

# Energy Market Monitoring Report

June 2023



## Market Results



# Summary Dashboard

Monthly Averages	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23
DAM (€/MWh)	267.19	387.64	283.25	136.09	143.12	276.52	162.16	159.19	145.25	125.57	105.19	117.11
% Change from previous month	47%	45%	-27%	-52%	5%	93%	-41%	-2%	-9%	-14%	-16%	11%
% Change from previous year	86%	195%	45%	-37%	-30%	10%	-20%	-9%	-50%	-42%	-27%	-36%
Actual System Demand (MW)	4085	4099	4197	4330	4733	4885	4885	4782	4833	4469	4276	4189
% Change from previous month	-2%	0%	2%	3%	9%	3%	0%	-2%	1%	-8%	-4%	-2%
% Change from previous year	-1%	-1%	-2%	-1%	0%	2%	1%	-1%	3%	1%	2%	0%
Actual Wind Generation (MW)	854	817	1081	2047	2233	1647	1987	2026	1748	1545	884	878
% Change from previous month	-24%	-4%	32%	89%	9%	-26%	21%	2%	-14%	-12%	-43%	-1%
% Change from previous year	90%	-3%	24%	33%	45%	-16%	18%	-27%	12%	8%	-38%	-22%
Gas Price p/therm	222.44	365.79	235.85	102.32	128.91	264.54	155.16	133.65	110.96	100.32	72.41	77.87
% Change from previous month	60%	64%	-36%	-57%	26%	105%	-41%	-14%	-17%	-10%	-28%	8%
% Change from previous year	145%	234%	52%	-49%	-35%	-3%	-22%	-29%	-64%	-38%	-24%	-44%
Carbon Price (€/Tonne)	81.34	88.20	70.29	70.46	75.84	85.61	79.91	91.82	89.41	89.98	84.18	85.51
% Change from previous month	-3%	8%	-20%	0%	8%	13%	-7%	15%	-3%	1%	-6%	2%
% Change from previous year	52%	56%	14%	19%	15%	8%	-5%	1%	20%	11%	-1%	2%
Coal Price (\$/tonne)	383.18	354.67	341.33	275.16	212.52	243.46	173.25	136.71	134.95	137.83	119.57	112.56
% Change from previous month	14%	-7%	-4%	-19%	-23%	15%	-29%	-21%	-1%	2%	-13%	-6%
% Change from previous year	196%	142%	96%	16%	48%	78%	14%	-27%	-61%	-55%	-63%	-67%
EWIC % Import Periods	33.03%	25.84%	16.25%	30.51%	18.61%	30.58%	49.03%	38.91%	50.00%	50.56%	75.86%	77.72%
EWIC % Export Periods	56.52%	51.92%	41.81%	46.24%	54.10%	35.08%	23.66%	27.19%	16.47%	13.65%	8.28%	4.06%
EWIC % Not Flow Periods	10.45%	22.24%	45.28%	23.25%	27.29%	34.34%	27.32%	33.89%	23.86%	30.80%	15.88%	18.22%
Moyle % Import Periods	24.90%	31.55%	35.35%	40.52%	29.51%	44.19%	62.05%	53.65%	64.68%	77.50%	85.42%	92.22%
Moyle % Export Periods	10.72%	66.26%	63.85%	59.44%	69.83%	55.78%	37.95%	46.02%	25.50%	27.43%	14.58%	7.67%
Moyle % Not Flow Periods	64.38%	2.18%	0.80%	0.03%	0.66%	0.03%	0.00%	0.33%	0.13%	0.07%	0.00%	0.10%

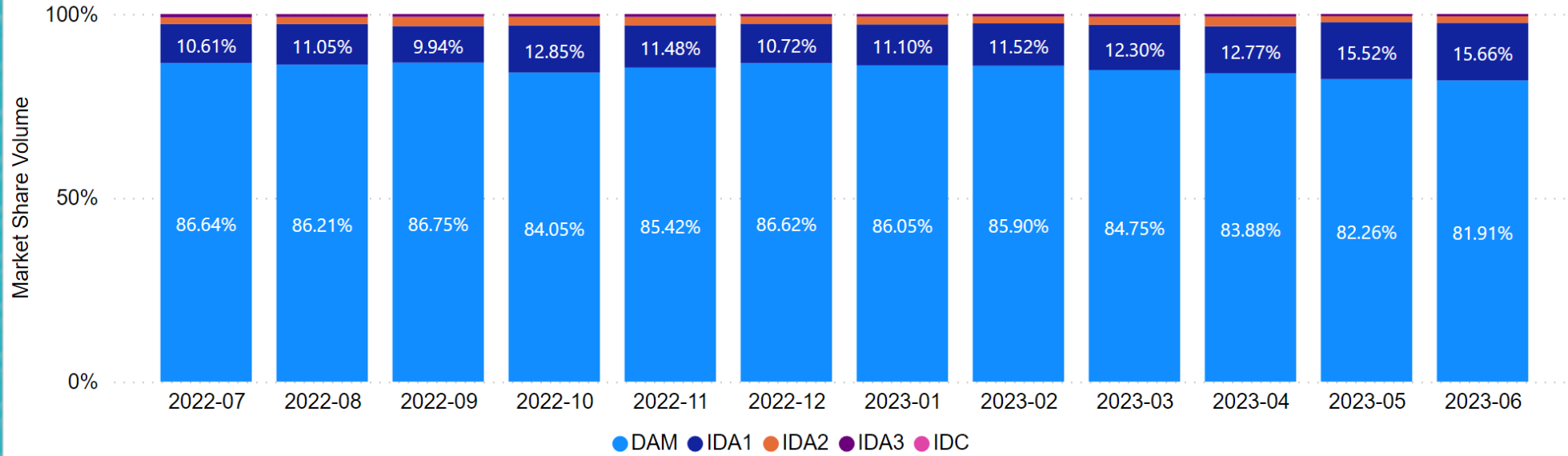
# Market Volumes June 2023

Daily Average Volume	MWh
DAM	104,086
IDA1	19,899
IDA2	2,260
IDA3	804
IDC	32

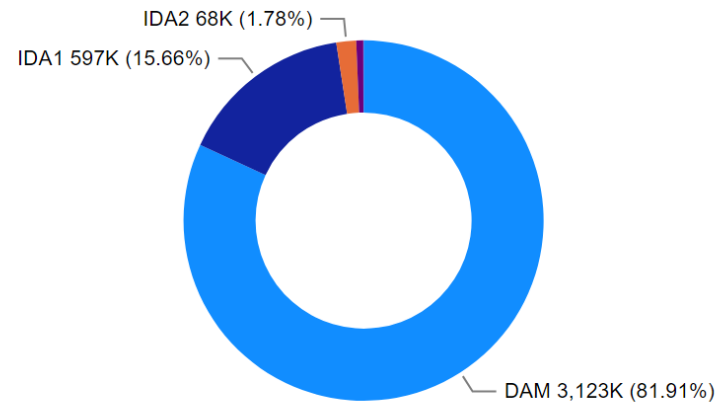
Total Monthly Volume	MWh
DAM	3,122,583
IDA1	596,984
IDA2	67,797
IDA3	24,119
IDC	764
<b>Total</b>	<b>3,812,247</b>

Total Market Value	€
DAM	€ 371,781,470
IDA1	€ 68,553,941
IDA2	€ 7,873,908
IDA3	€ 3,157,779
IDC	€ 95,473
<b>Total</b>	<b>€ 451,462,571</b>

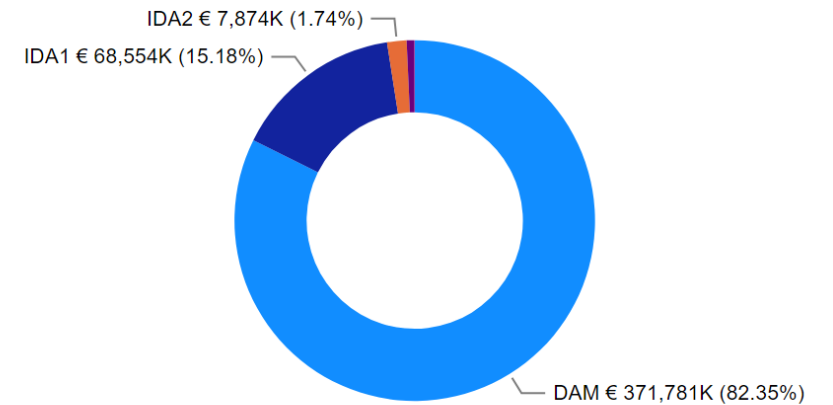
Ex-Ante Monthly Volume by Market



Ex-Ante Volumes (MWh)



Ex-Ante Values (€)



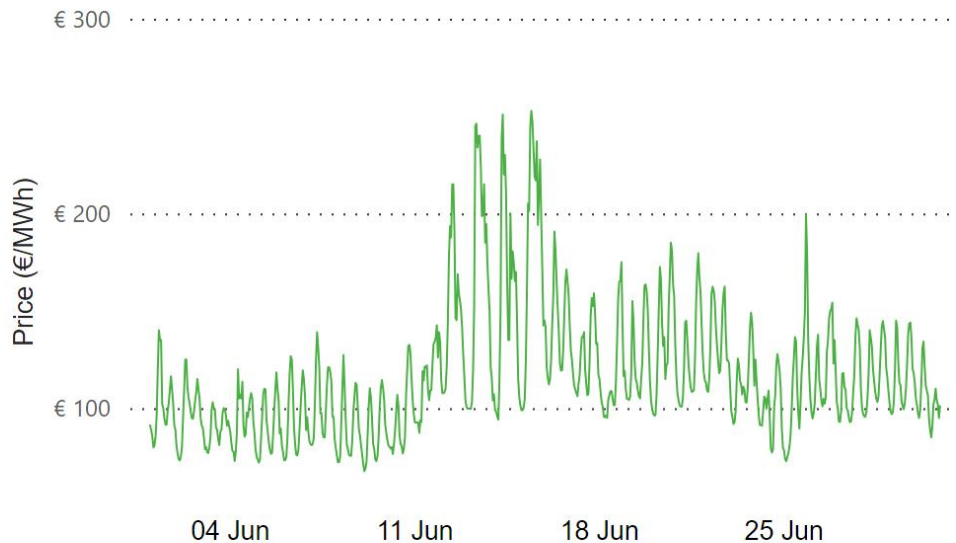


# Day Ahead Market June 2023

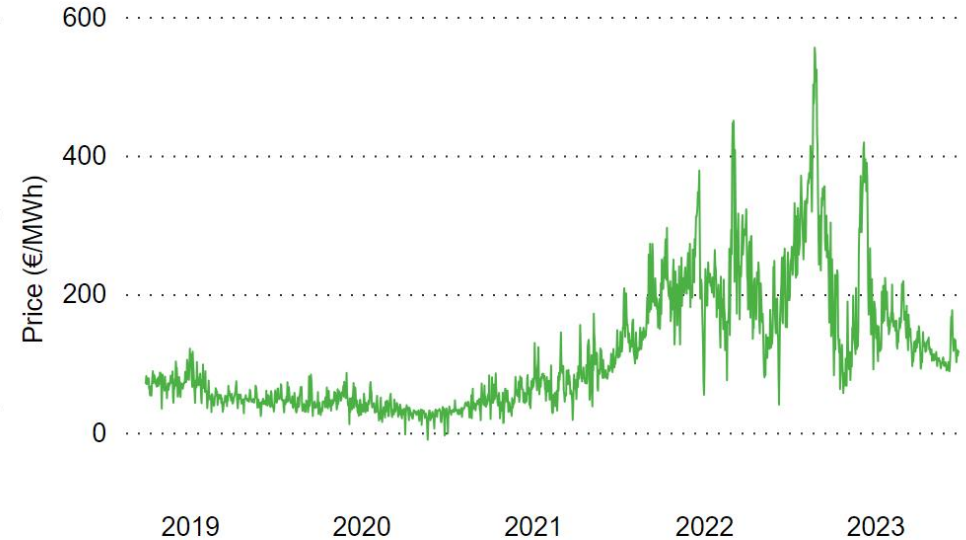
€ 117.11  
Average DAM Price  
€ 67.70  
Min DAM Price  
€ 252.70  
Max DAM Price

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

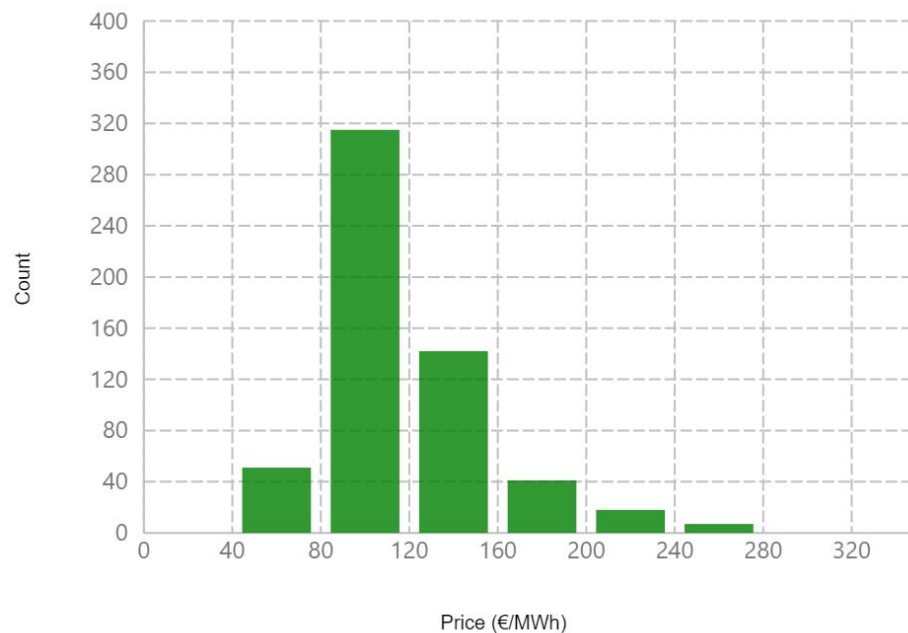
DAM Prices



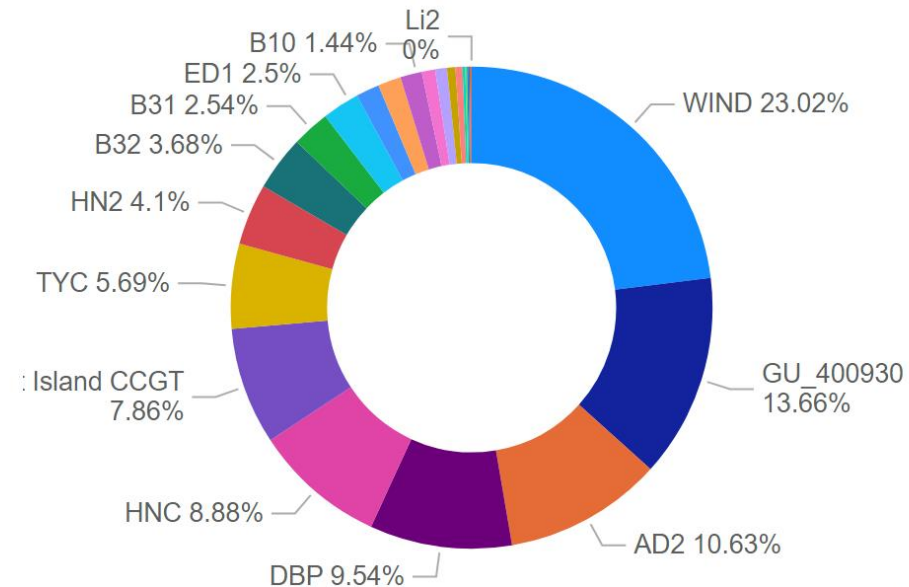
Historic Daily Average DAM Prices



Histogram of DAM Prices



DAM Sell Side Generator Order Results

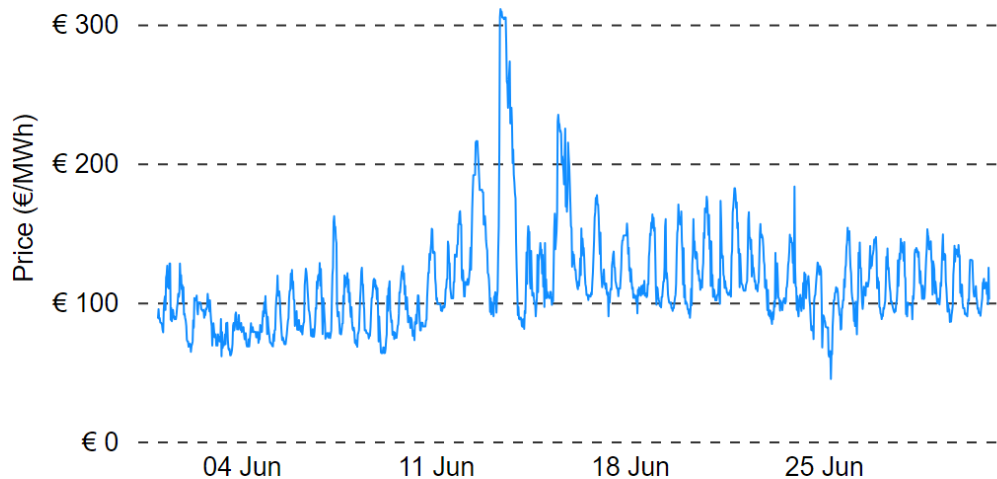


# Intraday Market June 2023

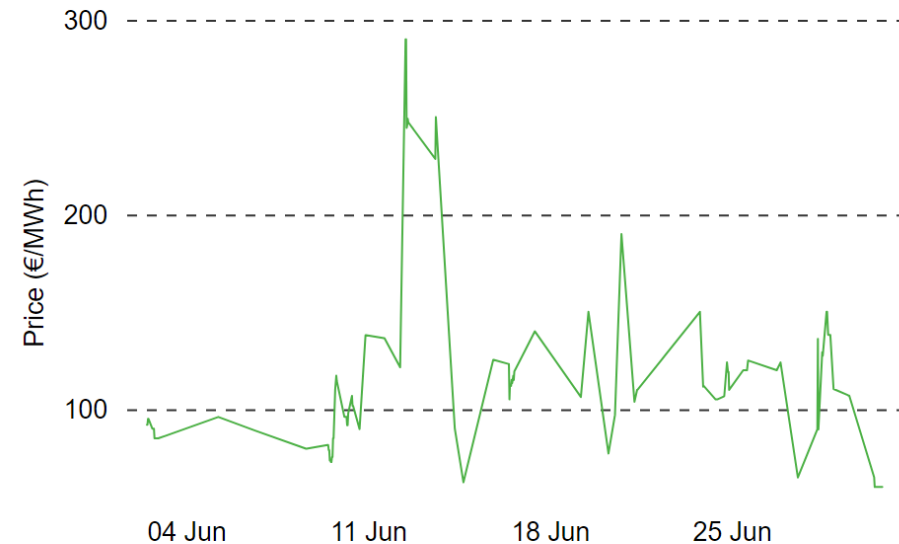
€ 113.56  
Average IDA1 Price  
€ 45.00  
Min IDA1 Price  
€ 311.00  
Max IDA1 Price

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

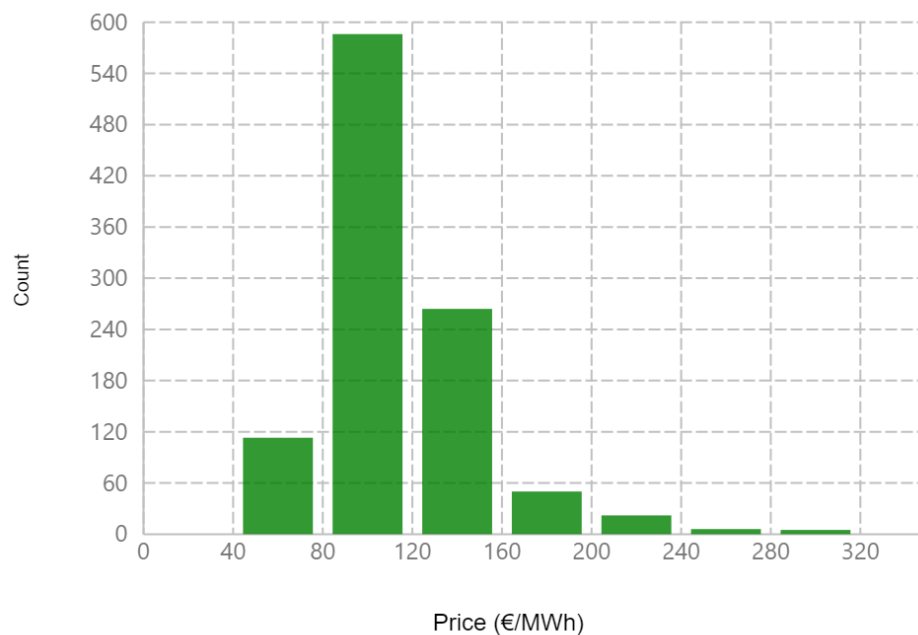
IDA 1 Prices



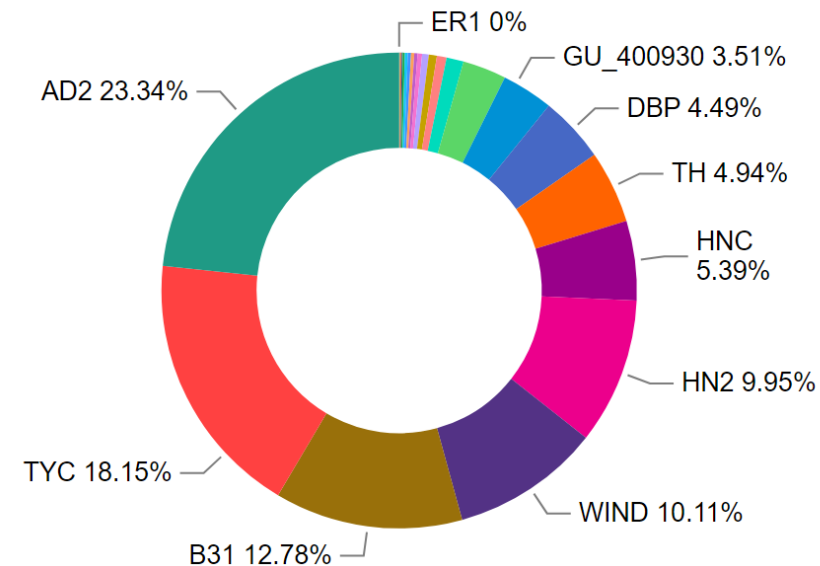
IDC Prices



Histogram of IDA1 Prices



IDA1 Sell Order Results By Market Participant





# SEM vs GB

## June 2023

### SEM Day Ahead Price

€ 117.11  
Average Price  
€ 67.70  
Min Price  
€ 252.70  
Max Price

### GB Day Ahead Price

€ 98.16  
Average Price  
€ 3.84  
Min Price  
€ 176.31  
Max Price

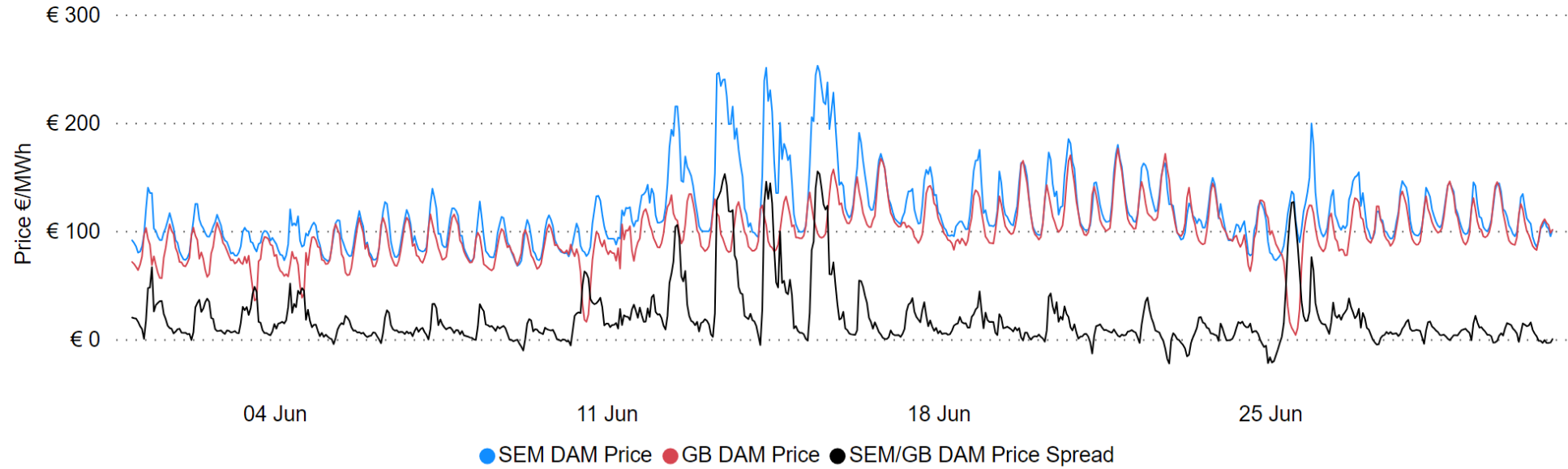
### SEM IDA1 Price

€ 113.56  
Average Price  
€ 45.00  
Min Price  
€ 311.00  
Max Price

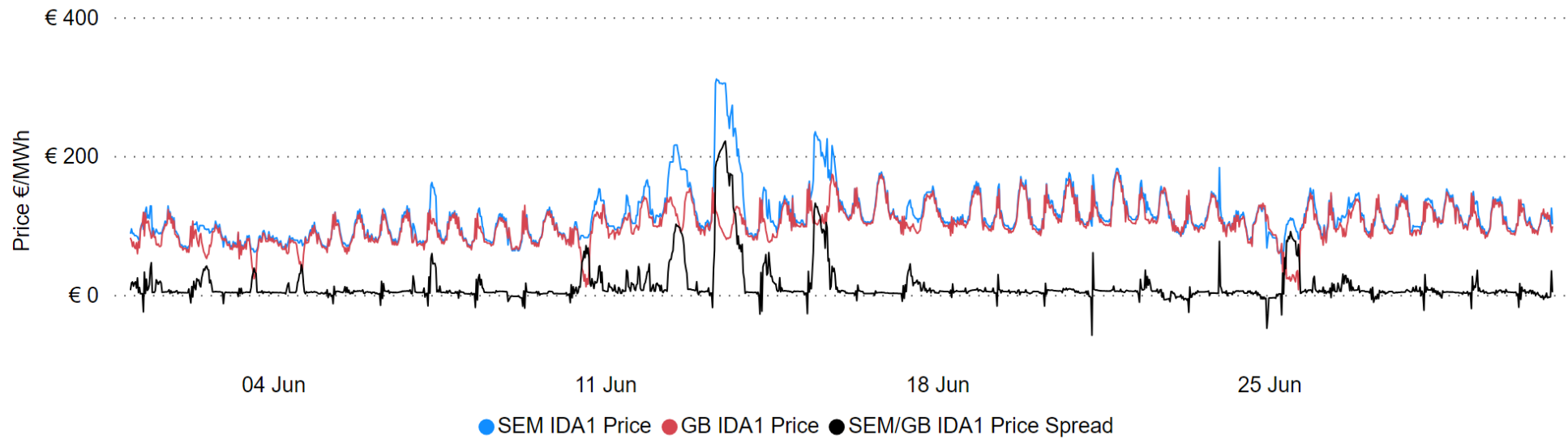
### GB IDA1 Prices

€ 101.27  
Average Price  
€ 7.59  
Min Price  
€ 176.64  
Max Price

### SEM & GB DAM Prices

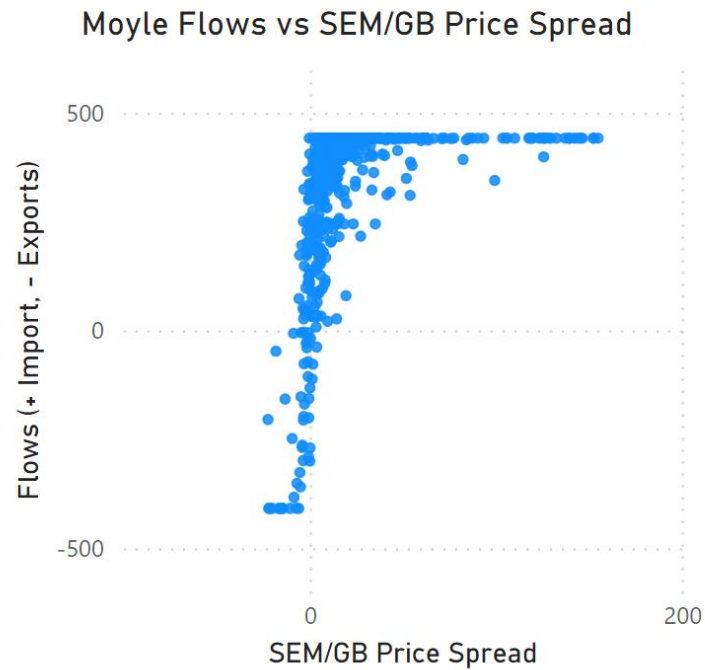
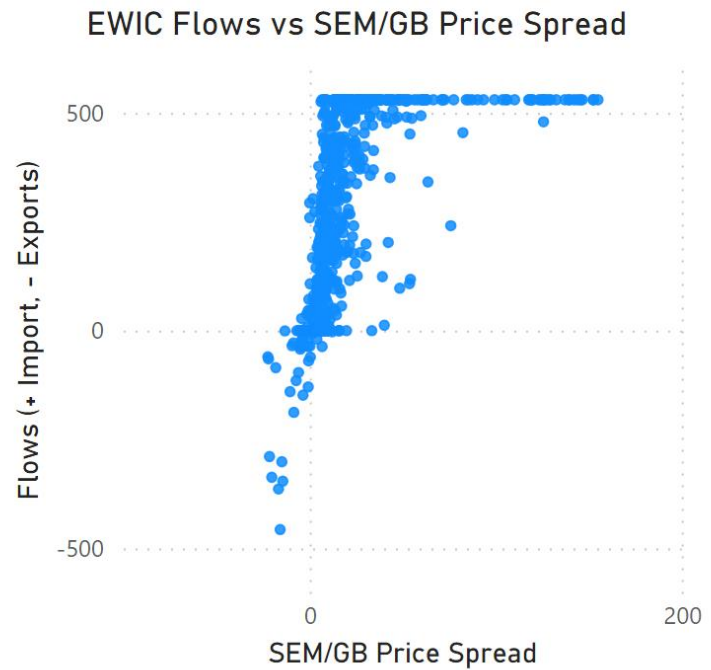
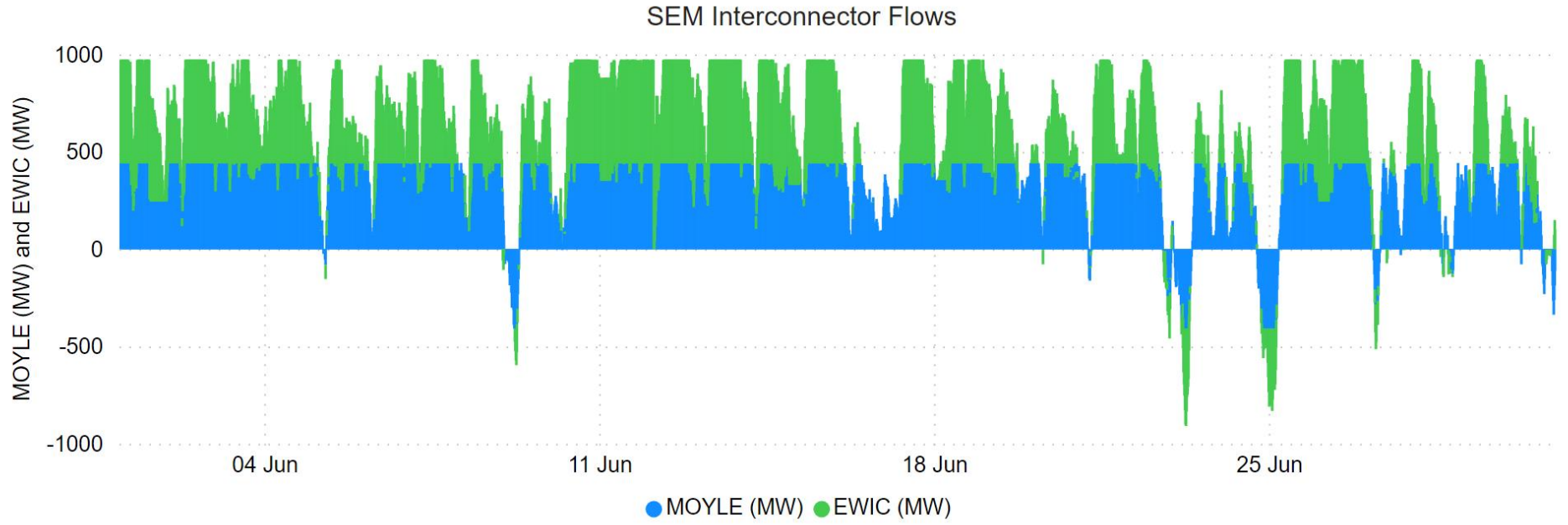


### SEM & GB IDA1 Prices



# SEM Interconnectors

## June 2023



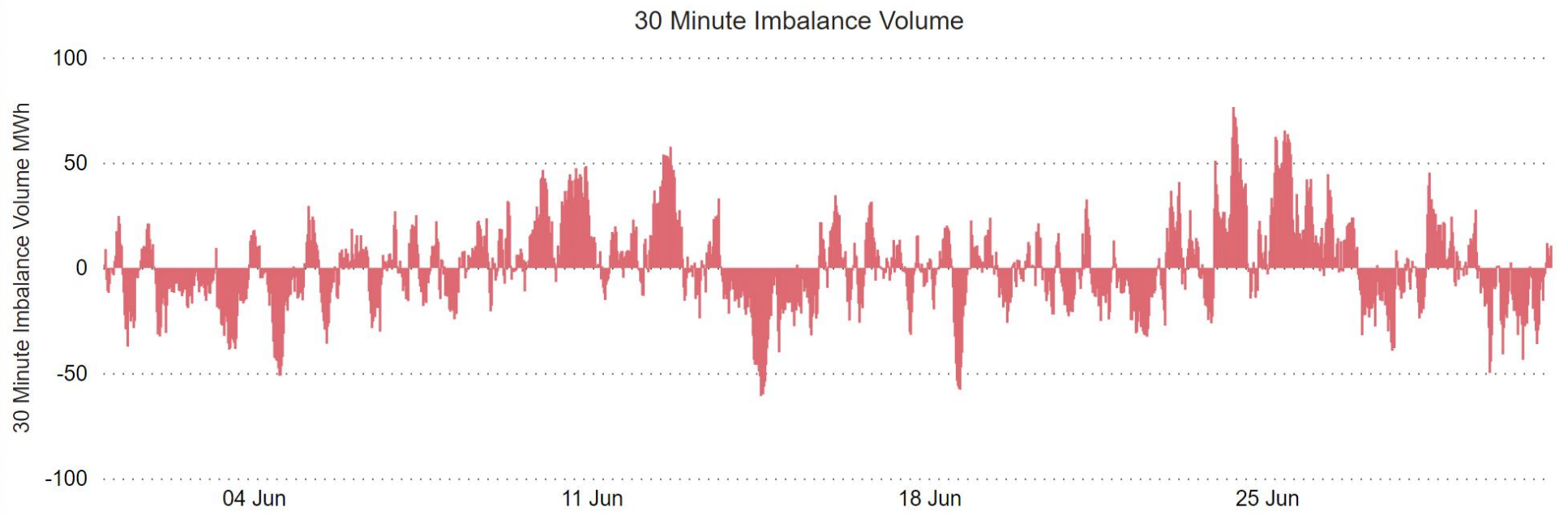
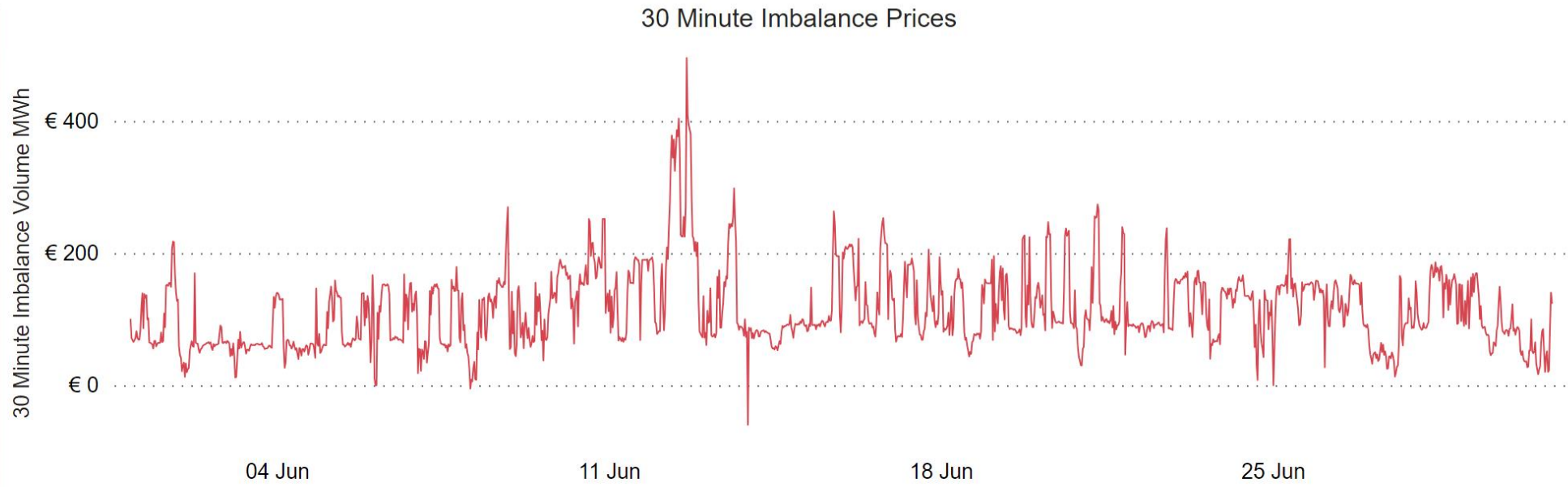
### Interconnector Flows

June 2023	MW
Moyle Imports	381
EWIC Imports	338
Moyle Exports	-175
EWIC Exports	-129
SEM Imports	663
SEM Exports	-245
SEM Net Import/Export	595



# Balancing Market June 2023

30 Minutes Imbalance Price  
€ 113.42  
Average Price  
-€ 60.11  
Lowest Price  
€ 495.50  
Highest Price



## Demand and Generation Mix



# Demand June 2023

## SEM Demand (MW)

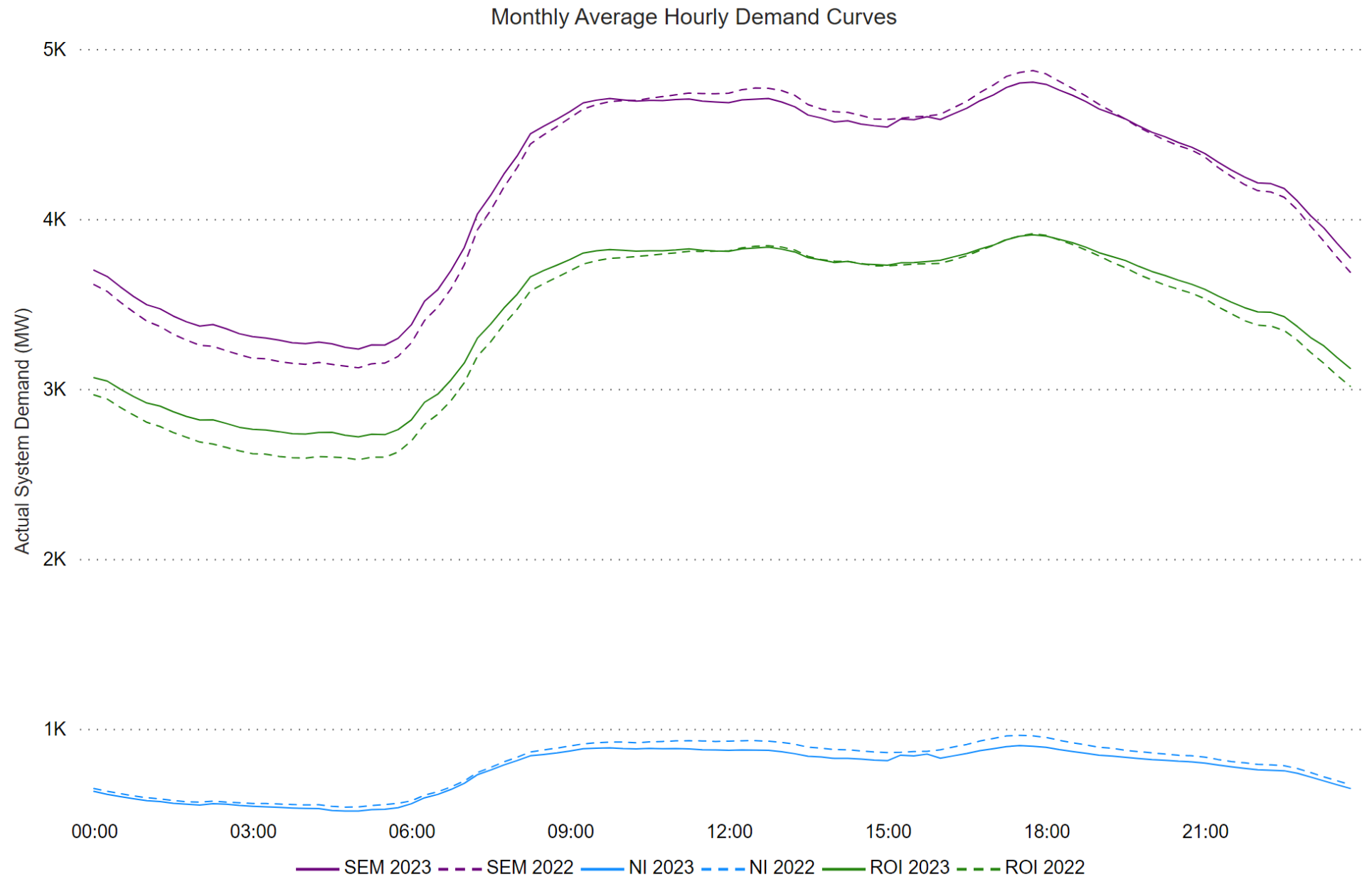
4,188.50	4,158.07
SEM Average 2023	SEM Average 2022
3,234.67	3,124.47
SEM Min 2023	SEM Min 2022
4,804.83	4,872.93
SEM Max 2023	SEM Max 2022

## NI Demand (MW)

750.94	784.60
NI Average 2023	NI Average 2022
516.70	539.87
NI Min 2023	NI Min 2022
901.60	961.90
NI Max 2023	NI Max 2022

## ROI Demand (MW)

3,437.56	3,373.49
ROI Average 2023	ROI Average 2022
2,717.90	2,583.63
ROI Min 2023	ROI Min 2022
3,906.57	3,913.63
ROI Max 2023	ROI Max 2022

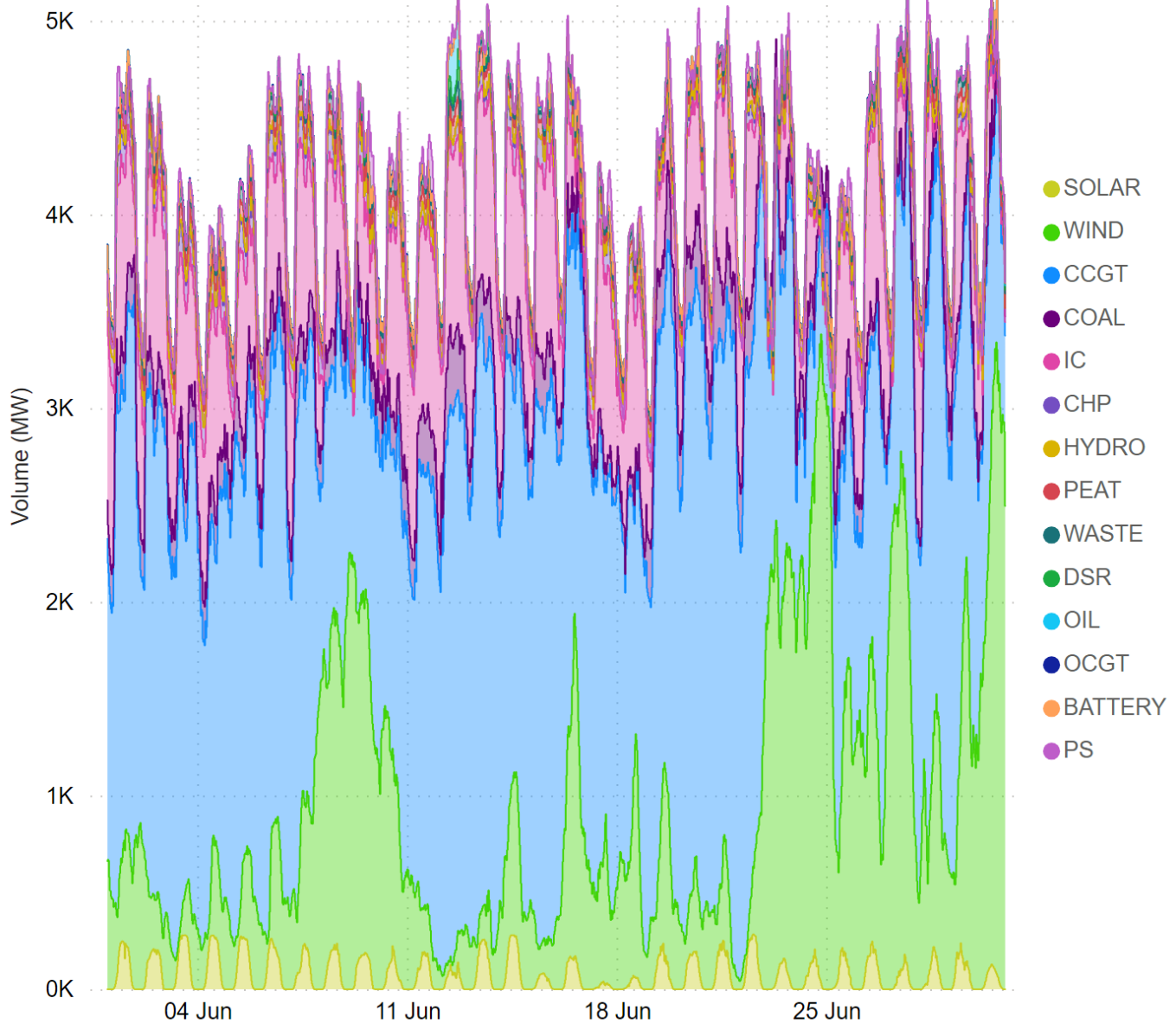


# Fuel Mix June 2023

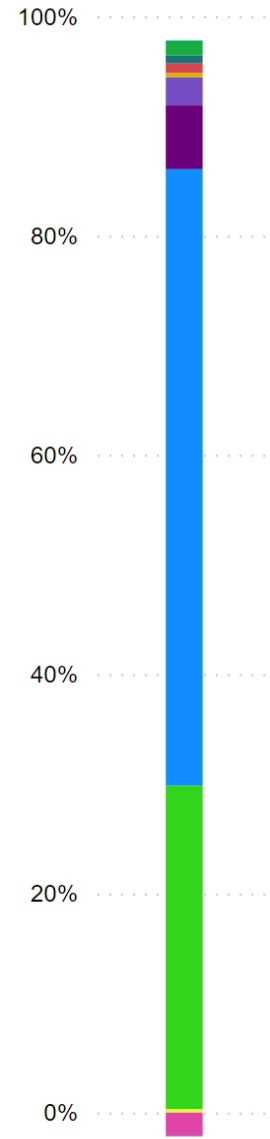
Fuel Type	Average (MW)	%
CCGT	1,164	45.1%
WIND	661	17.9%
INTERCONNECTOR	974	26.4%
COAL	199	5.4%
HYDRO	0	0%
CHP	153	4.1%
PEAT	82	2.2%
WASTE	79	2.1%
SOLAR	0	0%
DSR	33	0.9%
OIL	0	0%
OCGT	0	0%
BATTERY	-6	-0.2%
PUMPED STORAGE	-146	-4.0%

Fuel Type	Max (MW)	Min (MW)
CCGT	3,291	621
WIND	3,351	39
INTERCONNECTOR	974	-895
COAL	612	95
HYDRO	0	0
CHP	157	40
PEAT	102	0
WASTE	80	7
SOLAR	283	0
DSR	212	0
OIL	293	0
OCGT	0	0
BATTERY	13	0
PUMPED STORAGE	291	-300

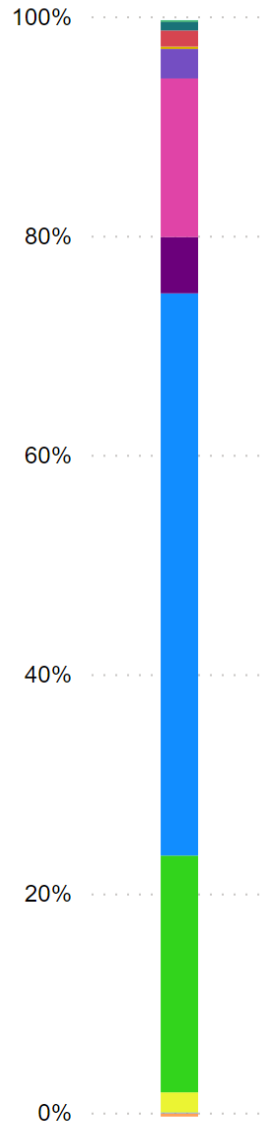
## SEM 30 Minute Fuel Mix



SEM Fuel Mix  
June 2022



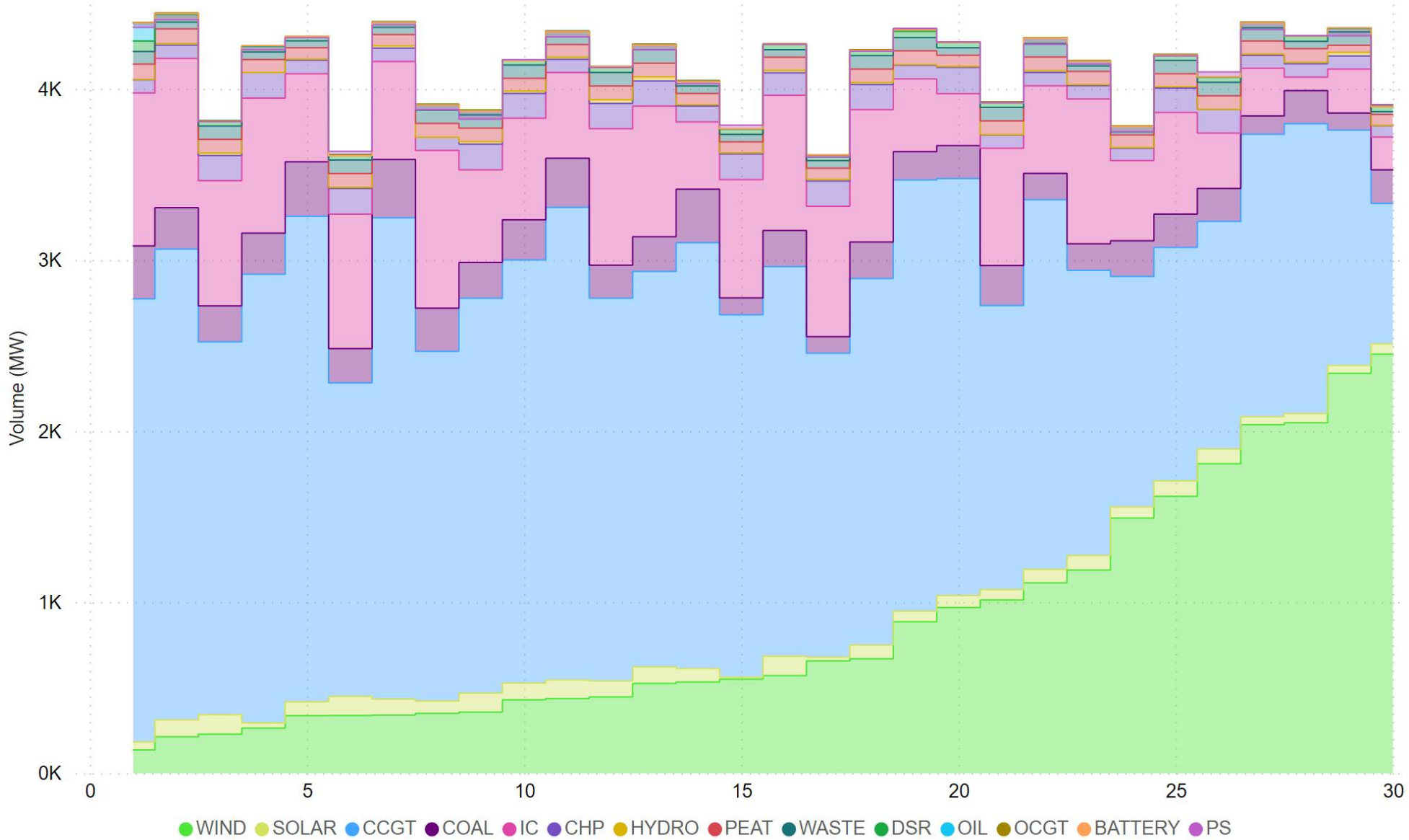
SEM Fuel Mix  
June 2023



# Fuel Mix Ranked by Wind Volume June 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

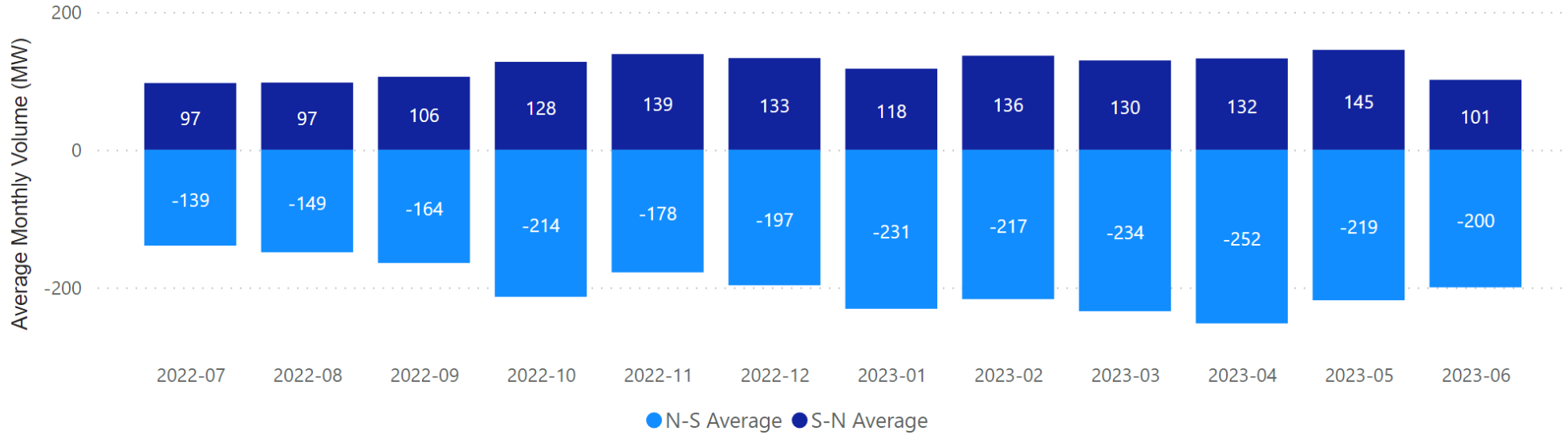




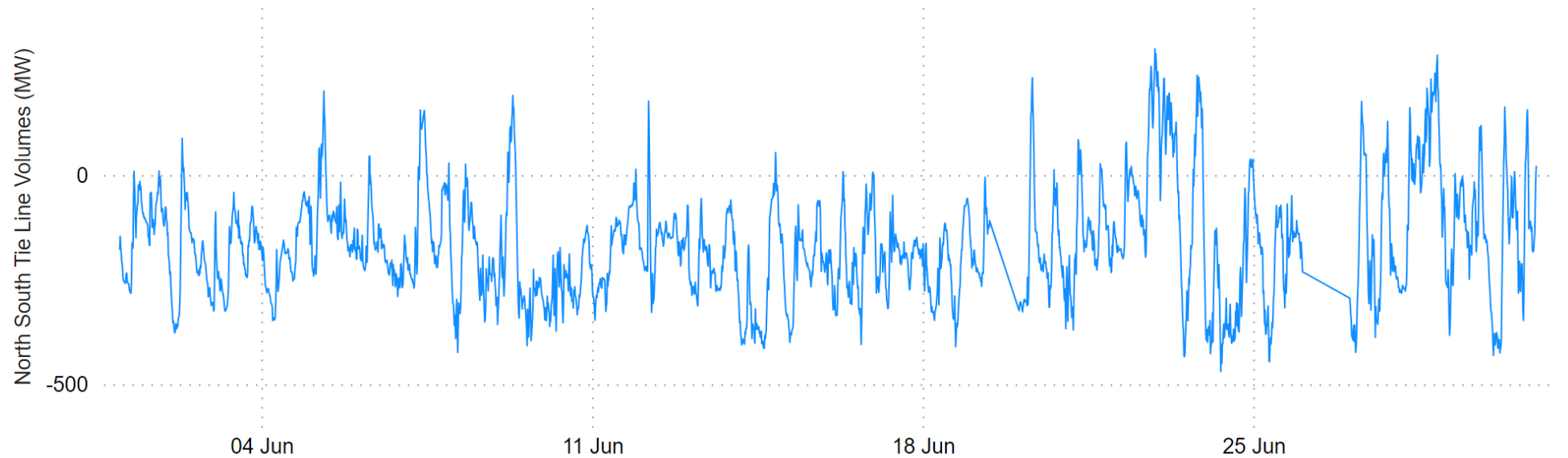
# North-South Tie Line June 2023

Flow Direction (Average)	MW
NI to ROI	199.18
ROI to NI	101.44
NET NI to ROI	168.83

Average Flows N-S Tie Line Long Term Trend



North South Tie Line Volumes 15 minute periods



Note  
N-S tie line data missing  
26th June 01:00 - 27th June 01:00

# Wind Generation June 2023

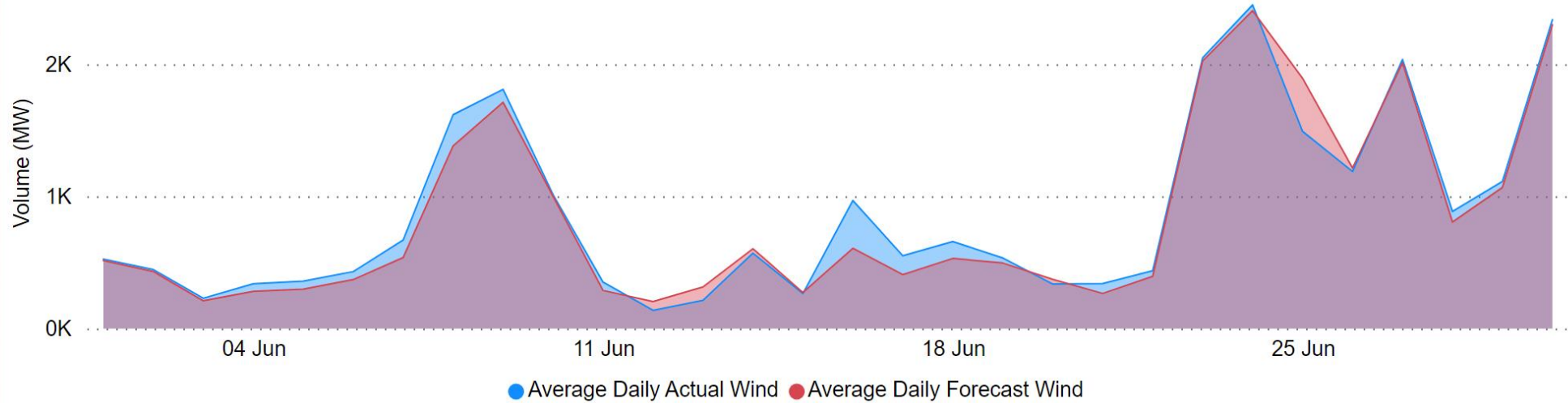
Average Daily Actual Wind (MW)  
878

Average Daily Forecast Wind (MW)  
841

Min SNSP %  
6.69

Max SNSP %  
76.01

Actual Daily Average Wind Relative to Forecast Daily Average Wind



SNSP %



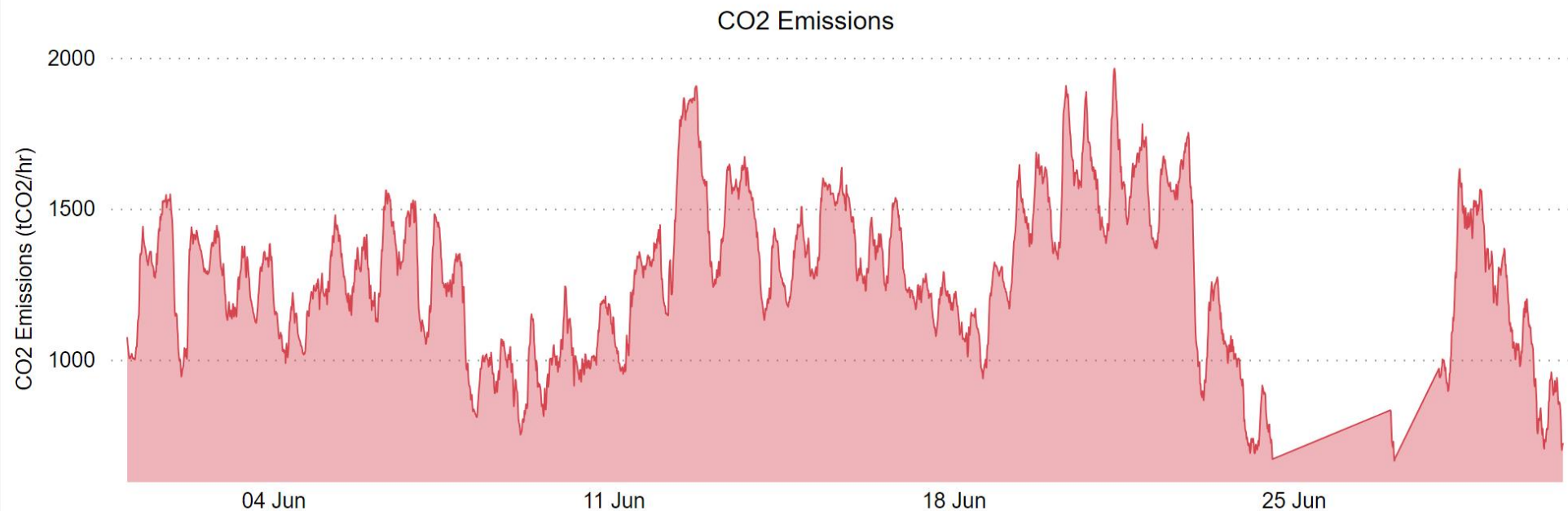
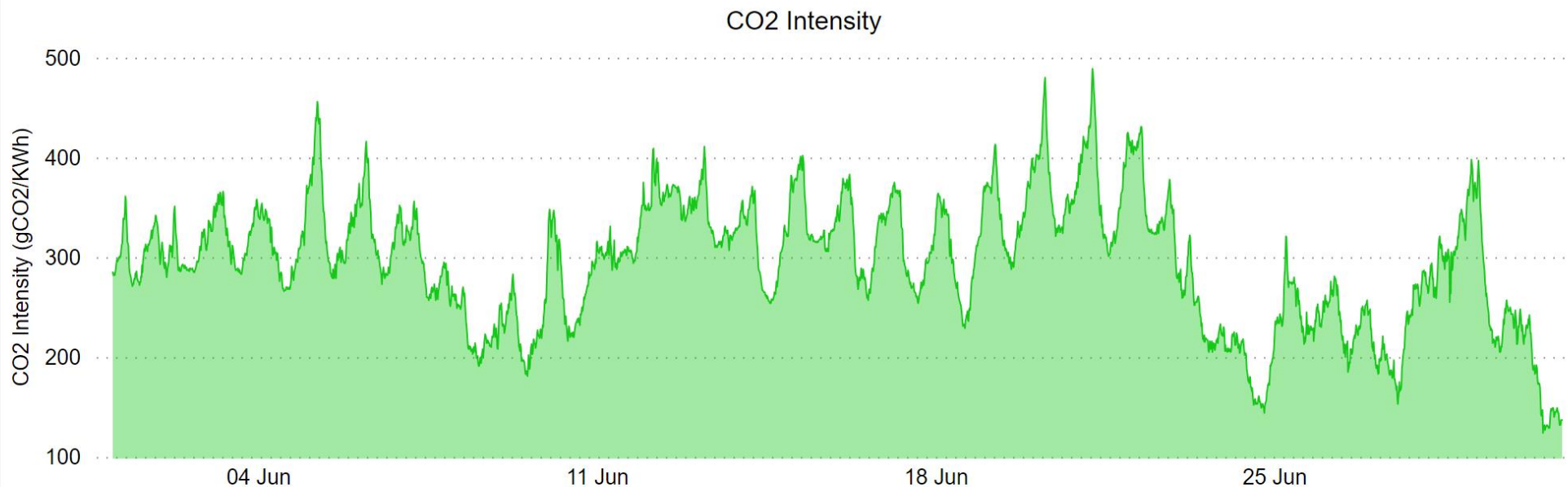
# CO<sub>2</sub> June 2023

**CO2 Intensity**  
 294.87  
 Monthly Average (gCO<sub>2</sub>/KWh)  
 124  
 Monthly Low (gCO<sub>2</sub>/KWh)  
 489  
 Monthly High (gCO<sub>2</sub>/KWh)

**CO2 Emissions**  
 1272.62  
 Monthly Average (tCO<sub>2</sub>/hr)  
 665  
 Monthly Low (tCO<sub>2</sub>/hr)  
 1964  
 Monthly High (tCO<sub>2</sub>/hr)

**Note**  
 CO2 Emissions data missing  
 24th June 13:45 to 27th June 00:00  
 27th June 02:15 to 28th June 00:00

Data sourced from - SONI/ERIGRID





## Fuel Costs and Spreads

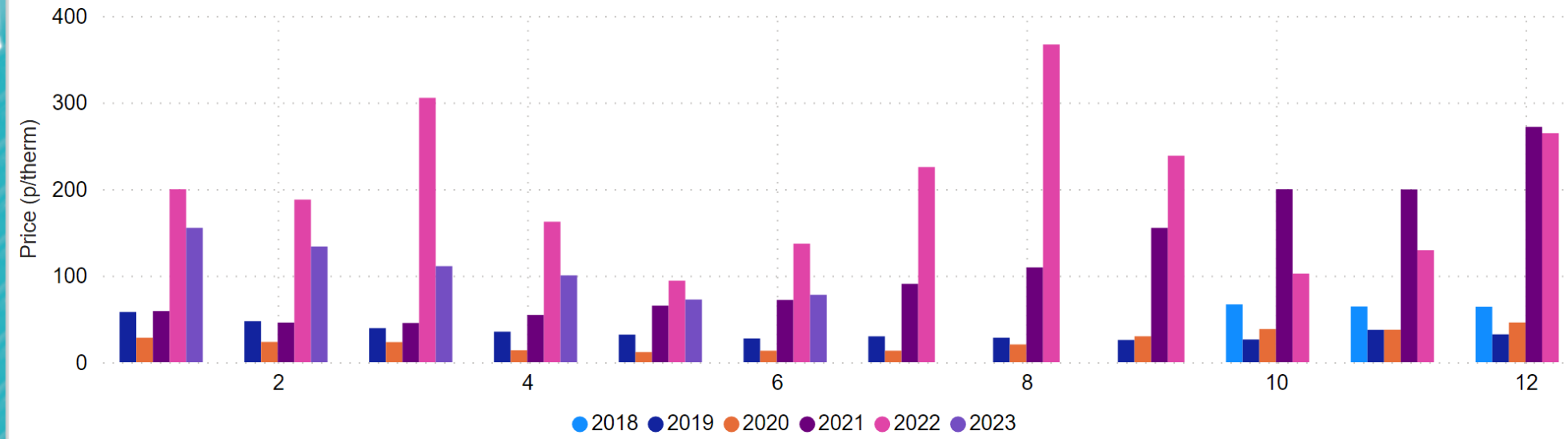
# Gas Price June 2023

77.87  
Monthly Average (p/therm)

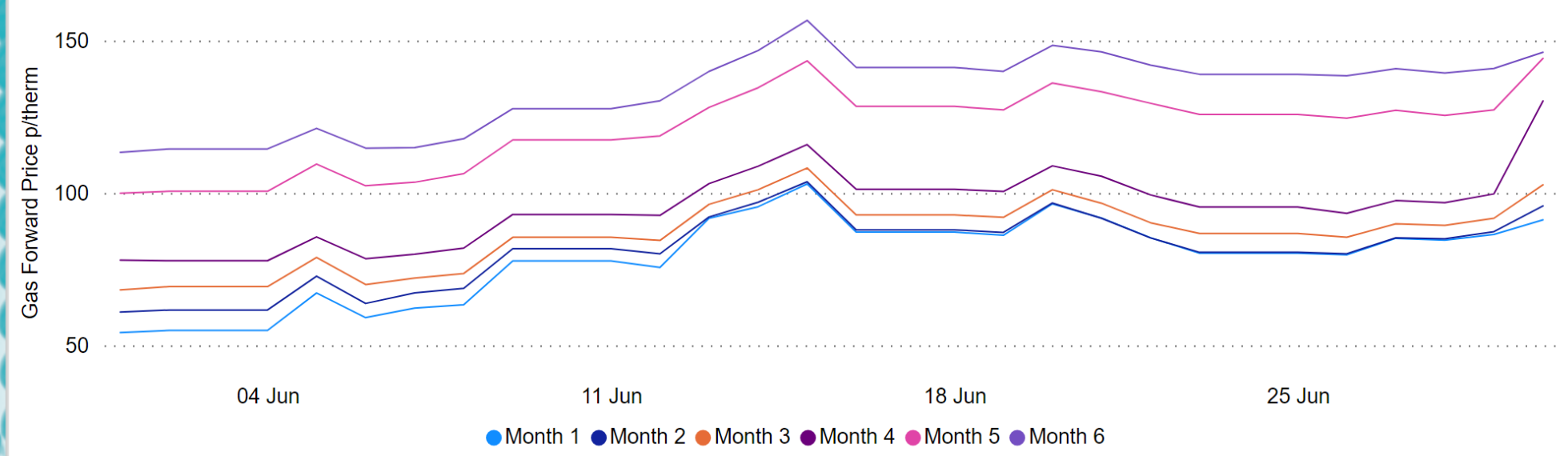
56.05  
Monthly Low (p/therm)

103.63  
Monthly High (p/therm)

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



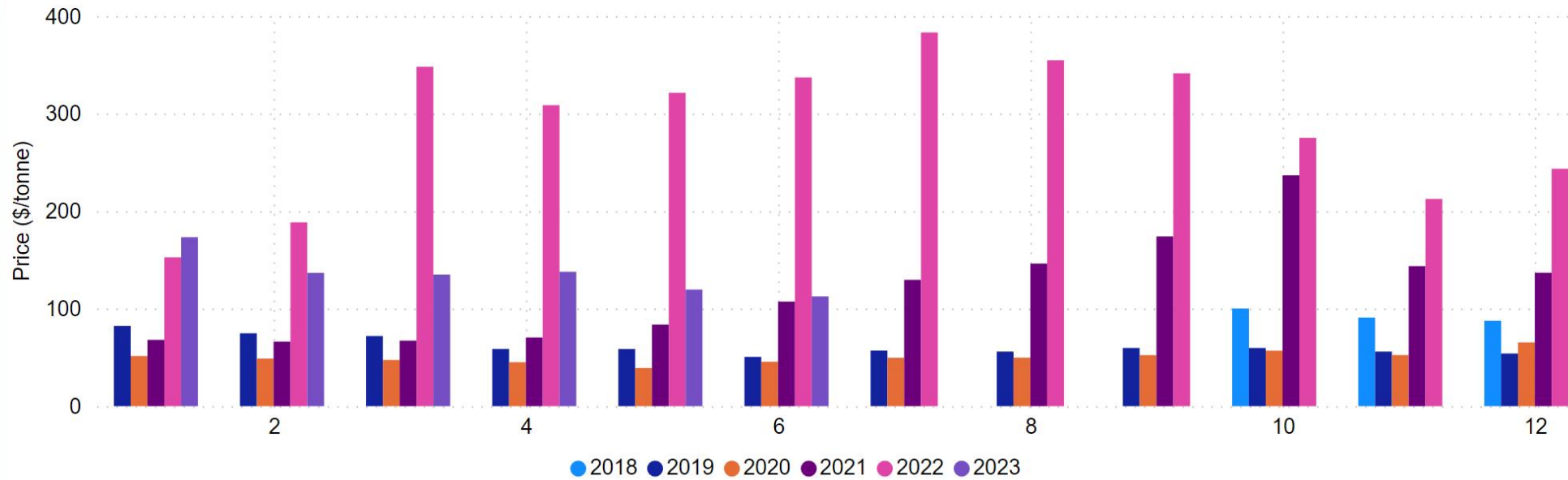
Gas Forward Prices



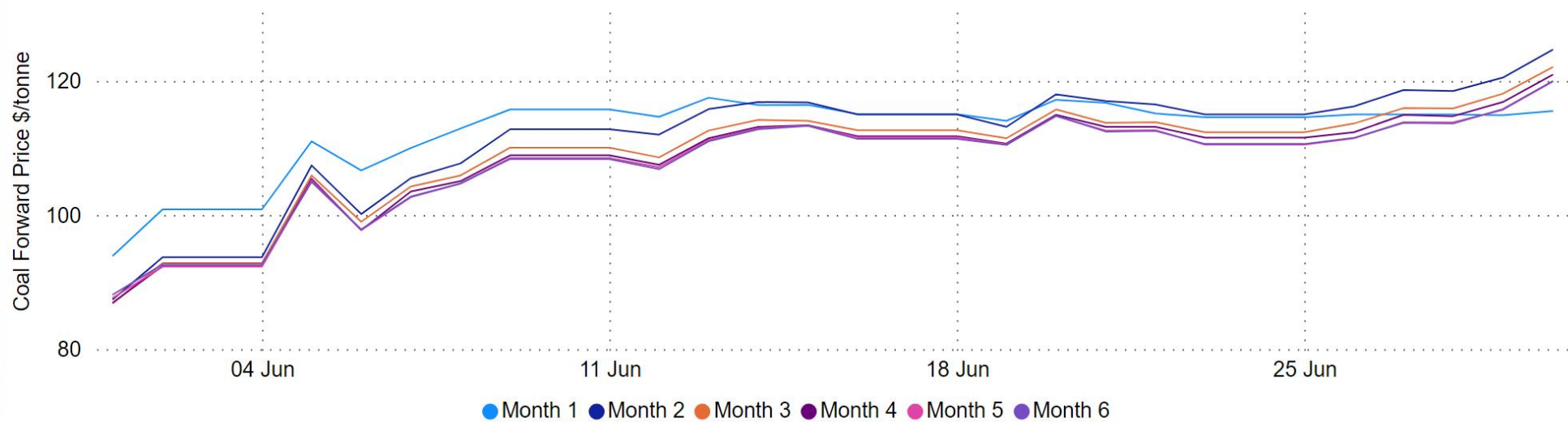
# Coal Price June 2023

\$112.56  
Monthly Average \$/tonne  
\$93.95  
Monthly Low \$/tonne  
\$117.50  
Monthly High \$/tonne

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



Coal Forward Prices



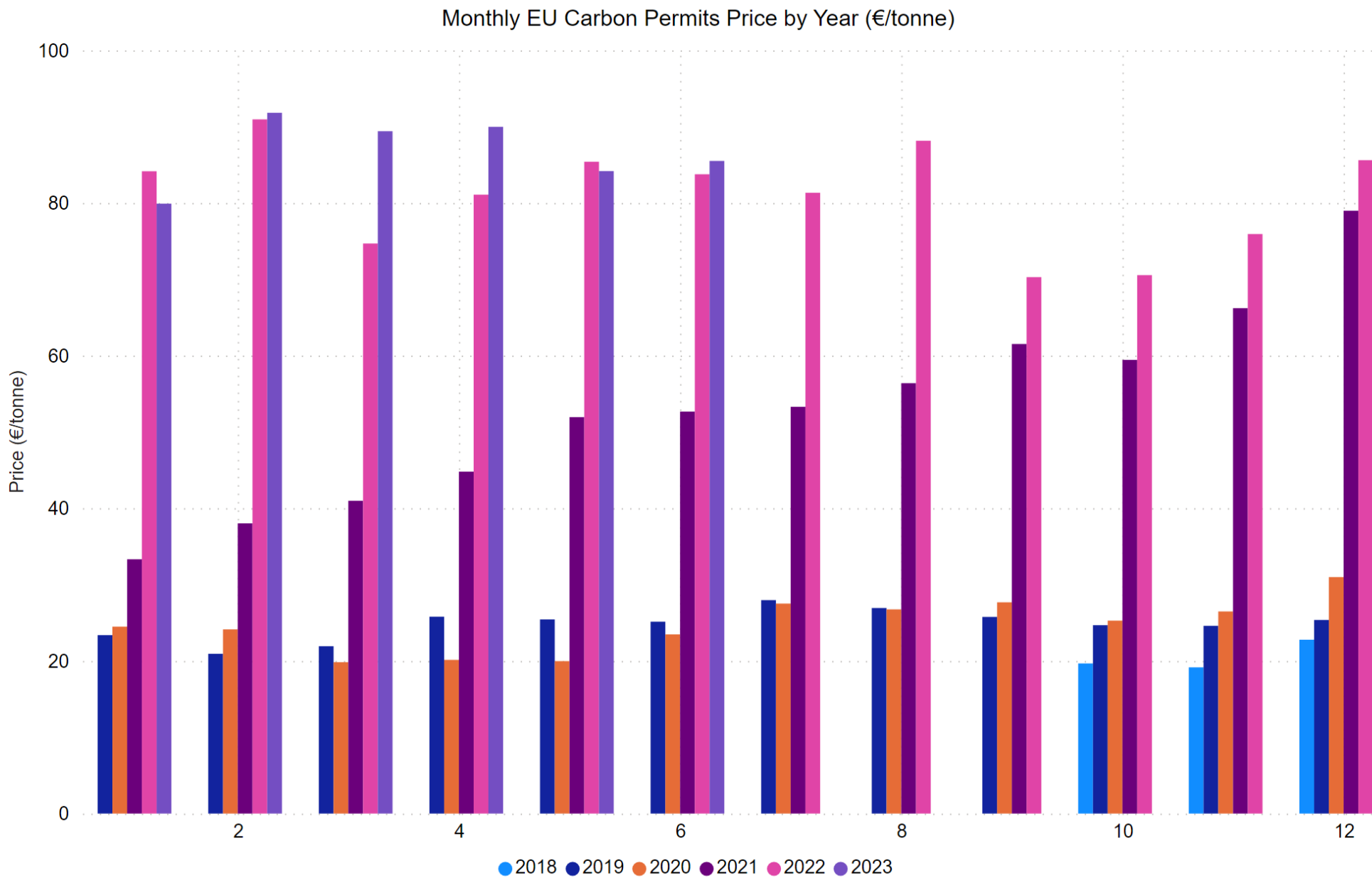


# Carbon Price June 2023

€ 85.51  
Monthly Average €/tonne

€ 77.23  
Monthly Low €/tonne

€ 92.60  
Monthly High €/tonne



# Spark Spreads June 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.

