



Energy Market Monitoring Report

July 2023



Market Results

Summary Dashboard

Monthly Averages	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23	Jul-23
DAM (€/MWh)	387.64	283.25	136.09	143.12	276.52	162.16	159.19	145.25	125.57	105.19	117.11	96.24
% Change from previous month	45%	-27%	-52%	5%	93%	-41%	-2%	-9%	-14%	-16%	11%	-18%
% Change from previous year	195%	45%	-37%	-30%	10%	-20%	-9%	-50%	-42%	-27%	-36%	-64%
Actual System Demand (MW)	4099	4197	4330	4733	4885	4885	4782	4833	4469	4276	4189	4101
% Change from previous month	0%	2%	3%	9%	3%	0%	-2%	1%	-8%	-4%	-2%	-2%
% Change from previous year	-1%	-2%	-1%	0%	2%	1%	-1%	3%	1%	2%	0%	0%
Actual Wind Generation (MW)	817	1081	2047	2233	1647	1987	2026	1748	1545	884	878	1316
% Change from previous month	-4%	32%	89%	9%	-26%	21%	2%	-14%	-12%	-43%	-1%	50%
% Change from previous year	-3%	24%	33%	45%	-16%	18%	-27%	12%	8%	-38%	-22%	54%
Gas Price p/therm	365.79	235.85	102.32	128.91	264.54	155.16	133.65	110.96	100.32	72.41	77.87	70.76
% Change from previous month	64%	-36%	-57%	26%	105%	-41%	-14%	-17%	-10%	-28%	8%	-9%
% Change from previous year	234%	52%	-49%	-35%	-3%	-22%	-29%	-64%	-38%	-24%	-44%	-68%
Carbon Price (€/Tonne)	88.20	70.29	70.46	75.84	85.61	79.91	91.82	89.41	89.98	84.18	85.51	86.57
% Change from previous month	8%	-20%	0%	8%	13%	-7%	15%	-3%	1%	-6%	2%	1%
% Change from previous year	56%	14%	19%	15%	8%	-5%	1%	20%	11%	-1%	2%	6%
Coal Price (\$/tonne)	354.67	341.33	275.16	212.52	243.46	173.25	136.71	134.95	137.83	119.57	112.56	111.02
% Change from previous month	-7%	-4%	-19%	-23%	15%	-29%	-21%	-1%	2%	-13%	-6%	-1%
% Change from previous year	142%	96%	16%	48%	78%	14%	-27%	-61%	-55%	-63%	-67%	-71%
EWIC % Import Periods	25.84%	16.25%	30.51%	18.61%	30.58%	49.03%	38.91%	50.00%	50.56%	75.86%	77.72%	67.11%
EWIC % Export Periods	51.92%	41.81%	46.24%	54.10%	35.08%	23.66%	27.19%	16.47%	13.65%	8.28%	4.06%	9.21%
EWIC % Not Flow Periods	22.24%	45.28%	23.25%	27.29%	34.34%	27.32%	33.89%	23.86%	30.80%	15.88%	18.22%	22.68%
Moyle % Import Periods	31.55%	35.35%	40.52%	29.51%	44.19%	62.05%	53.65%	64.68%	77.50%	85.42%	92.22%	84.04%
Moyle % Export Periods	66.26%	63.85%	59.44%	69.83%	55.78%	37.95%	46.02%	25.50%	27.43%	14.58%	7.67%	15.89%
Moyle % Not Flow Periods	2.18%	0.80%	0.03%	0.66%	0.03%	0.00%	0.33%	0.13%	0.07%	0.00%	0.10%	0.07%

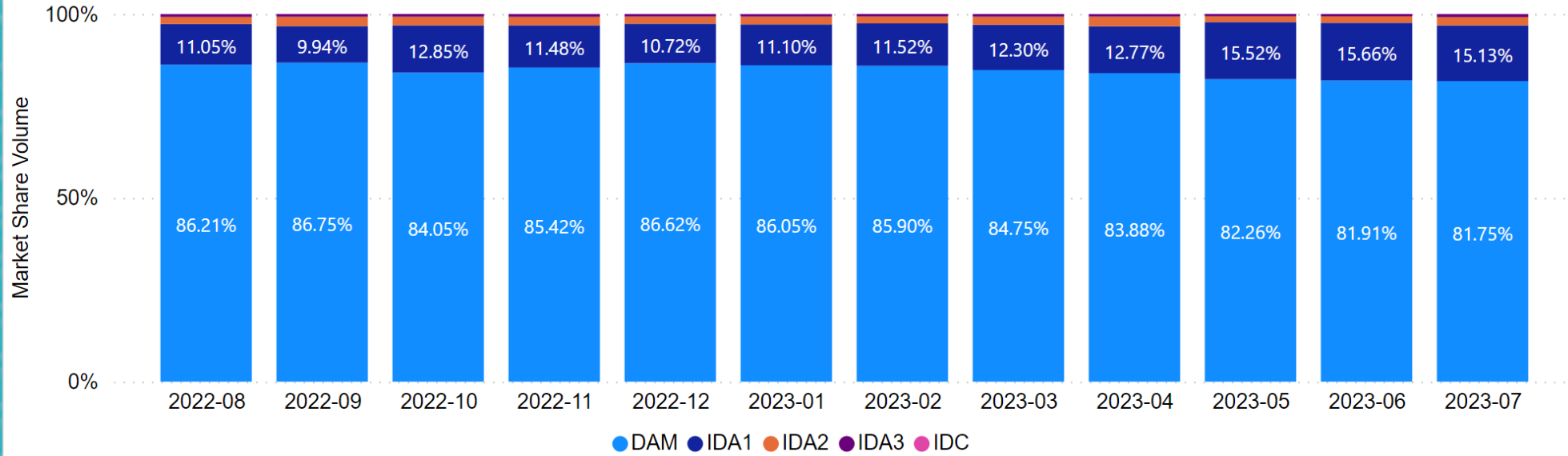
Market Volumes July 2023

Daily Average Volume	MWh
DAM	104,510
IDA1	19,339
IDA2	2,917
IDA3	1,035
IDC	68

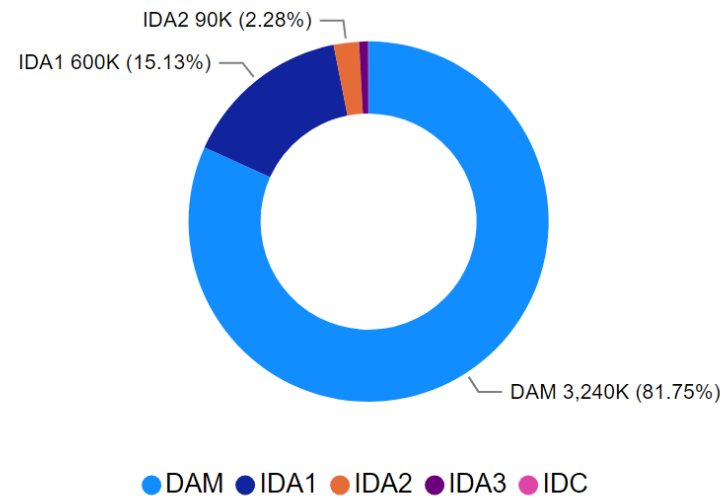
Total Monthly Volume	MWh
DAM	3,239,822
IDA1	599,515
IDA2	90,415
IDA3	32,083
IDC	1,289
Total	3,963,124

Total Market Value	€
DAM	€ 315,599,815
IDA1	€ 58,081,354
IDA2	€ 9,062,360
IDA3	€ 3,679,261
IDC	€ 136,342
Total	€ 386,559,132

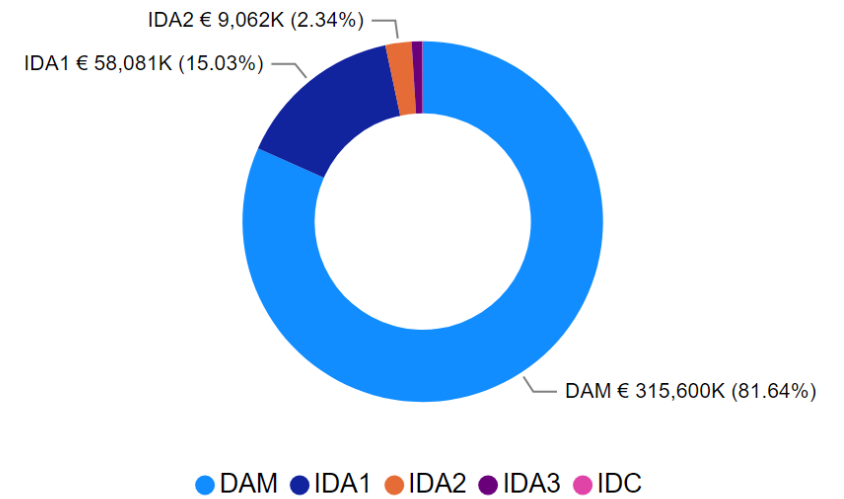
Ex-Ante Monthly Volume by Market



Ex-Ante Volumes (MWh)



Ex-Ante Values (€)

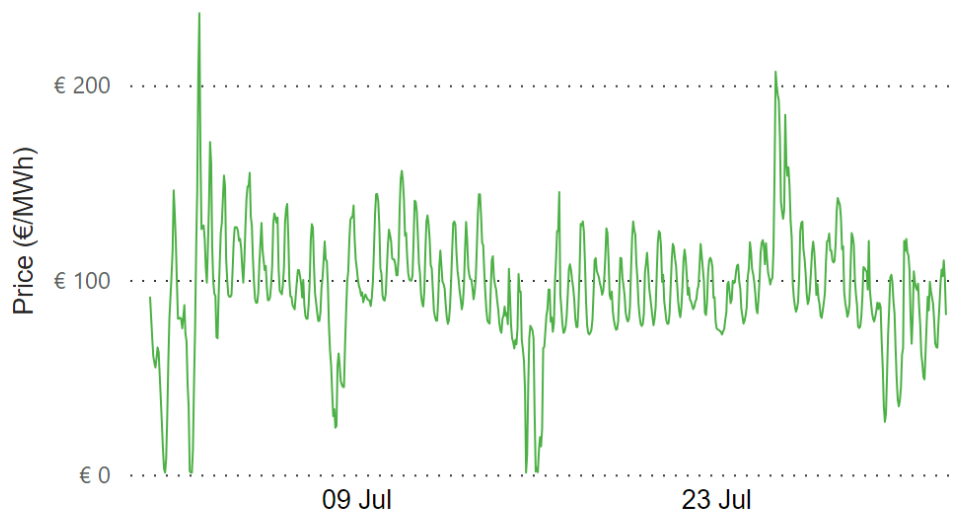


Day Ahead Market July 2023

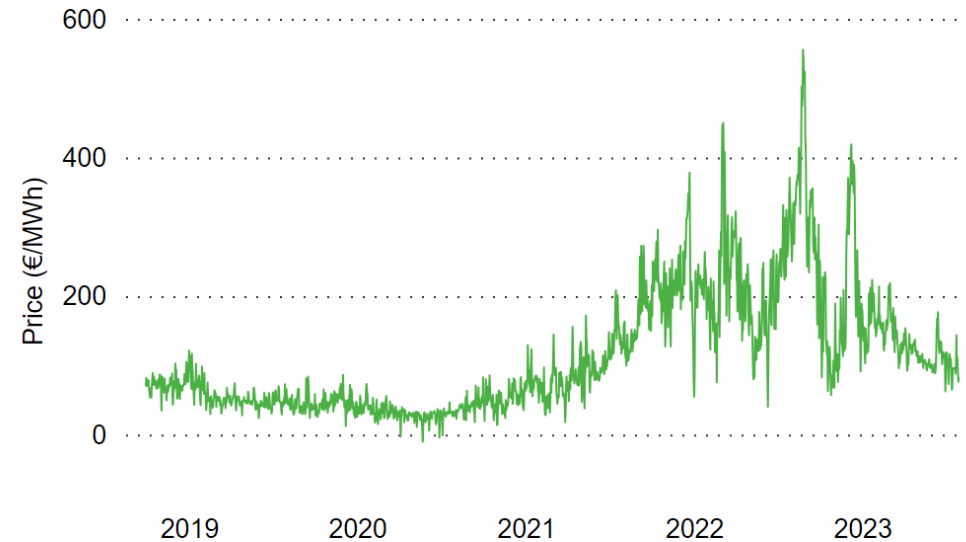
€ 96.24
Average DAM Price
€ 1.00
Min DAM Price
€ 237.00
Max DAM Price

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

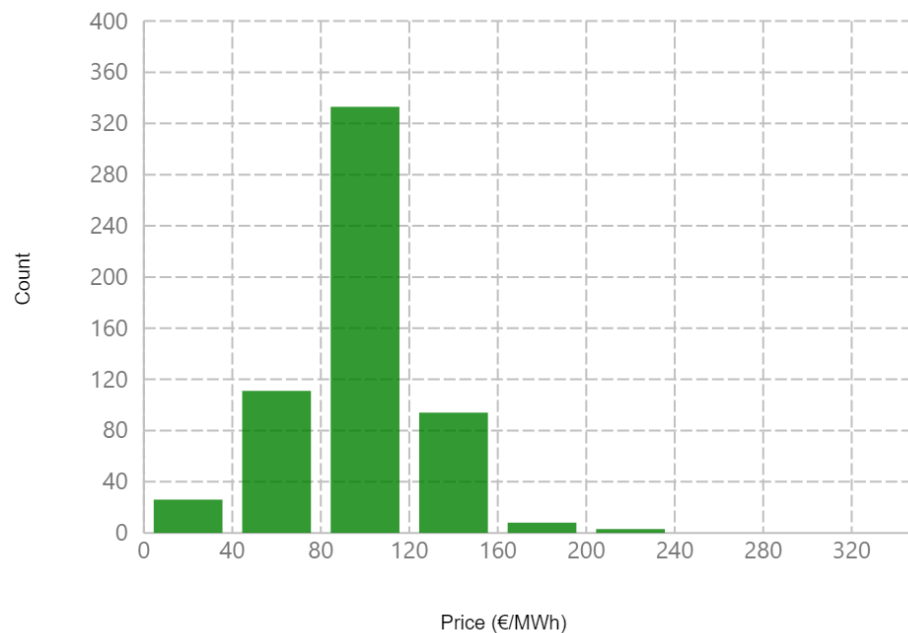
DAM Prices



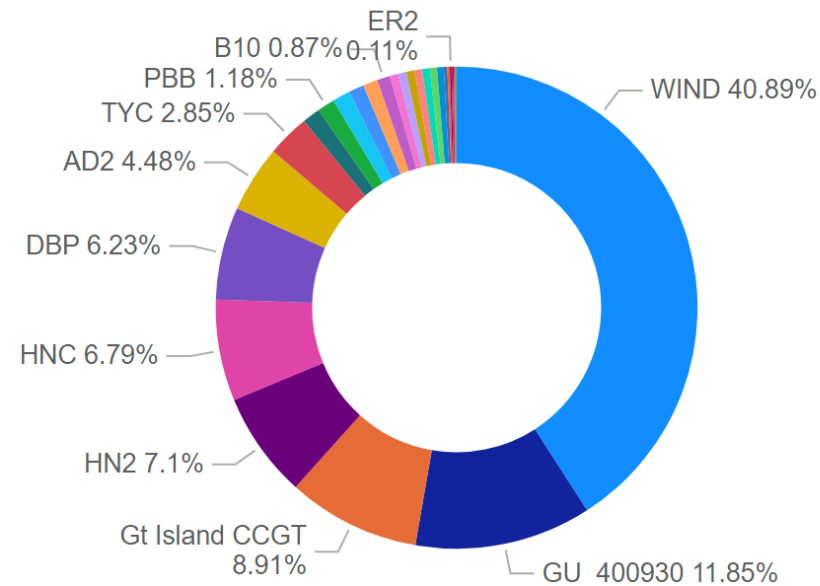
Historic Daily Average DAM Prices



Histogram of DAM Prices



DAM Sell Side Generator Order Results



Intraday Market July 2023

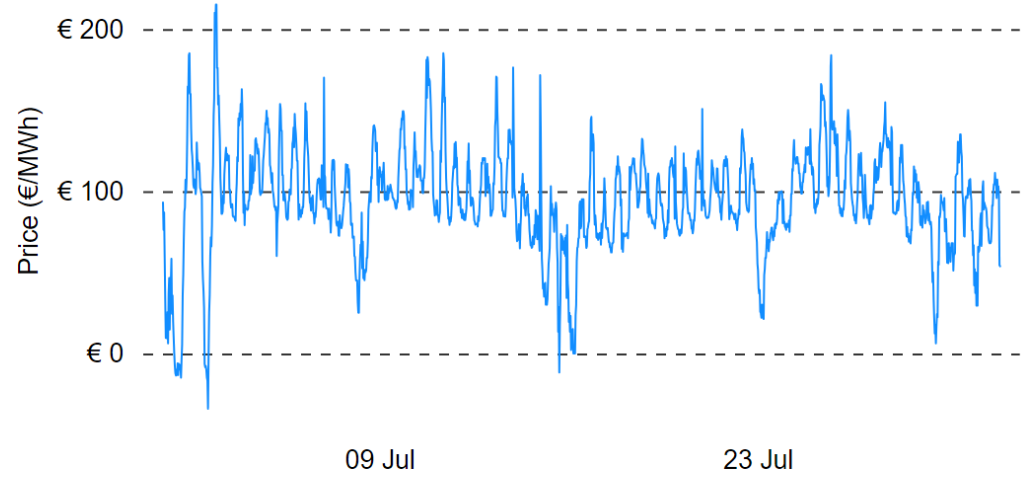
€ 94.49
Average IDA1 Price

-€ 34.06
Min IDA1 Price

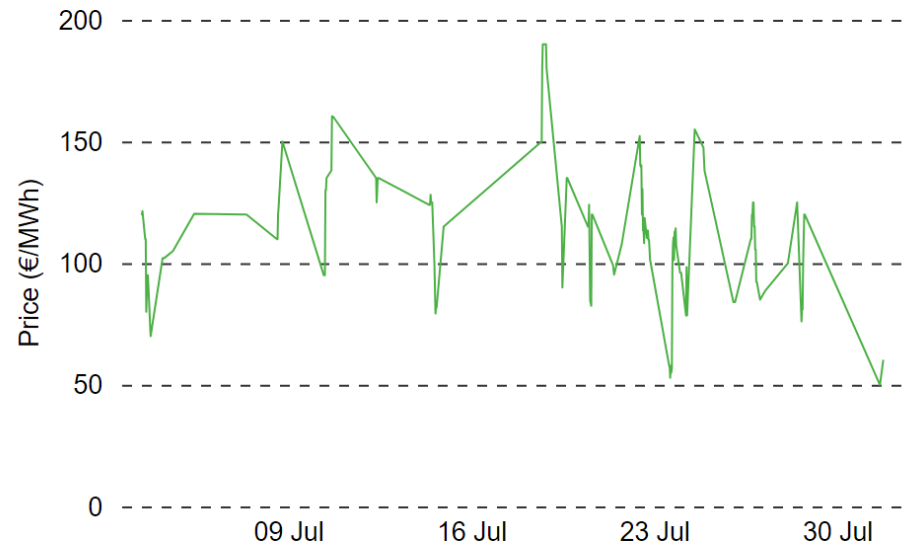
€ 215.00
Max IDA1 Price

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

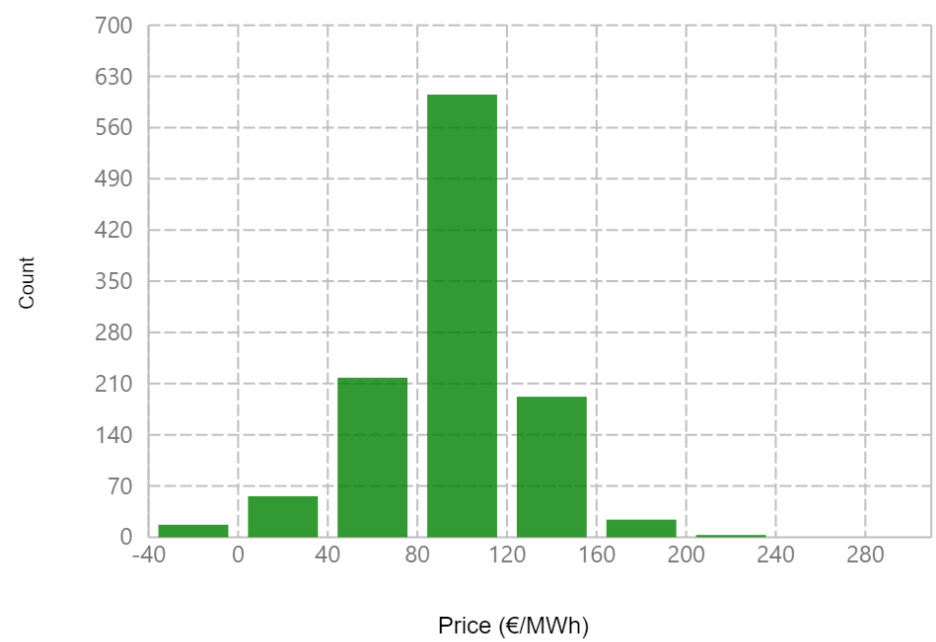
IDA 1 Prices



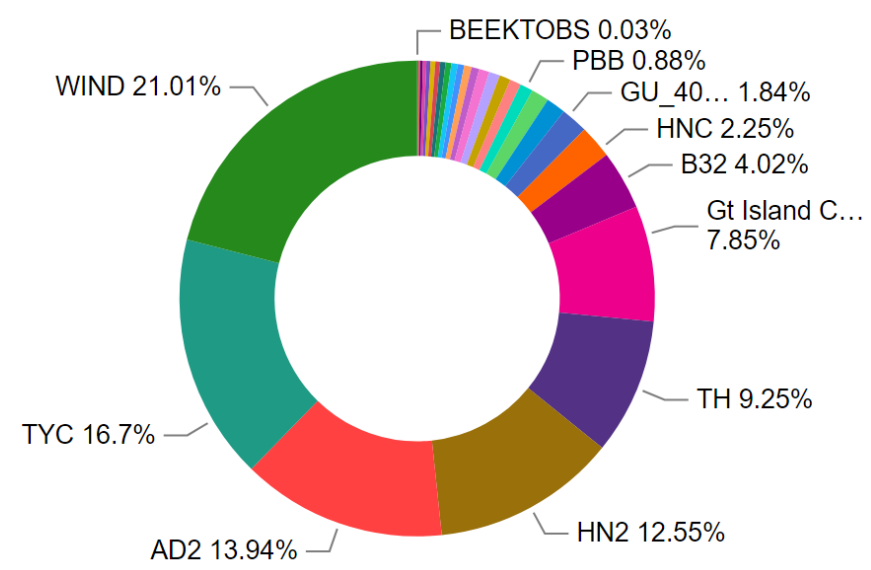
IDC Prices



Histogram of IDA1 Prices



IDA1 Sell Order Results By Market Participant



SEM vs GB July 2023

SEM Day Ahead Price

€ 96.24
Average Price

€ 1.00
Min Price

€ 237.00
Max Price

GB Day Ahead Price

€ 81.67
Average Price

-€ 59.97
Min Price

€ 152.64
Max Price

SEM IDA1 Price

€ 94.49
Average Price

-€ 34.06
Min Price

€ 215.00
Max Price

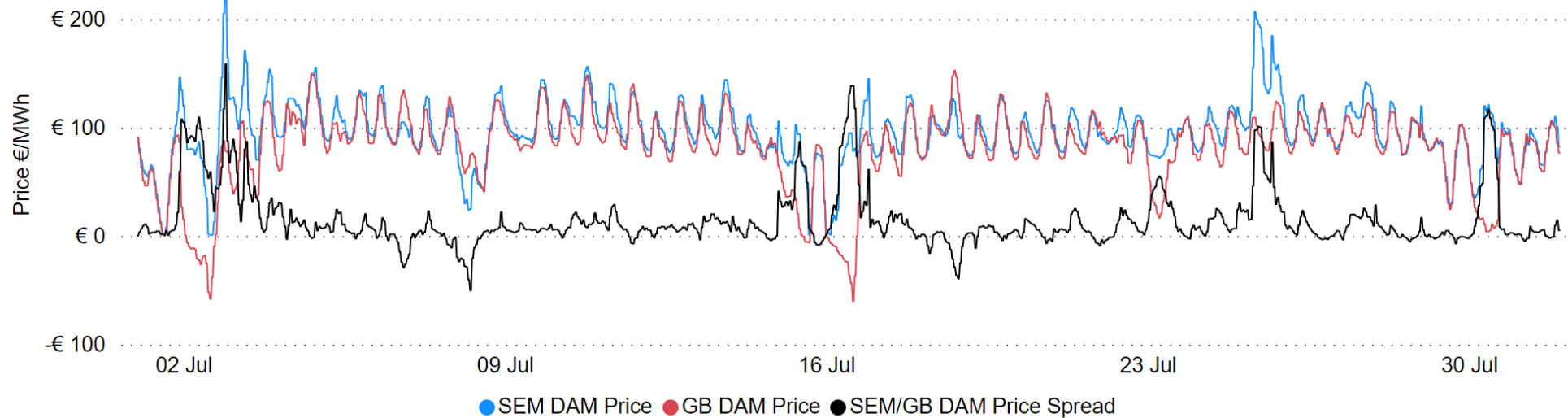
GB IDA1 Prices

€ 82.61
Average Price

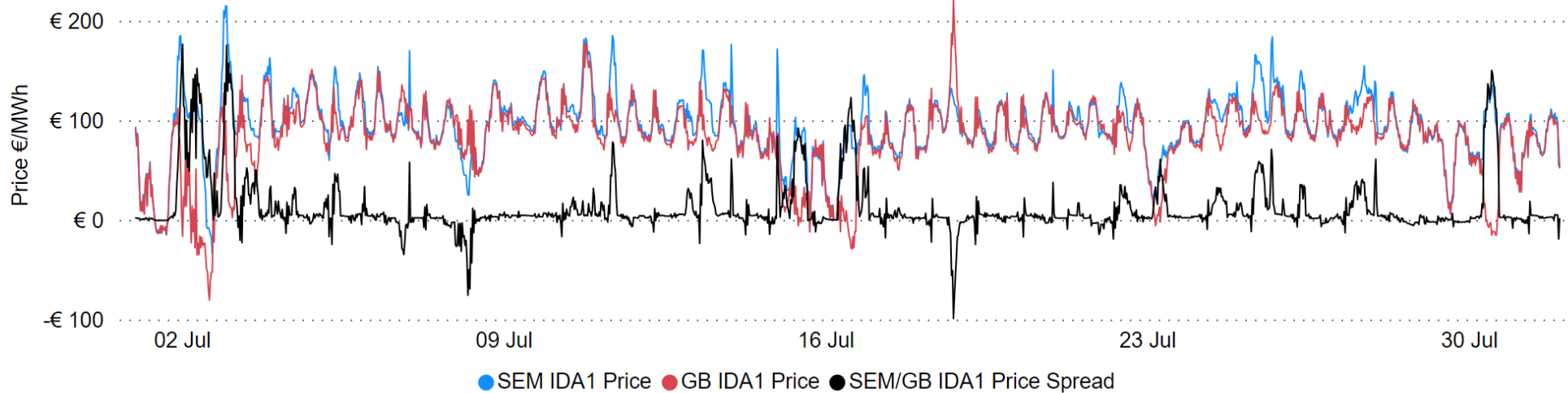
-€ 80.41
Min Price

€ 221.18
Max Price

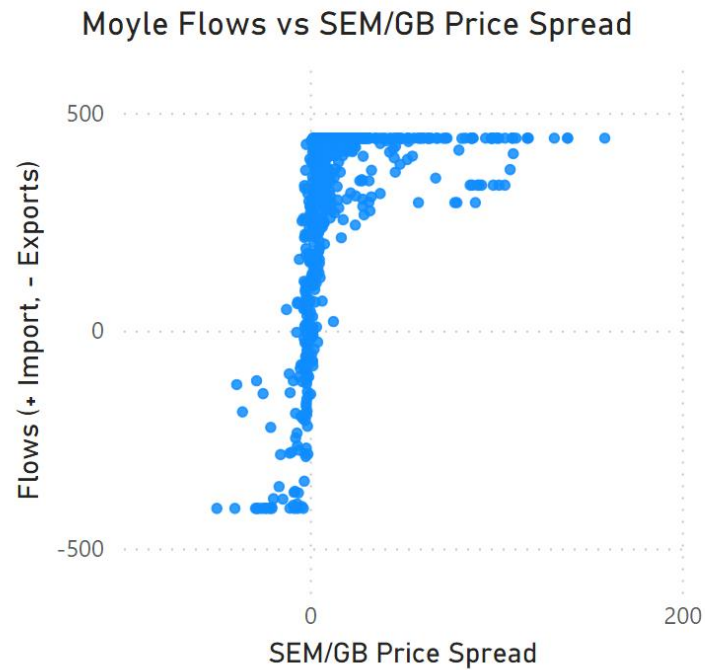
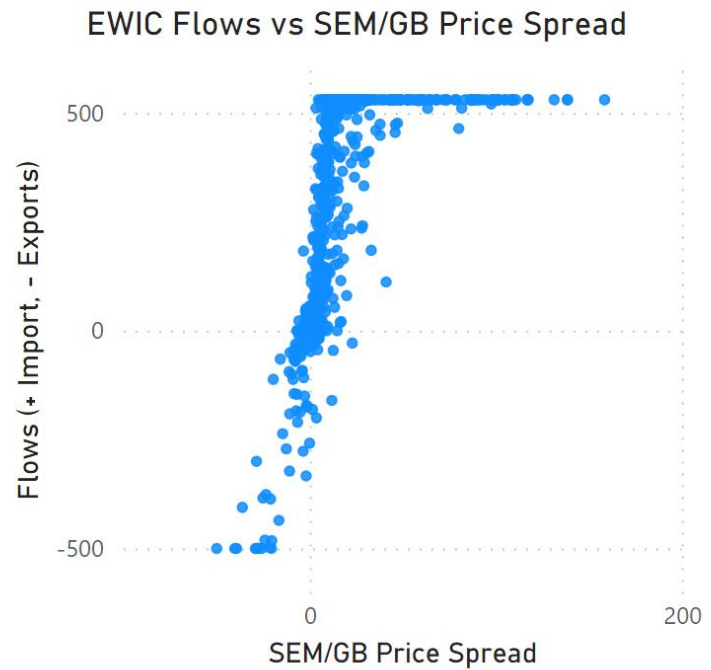
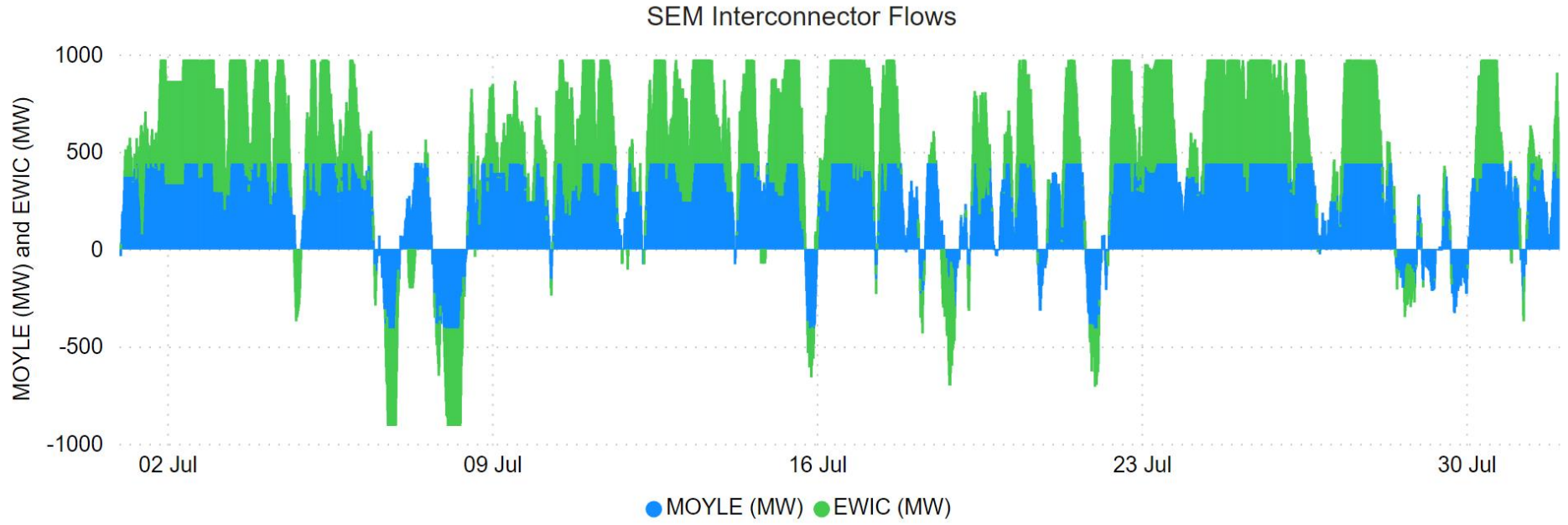
SEM & GB DAM Prices



SEM & GB IDA1 Prices



SEM Interconnectors July 2023



Interconnector Flows

July 2023	MW
Moyle Imports	363
EWIC Imports	349
Moyle Exports	-175
EWIC Exports	-209
SEM Imports	646
SEM Exports	-285
SEM Net Import/Export	496

Balancing Market July 2023

30 Minutes Imbalance Price

€ 99.87

Average Price

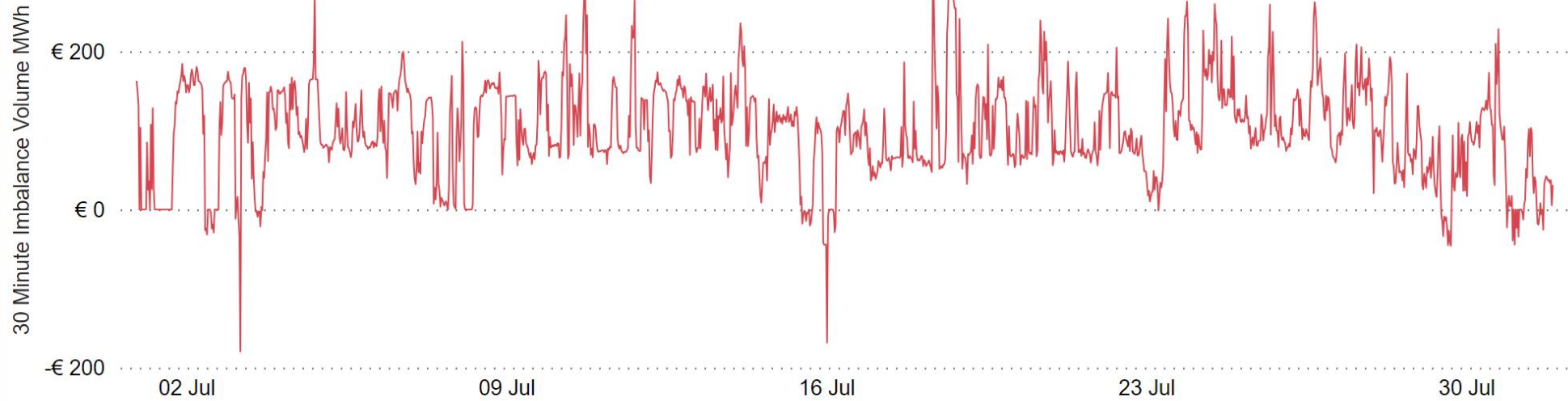
-€ 179.43

Lowest Price

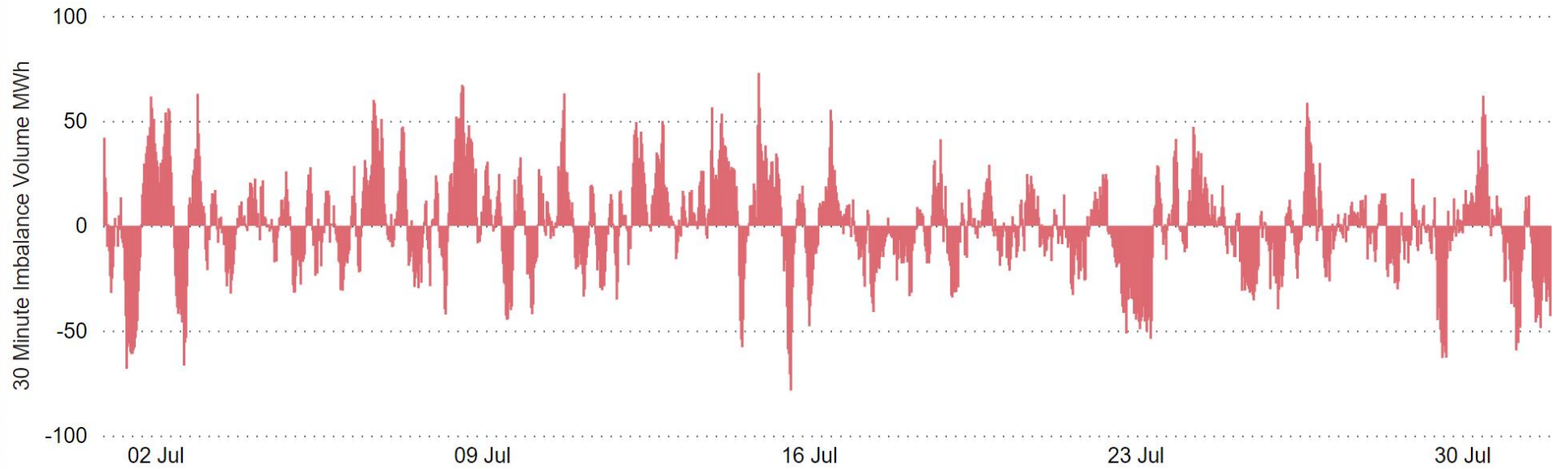
€ 298.11

Highest Price

30 Minute Imbalance Prices



30 Minute Imbalance Volume



Demand and Generation Mix

Demand July 2023

SEM Demand (MW)

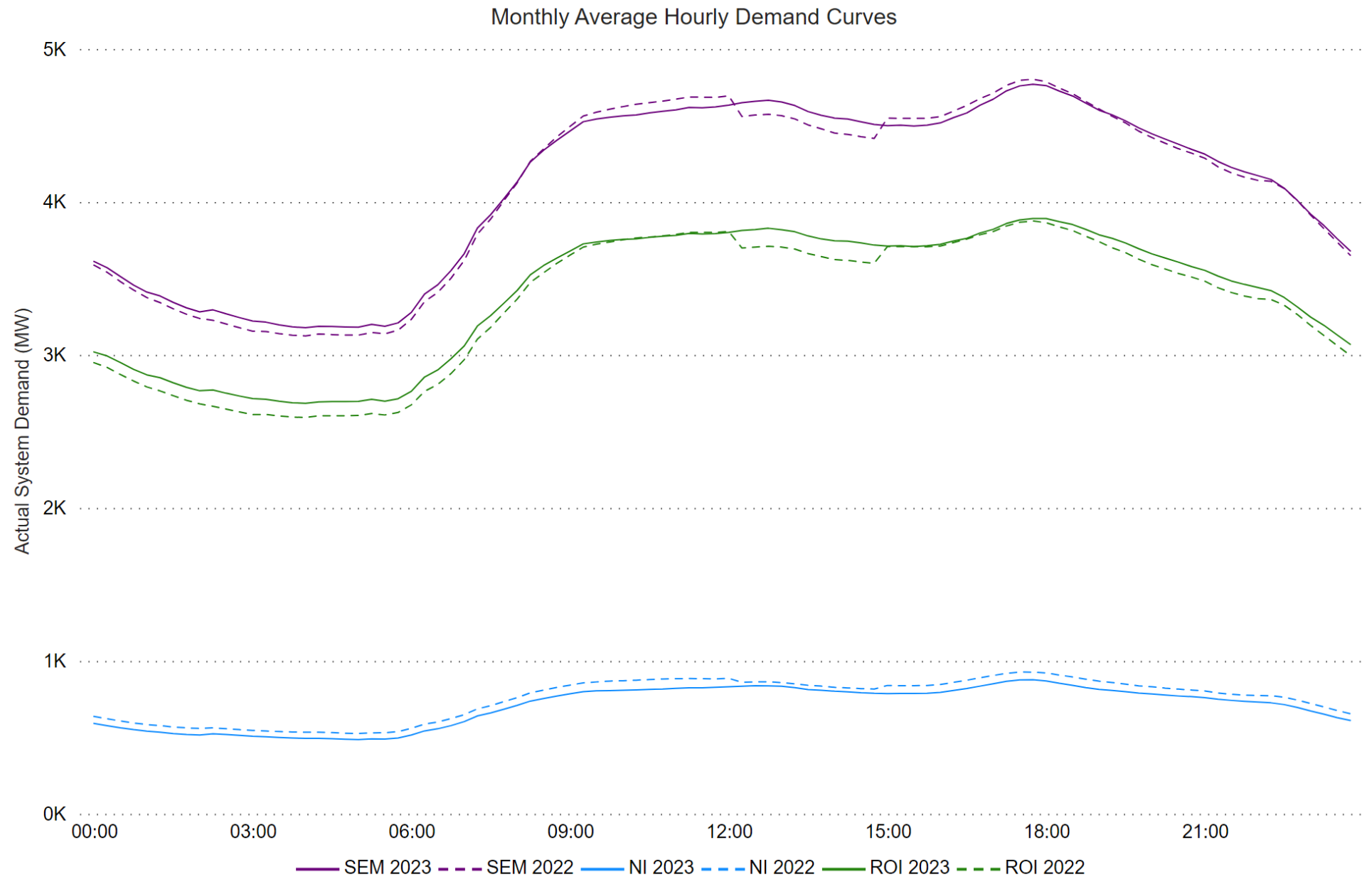
4,101.08	4,085.04
SEM Average 2023	SEM Average 2022
3,178.03	3,124.48
SEM Min 2023	SEM Min 2022
4,768.97	4,802.52
SEM Max 2023	SEM Max 2022

NI Demand (MW)

705.13	750.93
NI Average 2023	NI Average 2022
485.31	525.26
NI Min 2023	NI Min 2022
876.94	927.35
NI Max 2023	NI Max 2022

ROI Demand (MW)

3,395.94	3,334.08
ROI Average 2023	ROI Average 2022
2,684.00	2,591.10
ROI Min 2023	ROI Min 2022
3,891.94	3,875.84
ROI Max 2023	ROI Max 2022

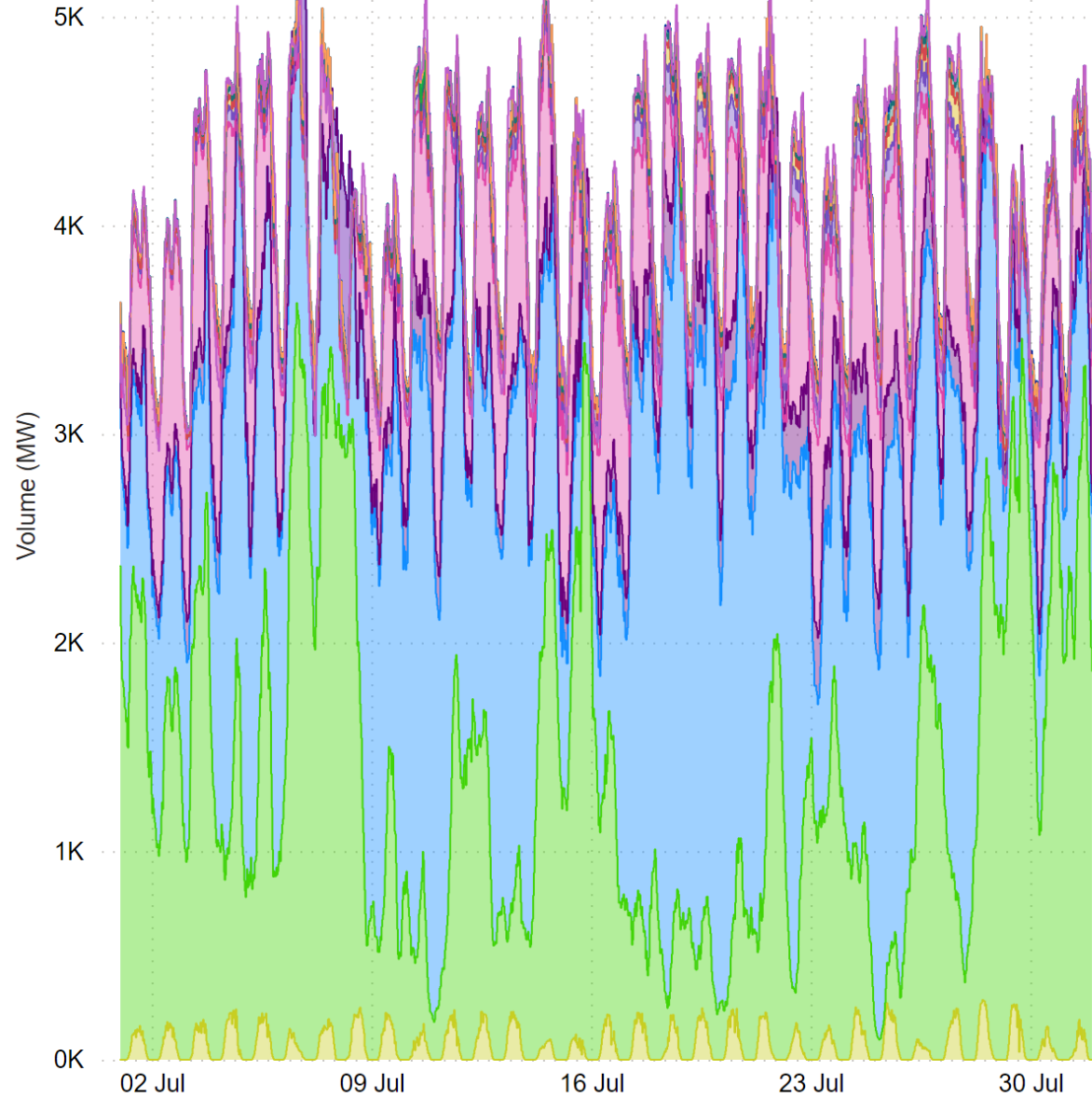


Fuel Mix July 2023

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
July 2022



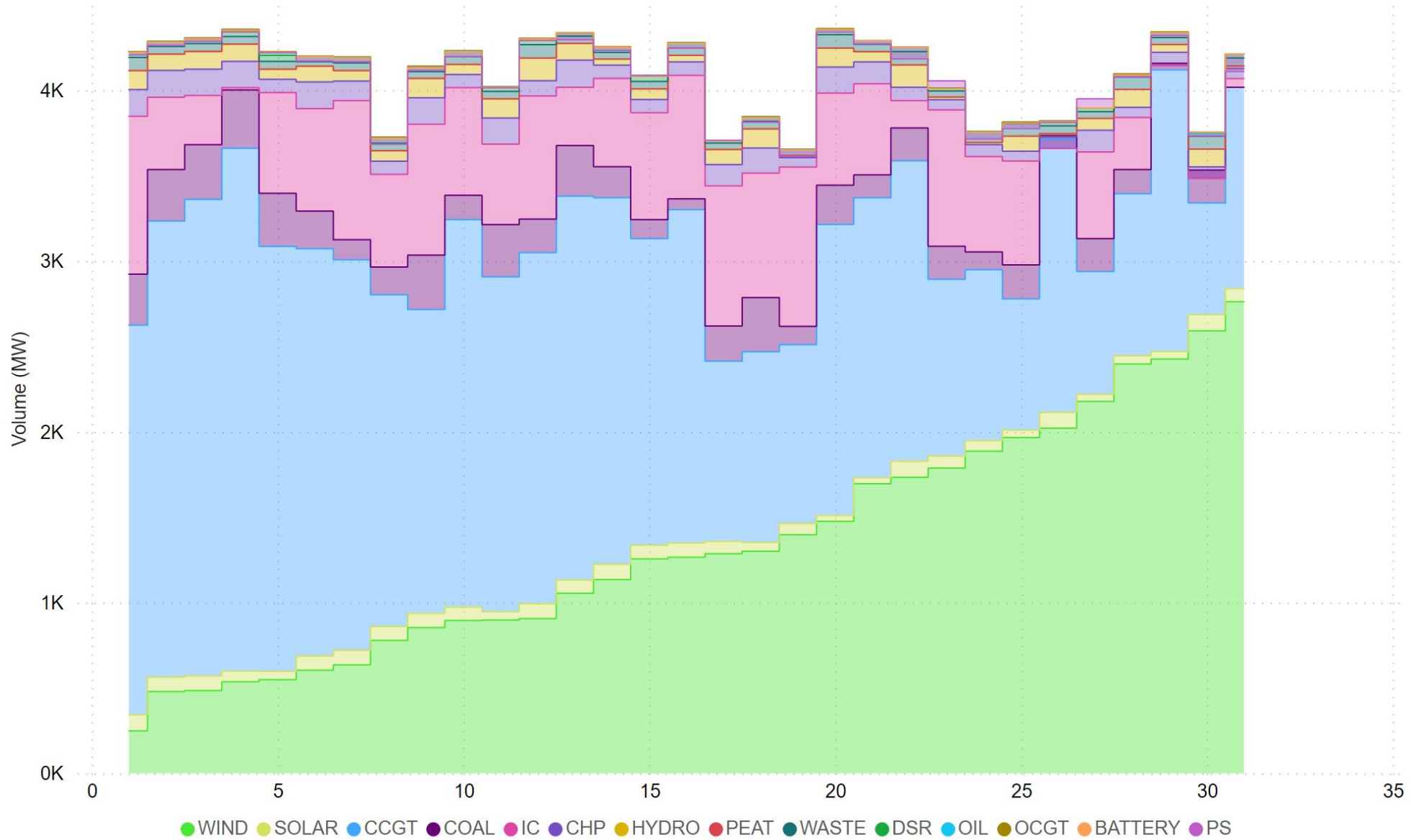
SEM Fuel Mix
July 2023



Fuel Mix Ranked by Wind Volume July 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.

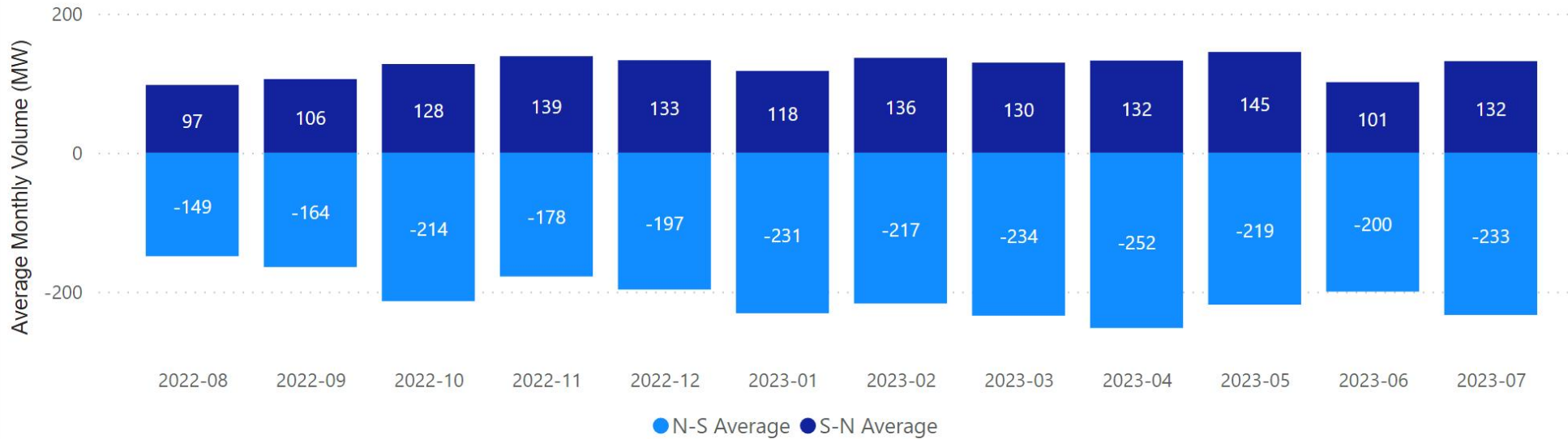
Daily SEM Fuel Mix Ranked by Wind Volume for the Month



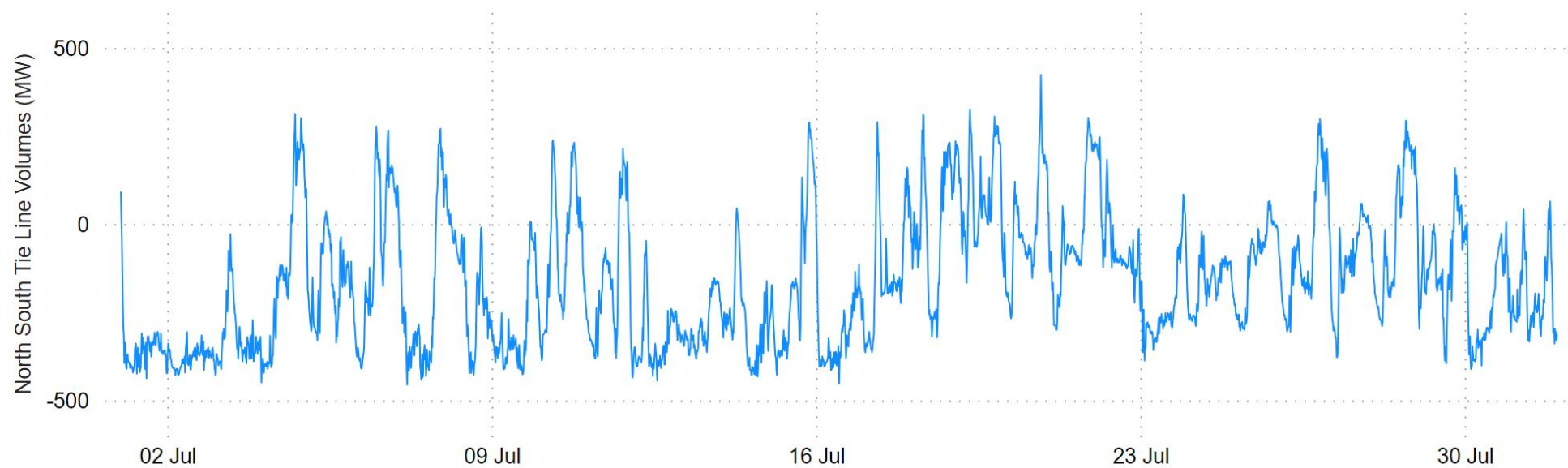
North-South Tie Line July 2023

Flow Direction (Average)	MW
NI to ROI	233.42
ROI to NI	131.64
NET NI to ROI	101.78

Average Flows N-S Tie Line Long Term Trend



North South Tie Line Volumes 15 minute periods



Wind Generation July 2023

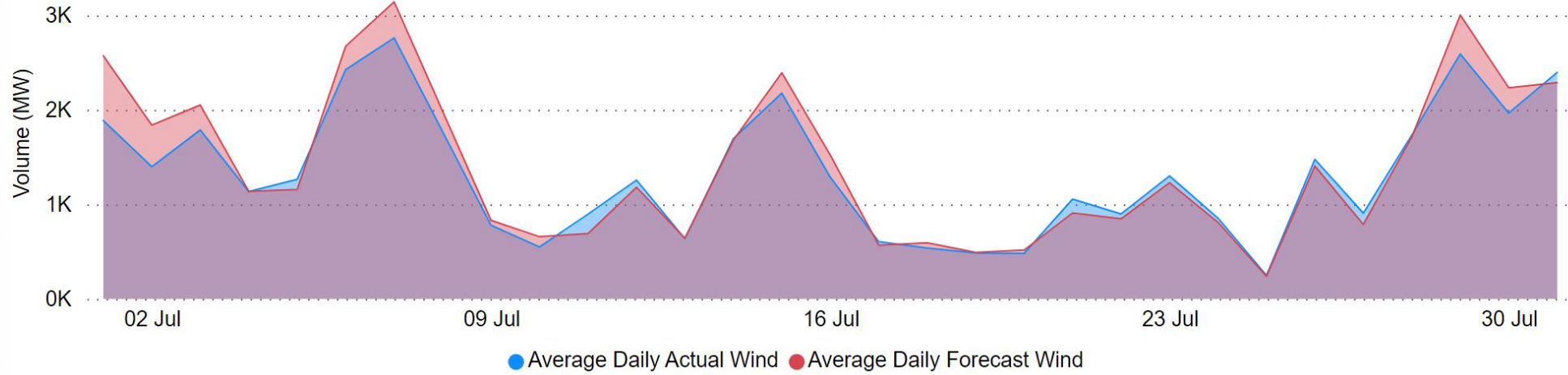
Average Daily Actual Wind (MW)
1,316

Average Daily Forecast Wind (MW)
1,393

Min SNSP %
6.48

Max SNSP %
75.31

Actual Daily Average Wind Relative to Forecast Daily Average Wind



SNSP %



CO₂ July 2023

CO2 Intensity
 236.25
 Monthly Average (gCO₂/KWh)
 101
 Monthly Low (gCO₂/KWh)
 440
 Monthly High (gCO₂/KWh)

CO2 Emissions
 1123.23
 Monthly Average (tCO₂/hr)
 650
 Monthly Low (tCO₂/hr)
 2019
 Monthly High (tCO₂/hr)

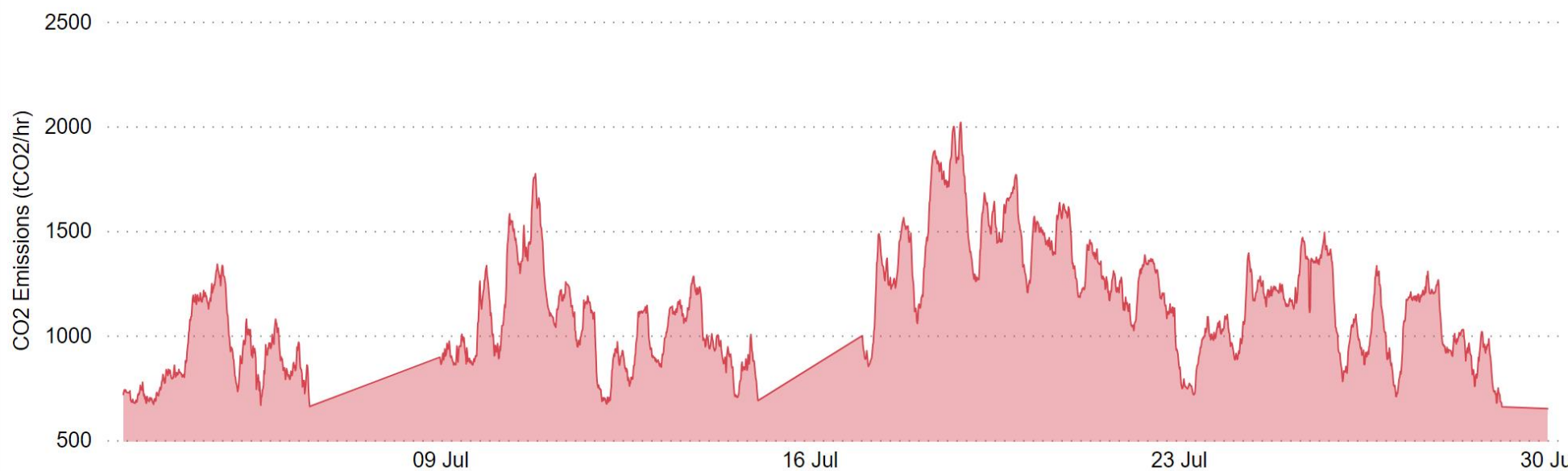
Note
 CO₂ Emissions data missing
 6th July 13:00 to 9th July 00:00
 15th July 01:00 to 17th July 00:00

Data sourced from - SONI/ERIGRID

CO2 Intensity



CO2 Emissions

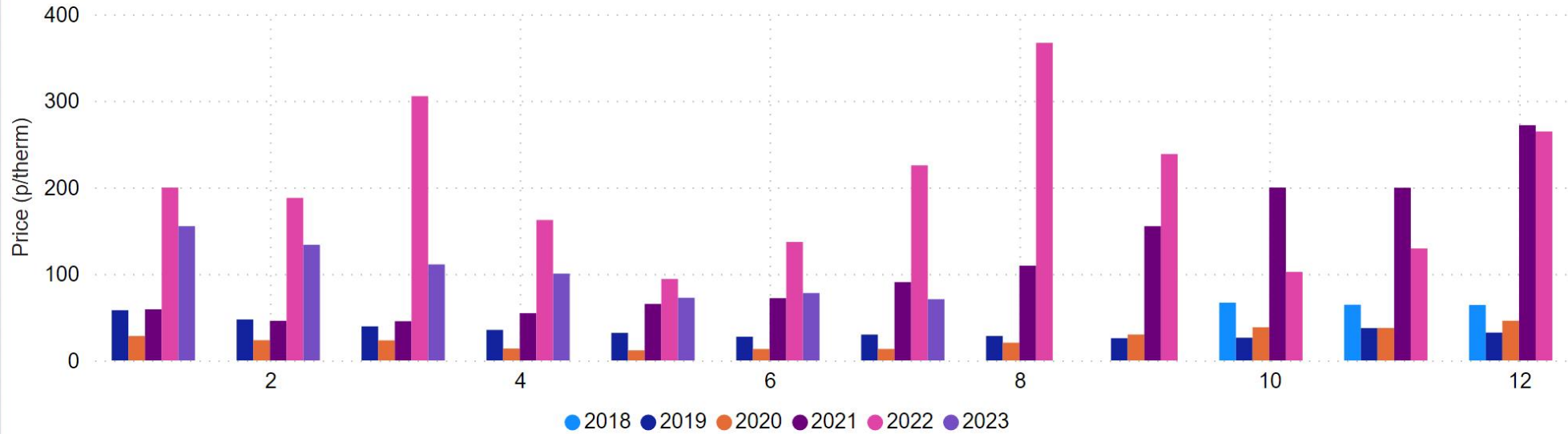


Fuel Costs and Spreads

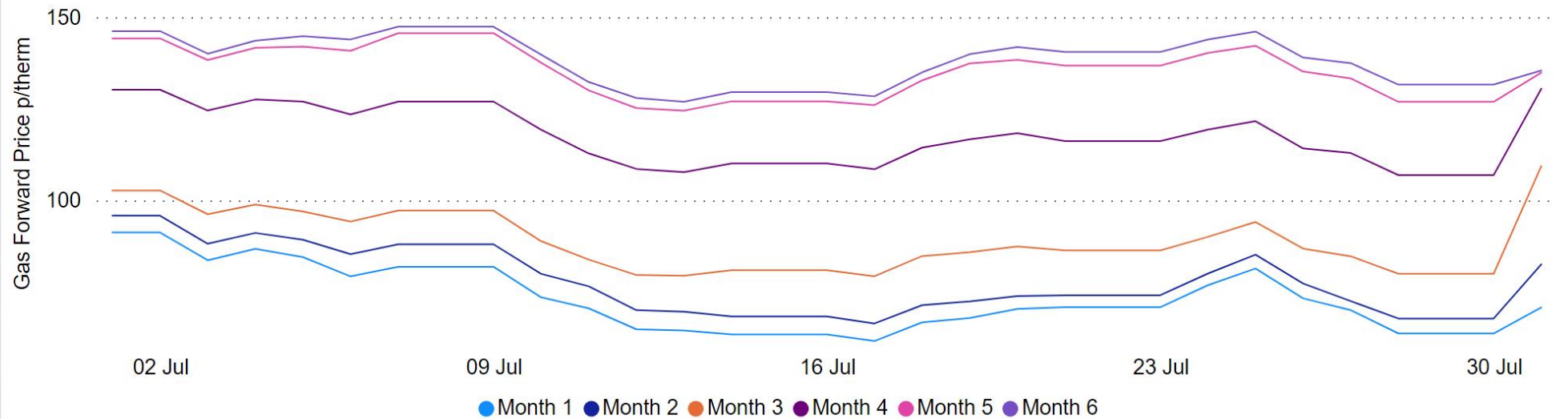
Gas Price July 2023

70.76
Monthly Average (p/therm)
60.90
Monthly Low (p/therm)
85.60
Monthly High (p/therm)

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



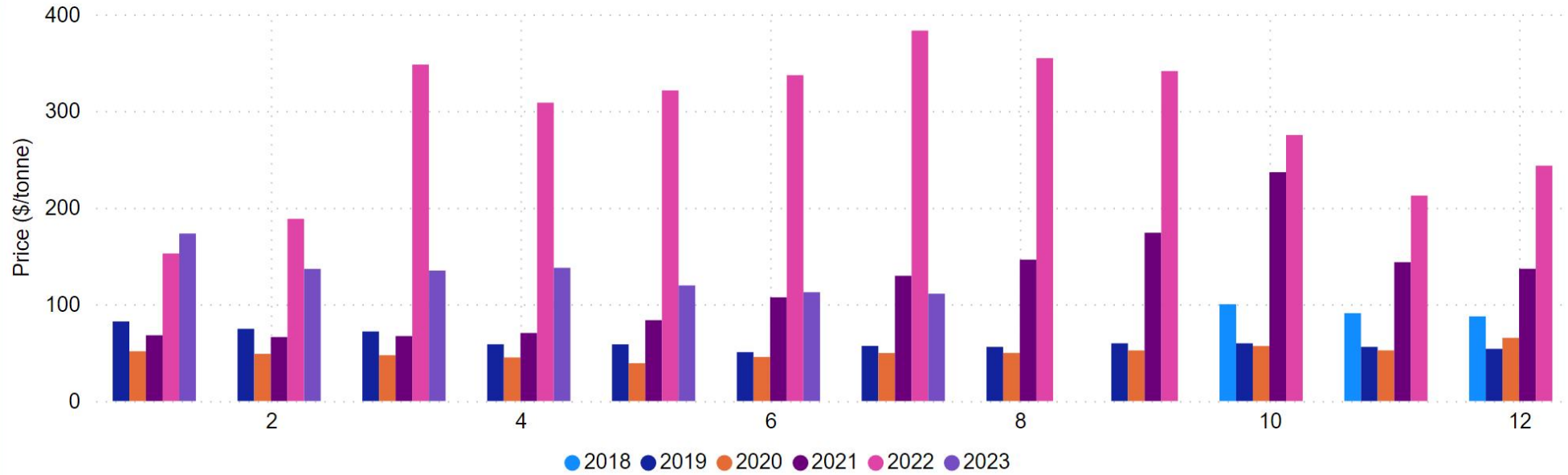
Gas Forward Prices



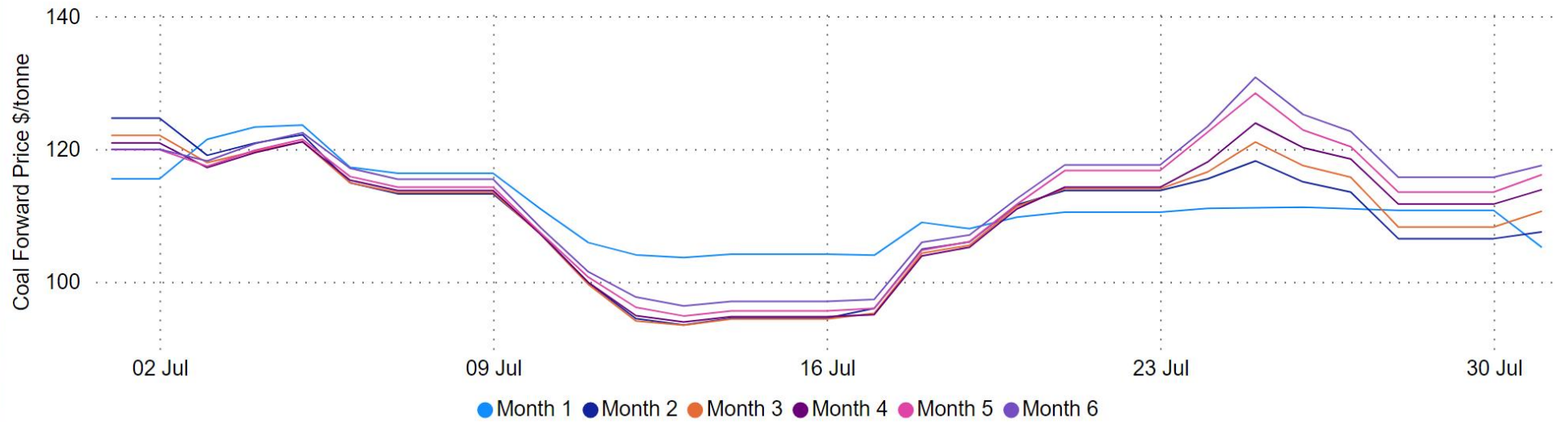
Coal Price July 2023

\$111.02
Monthly Average \$/tonne
\$103.65
Monthly Low \$/tonne
\$123.60
Monthly High \$/tonne

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



Coal Forward Prices

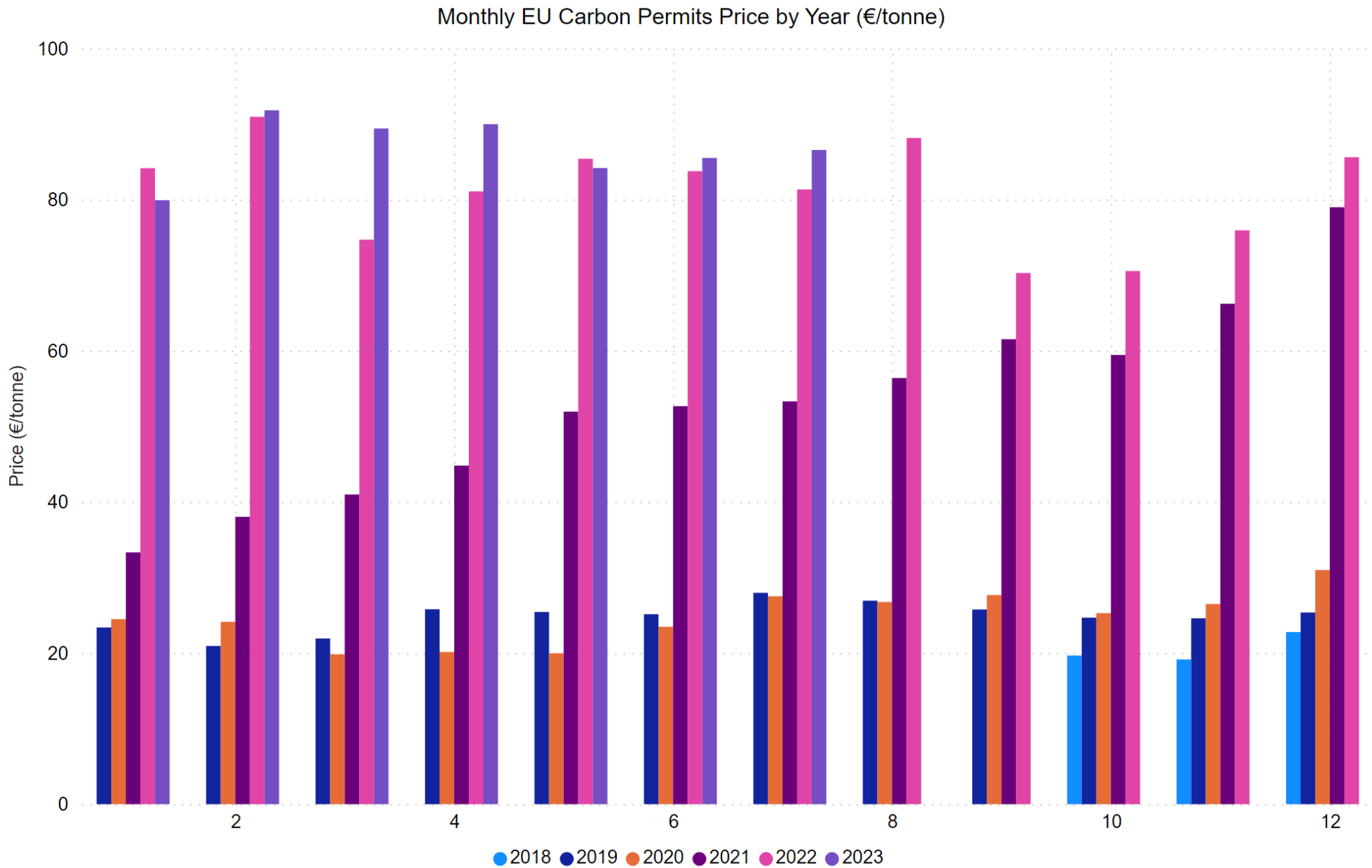


Carbon Price July 2023

€ 86.57
Monthly Average €/tonne

€ 84.15
Monthly Low €/tonne

€ 90.20
Monthly High €/tonne

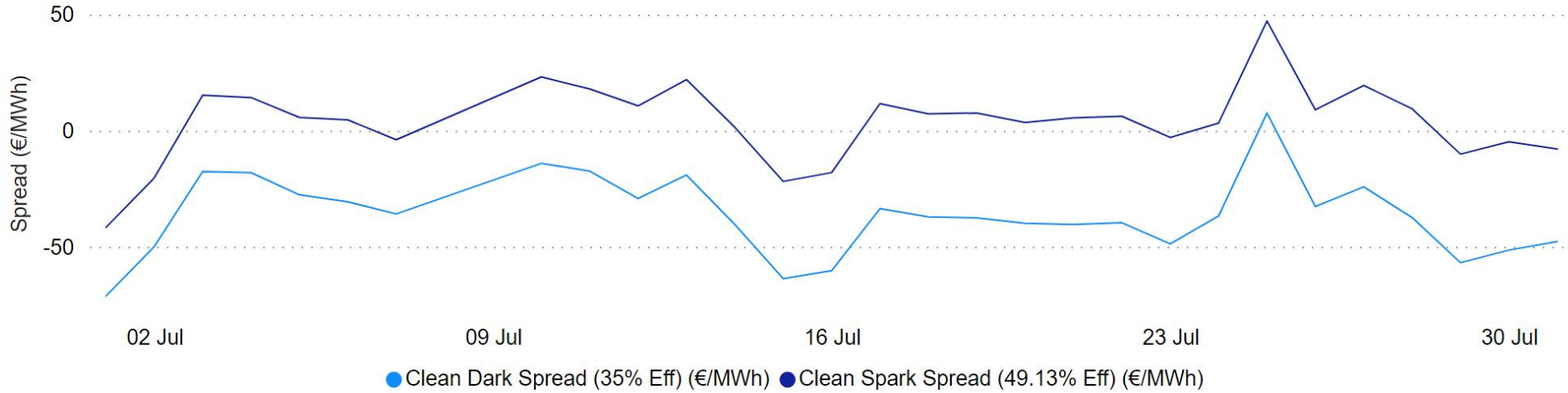


Spark Spreads July 2023

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.

Clean Dark Spread v Clean Spark Spread



Clean Dark Spread v Clean Spark Spread (October 2018 Onwards)

