



Energy Market Monitoring Report

January 2023





Market Results

Summary Dashboard

Monthly Averages	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23
DAM (€/MWh)	175.11	293.25	218.26	143.27	181.84	267.19	387.64	283.25	136.09	143.12	276.52	162.16
% Change from previous month	-13%	67%	-26%	-34%	27%	47%	45%	-27%	-52%	5%	93%	-41%
% Change from previous year	204%	302%	155%	48%	91%	86%	195%	45%	-37%	-30%	10%	-20%
Actual System Demand (MW)	4833	4675	4408	4208	4169	4085	4099	4197	4330	4733	4885	4885
% Change from previous month	0%	-3%	-6%	-5%	-1%	-2%	0%	2%	3%	9%	3%	0%
% Change from previous year	3%	4%	3%	0%	2%	-1%	-1%	-2%	-1%	0%	2%	1%
Actual Wind Generation (MW)	2777	1559	1426	1428	1129	854	817	1081	2047	2233	1647	1987
% Change from previous month	65%	-44%	-9%	0%	-21%	-24%	-4%	32%	89%	9%	-26%	21%
% Change from previous year	13%	-3%	31%	34%	13%	90%	-3%	24%	33%	45%	-16%	18%
Gas Price p/therm	188.07	305.39	162.26	95.13	139.03	222.44	365.79	235.85	102.32	128.91	264.54	155.16
% Change from previous month	-6%	62%	-47%	-41%	46%	60%	64%	-36%	-57%	26%	105%	-41%
% Change from previous year	317%	586%	217%	45%	93%	145%	234%	52%	-49%	-35%	-3%	-22%
Carbon Price (€/Tonne)	90.96	74.69	81.09	85.41	83.74	81.34	88.20	70.29	70.46	75.84	85.61	79.91
% Change from previous month	8%	-18%	9%	5%	-2%	-3%	8%	-20%	0%	8%	13%	-7%
% Change from previous year	138%	81%	77%	63%	59%	52%	56%	14%	19%	15%	8%	-5%
Coal Price (\$/tonne)	188.51	348.03	308.61	321.33	337.07	383.18	354.67	341.33	275.16	212.52	243.46	173.25
% Change from previous month	23%	85%	-11%	4%	5%	14%	-7%	-4%	-19%	-23%	15%	-29%
% Change from previous year	185%	418%	338%	284%	214%	196%	142%	96%	16%	48%	78%	14%
EWIC % Import Periods	18.15%	68.75%	0.00%	12.33%	27.16%	33.03%	25.84%	16.25%	30.51%	18.61%	30.58%	49.03%
EWIC % Export Periods	59.19%	17.04%	0.00%	23.49%	43.56%	56.52%	51.92%	41.81%	46.24%	54.10%	35.08%	23.66%
EWIC % Not Flow Periods	33.37%	14.21%	100.00%	64.18%	29.28%	10.45%	22.24%	45.28%	23.25%	27.29%	34.34%	27.32%
Moyle % Import Periods	27.31%	55.04%	56.33%	38.54%	40.44%	24.90%	31.55%	35.35%	40.52%	29.51%	44.19%	62.05%
Moyle % Export Periods	72.69%	44.83%	43.63%	61.46%	59.56%	10.72%	66.26%	63.85%	59.44%	69.83%	55.78%	37.95%
Moyle % Not Flow Periods	7.14%	0.13%	0.00%	0.00%	0.00%	64.38%	2.18%	0.80%	0.03%	0.66%	0.03%	0.00%

Market Volumes January 2023

Daily Average Volume MWh

DAM	122,920
IDA1	15,855
IDA2	3,015
IDA3	990
IDC	80

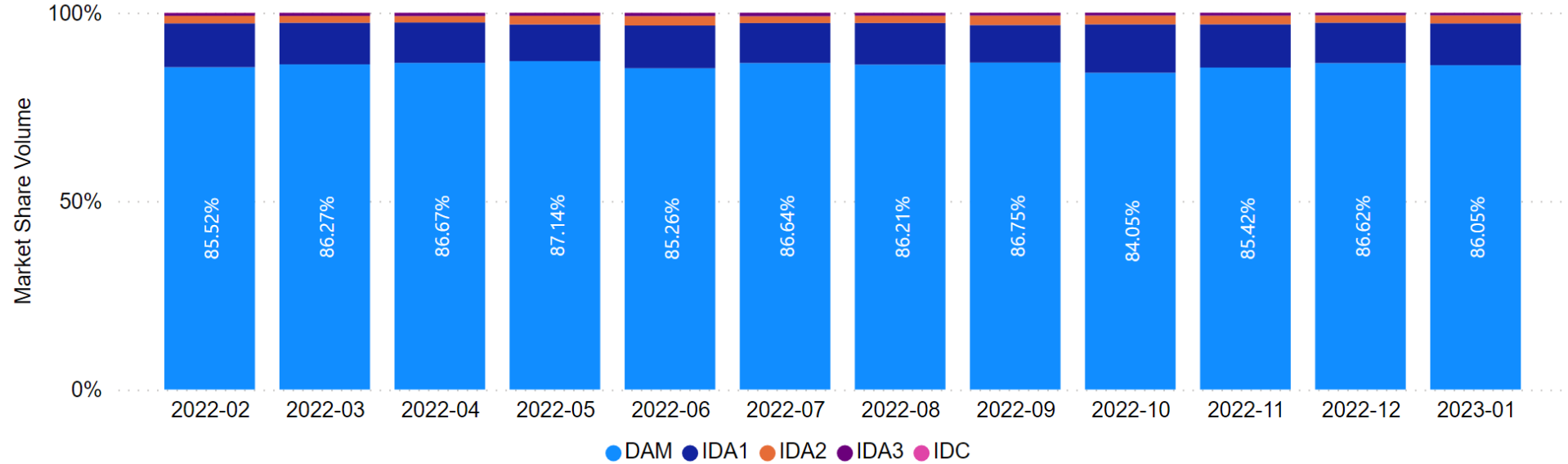
Total Monthly Volume MWh

DAM	3,810,515
IDA1	491,520
IDA2	93,457
IDA3	30,699
IDC	2,092
Total	4,428,283

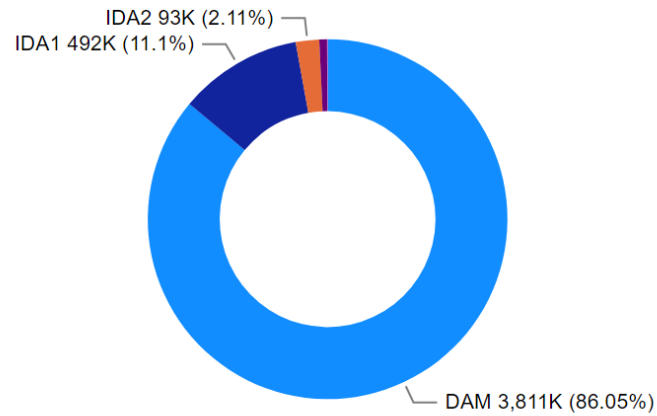
Total Market Value €

IDC	€ 350,952
IDA3	€ 5,840,084
IDA2	€ 16,783,497
IDA1	€ 82,375,127
DAM	€ 638,063,934
Total	€ 743,413,594

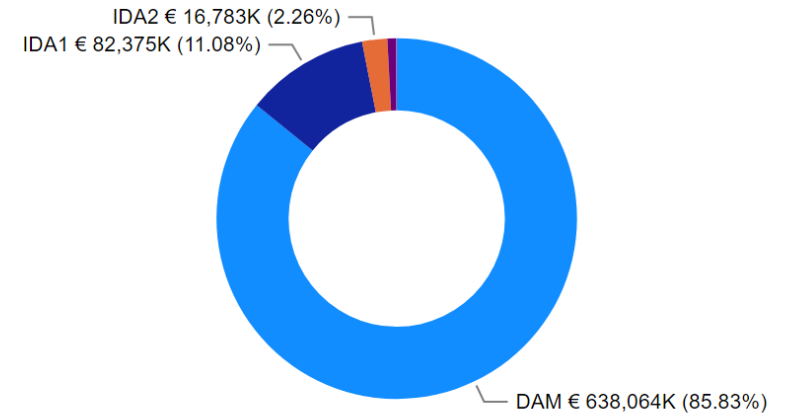
Ex-Ante Monthly Volume by Market



Ex-Ante Volumes (MWh)



Ex-Ante Values (€)



● DAM ● IDA1 ● IDA2 ● IDA3 ● IDC

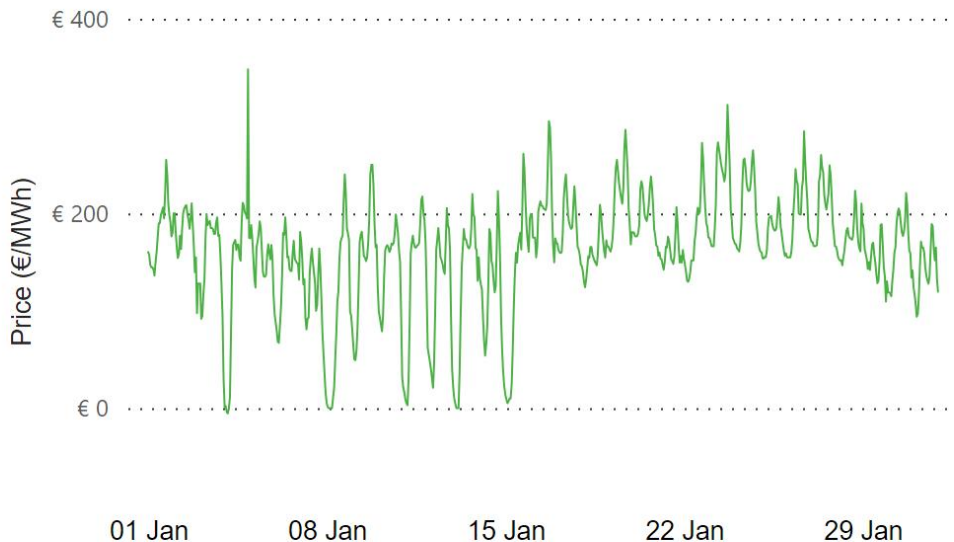
● DAM ● IDA1 ● IDA2 ● IDA3 ● IDC

Day Ahead Market January 2023

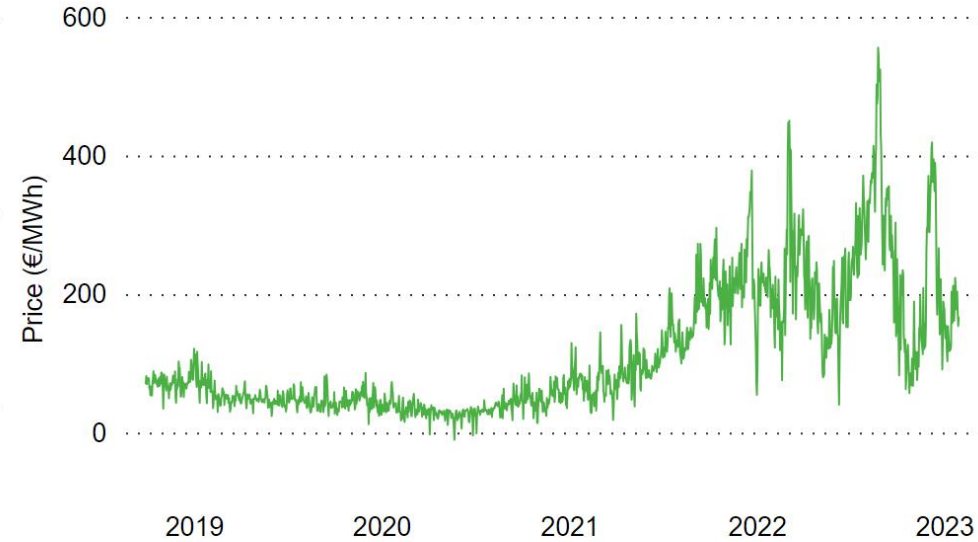
€ 162.16
Average DAM Price
-€ 5.27
Min DAM Price
€ 348.00
Max DAM Price

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

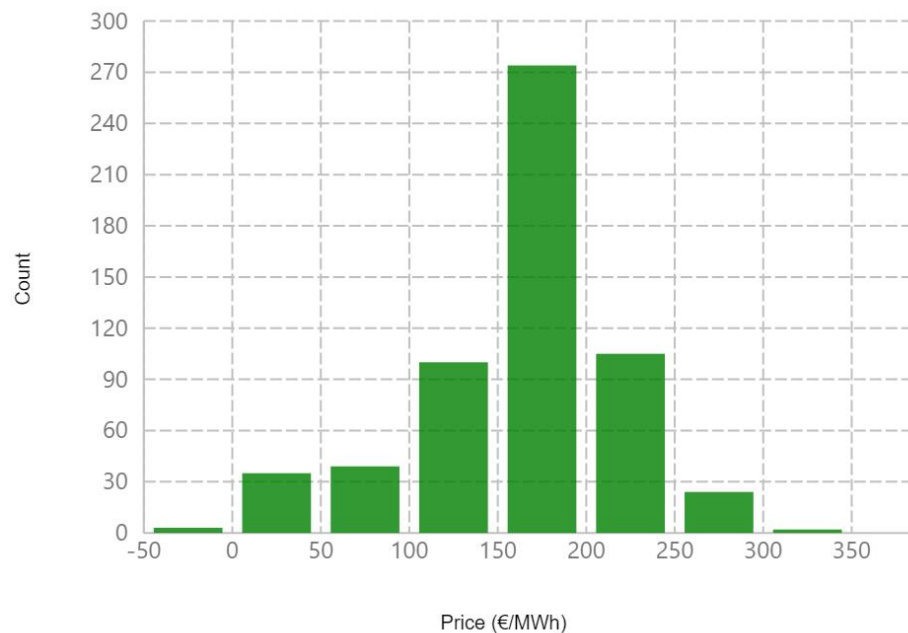
DAM Prices



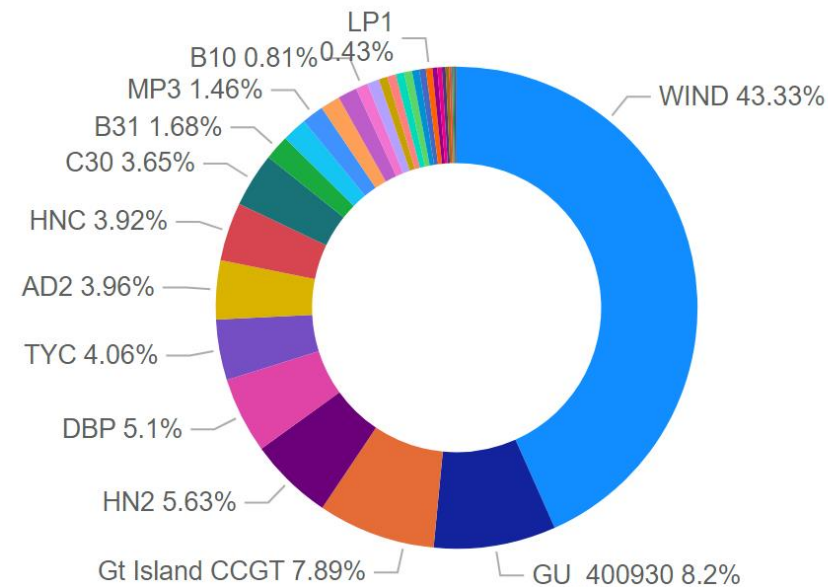
Historic Daily Average DAM Prices



Histogram of DAM Prices



DAM Sell Side Generator Order Results

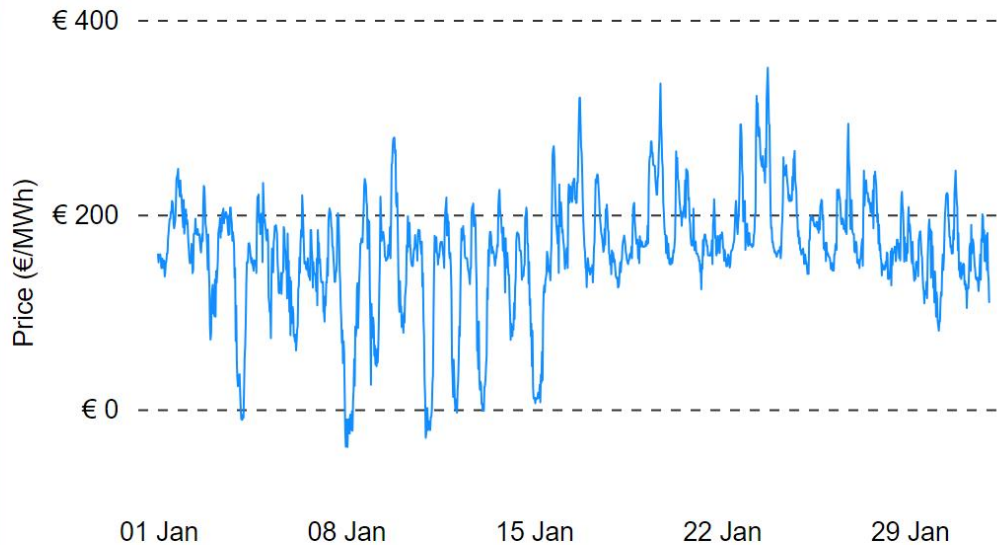


Intraday Market January 2023

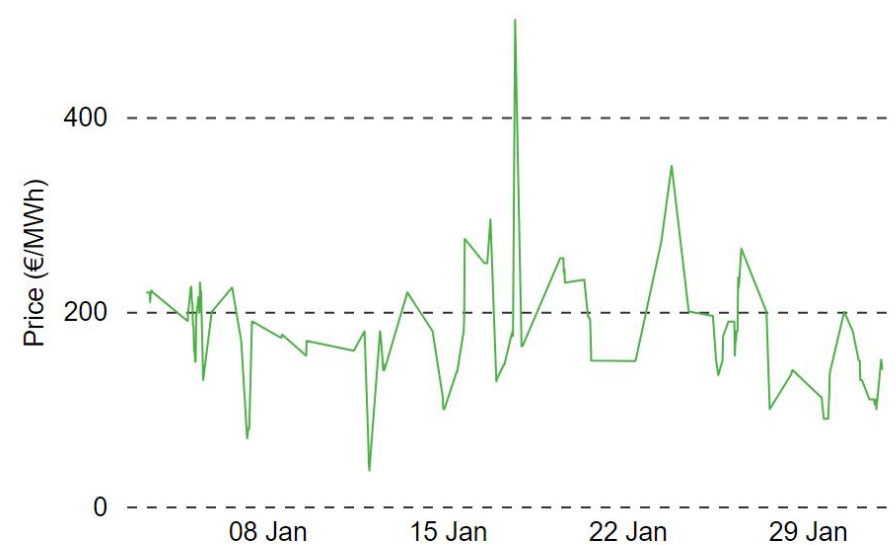
€ 161.41
Average IDA1 Price
-€ 38.84
Min IDA1 Price
€ 350.79
Max IDA1 Price

The most frequent price range for January was between €120 and €180

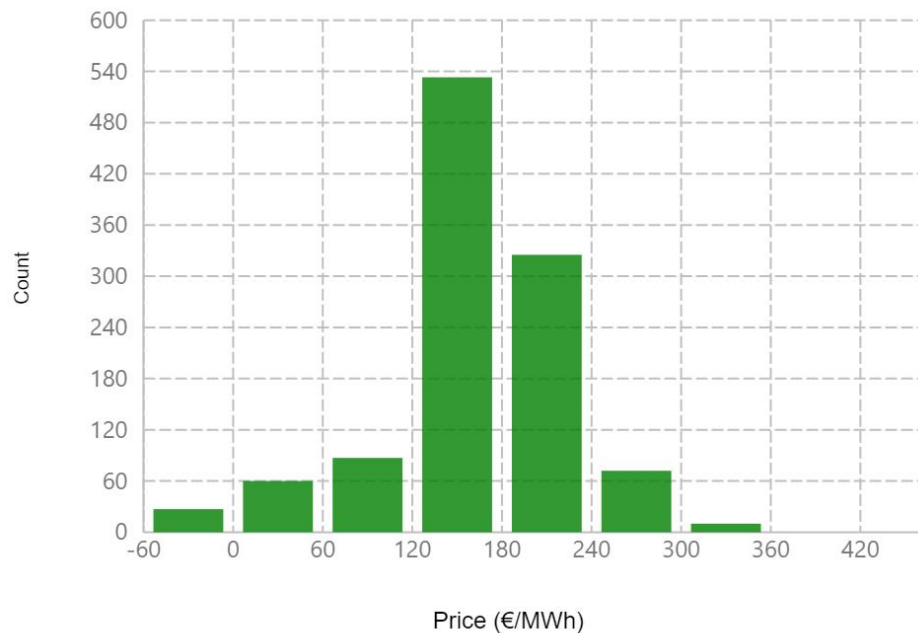
IDA 1 Prices



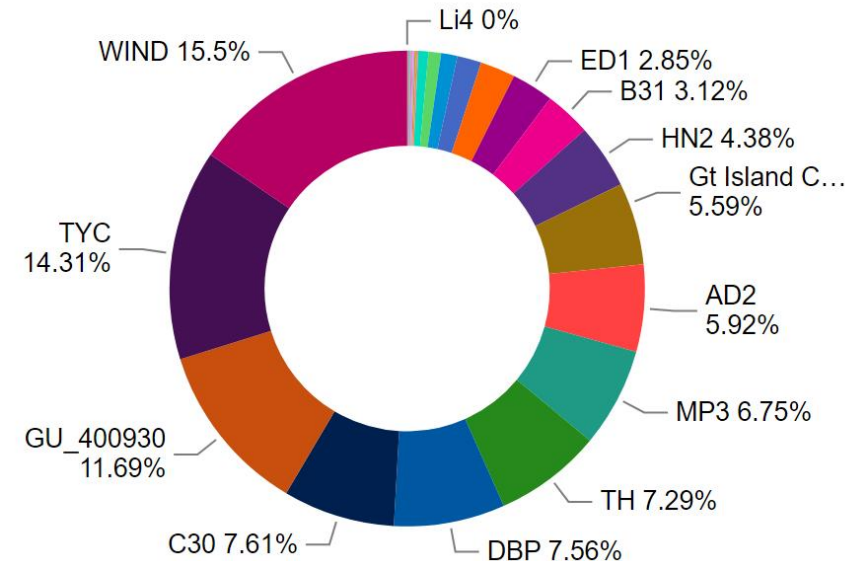
IDC Prices



Histogram of IDA1 Prices



IDA1 Sell Order Results By Market Participant



SEM vs GB

January 2023

SEM Day Ahead Price

€ 162.16
Average Price

-€ 5.27
Min Price

€ 348.00
Max Price

GB Day Ahead Price

€ 149.90
Average Price

-€ 1.11
Min Price

€ 291.85
Max Price

SEM IDA1 Price

€ 161.41
Average Price

-€ 38.84
Min Price

€ 350.79
Max Price

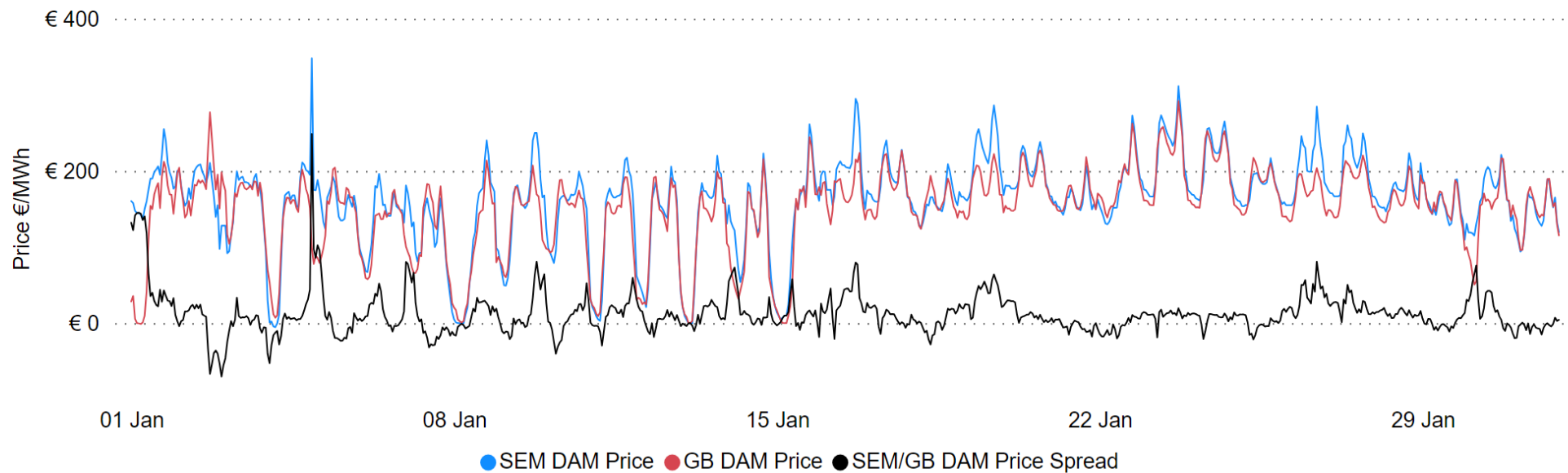
GB IDA1 Prices

€ 154.18
Average Price

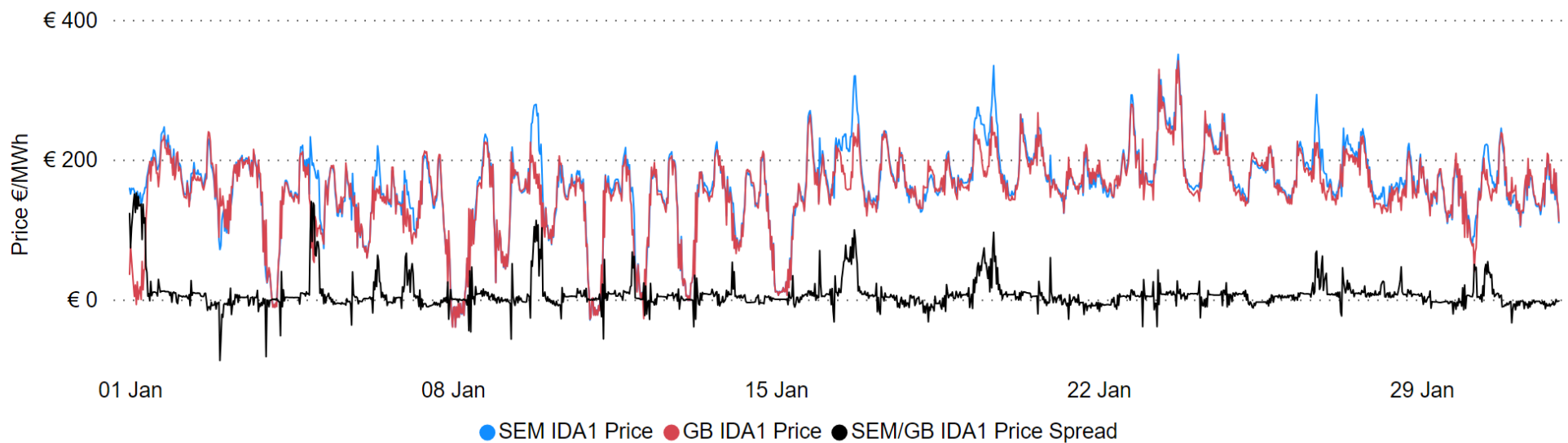
-€ 39.77
Min Price

€ 341.55
Max Price

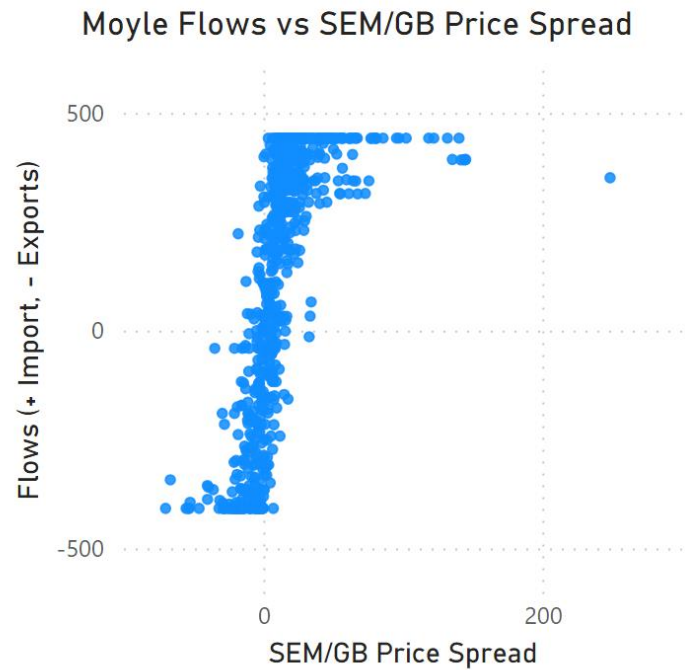
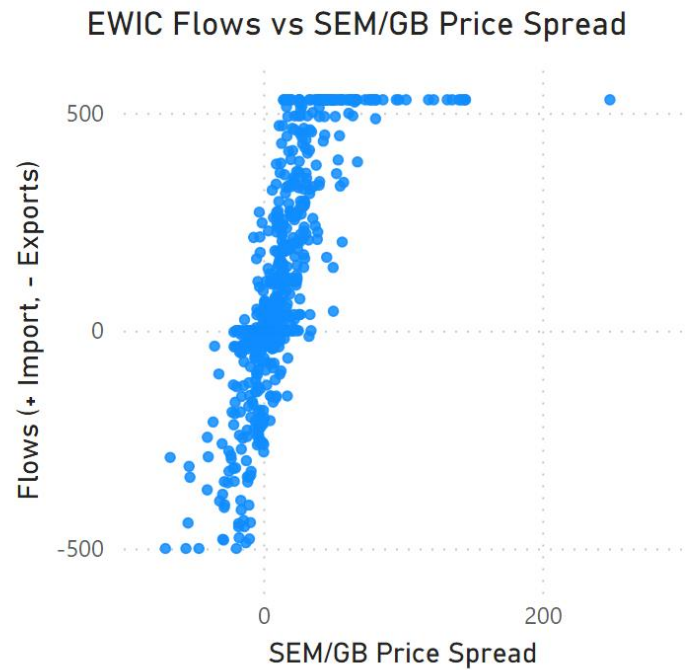
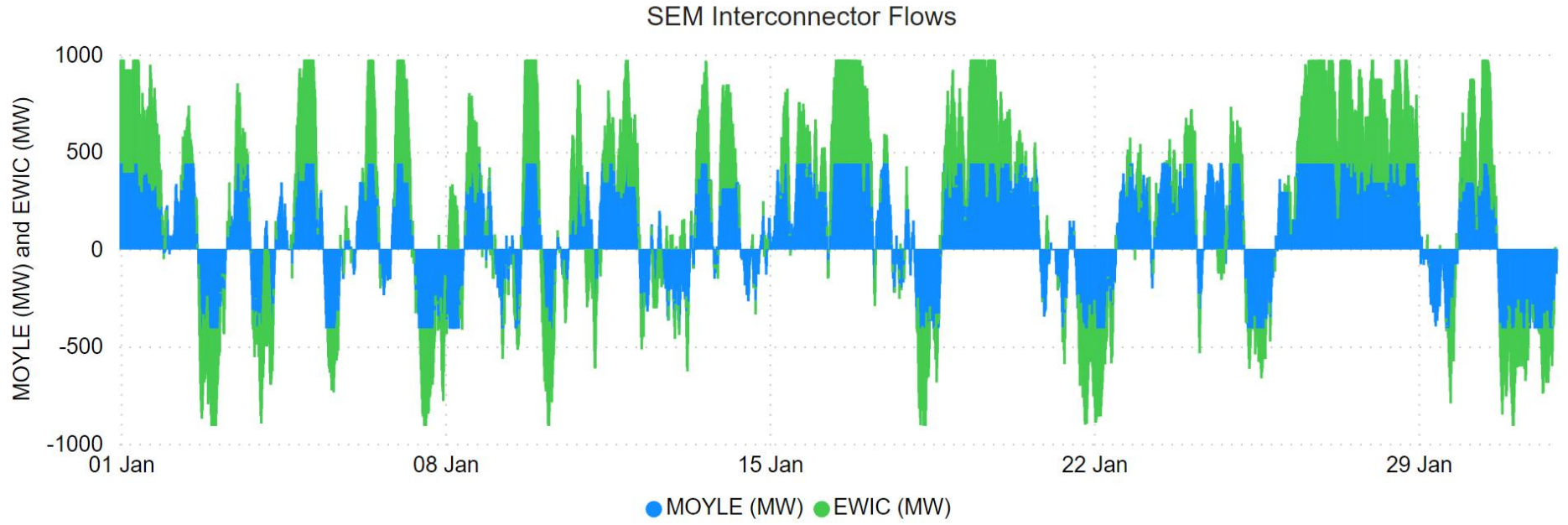
SEM & GB DAM Prices



SEM & GB IDA1 Prices



SEM Interconnectors January 2023



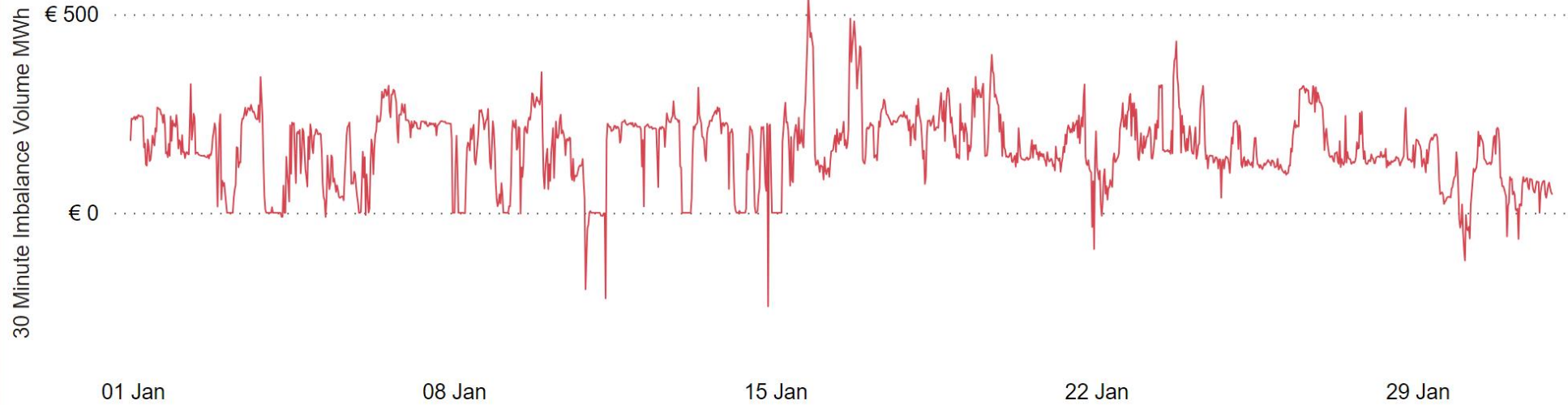
Interconnector Flows

January 2023	MW
Moyle Imports	323
EWIC Imports	277
Moyle Exports	-182
EWIC Exports	-237
SEM Imports	534
SEM Exports	-338
SEM Net Import/Export	199

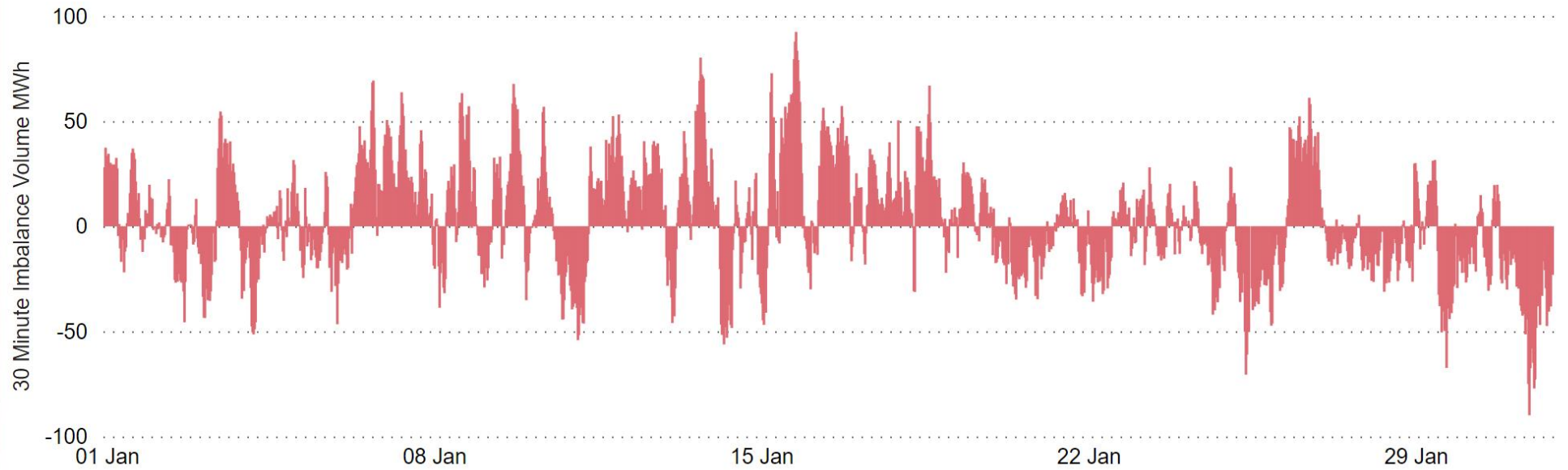
Balancing Market January 2023

30 Minutes Imbalance Price
€ 162.70
Average Price
-€ 235.65
Lowest Price
€ 544.79
Highest Price

30 Minute Imbalance Prices



30 Minute Imbalance Volume



Demand and Generation Mix

Demand January 2023

SEM Demand (MW)

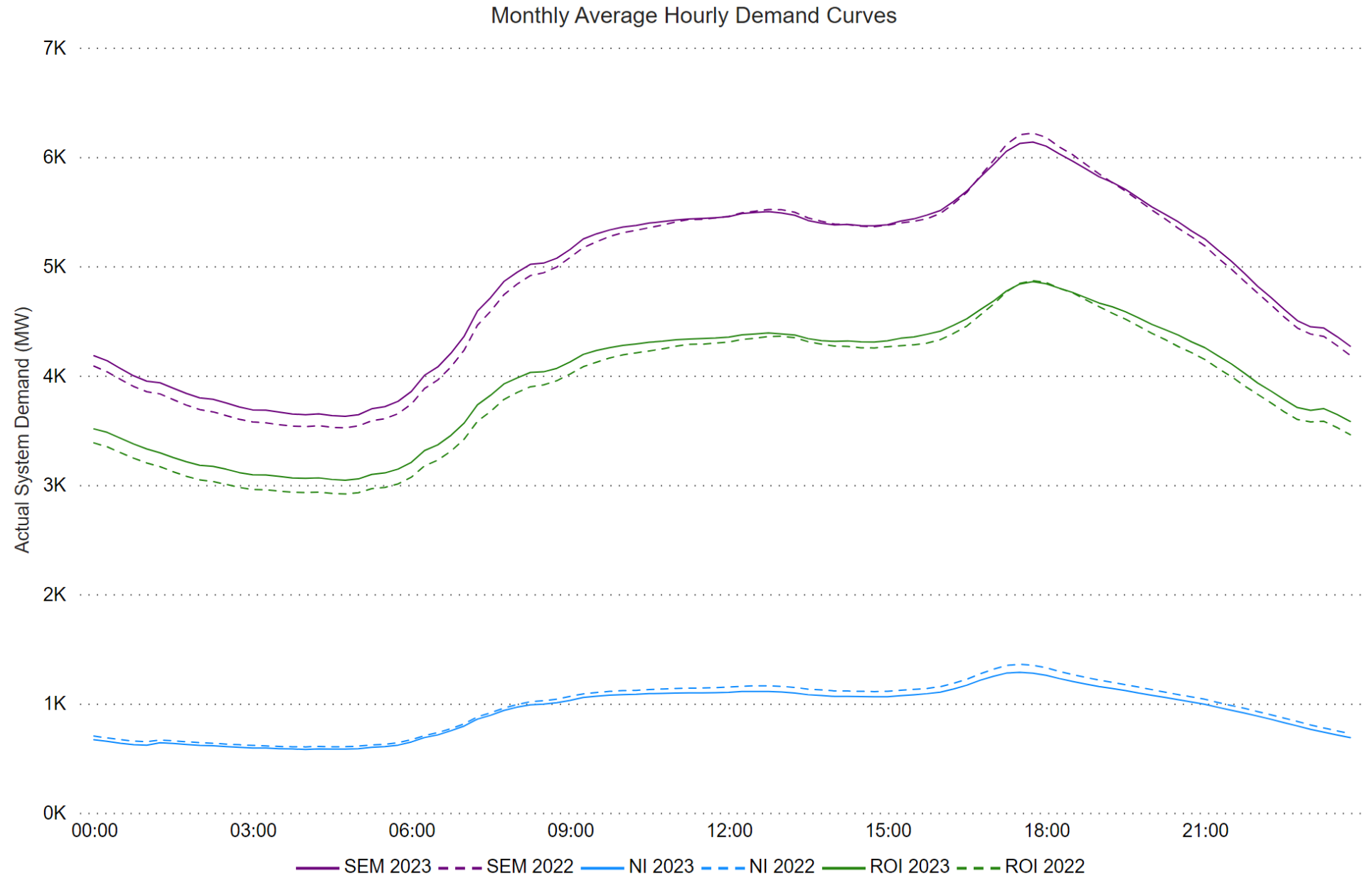
4,885.32	4,833.67
SEM Average 2023	SEM Average 2022
3,627.19	3,522.61
SEM Min 2023	SEM Min 2022
6,136.39	6,217.10
SEM Max 2023	SEM Max 2022

NI Demand (MW)

922.35	961.90
NI Average 2023	NI Average 2022
580.81	603.68
NI Min 2023	NI Min 2022
1,285.81	1,359.45
NI Max 2023	NI Max 2022

ROI Demand (MW)

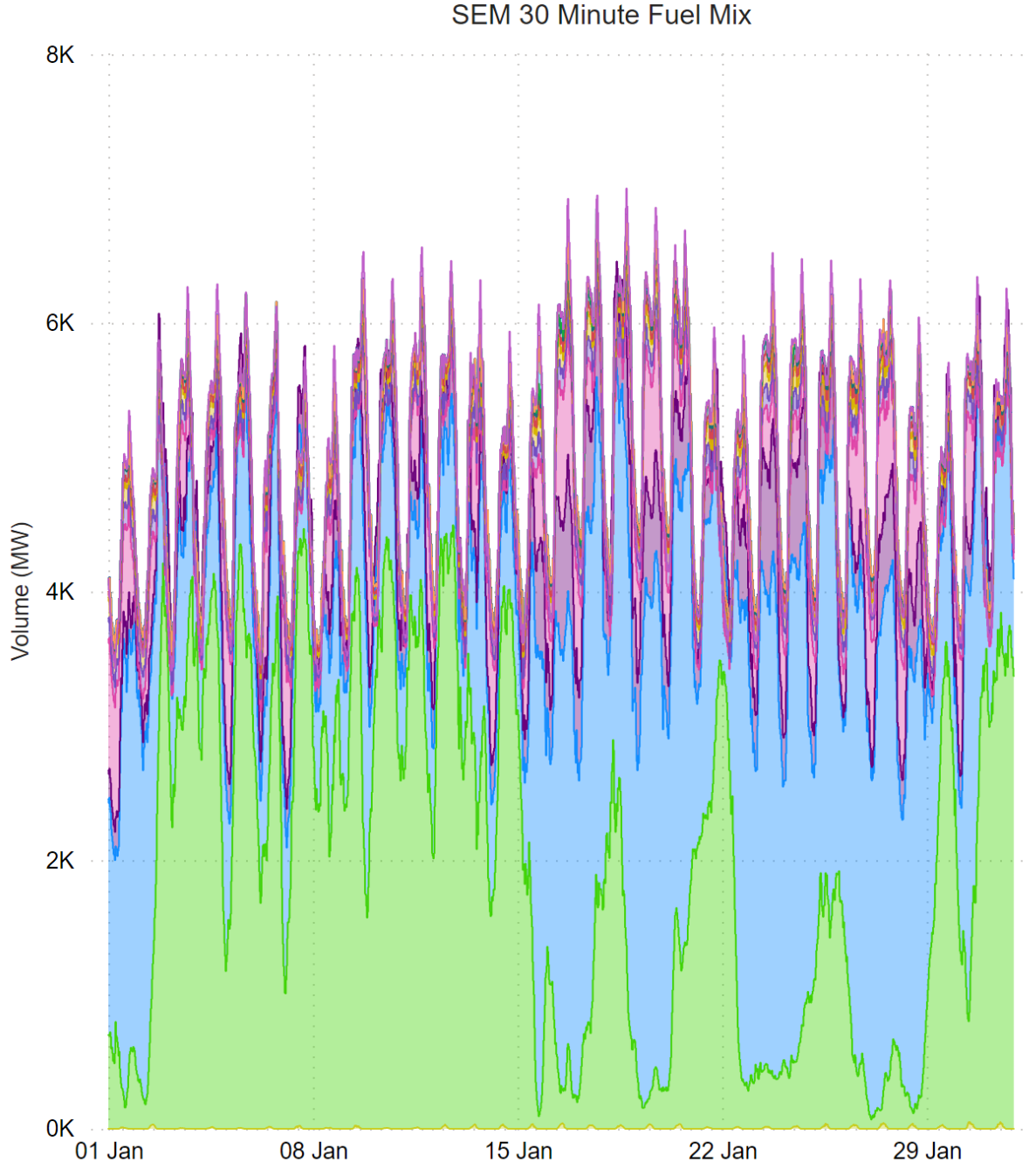
3,962.98	3,871.78
ROI Average 2023	ROI Average 2022
3,043.03	2,917.35
ROI Min 2023	ROI Min 2022
4,858.74	4,867.58
ROI Max 2023	ROI Max 2022



Fuel Mix January 2023

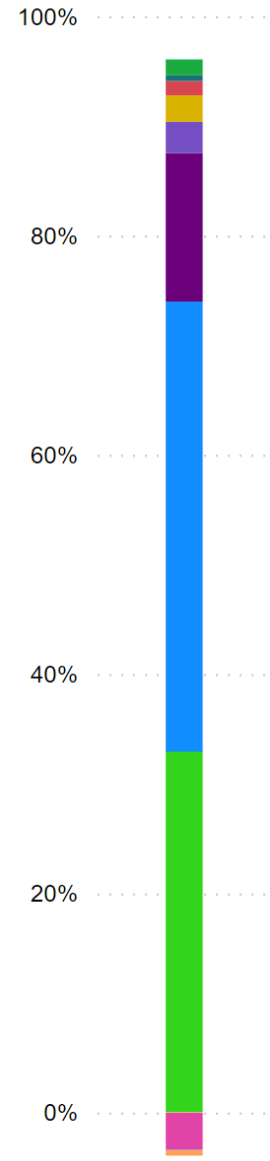
Fuel Type	Average (MW)	%
CCGT	1,992	39.8%
WIND	1,988	39.74%
INTERCONNECTOR	199.8	4.0%
COAL	406	8.1%
HYDRO	200	4.0%
CHP	132	2.6%
PEAT	52	1.0%
WASTE	72	1.4%
SOLAR	4	0.1%
DSR	21	0.5%
OIL	41	0.1%
OCGT	1	0.0%
BATTERY	-4	-0.1%
PUMPED STORAGE	-21	-0.4%

Fuel Type	Max (MW)	Min (MW)
CCGT	3,914	656
WIND	4,493	69
INTERCONNECTOR	977	-904
COAL	1,030	100
HYDRO	184	99
CHP	169	0
PEAT	91	0
WASTE	81	41
SOLAR	49	0
DSR	38	0
OIL	347	0
OCGT	122	0
BATTERY	42	-18
PUMPED STORAGE	292	-301

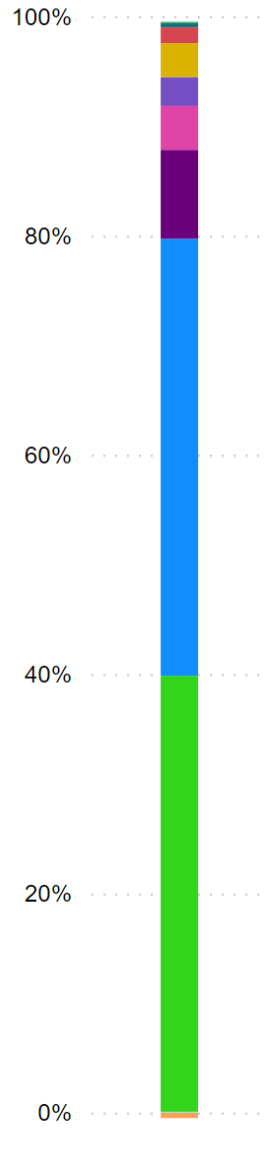


- SOLAR
- WIND
- CCGT
- COAL
- IC
- CHP
- HYDRO
- PEAT
- WASTE
- DSR
- OIL
- OCGT
- BATTERY
- PS

SEM Fuel Mix
January 2022



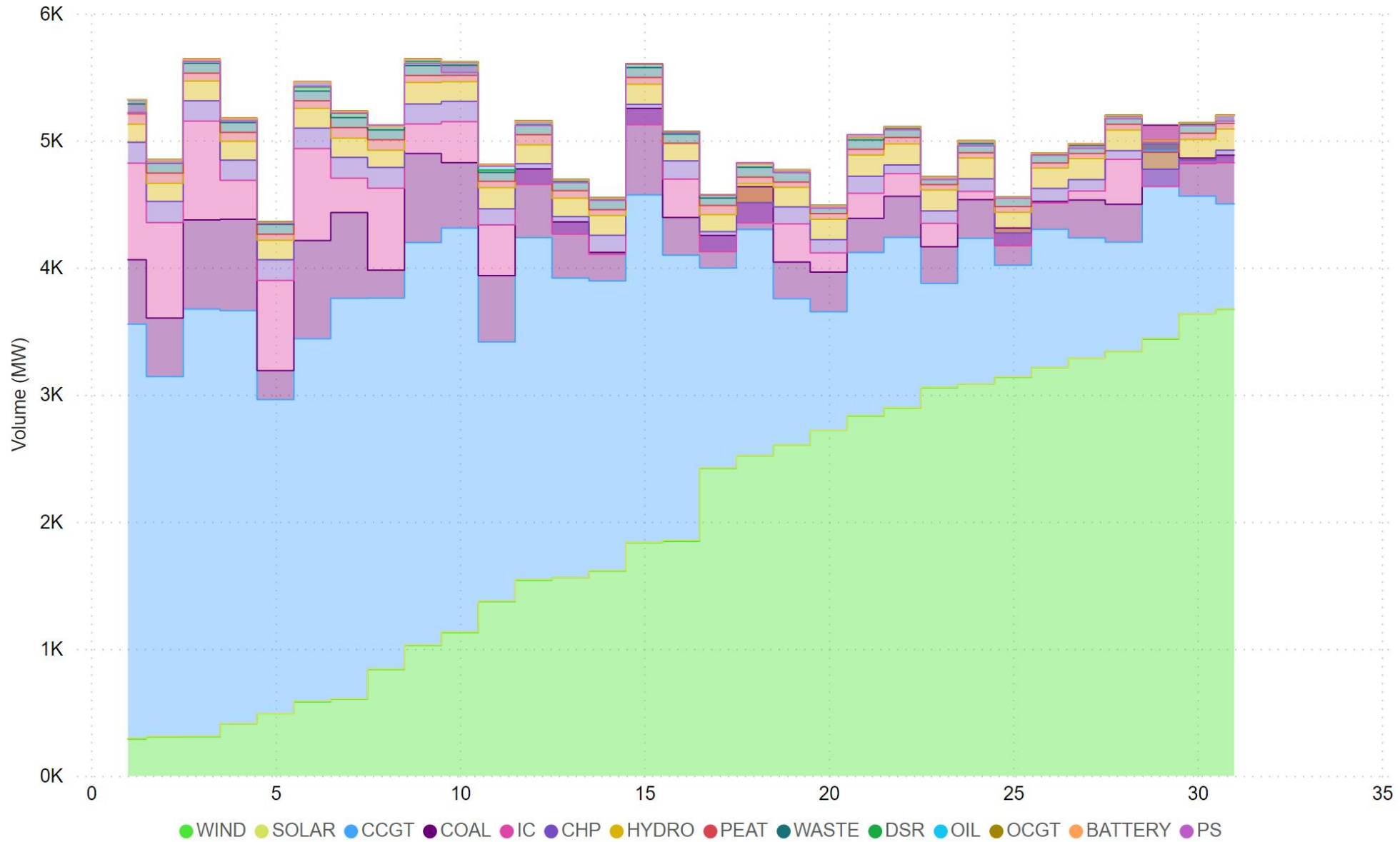
SEM Fuel Mix
January 2023



Fuel Mix Ranked by Wind Volume January 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.

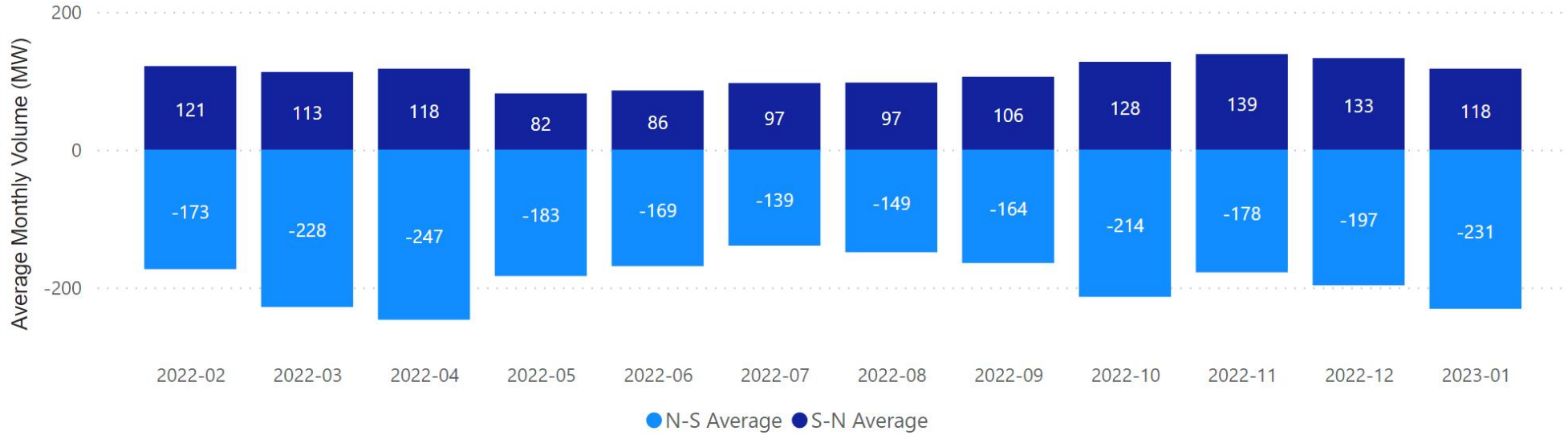
Daily SEM Fuel Mix Ranked by Wind Volume for the Month



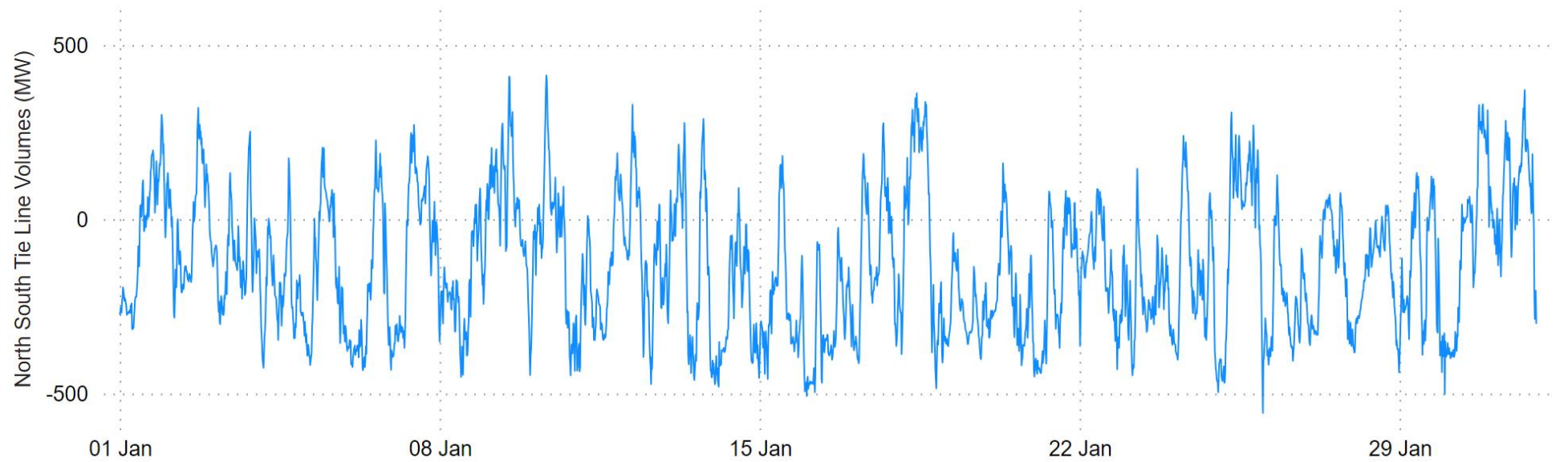
North-South Tie Line January 2023

Flow Direction (Average)	MW
NI to ROI	-230.95
ROI to NI	117.61
NET NI to ROI	-136.56

Average Flows N-S Tie Line Long Term Trend



North South Tie Line Volumes 15 minute periods

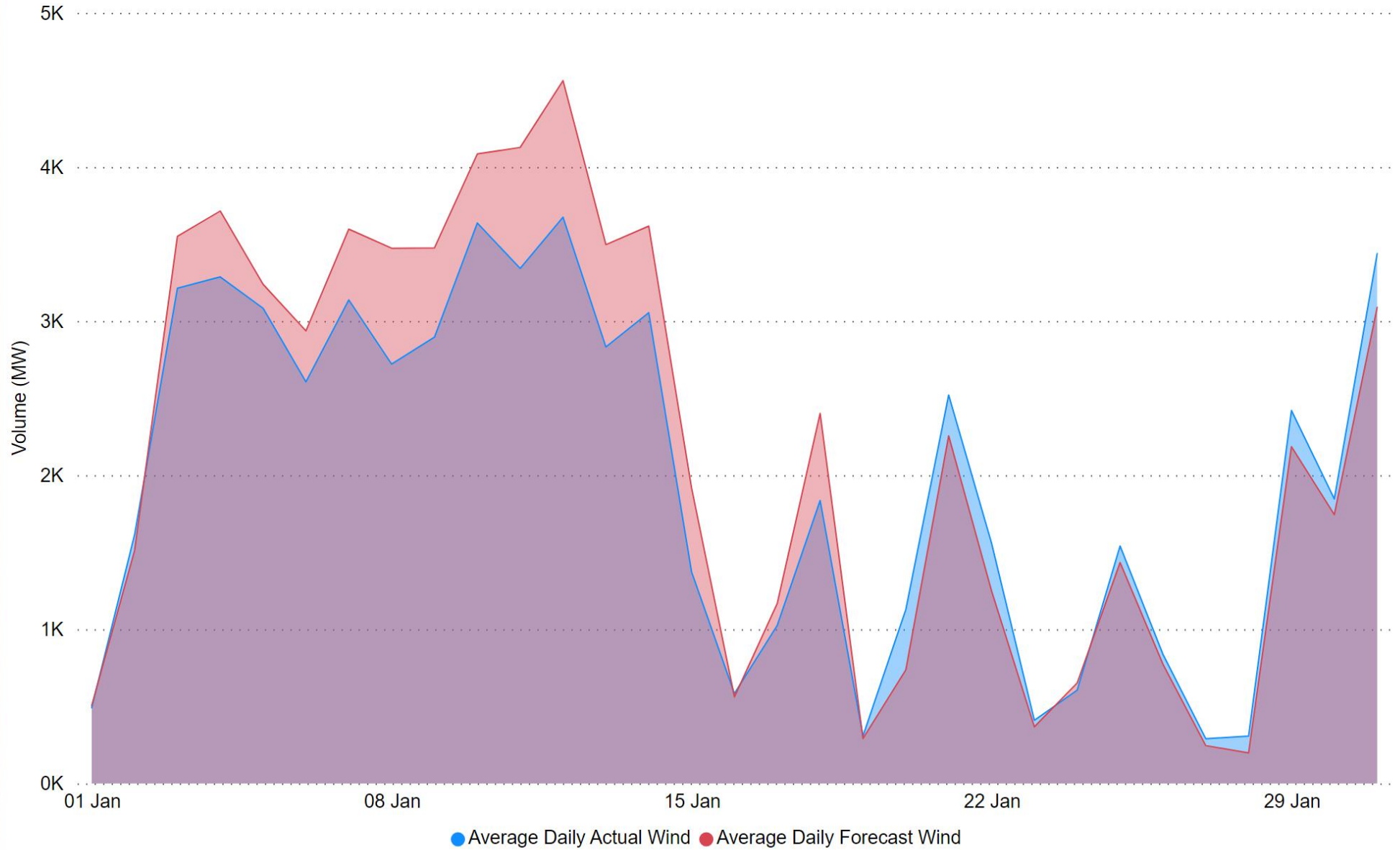


Wind Generation January 2023

Average Daily Actual Wind (MW)
1,987

Average Daily Forecast Wind (MW)
2,166

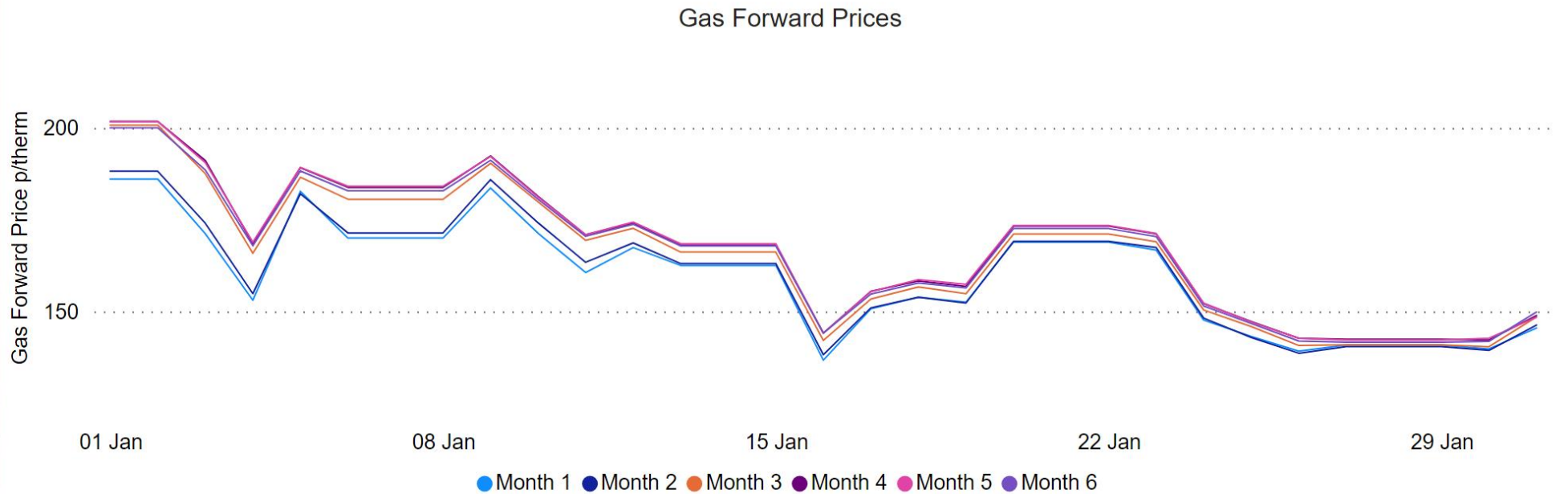
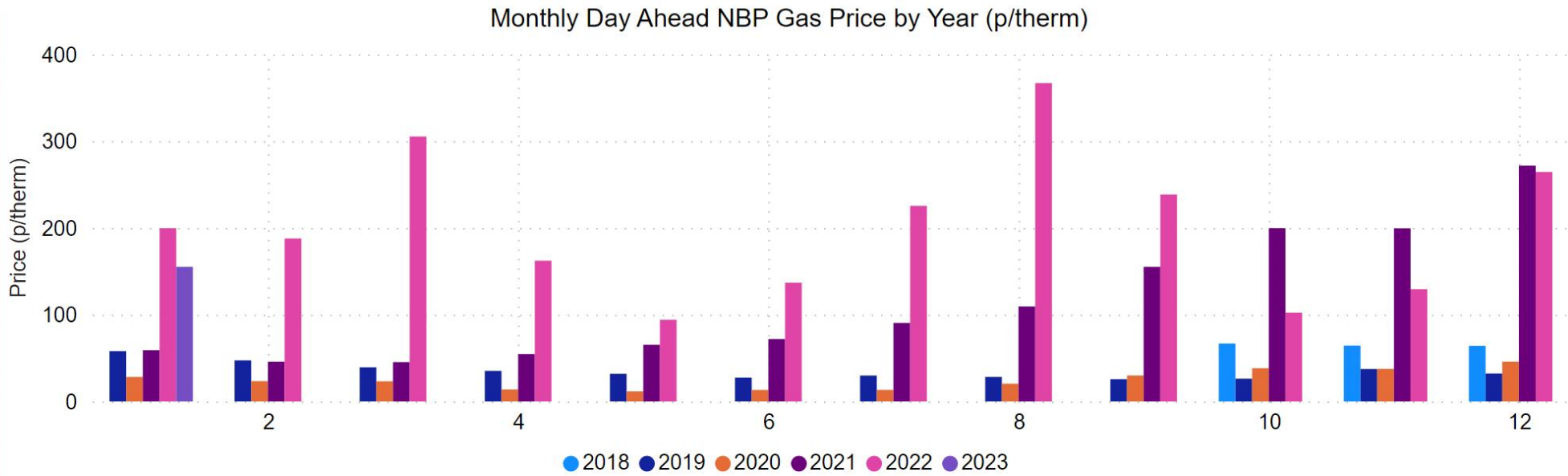
Actual Daily Average Wind Relative to Forecast Daily Average Wind



Fuel Costs and Spreads

Gas Price January 2023

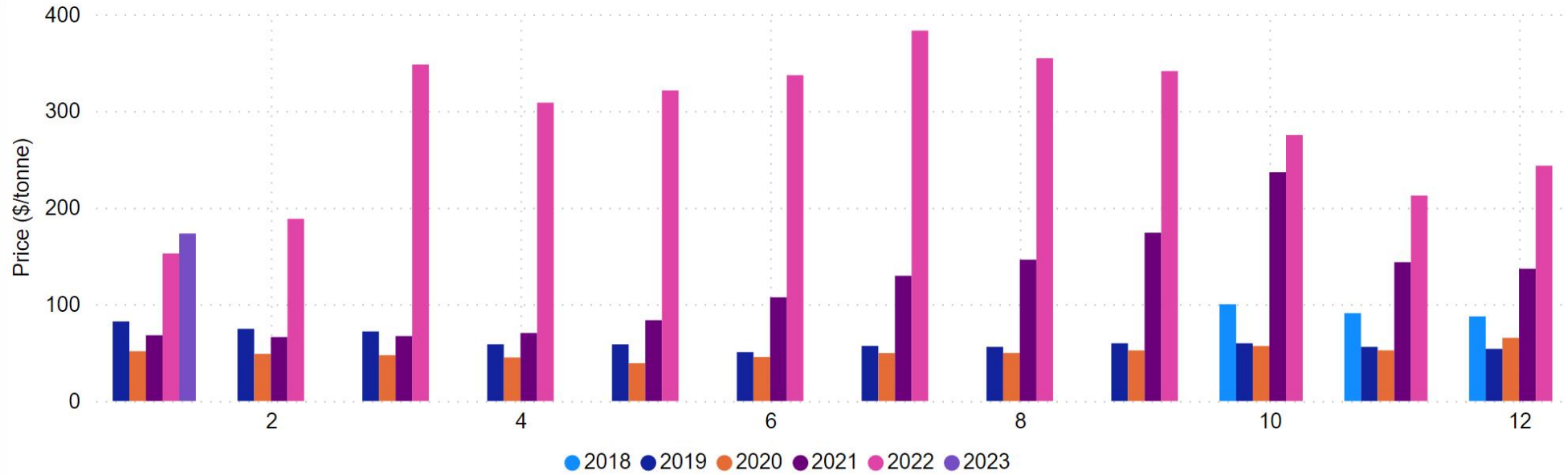
155.16
Monthly Average (p/therm)
138.00
Monthly Low (p/therm)
172.05
Monthly High (p/therm)



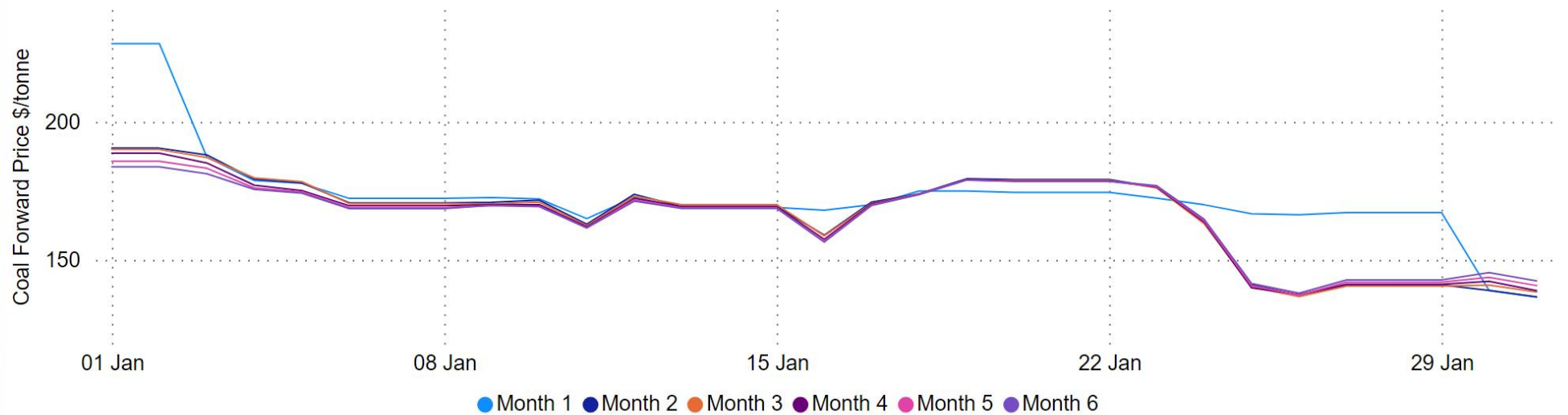
Coal Price January 2023

\$173.25
Monthly Average \$/tonne
\$136.65
Monthly Low \$/tonne
\$228.35
Monthly High \$/tonne

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



Coal Forward Prices

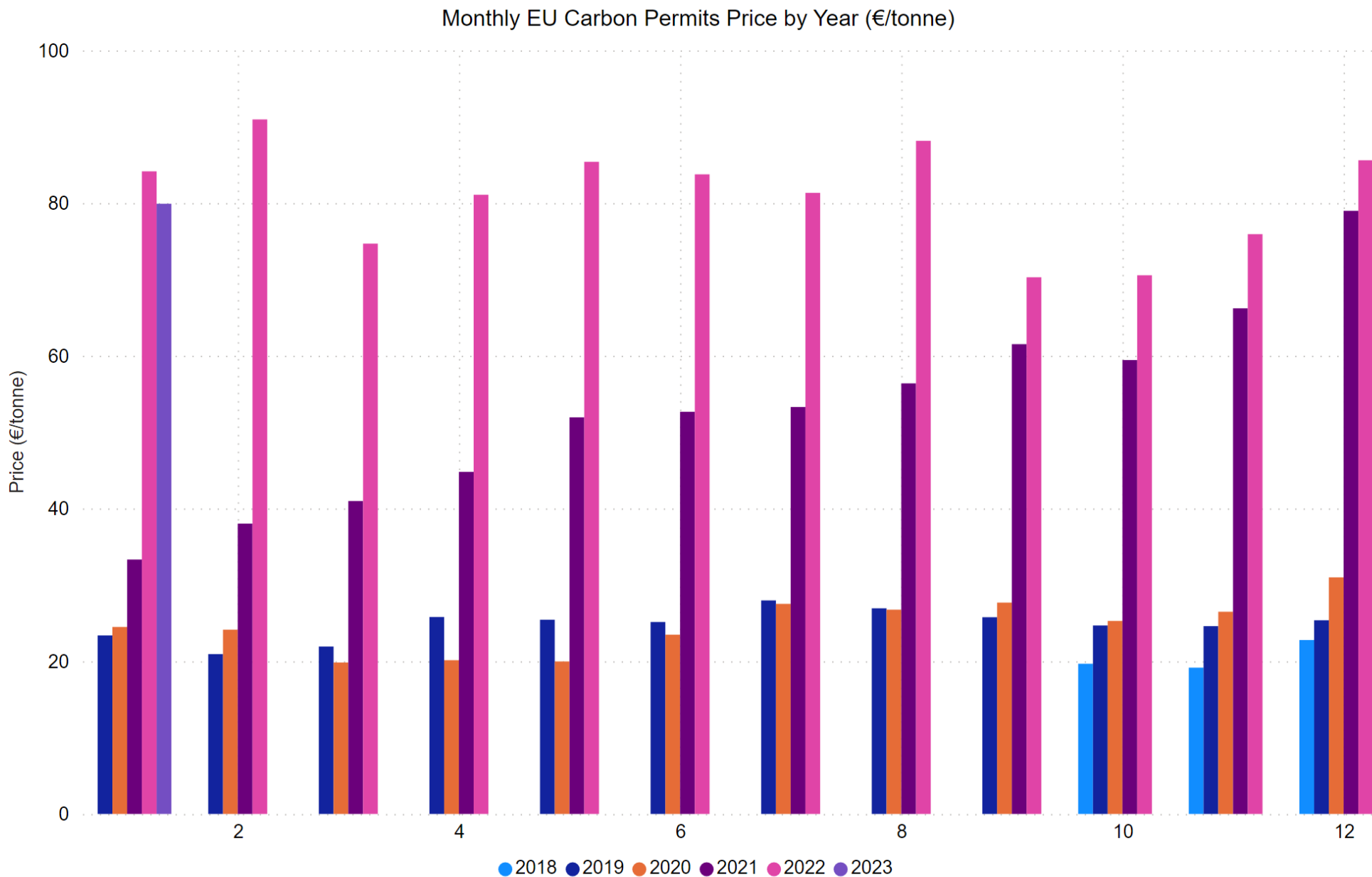


Carbon Price January 2023

€ 79.91
Monthly Average €/tonne

€ 74.73
Monthly Low €/tonne

€ 90.10
Monthly High €/tonne

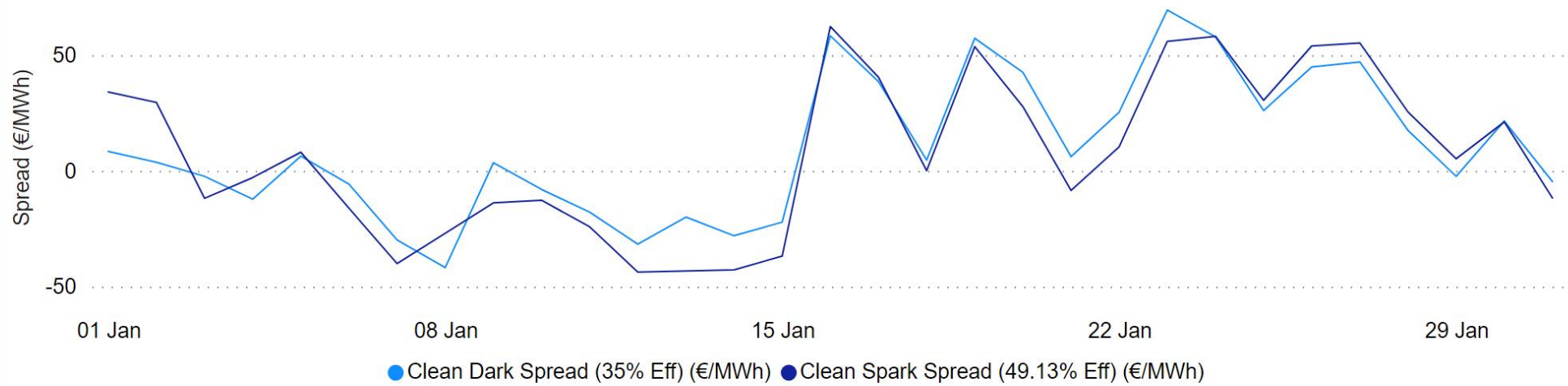


Spark Spreads January 2023

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)

