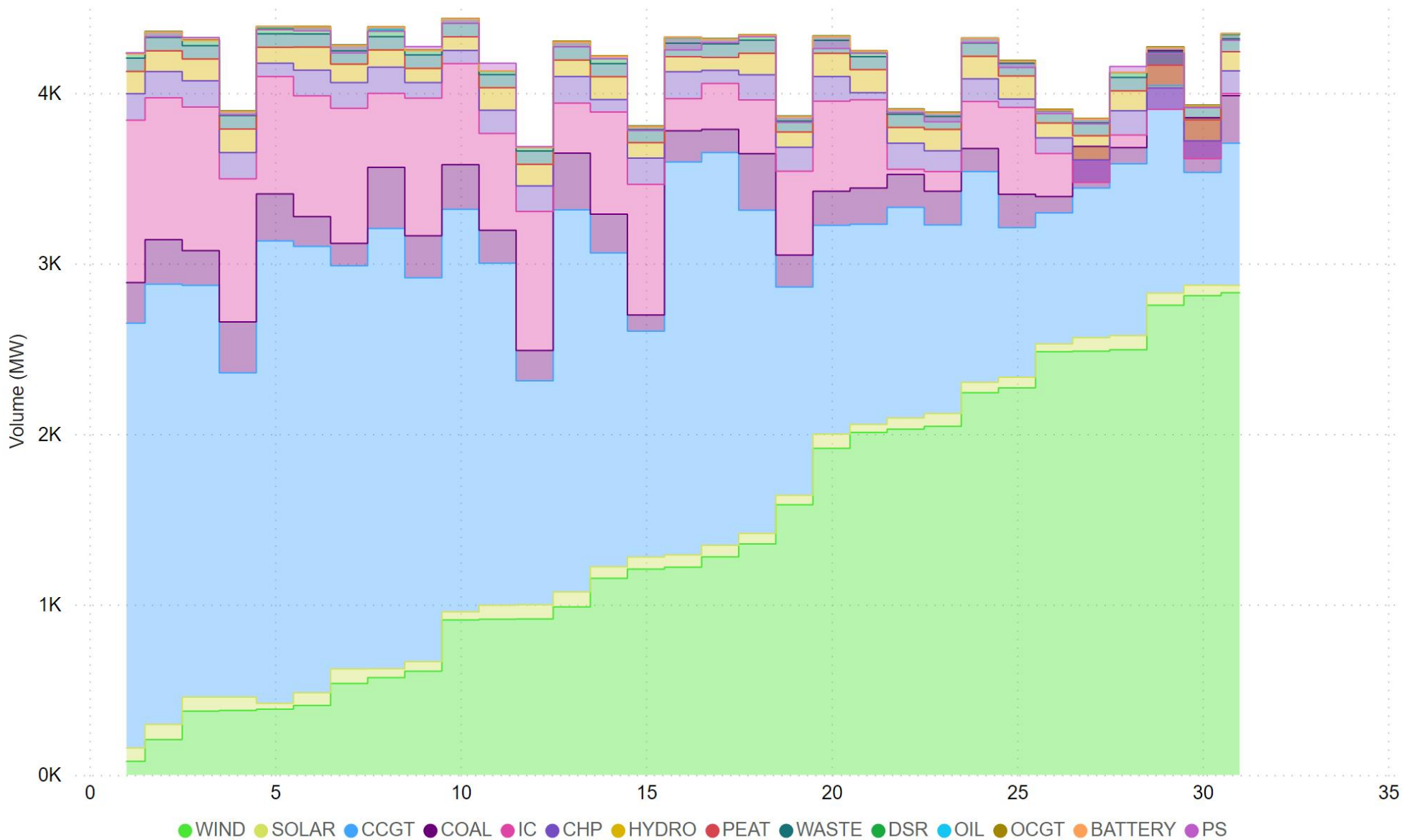
SEM Fuel Mix August 2023



Fuel Mix Ranked by Wind Volume August 2023

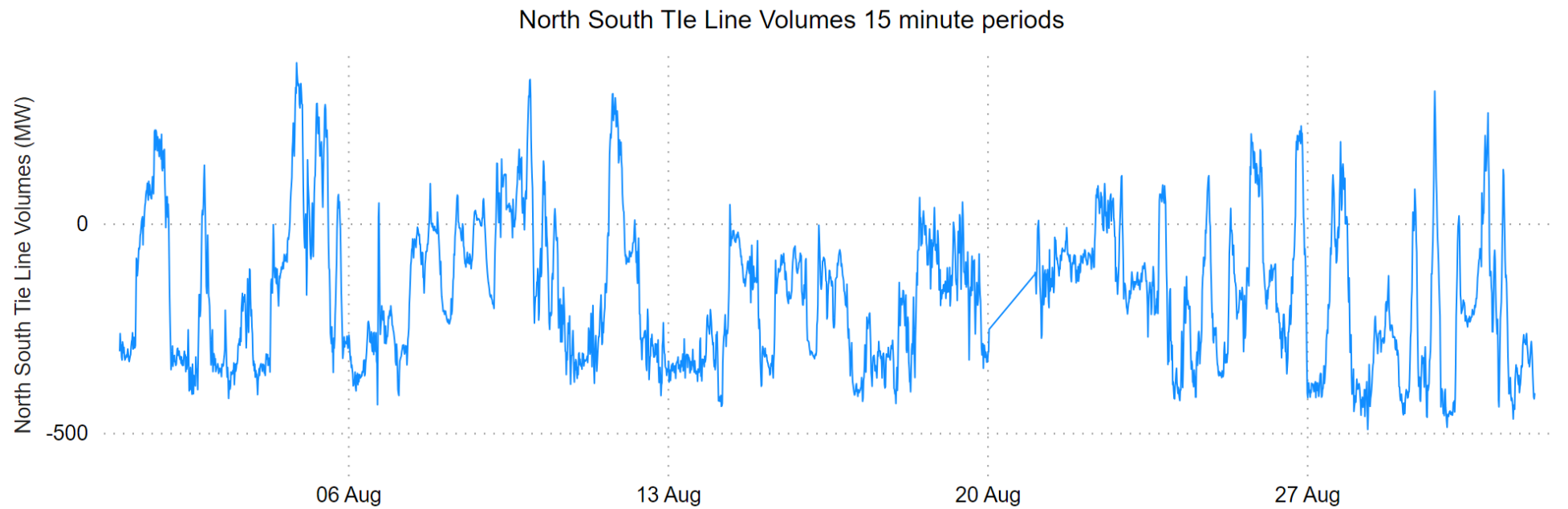
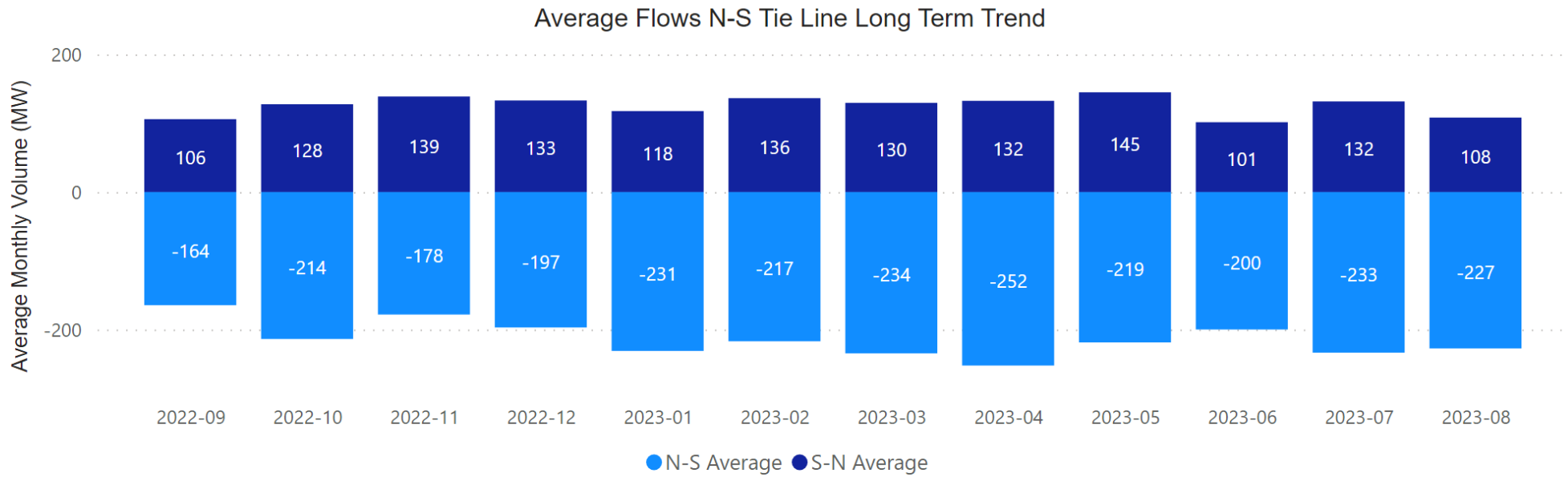
This chart shows the average daily fuel mix for the month but instead of being a timeline chart it is ranked by level of wind available from smallest to largest.

Daily SEM Fuel Mix Ranked by Wind Volume for the Month



North-South Tie Line August 2023

Flow Direction (Average)	MW
NI to ROI	227.30
ROI to NI	108.17
NET NI to ROI	172.77



Note
N_S tie line data missing
20th August 01:00 - 21st August 01:00

Wind Generation August 2023

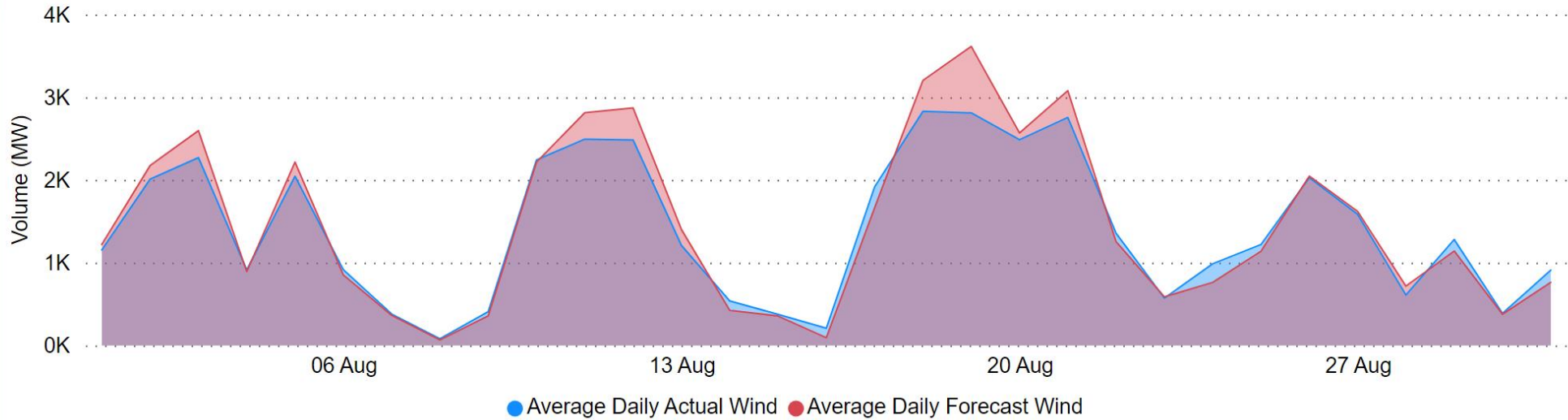
Average Daily Actual Wind (MW)
1,401

Average Daily Forecast Wind (MW)
1,465

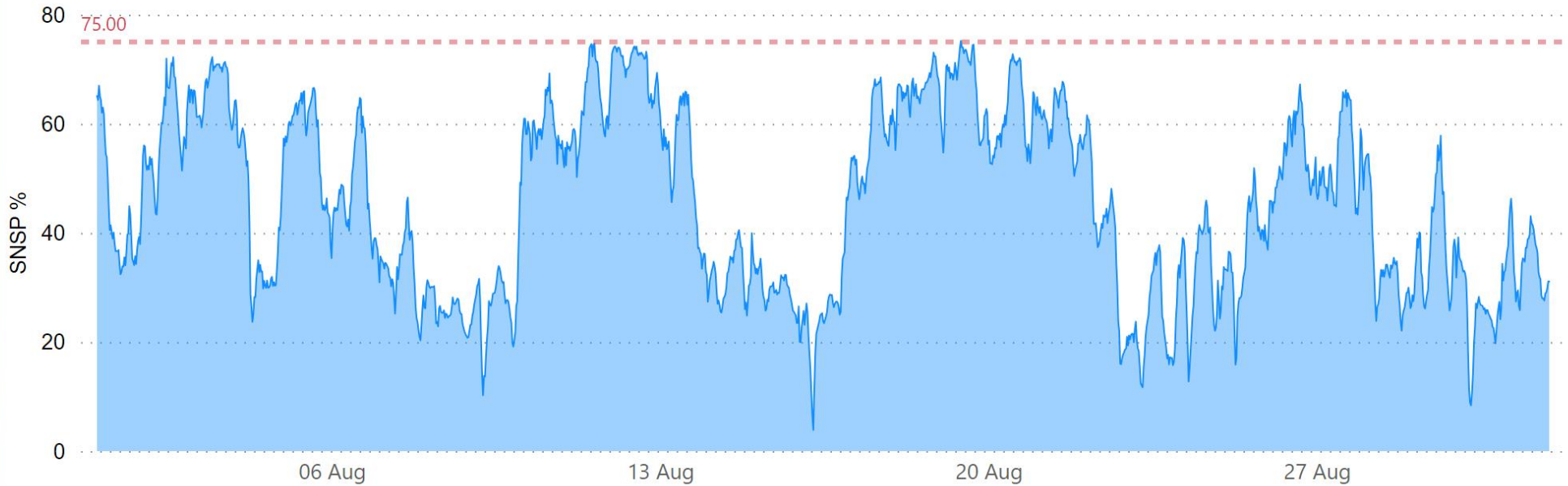
Min SNSP %
3.88

Max SNSP %
75.20

Actual Daily Average Wind Relative to Forecast Daily Average Wind



SNSP %



CO₂ August 2023

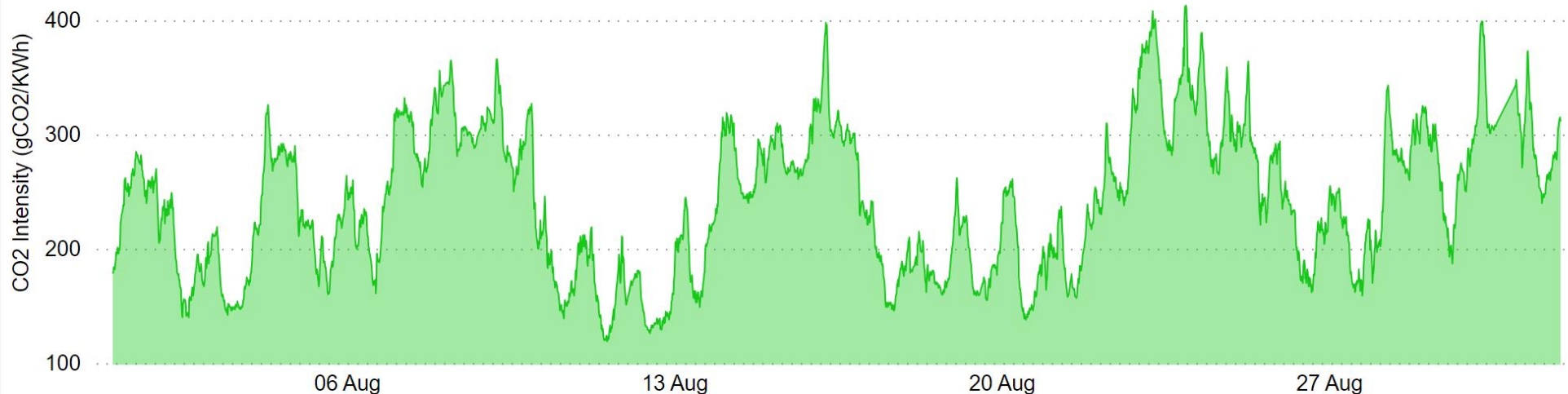
CO2 Intensity
242.12
Monthly Average (gCO₂/KWh)
119
Monthly Low (gCO₂/KWh)
413
Monthly High (gCO₂/KWh)

CO2 Emissions
1088.66
Monthly Average (tCO₂/hr)
650
Monthly Low (tCO₂/hr)
1790
Monthly High (tCO₂/hr)

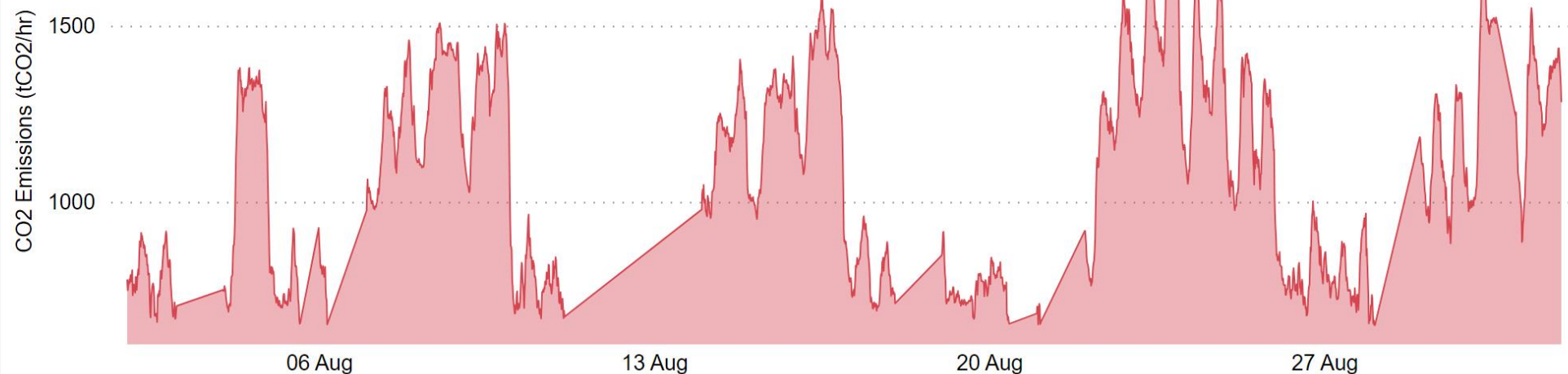
Note
CO2 Emissions data missing
3th August 01:00 - 4th August 00:00
6th August 04:15 - 7th August 00:00
11th August 03:15 - 14th August 00:00
18th August 01:00 - 19th August 00:00
21st August 02:00 - 22nd August 00:00
28th August 01:45 - 29th August 00:15

Data sourced from - SONI/ERIGRID

CO2 Intensity



CO2 Emissions

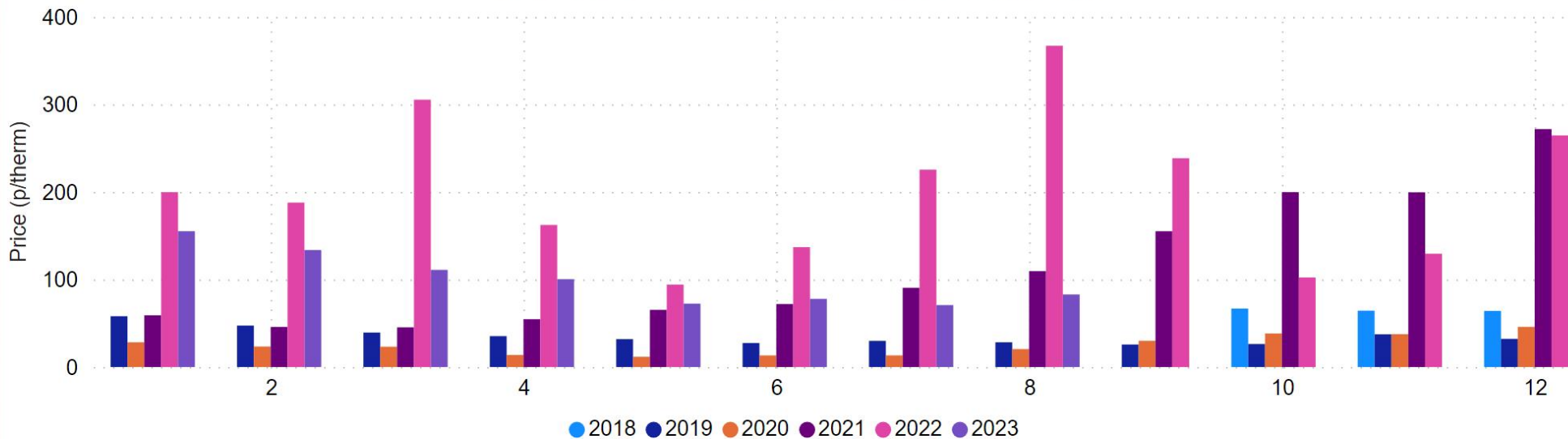


Fuel Costs and Spreads

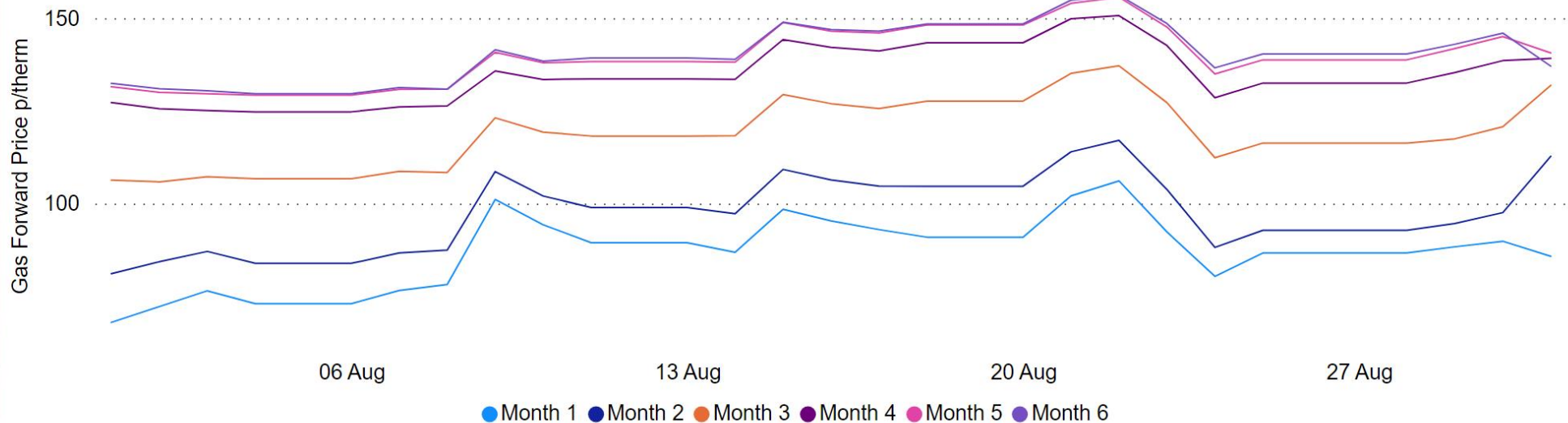
Gas Price August 2023

82.87
Monthly Average (p/therm)
66.55
Monthly Low (p/therm)
108.05
Monthly High (p/therm)

Monthly Day Ahead NBP Gas Price by Year (p/therm)

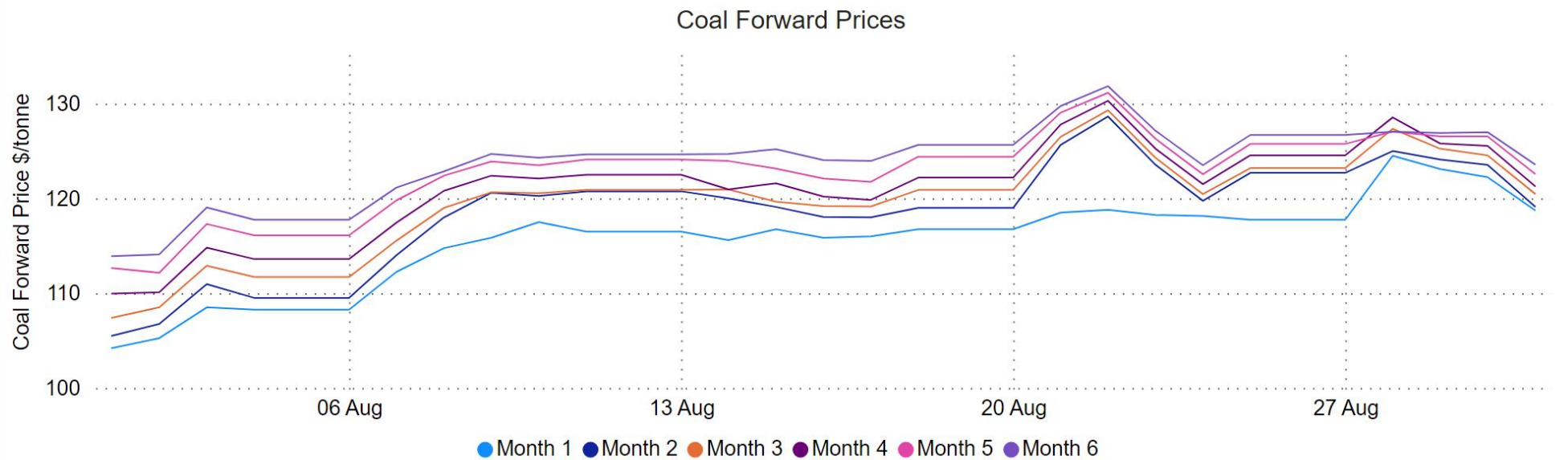
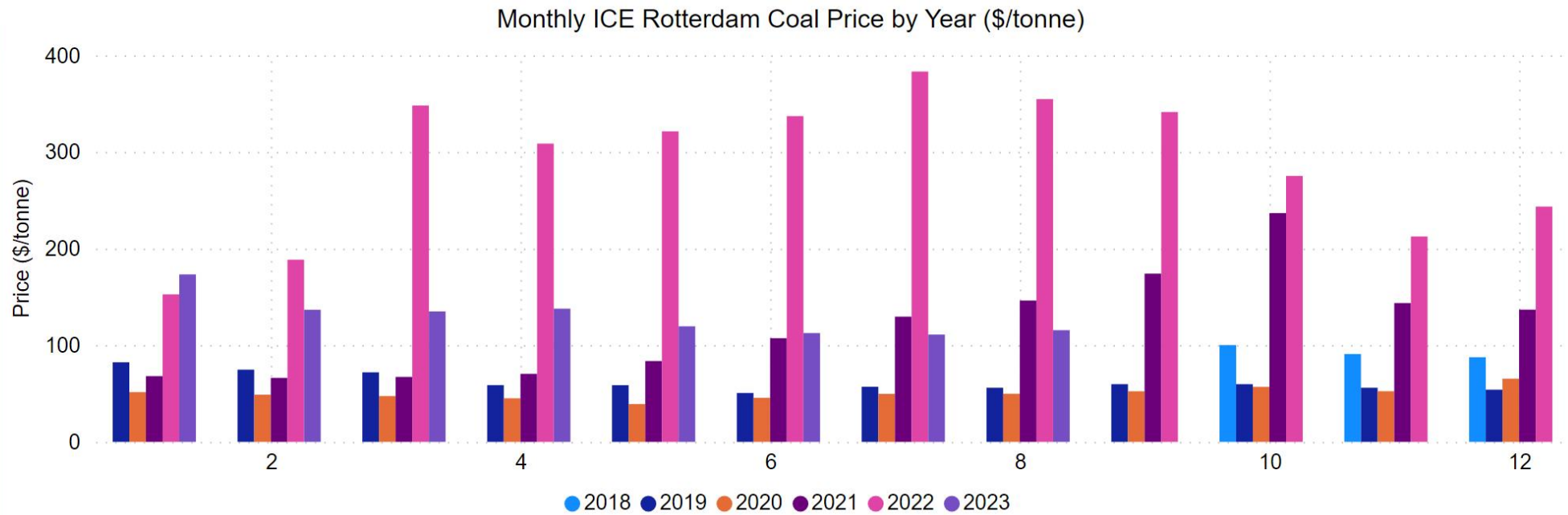


Gas Forward Prices



Coal Price August 2023

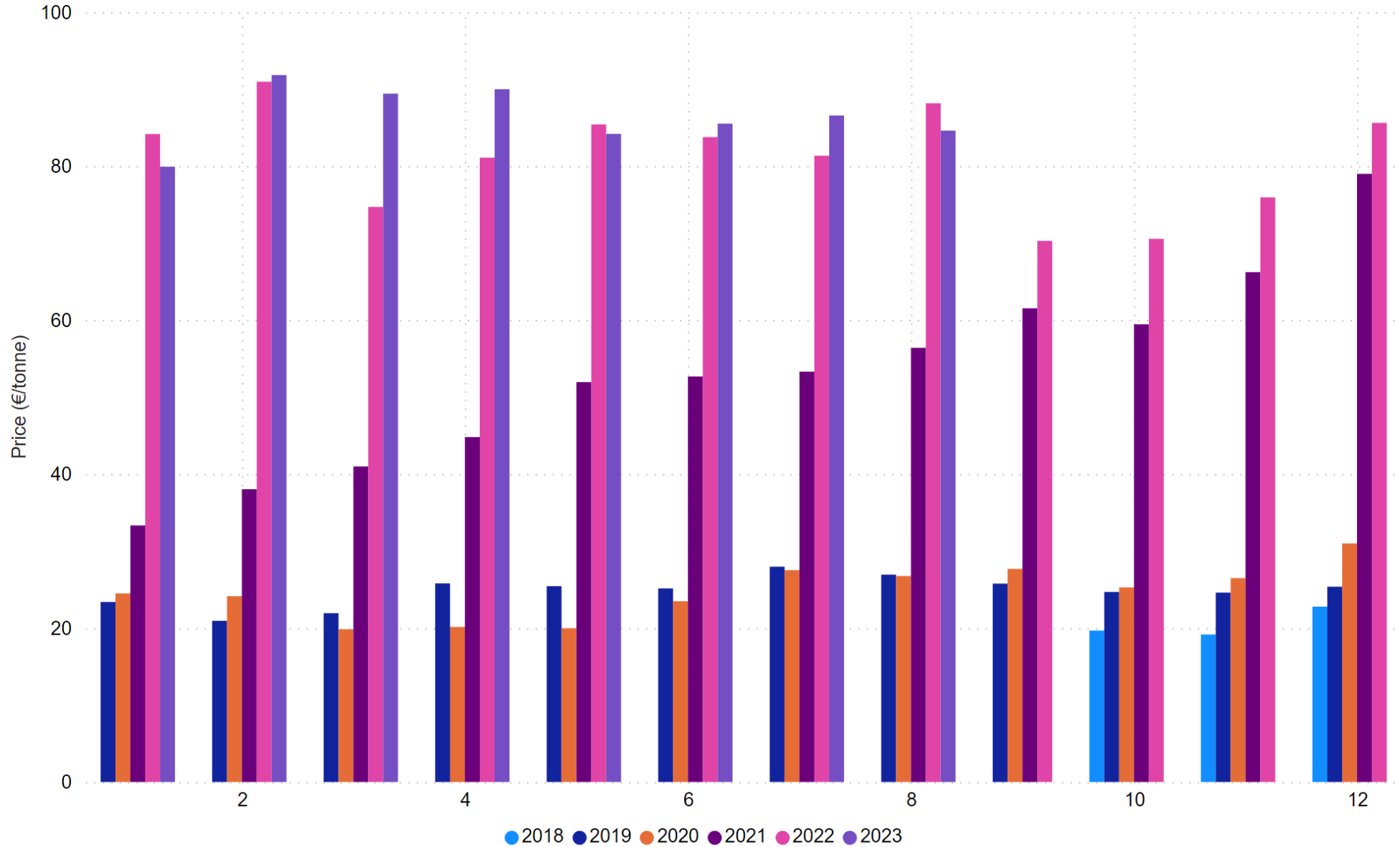
\$115.57
Monthly Average \$/tonne
\$104.20
Monthly Low \$/tonne
\$124.50
Monthly High \$/tonne



Carbon Price August 2023

€ 84.61
Monthly Average €/tonne
€ 81.45
Monthly Low €/tonne
€ 88.43
Monthly High €/tonne

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



Spark Spreads August 2023

Clean Dark Spread measure the profitability of coal fired power generation based on the variable cost of inputs (coal and carbon credits) and the value of the output (electricity).

Clean Spark Spread is the difference between the price received by a generator for electricity produced and the cost of the natural gas + Carbon needed to produce that electricity.

