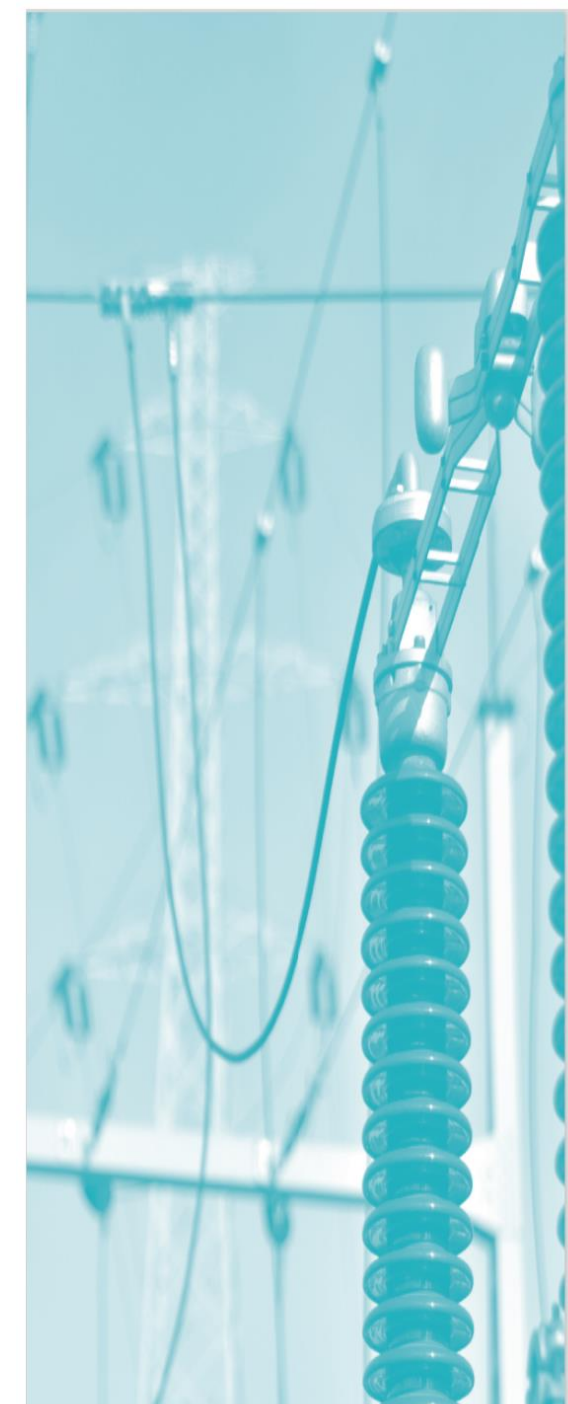


Energy Market Monitoring Report

February 2023



Market Results

Summary Dashboard

Monthly Averages	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23
DAM (€/MWh)	293.25	218.26	143.27	181.84	267.19	387.64	283.25	136.09	143.12	276.52	162.16	159.19
% Change from previous month	67%	-26%	-34%	27%	47%	45%	-27%	-52%	5%	93%	-41%	-2%
% Change from previous year	302%	155%	48%	91%	86%	195%	45%	-37%	-30%	10%	-20%	-9%
Actual System Demand (MW)	4675	4408	4208	4169	4085	4099	4197	4330	4733	4885	4885	4782
% Change from previous month	-3%	-6%	-5%	-1%	-2%	0%	2%	3%	9%	3%	0%	-2%
% Change from previous year	4%	3%	0%	2%	-1%	-1%	-2%	-1%	0%	2%	1%	-1%
Actual Wind Generation (MW)	1559	1426	1428	1129	854	817	1081	2047	2233	1647	1987	2026
% Change from previous month	-44%	-9%	0%	-21%	-24%	-4%	32%	89%	9%	-26%	21%	2%
% Change from previous year	-3%	31%	34%	13%	90%	-3%	24%	33%	45%	-16%	18%	-27%
Gas Price p/therm	305.39	162.26	95.13	139.03	222.44	365.79	235.85	102.32	128.91	264.54	155.16	133.65
% Change from previous month	62%	-47%	-41%	46%	60%	64%	-36%	-57%	26%	105%	-41%	-14%
% Change from previous year	586%	217%	45%	93%	145%	234%	52%	-49%	-35%	-3%	-22%	-29%
Carbon Price (€/Tonne)	74.69	81.09	85.41	83.74	81.34	88.20	70.29	70.46	75.84	85.61	79.91	91.82
% Change from previous month	-18%	9%	5%	-2%	-3%	8%	-20%	0%	8%	13%	-7%	15%
% Change from previous year	81%	77%	63%	59%	52%	56%	14%	19%	15%	8%	-5%	1%
Coal Price (\$/tonne)	348.03	308.61	321.33	337.07	383.18	354.67	341.33	275.16	212.52	243.46	173.25	136.71
% Change from previous month	85%	-11%	4%	5%	14%	-7%	-4%	-19%	-23%	15%	-29%	-21%
% Change from previous year	418%	338%	284%	214%	196%	142%	96%	16%	48%	78%	14%	-27%
EWIC % Import Periods	68.75%	0.00%	12.33%	27.16%	33.03%	25.84%	16.25%	30.51%	18.61%	30.58%	49.03%	38.91%
EWIC % Export Periods	17.04%	0.00%	23.49%	43.56%	56.52%	51.92%	41.81%	46.24%	54.10%	35.08%	23.66%	27.19%
EWIC % Not Flow Periods	14.21%	100.00%	64.18%	29.28%	10.45%	22.24%	45.28%	23.25%	27.29%	34.34%	27.32%	33.89%
Moyle % Import Periods	55.04%	56.33%	38.54%	40.44%	24.90%	31.55%	35.35%	40.52%	29.51%	44.19%	62.05%	53.65%
Moyle % Export Periods	44.83%	43.63%	61.46%	59.56%	10.72%	66.26%	63.85%	59.44%	69.83%	55.78%	37.95%	46.02%
Moyle % Not Flow Periods	0.13%	0.00%	0.00%	0.00%	64.38%	2.18%	0.80%	0.03%	0.66%	0.03%	0.00%	0.33%

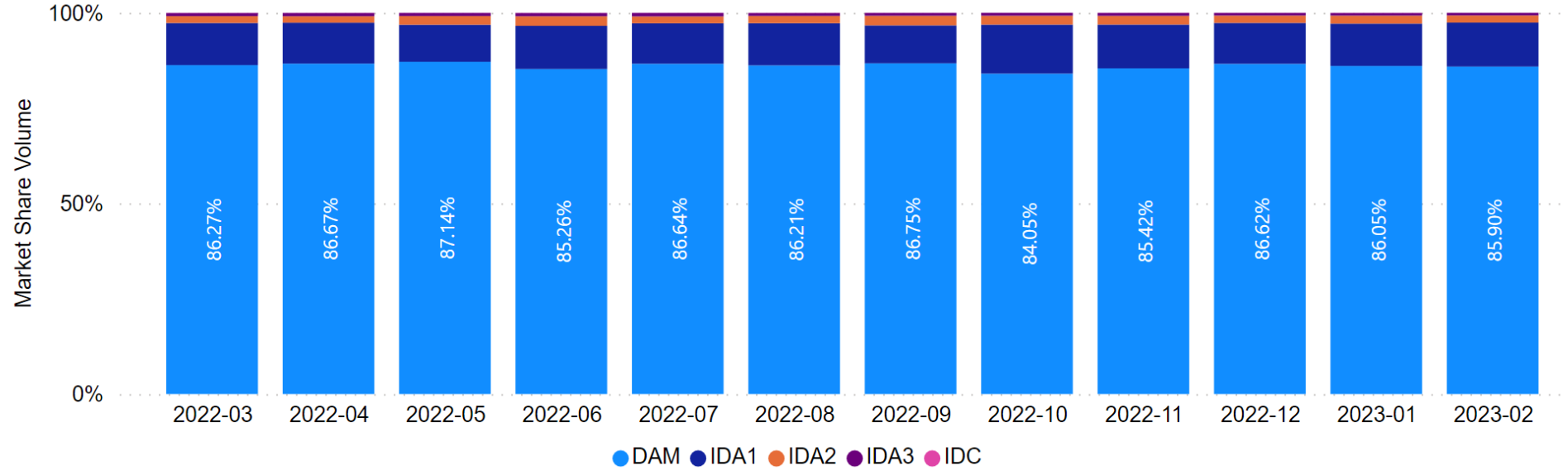
Market Volumes February 2023

Daily Average Volume	MWh
DAM	121,720
IDA1	16,329
IDA2	2,672
IDA3	962
IDC	28

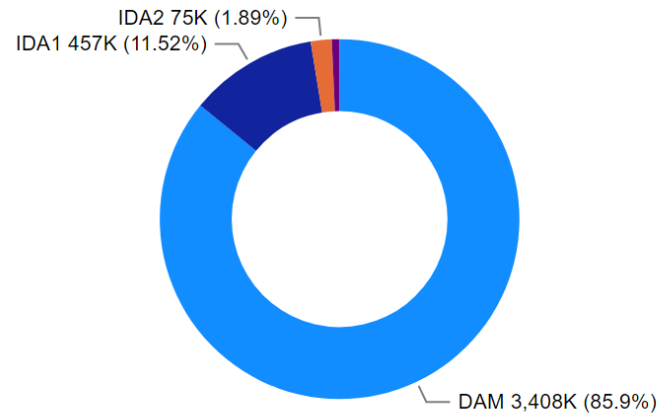
Total Monthly Volume	MWh
DAM	3,408,158
IDA1	457,210
IDA2	74,807
IDA3	26,942
IDC	637
Total	3,967,754

Total Market Value	€
IDC	€ 111,620
IDA3	€ 5,080,811
IDA2	€ 12,357,179
IDA1	€ 74,495,581
DAM	€ 550,921,941
Total	€ 642,967,131

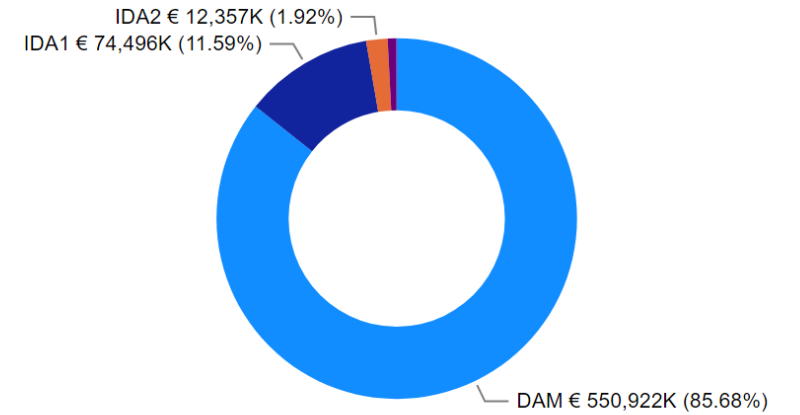
Ex-Ante Monthly Volume by Market



Ex-Ante Volumes (MWh)



Ex-Ante Values (€)



● DAM ● IDA1 ● IDA2 ● IDA3 ● IDC

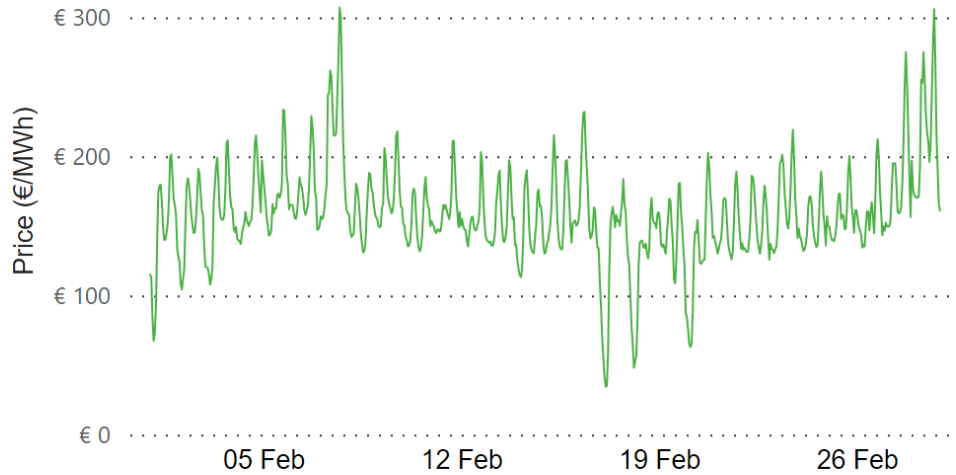
● DAM ● IDA1 ● IDA2 ● IDA3 ● IDC

Day Ahead Market February 2023

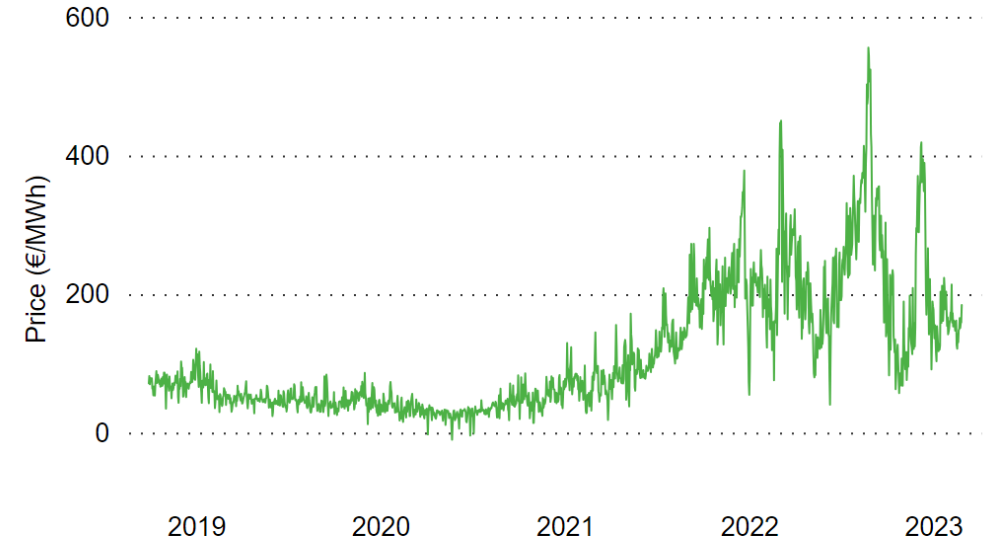
€ 159.19
Average DAM Price
€ 34.51
Min DAM Price
€ 307.00
Max DAM Price

The most frequent price range for February was between €120 and €160

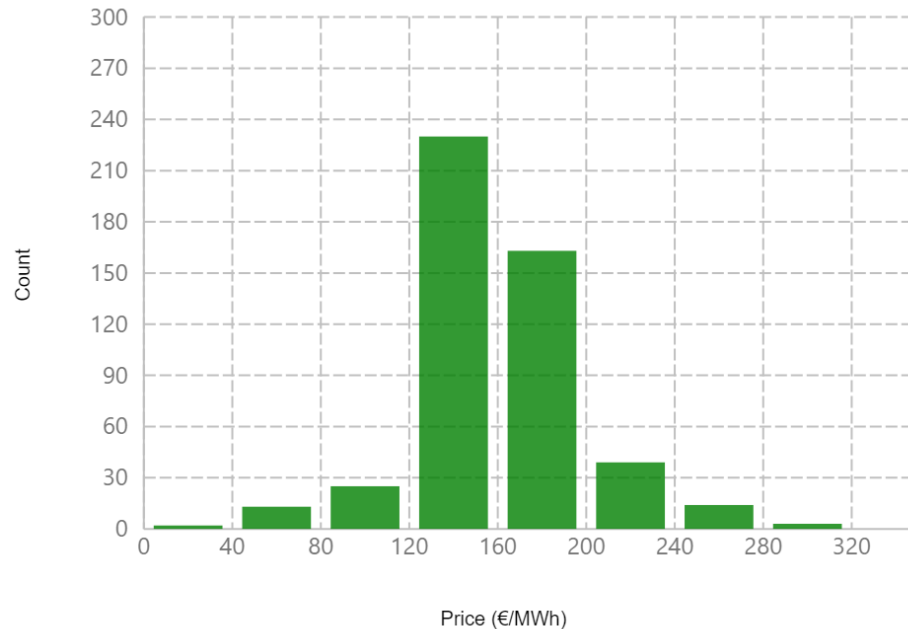
DAM Prices



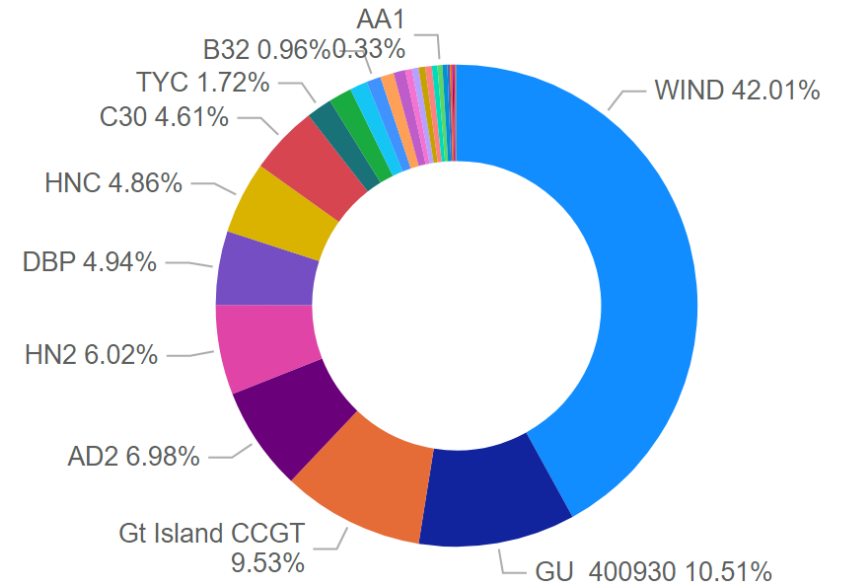
Historic Daily Average DAM Prices



Histogram of DAM Prices



DAM Sell Side Generator Order Results



Intraday Market February 2023

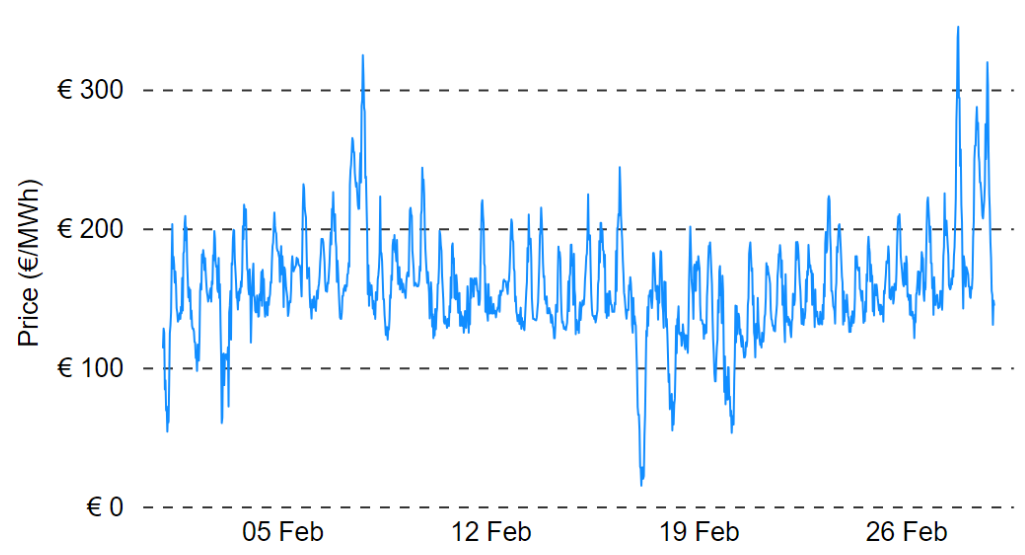
€ 158.03
Average IDA1 Price

€ 15.00
Min IDA1 Price

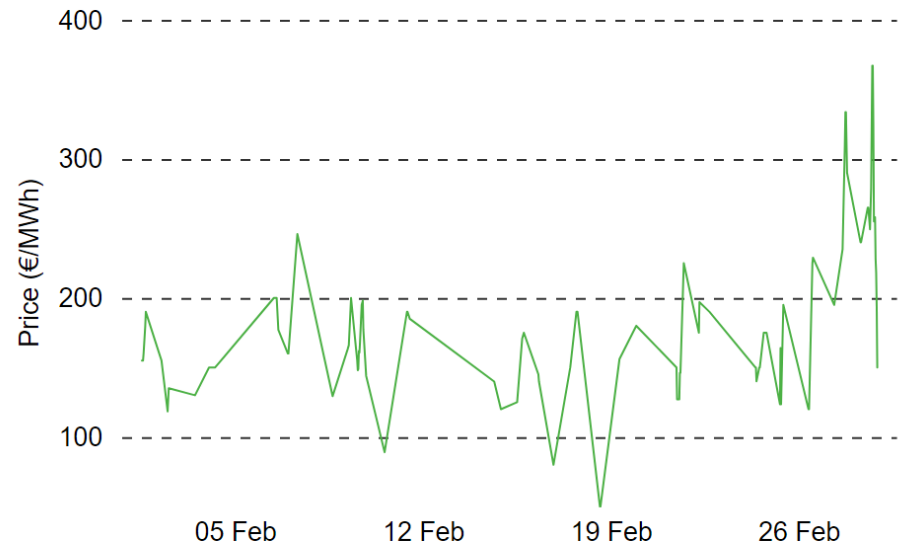
€ 345.00
Max IDA1 Price

The most frequent price range for February was between €150 and €200

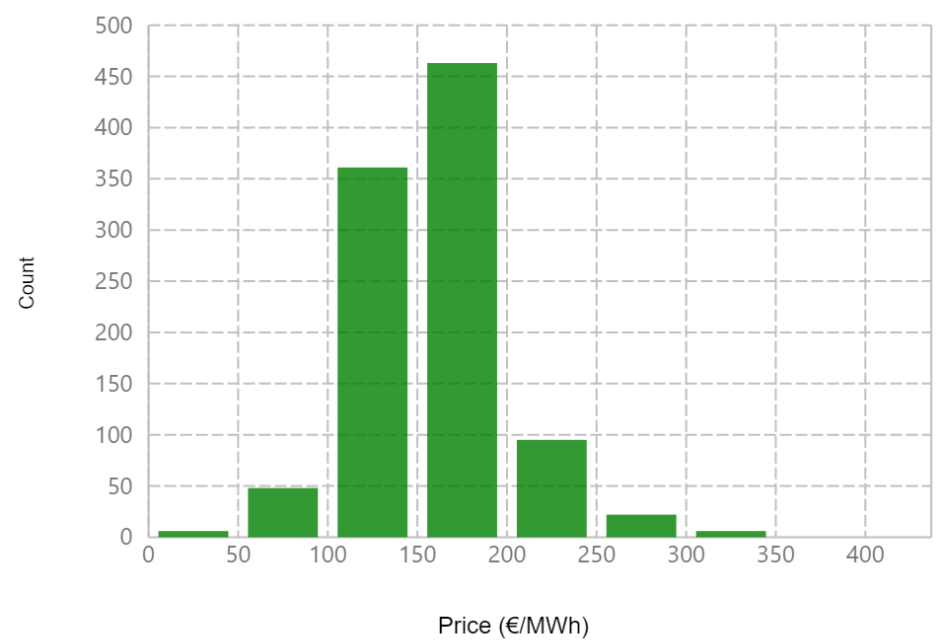
IDA 1 Prices



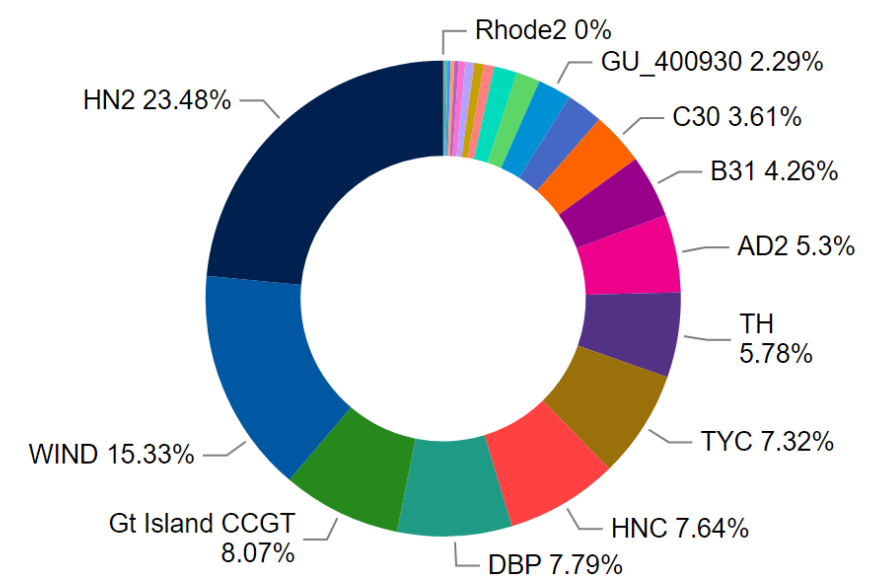
IDC Prices



Histogram of IDA1 Prices



IDA1 Sell Order Results By Market Participant



SEM vs GB

February 2023

SEM Day Ahead Price

€ 159.19
Average Price

€ 34.51
Min Price

€ 307.00
Max Price

GB Day Ahead Price

€ 153.31
Average Price

€ 60.79
Min Price

€ 264.41
Max Price

SEM IDA1 Price

€ 158.03
Average Price

€ 15.00
Min Price

€ 345.00
Max Price

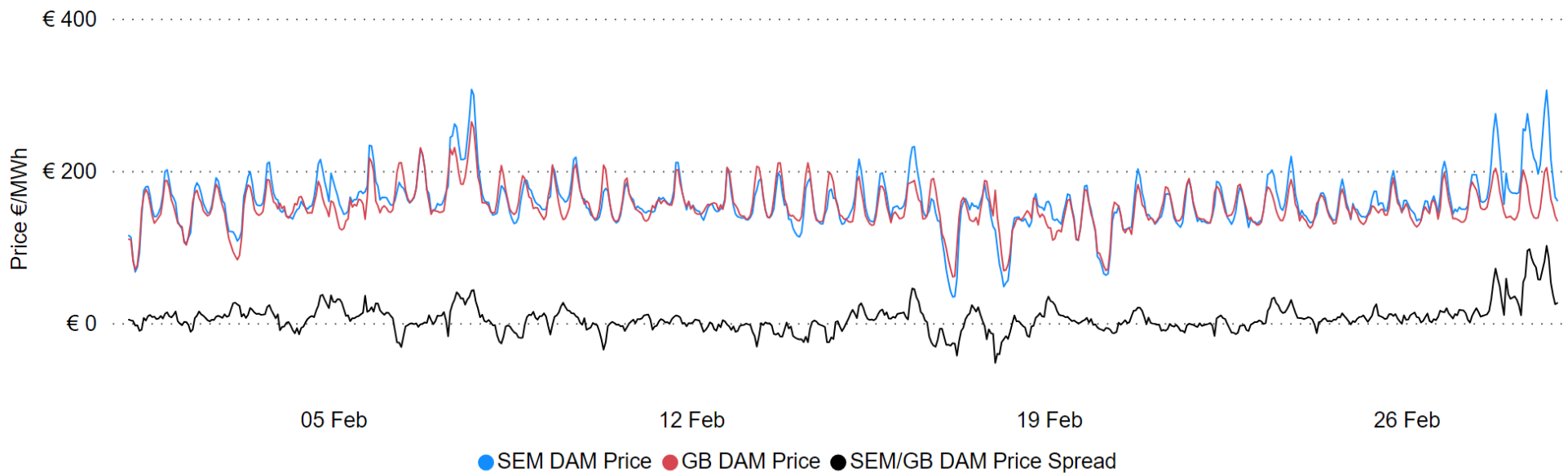
GB IDA1 Prices

€ 154.28
Average Price

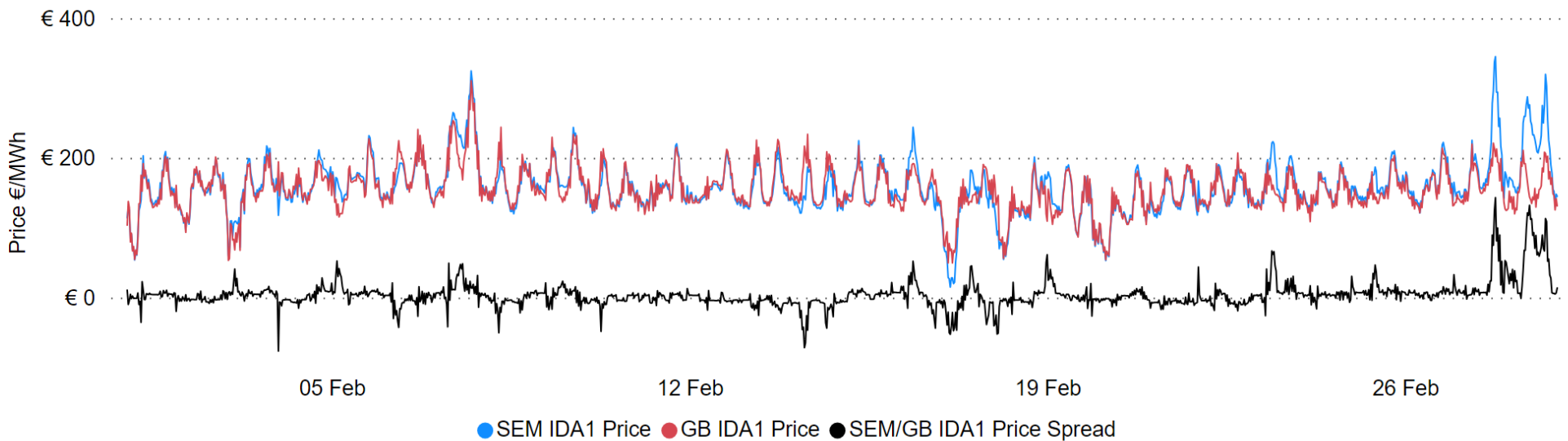
€ 49.49
Min Price

€ 310.48
Max Price

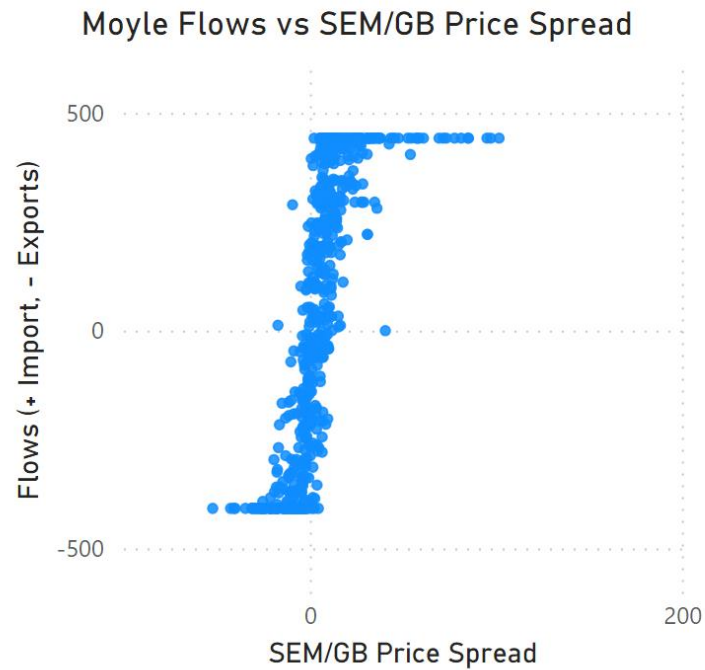
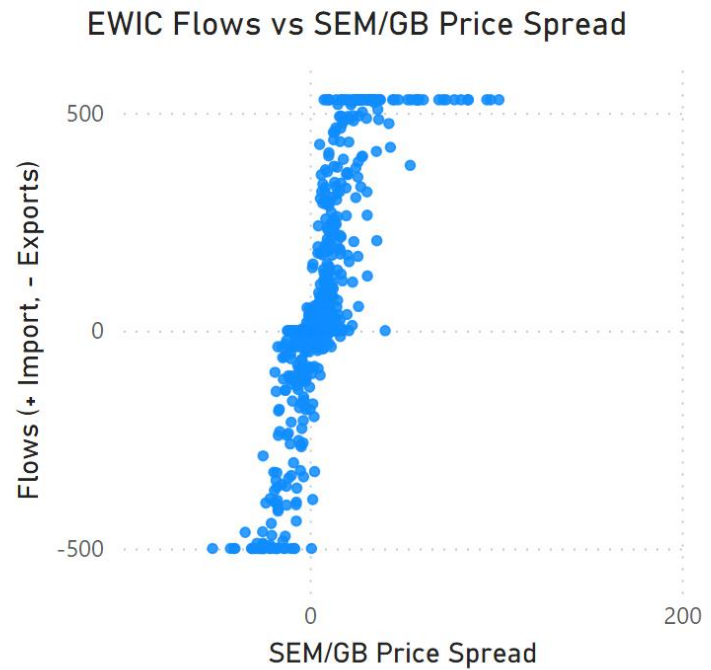
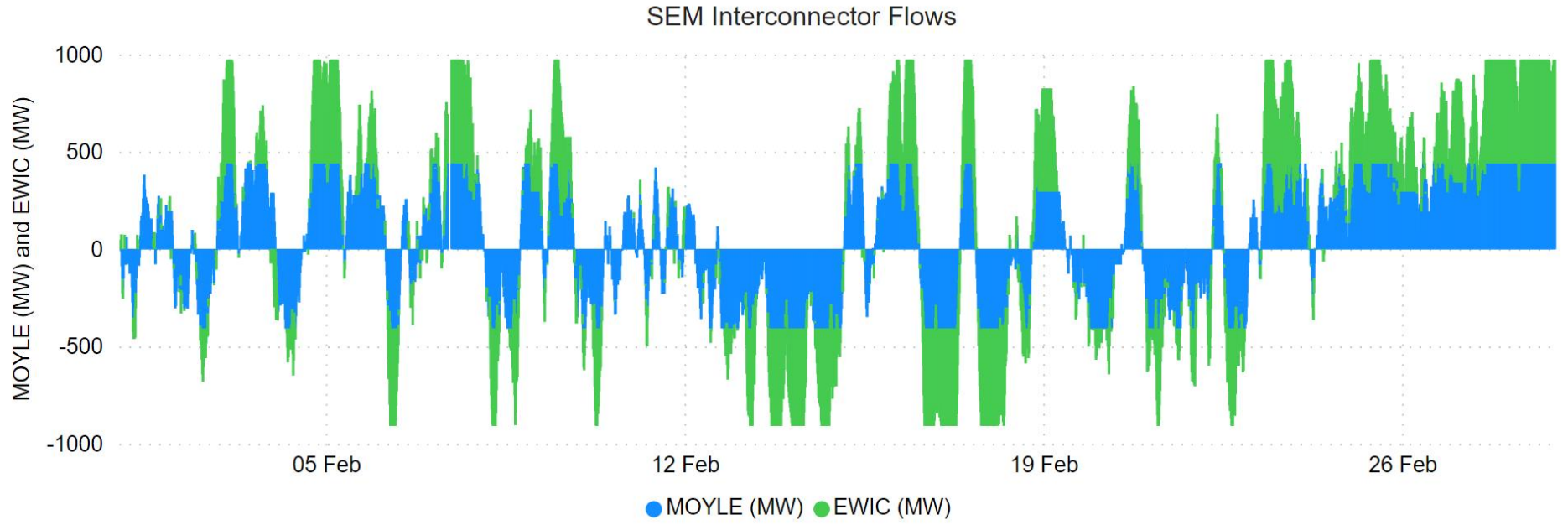
SEM & GB DAM Prices



SEM & GB IDA1 Prices



SEM Interconnectors February 2023



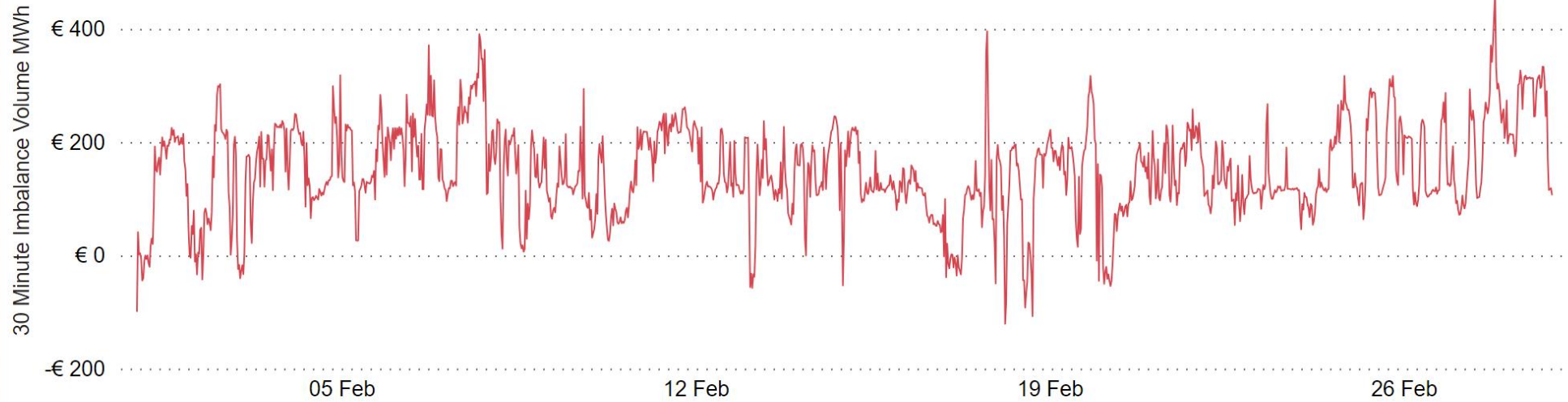
Interconnector Flows

February 2023	MW
Moyle Imports	316
EWIC Imports	294
Moyle Exports	-254
EWIC Exports	-237
SEM Imports	521
SEM Exports	-398
SEM Net Import/Export	103

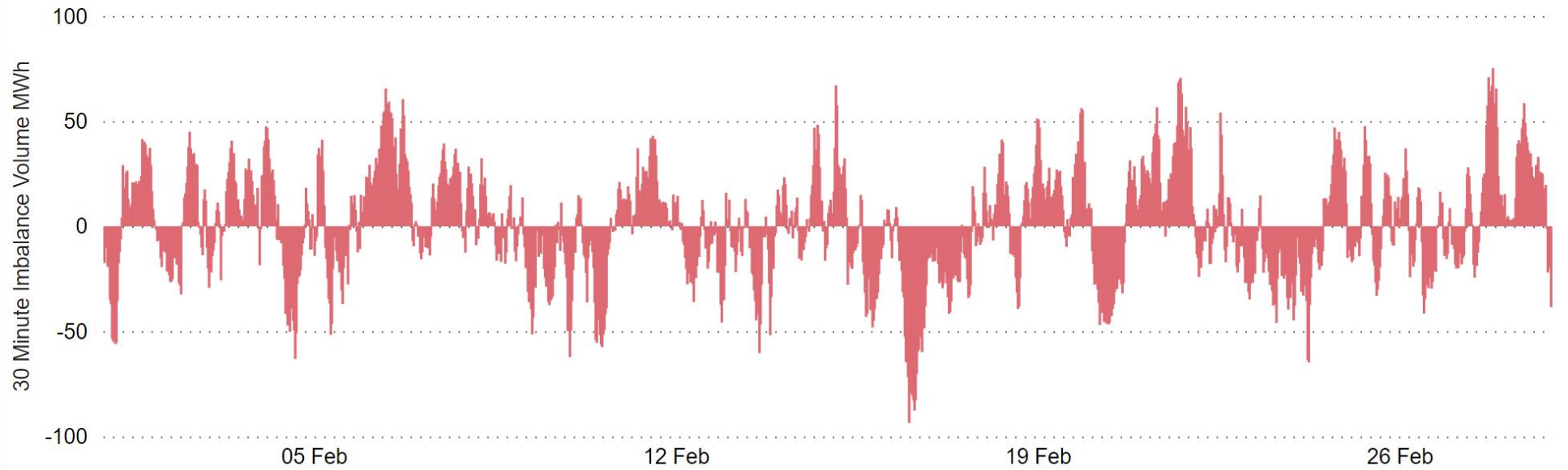
Balancing Market February 2023

30 Minutes Imbalance Price
€ 150.30
Average Price
-€ 120.83
Lowest Price
€ 462.55
Highest Price

30 Minute Imbalance Prices



30 Minute Imbalance Volume



Demand and Generation Mix

Demand February 2023

SEM Demand (MW)

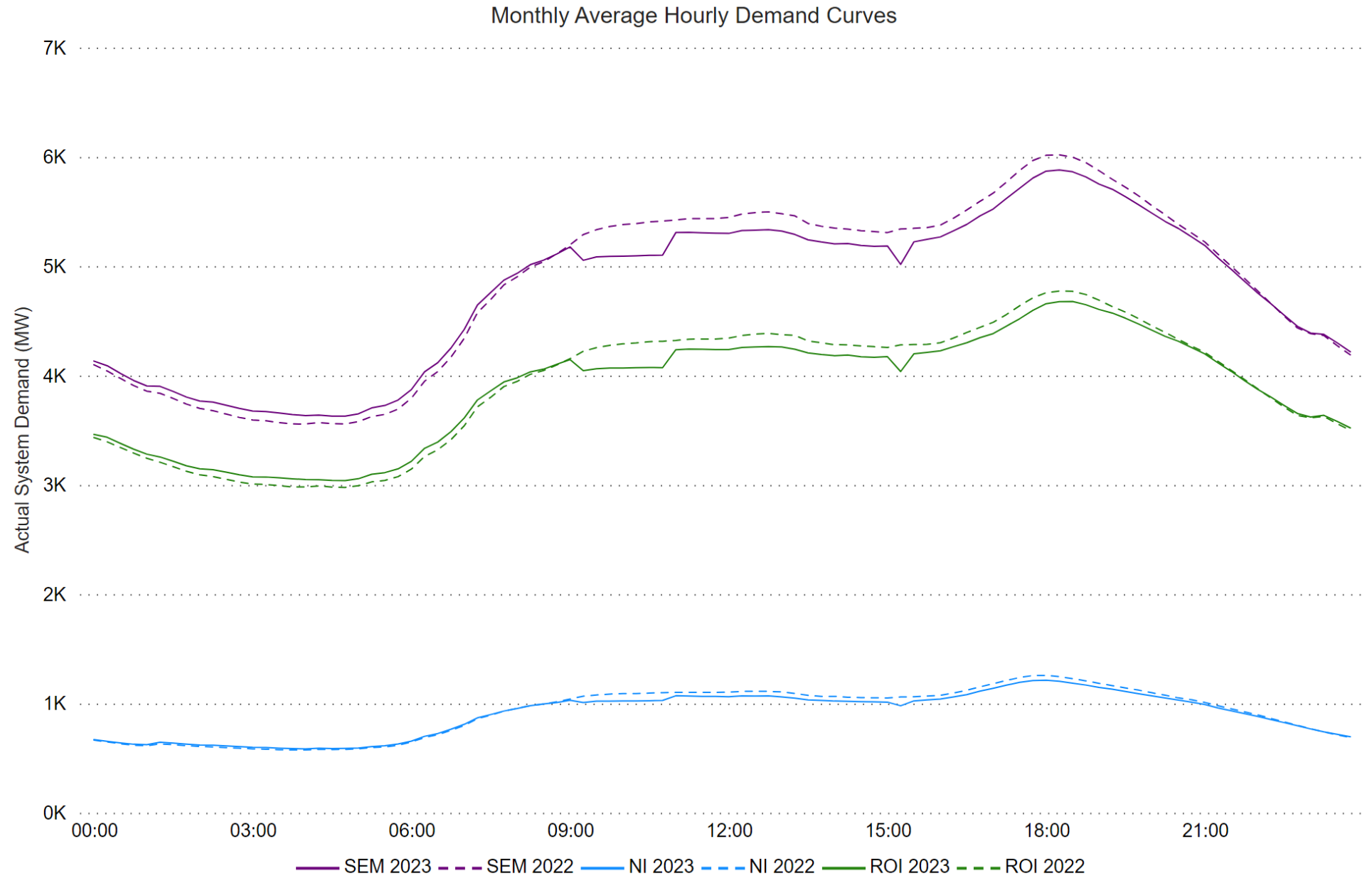
4,782.07	4,833.27
SEM Average 2023	SEM Average 2022
3,629.14	3,557.00
SEM Min 2023	SEM Min 2022
5,880.07	6,018.96
SEM Max 2023	SEM Max 2022

NI Demand (MW)

902.01	920.44
NI Average 2023	NI Average 2022
585.54	574.96
NI Min 2023	NI Min 2022
1,212.68	1,257.64
NI Max 2023	NI Max 2022

ROI Demand (MW)

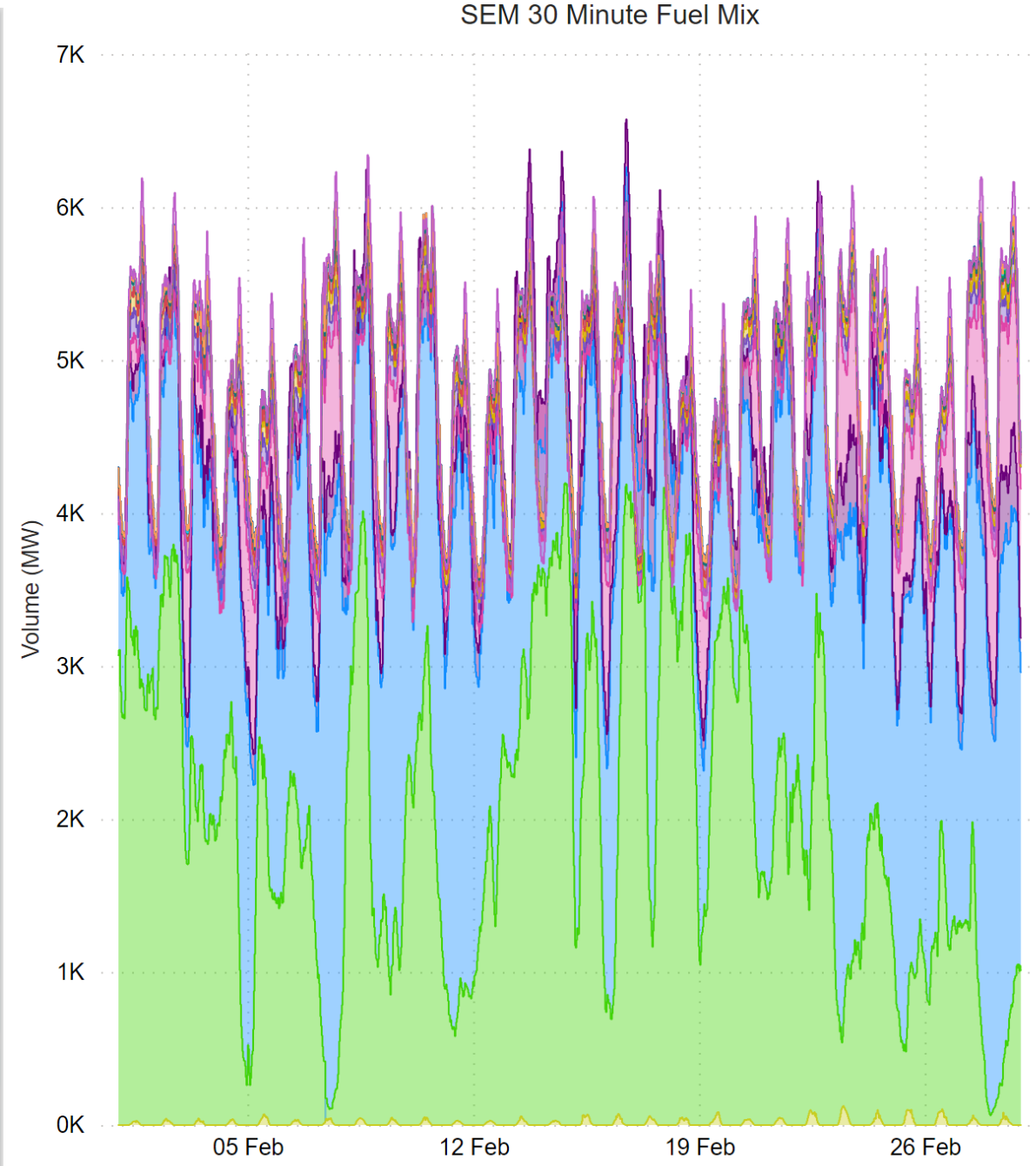
3,880.03	3,912.83
ROI Average 2023	ROI Average 2022
3,038.79	2,977.50
ROI Min 2023	ROI Min 2022
4,677.25	4,772.96
ROI Max 2023	ROI Max 2022



Fuel Mix February 2023

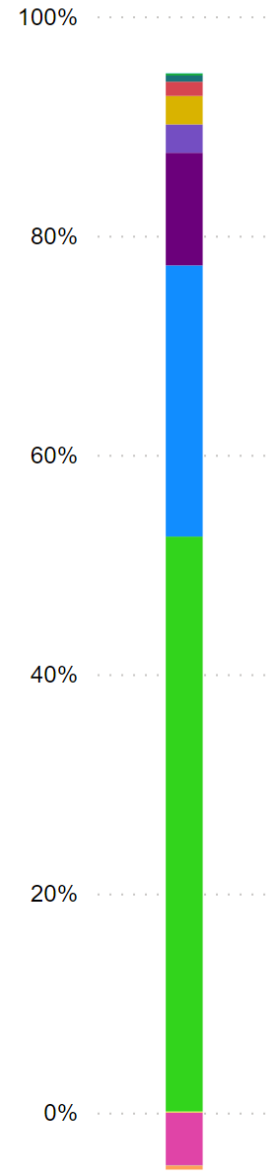
Fuel Type	Average (MW)	%
CCGT	2,043	42.6%
WIND	2,031	42.4%
INTERCONNECTOR	107	2.2%
COAL	252	5.3%
HYDRO	77	1.6%
CHP	146	3.0%
PEAT	60	1.3%
WASTE	55	1.1%
SOLAR	12	0.3%
DSR	28	0.6%
OIL	1	0.0%
OCGT	1	0.0%
BATTERY	-3	-0.1%
PUMPED STORAGE	-16	-0.3%

Fuel Type	Max (MW)	Min (MW)
CCGT	3,938	681
WIND	4,196	63
INTERCONNECTOR	978	-935
COAL	637	91
HYDRO	172	1
CHP	169	64
PEAT	100	0
WASTE	81	0
SOLAR	124	0
DSR	201	0
OIL	93	0
OCGT	25	0
BATTERY	19	-15
PUMPED STORAGE	292	-300

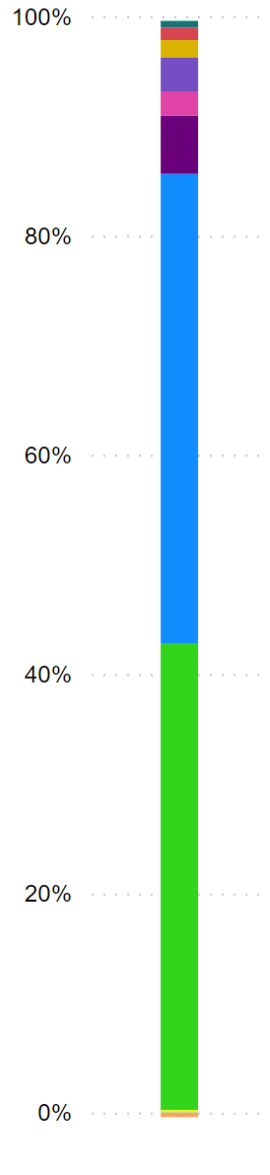


- SOLAR
- WIND
- CCGT
- COAL
- IC
- CHP
- HYDRO
- PEAT
- WASTE
- DSR
- OIL
- OCGT
- BATTERY
- PS

SEM Fuel Mix
February 2022



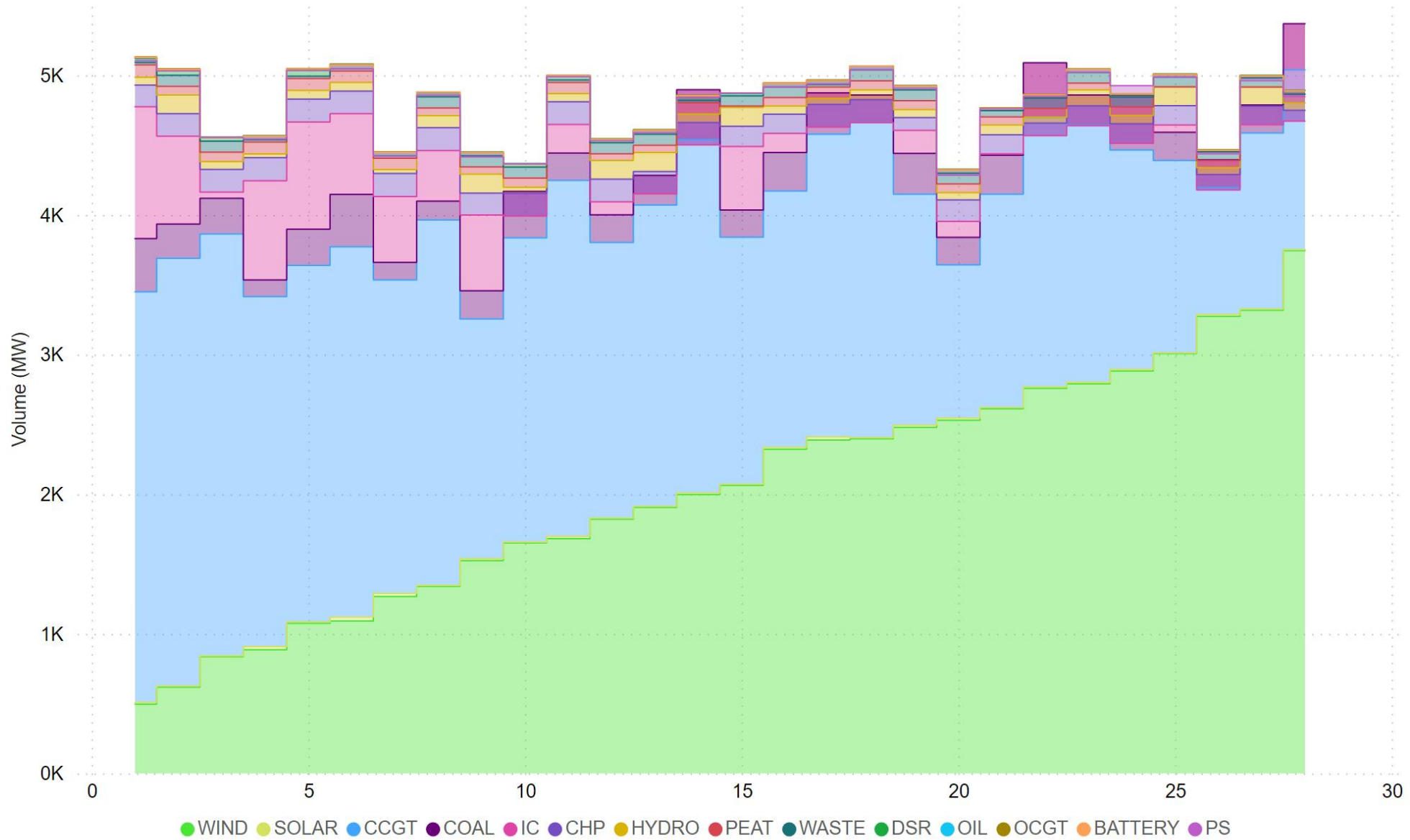
SEM Fuel Mix
February 2023



Fuel Mix Ranked by Wind Volume February 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.

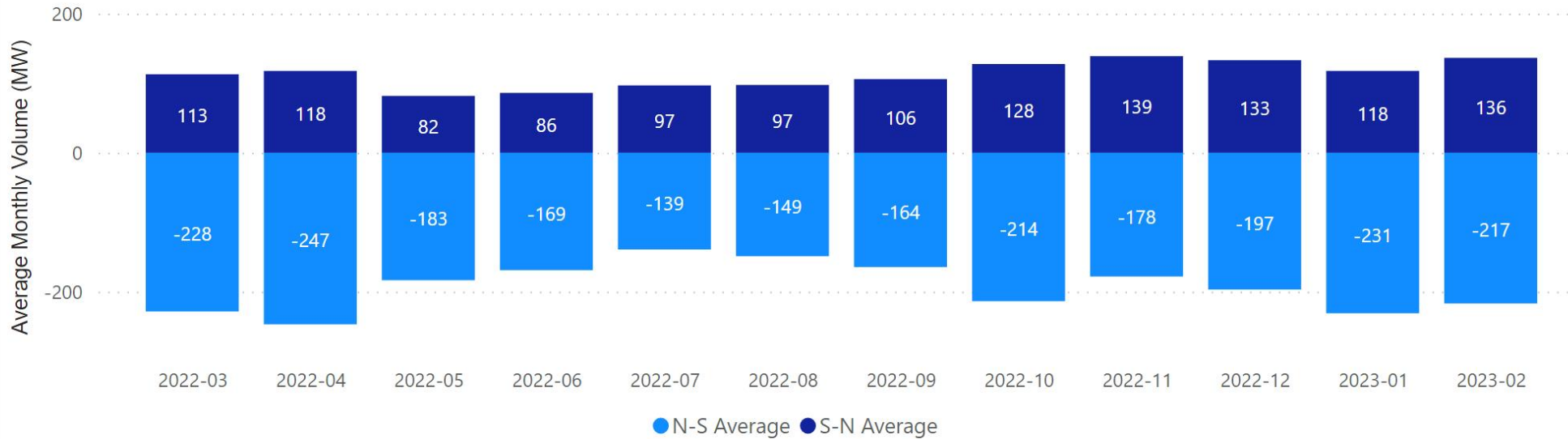
Daily SEM Fuel Mix Ranked by Wind Volume for the Month



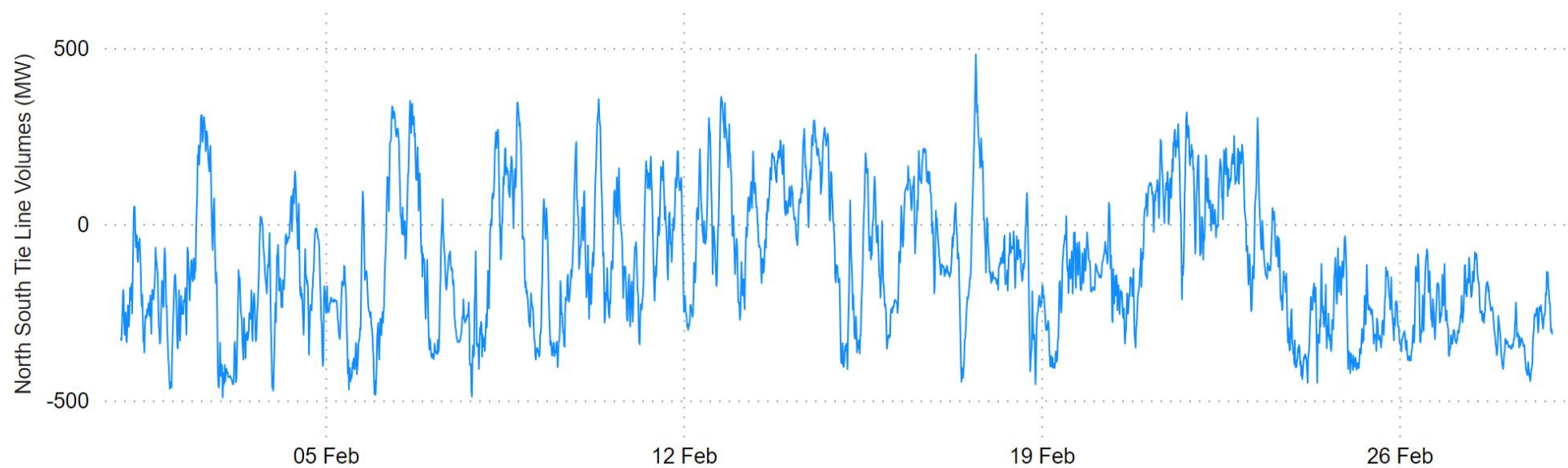
North-South Tie Line February 2023

Flow Direction (Average)	MW
NI to ROI	-216.91
ROI to NI	136.38
NET NI to ROI	-119.19

Average Flows N-S Tie Line Long Term Trend



North South Tie Line Volumes 15 minute periods

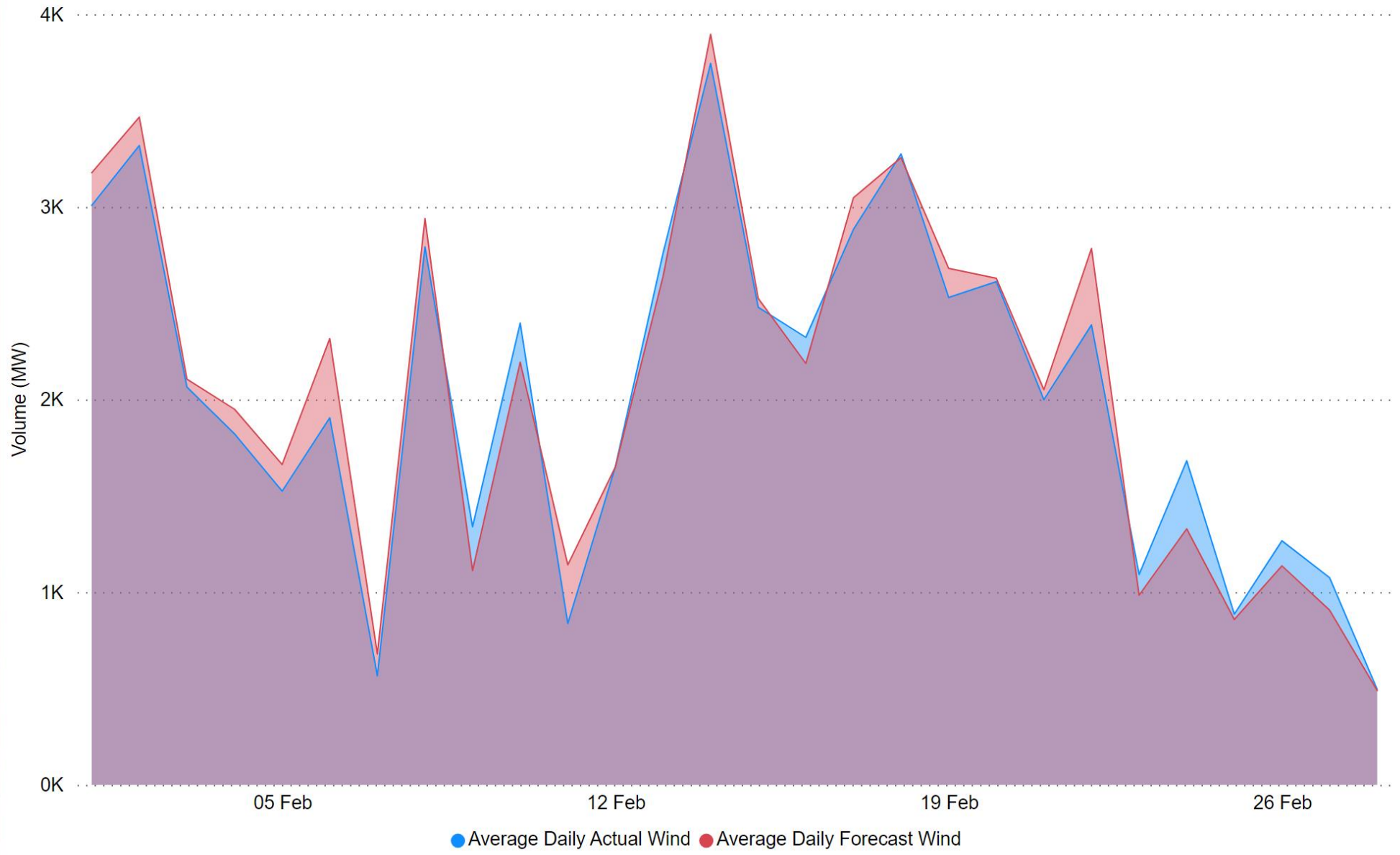


Wind Generation February 2023

Average Daily Actual Wind (MW)
2,026

Average Daily Forecast Wind (MW)
2,064

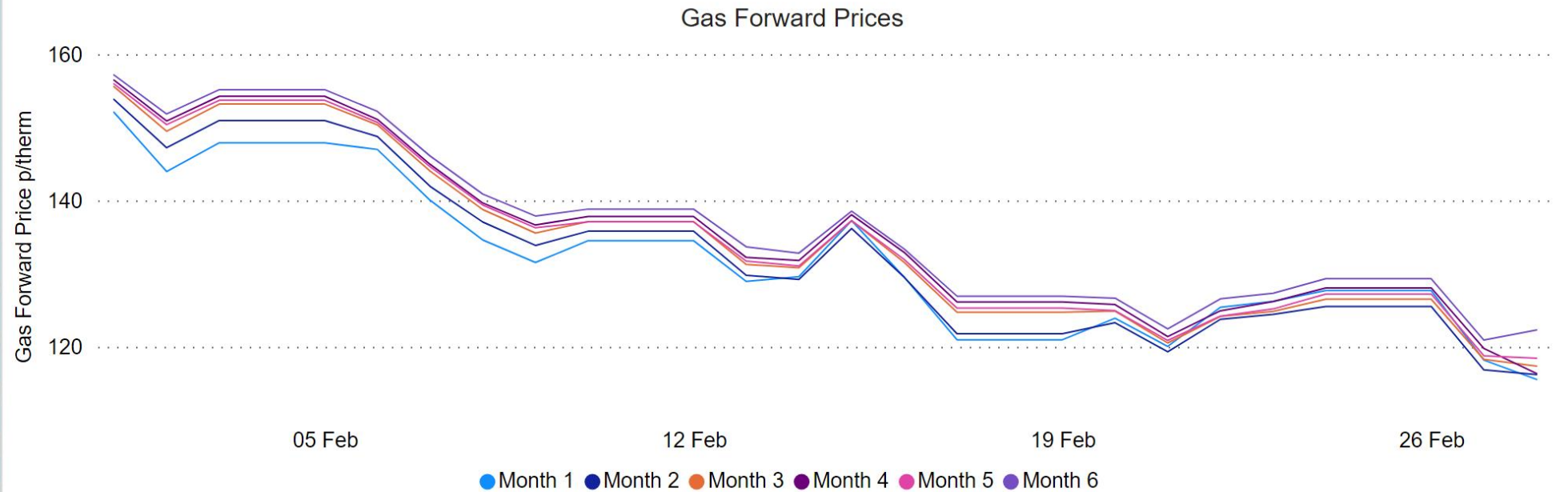
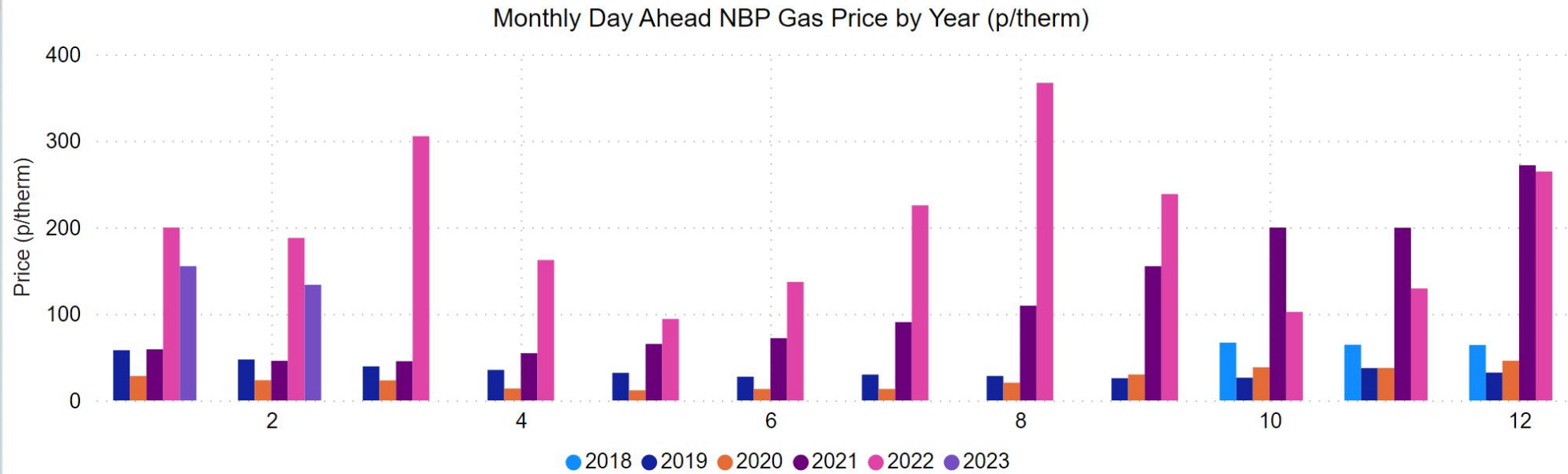
Actual Daily Average Wind Relative to Forecast Daily Average Wind



Fuel Costs and Spreads

Gas Price February 2023

133.65
Monthly Average (p/therm)
119.05
Monthly Low (p/therm)
153.05
Monthly High (p/therm)

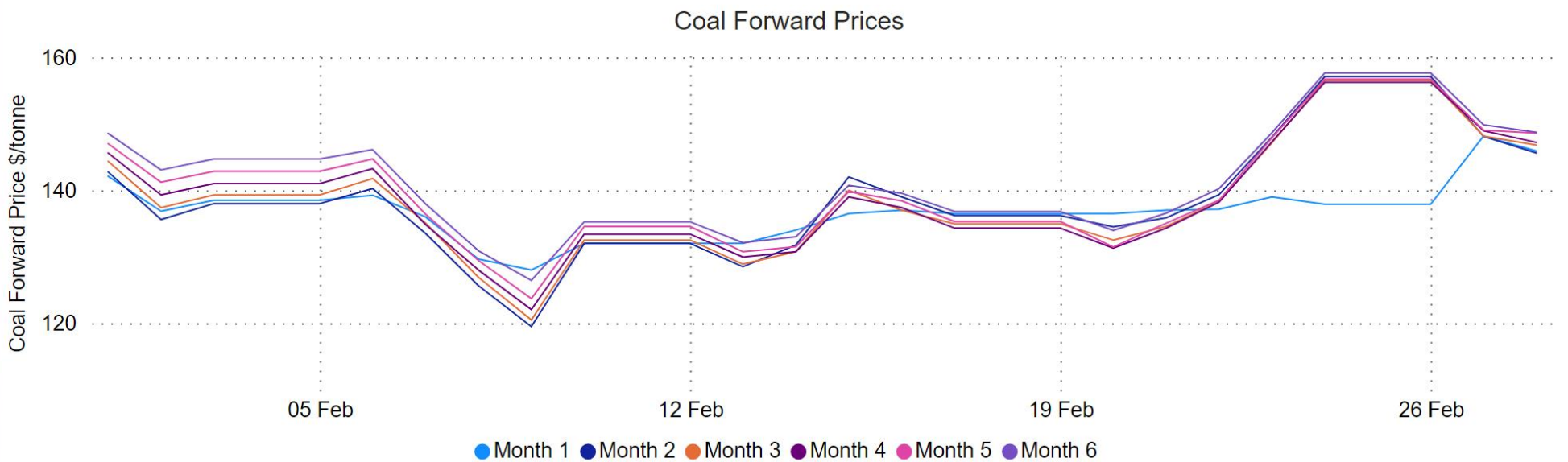
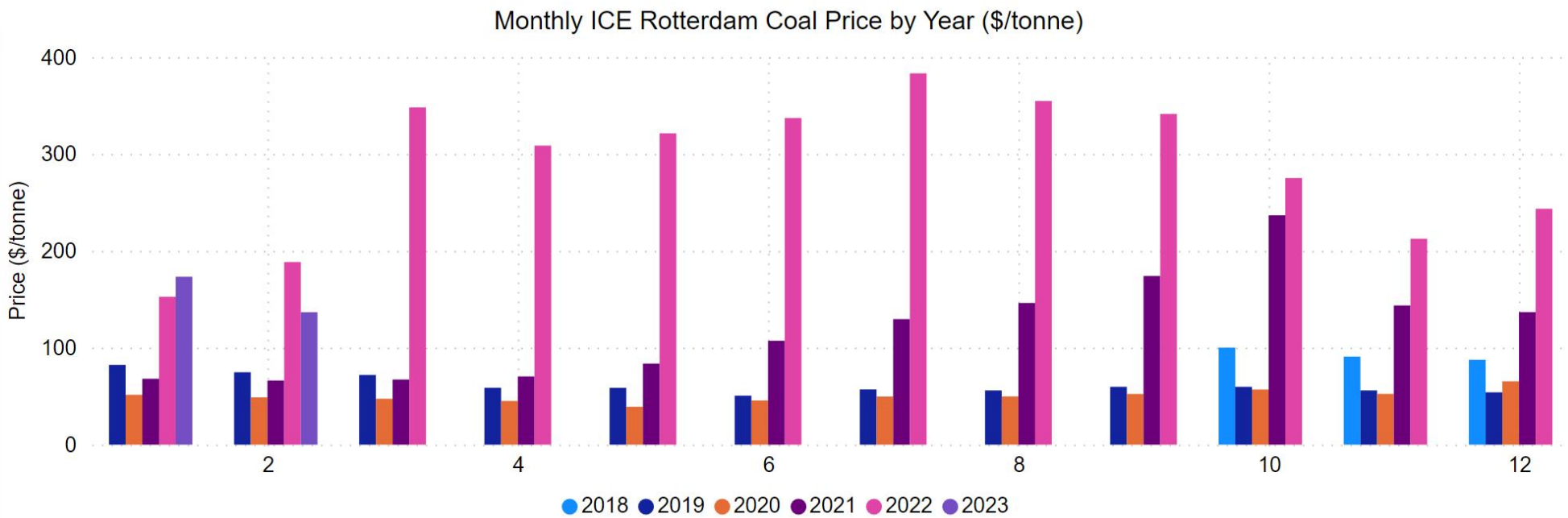


Coal Price February 2023

\$136.71
Monthly Average \$/tonne

\$128.00
Monthly Low \$/tonne

\$148.15
Monthly High \$/tonne

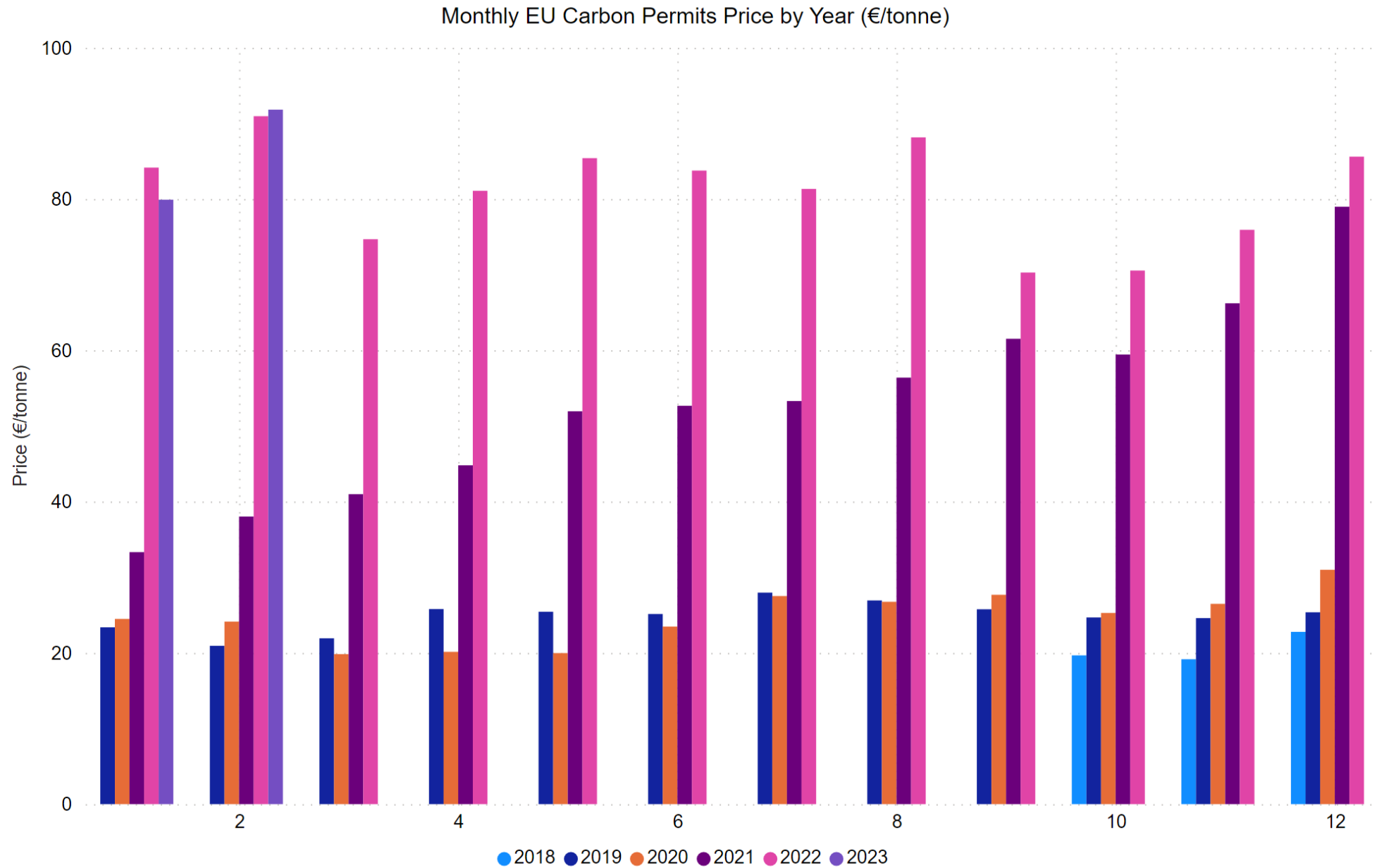


Carbon Price February 2023

€ 91.82
Monthly Average €/tonne

€ 87.25
Monthly Low €/tonne

€ 97.20
Monthly High €/tonne



Spark Spreads February 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.

