Nordic Capacity Calculation Methodology Project (Nordic CCM)

Nordic CCM

External Parallel Run Market Report
Appendix for Week 6 of 2024

Appendix

Contents

Domain validation 2

Socio Economic Welfare 3

Prices 12

Net positions 16

Border flow 32

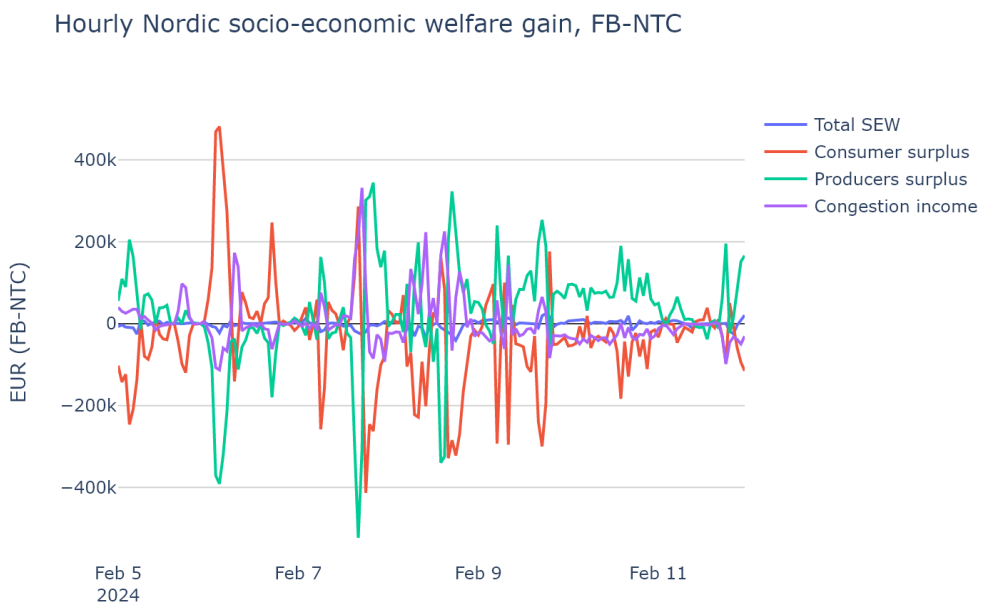
Domain validation (NEW)

Energy Delivery Day:	Mon. 05.02.	Tue. 06.02.	Wed. 07.02.	Thu. 08.02.	Fri. 09.02.	Sat. 10.02.	Sun. 11.02.
Invalid/missing IGMs	0	0	10	0	0	0	0
Substituted IGMs	0	0	0	0	0	0	0
Invalid CGMs	0	0	0	0	0	0	0
FB domain back-up	0	0	0	0	0	0	0
FAV provision	0	1	1	0	0	0	0
Final domain acceptance (1 TSO =25%)	100%	100%	100%	100%	100%	100%	100%

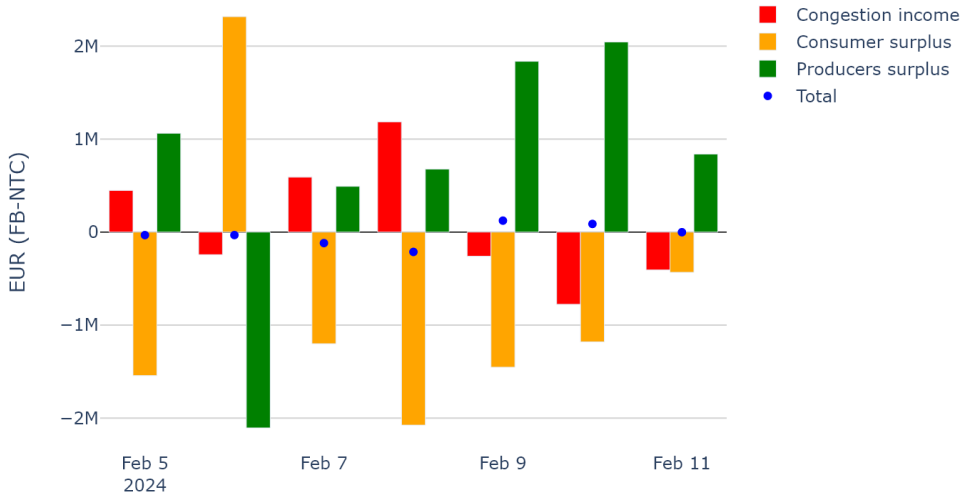
Socio Economic Welfare

For the socio-economic welfare graphs, the contribution from interconnectors out of the Nordic CCR is not included. Thus, the values for the congestion income are only from the Nordic internal bidding zones, and not from the contributions on the Hansa/Baltic borders. This includes the country specific socio-economic welfare graphs.

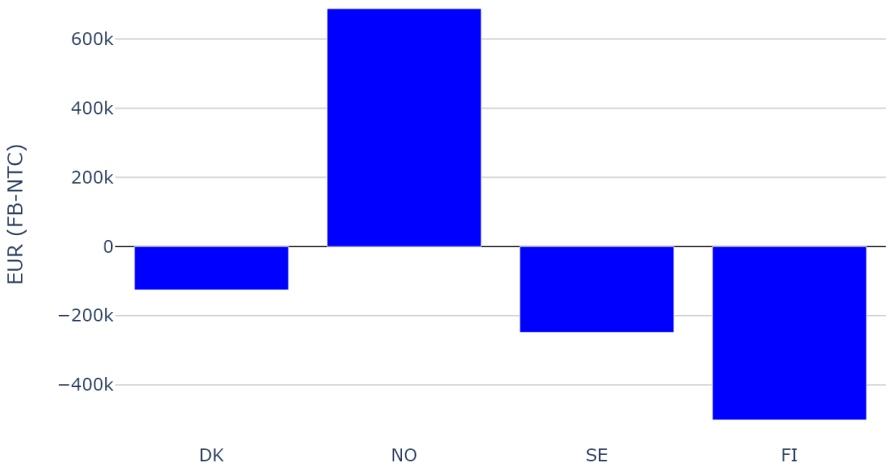
Nordics

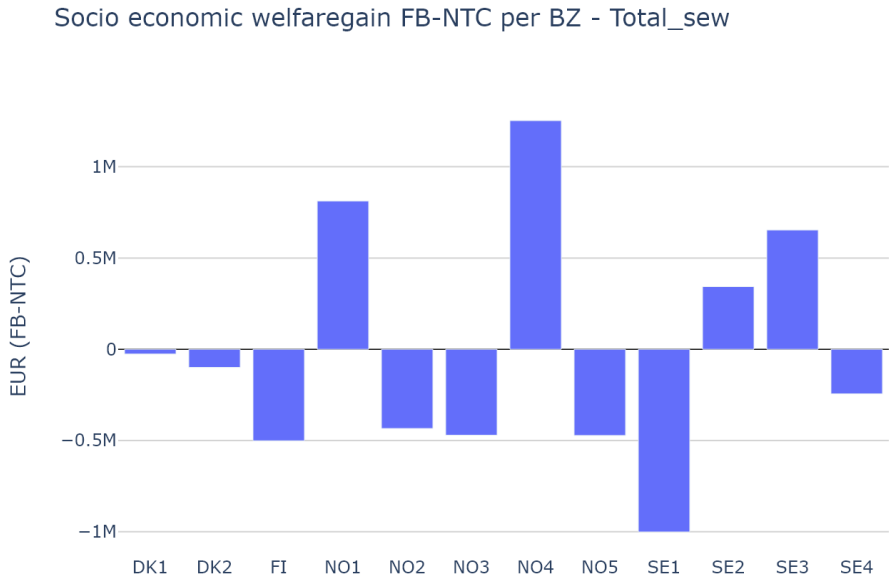


Nordics socio-economic welfare per stakeholder and day

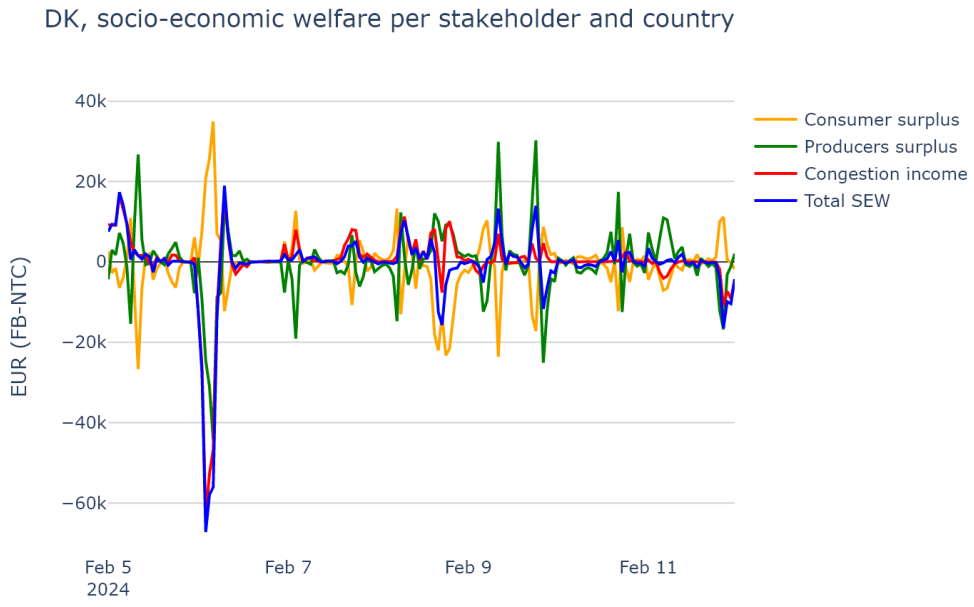


Total Nordic socio-economic welfare per country

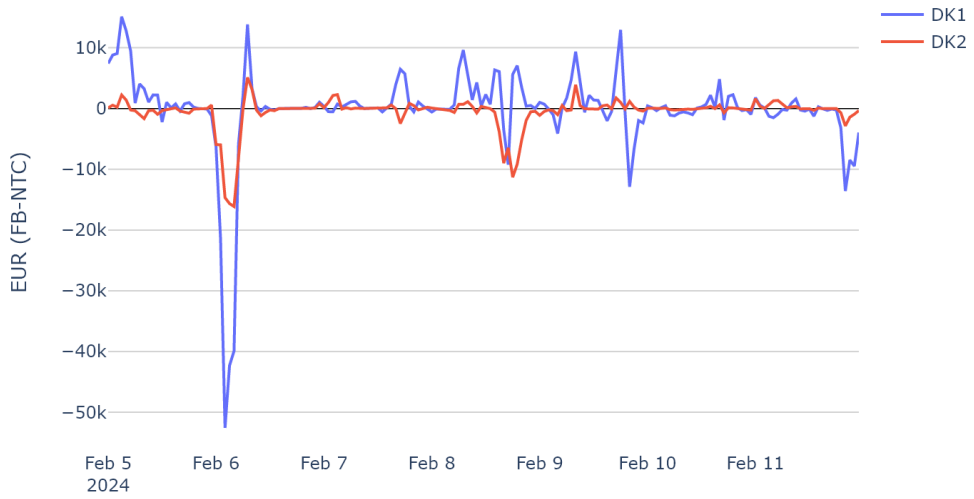



Socio economic welfaregain FB-NTC per BZ - Total_sew
EUR (FB-NTC)
1M
0.5M
0
−0.5M
−1M
DK1
DK2
FI
NO1
NO2
NO3
NO4
NO5
SE1
SE2
SE3
SE4

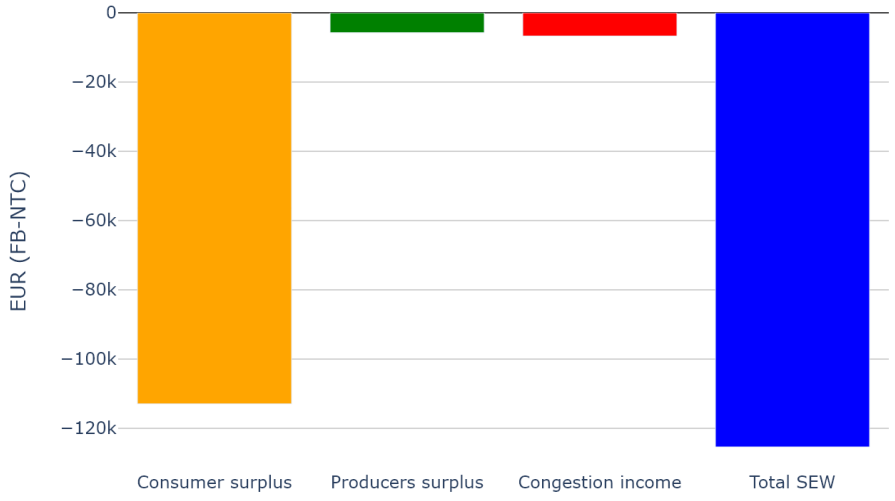
Denmark


DK, socio-economic welfare per stakeholder and country
EUR (FB-NTC)
40k
20k
0
−20k
−40k
−60k
Feb 5
2024
Feb 7
Feb 9
Feb 11
Consumer surplus
Producers surplus
Congestion income
Total SEW

Total socio economic welfaregain FB-NTC per BZ in DK

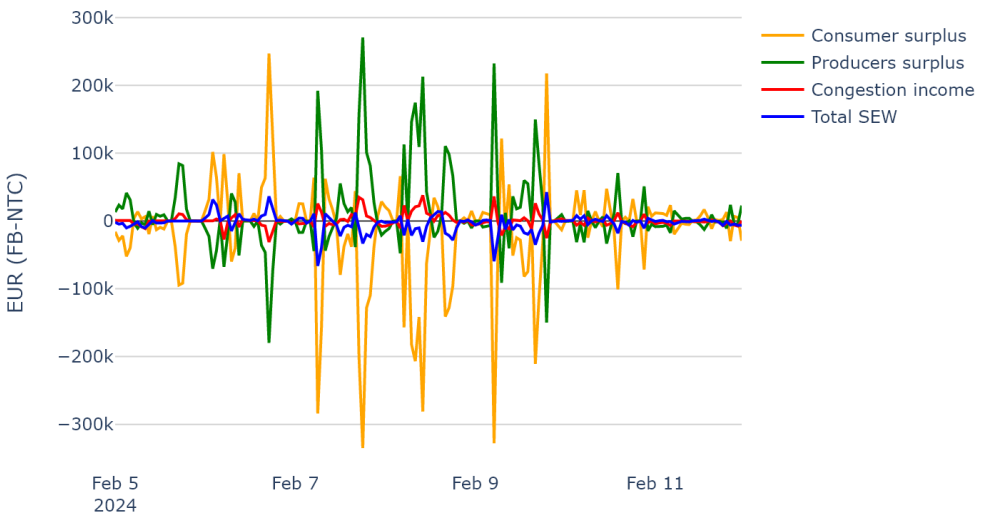


DK, socio-economic welfare per stakeholder and country

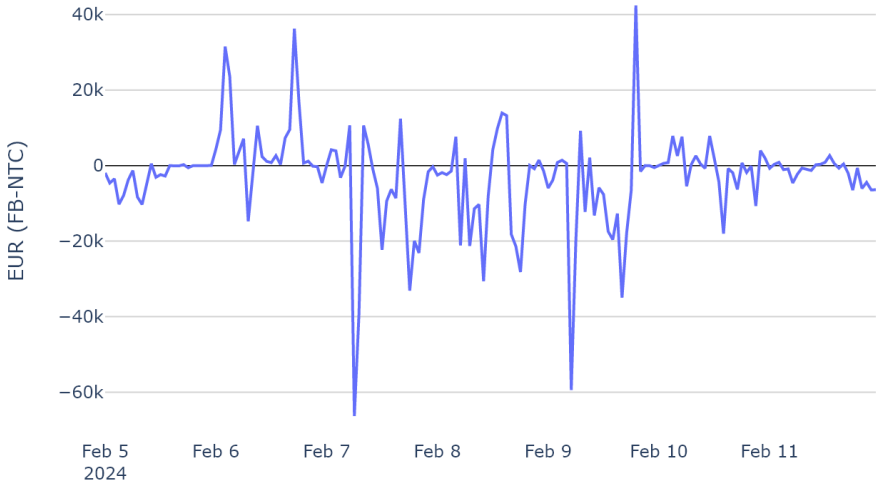


Finland

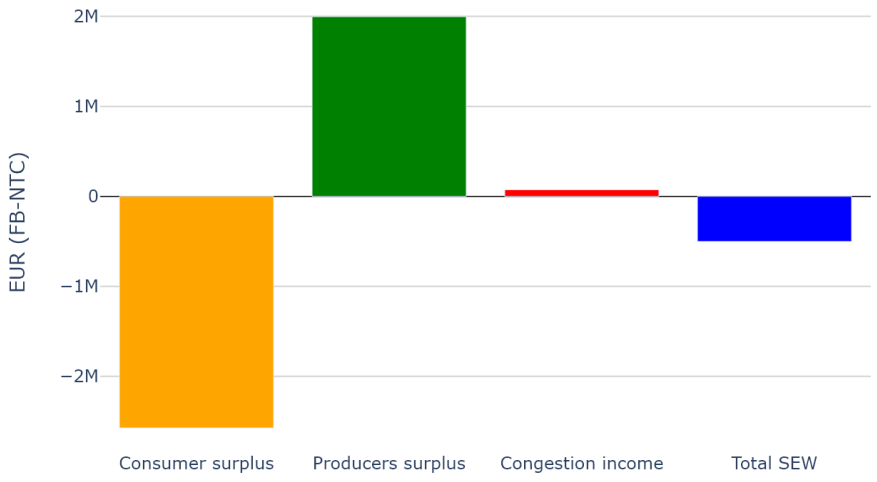
FI, socio-economic welfare per stakeholder and country



Total socio economic welfaregain FB-NTC per BZ in FI

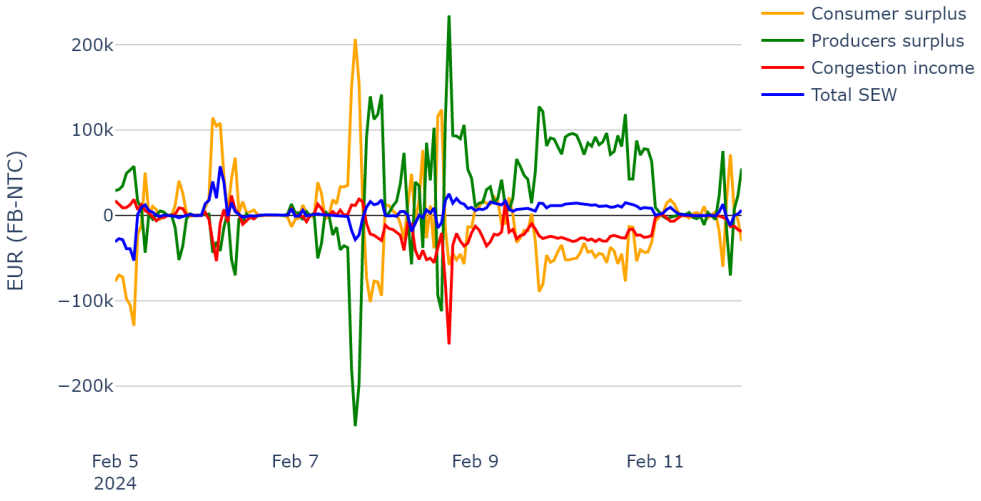


FI, socio-economic welfare per stakeholder and country

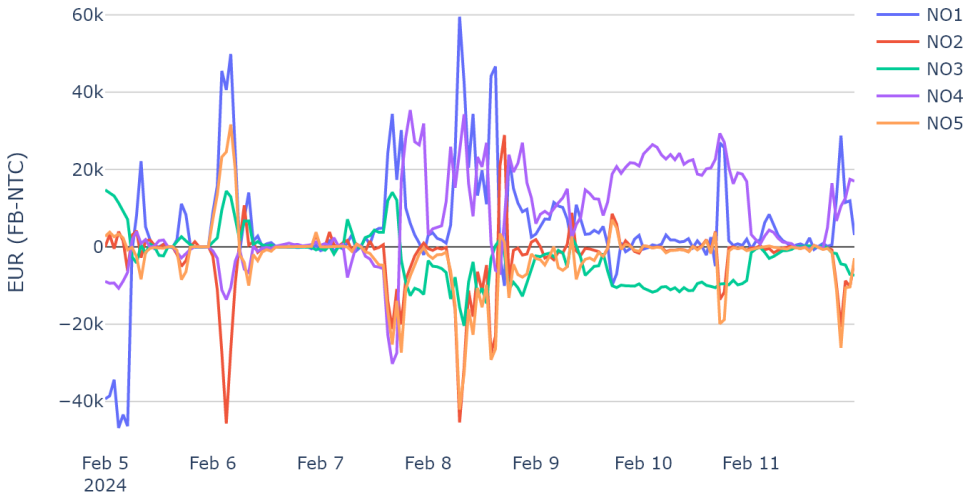


Norway

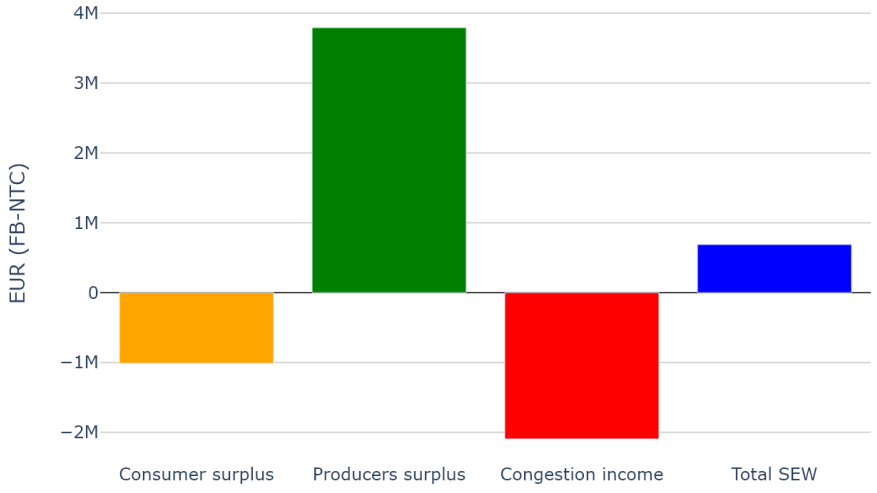
NO, socio-economic welfare per stakeholder and country



Total socio economic welfaregain FB-NTC per BZ in NO

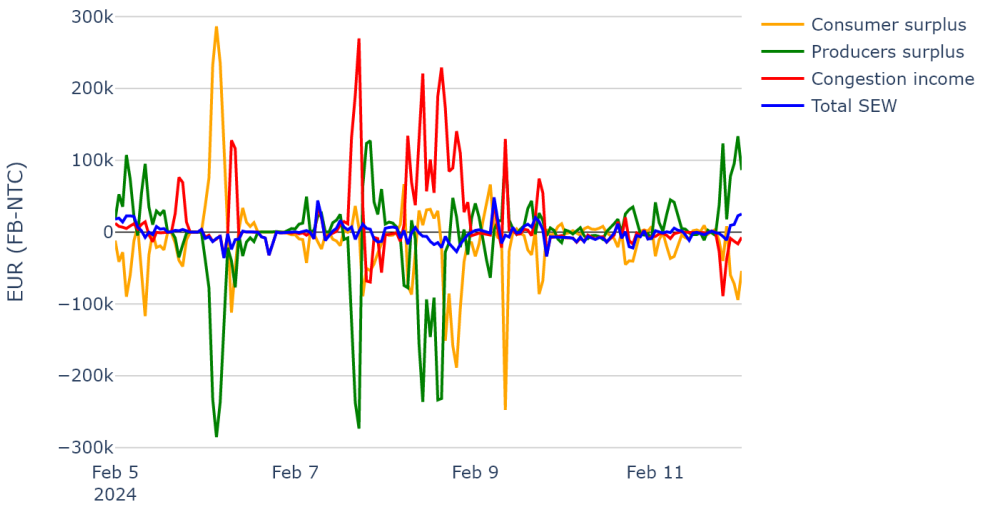


NO, socio-economic welfare per stakeholder and country

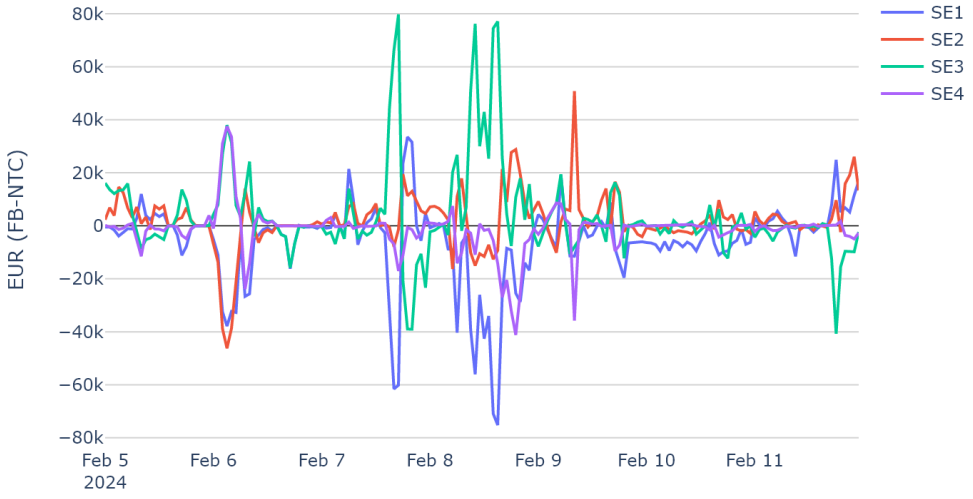


Sweden

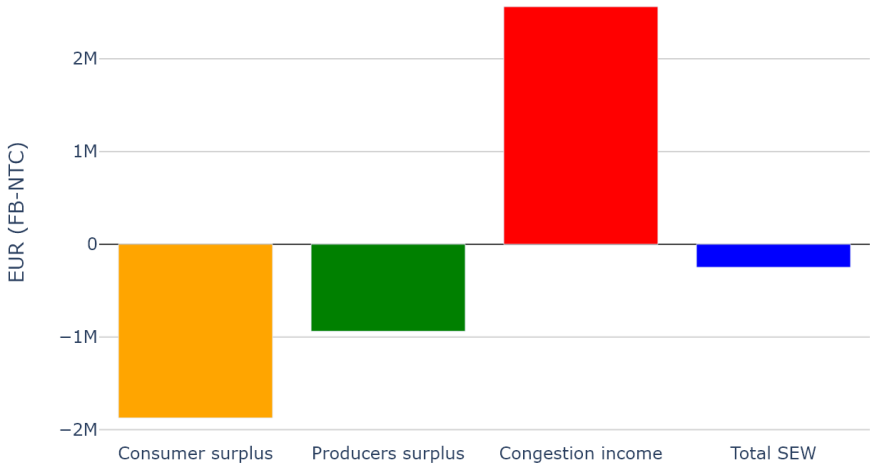
SE, socio-economic welfare per stakeholder and country



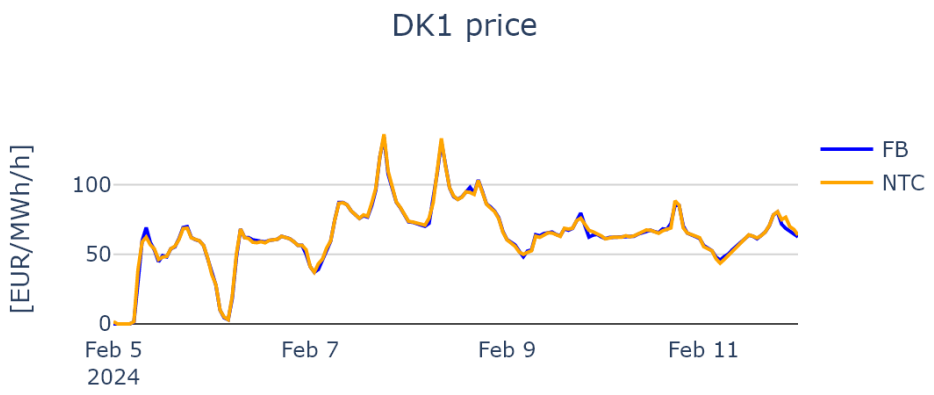
Total socio economic welfaregain FB-NTC per BZ in SE

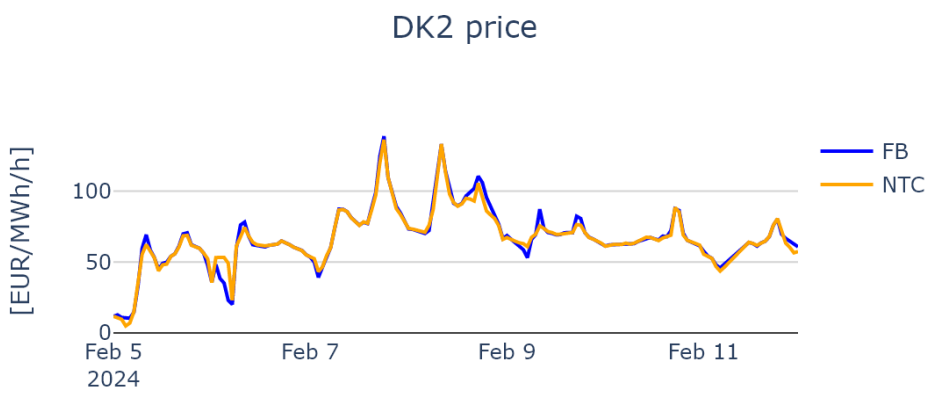


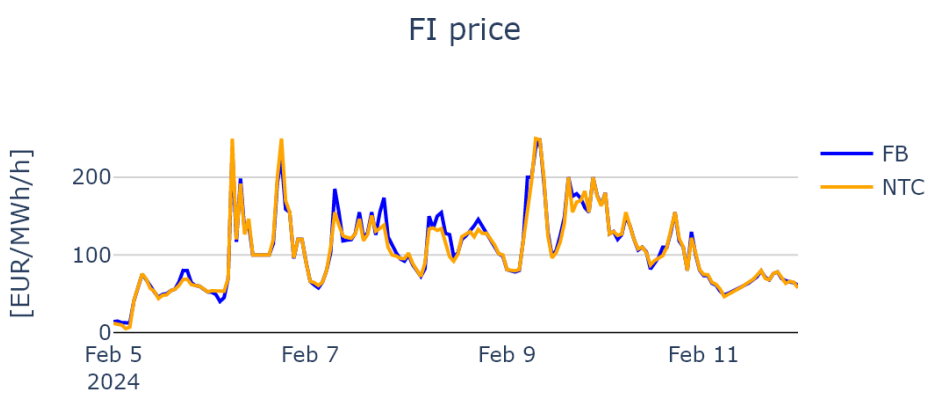
SE, socio-economic welfare per stakeholder and country

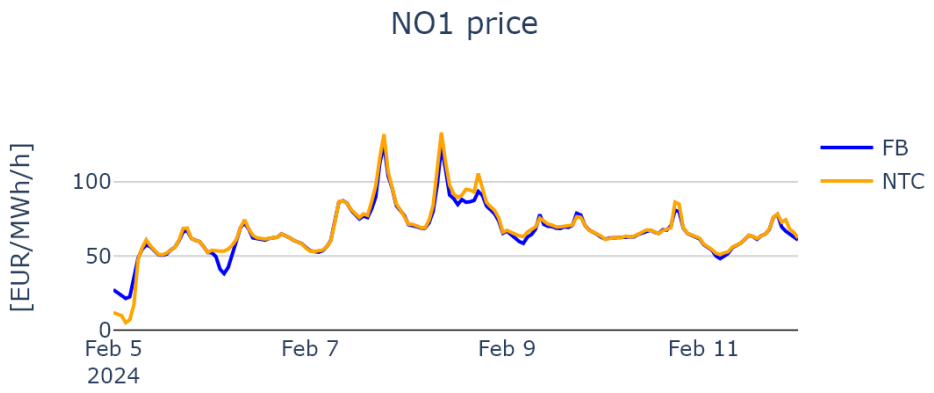


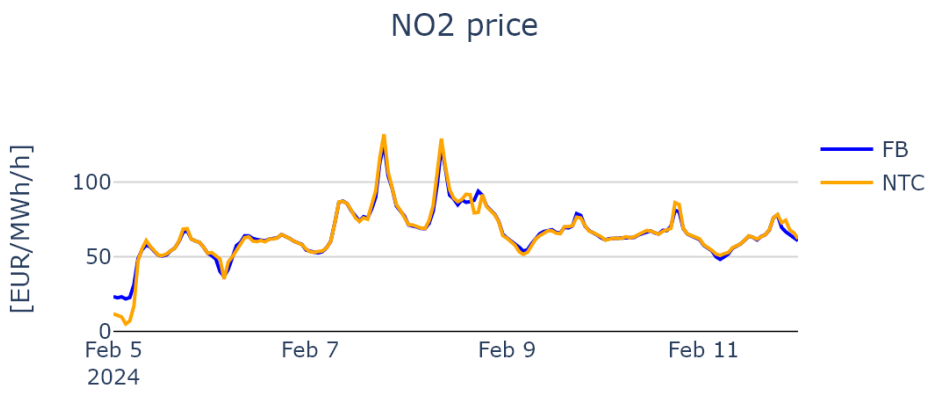
Prices

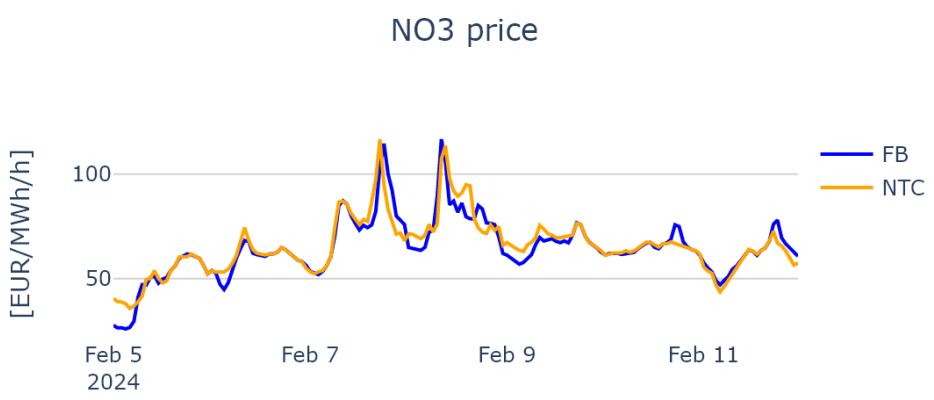

DK1 price
[EUR/MWh/h]
100
50
0
Feb 5
2024
Feb 7
Feb 9
Feb 11
FB
NTC

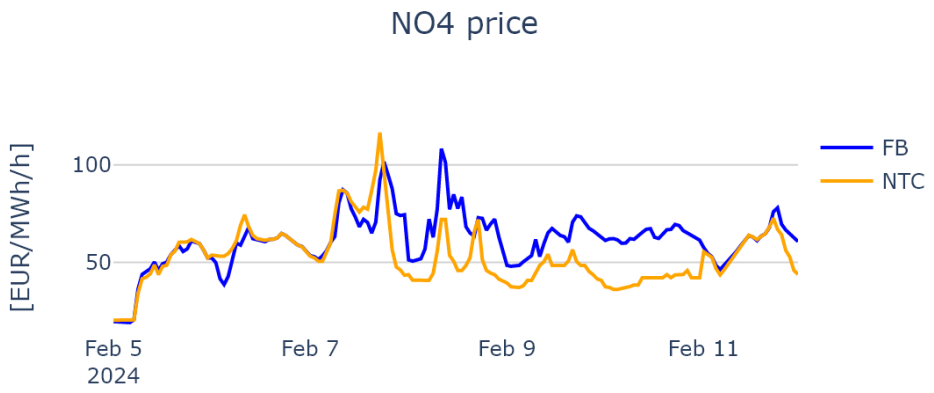

DK2 price
[EUR/MWh/h]
100
50
0
Feb 5
2024
Feb 7
Feb 9
Feb 11
FB
NTC

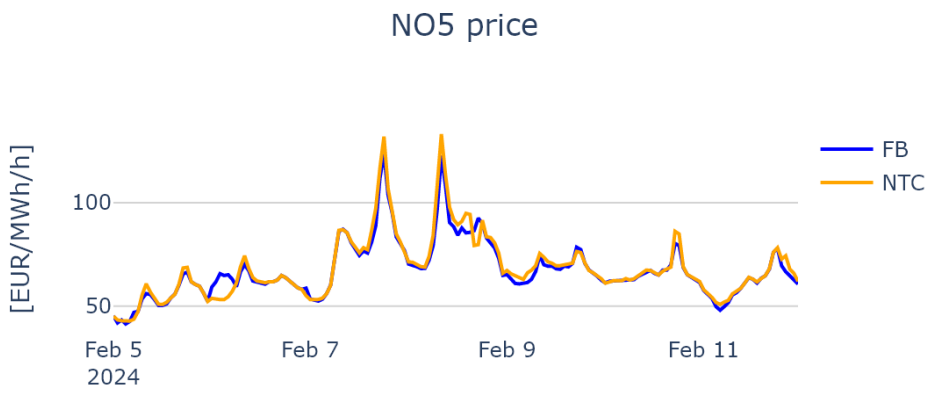

FI price
[EUR/MWh/h]
200
100
0
Feb 5
2024
Feb 7
Feb 9
Feb 11
FB
NTC


NO1 price
[EUR/MWh/h]
100
50
0
Feb 5
2024
Feb 7
Feb 9
Feb 11
FB
NTC

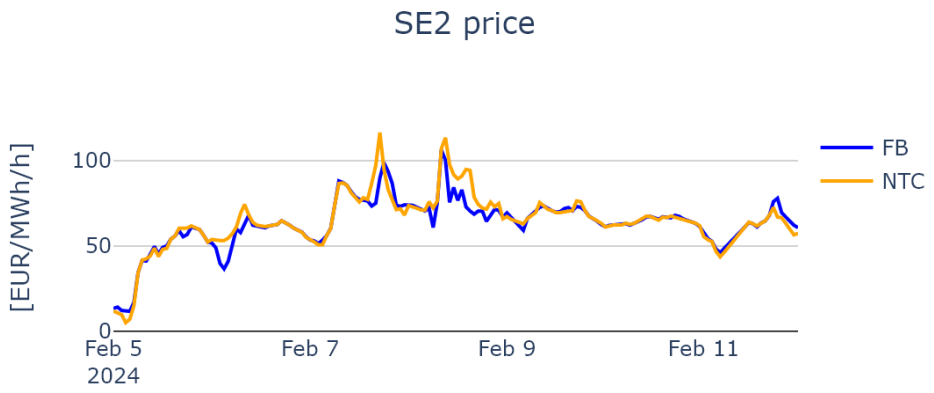

NO2 price
[EUR/MWh/h]
100
50
0
Feb 5
2024
Feb 7
Feb 9
Feb 11
FB
NTC

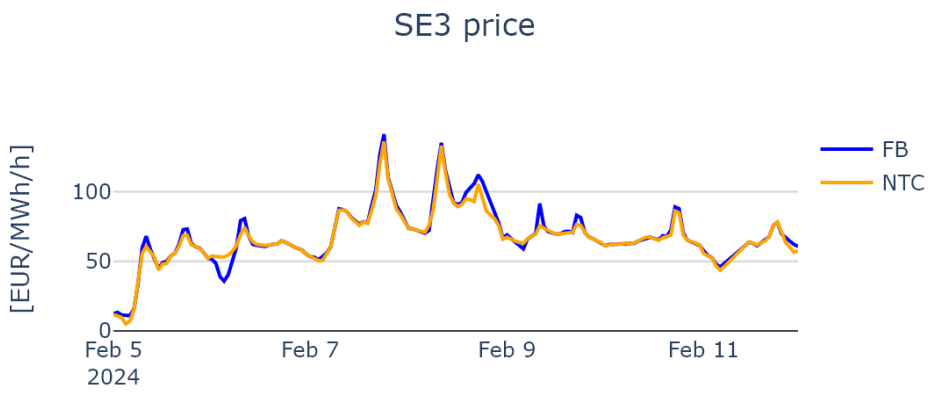

NO3 price
[EUR/MWh/h]
100
50
Feb 5
2024
Feb 7
Feb 9
Feb 11
FB
NTC

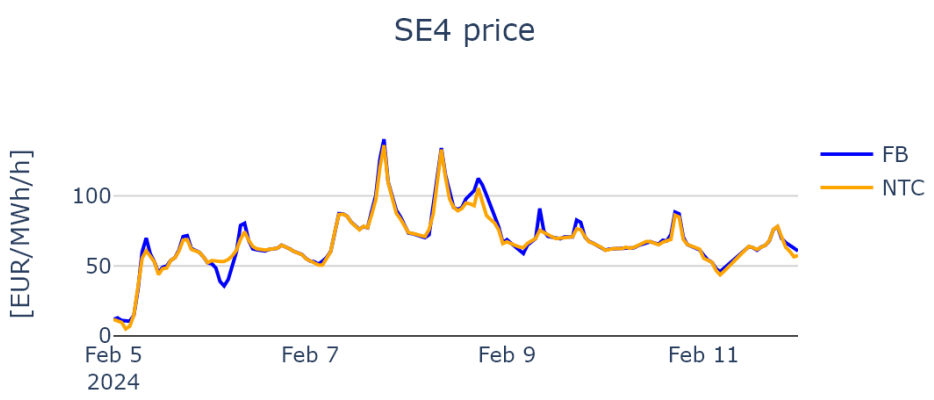

NO4 price
[EUR/MWh/h]
100
50
Feb 5
2024
Feb 7
Feb 9
Feb 11
FB
NTC


NO5 price
[EUR/MWh/h]
100
50
Feb 5
2024
Feb 7
Feb 9
Feb 11
FB
NTC

SE1 price
[EUR/MWh/h]
100
50
0
Feb 5
2024
Feb 7
Feb 9
Feb 11
FB
NTC

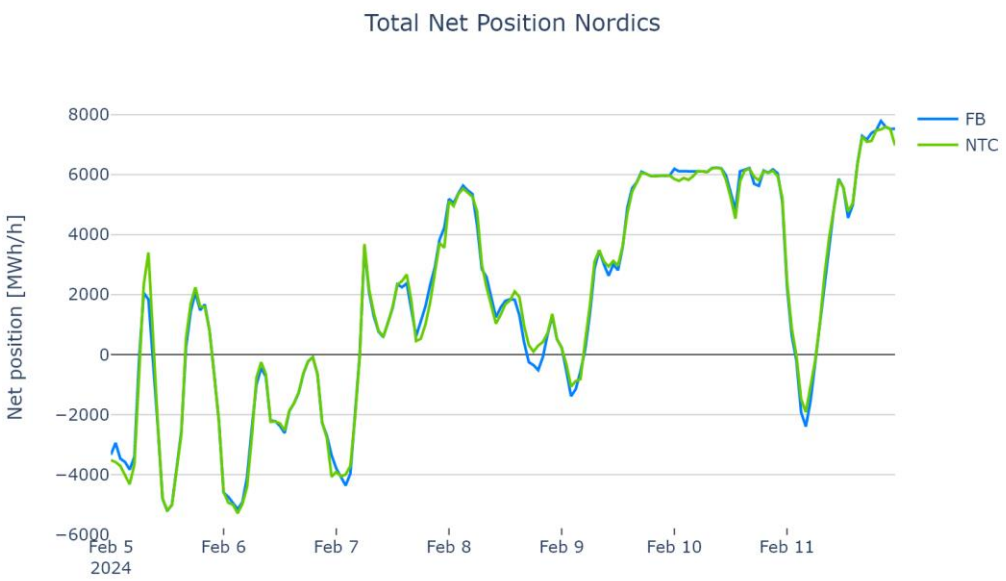

SE2 price
[EUR/MWh/h]
100
50
0
Feb 5
2024
Feb 7
Feb 9
Feb 11
FB
NTC

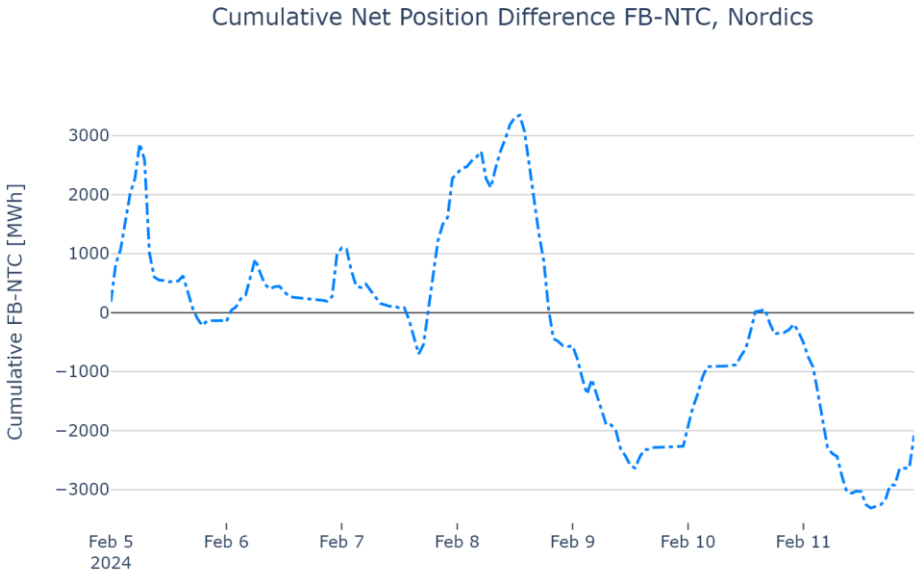

SE3 price
[EUR/MWh/h]
100
50
0
Feb 5
2024
Feb 7
Feb 9
Feb 11
FB
NTC


SE4 price
[EUR/MWh/h]
100
50
0
Feb 5
2024
Feb 7
Feb 9
Feb 11
FB
NTC

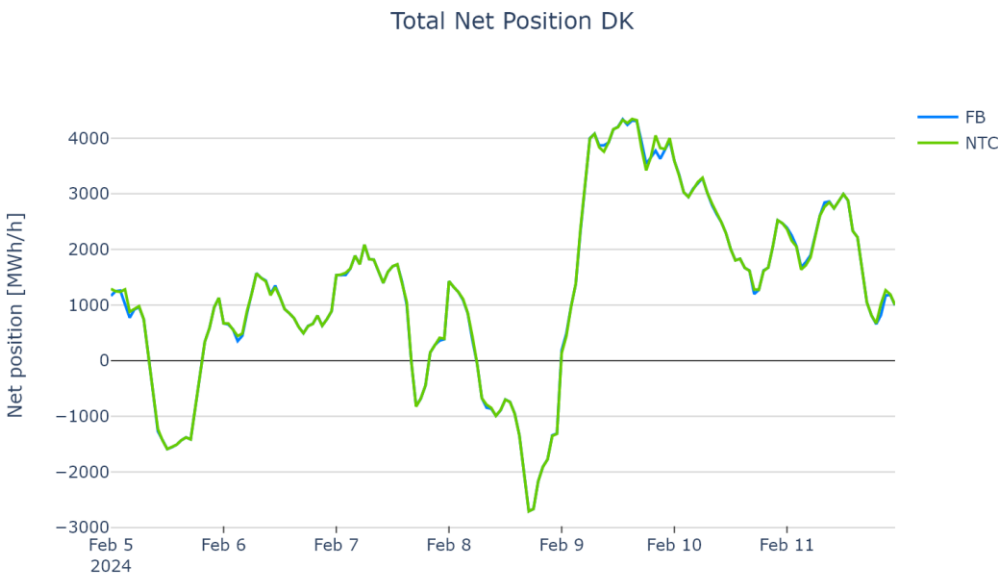
Net positions

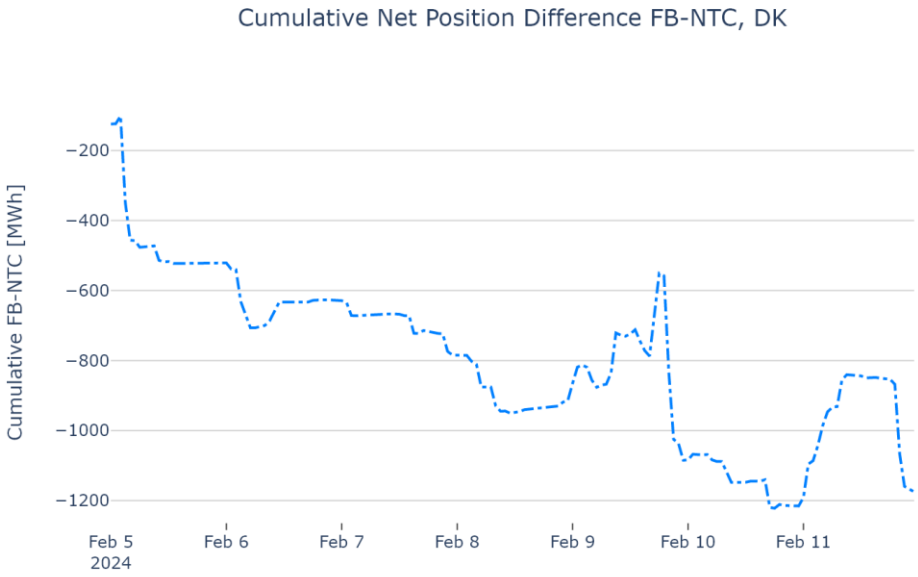
Nordics

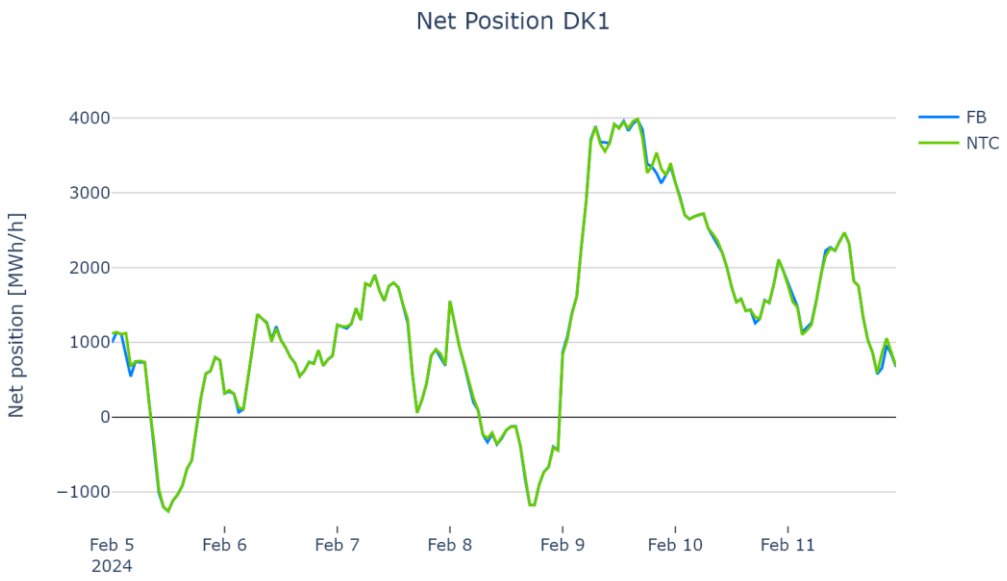


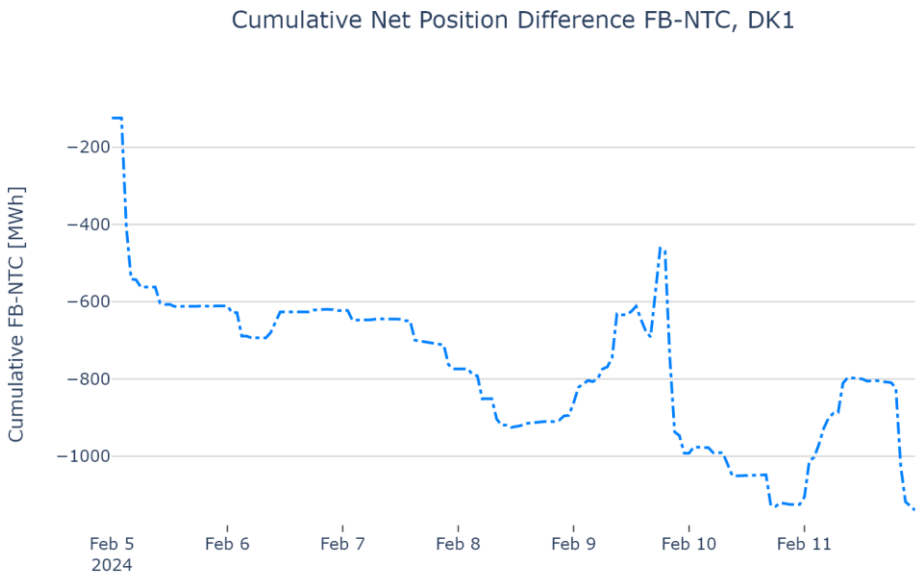


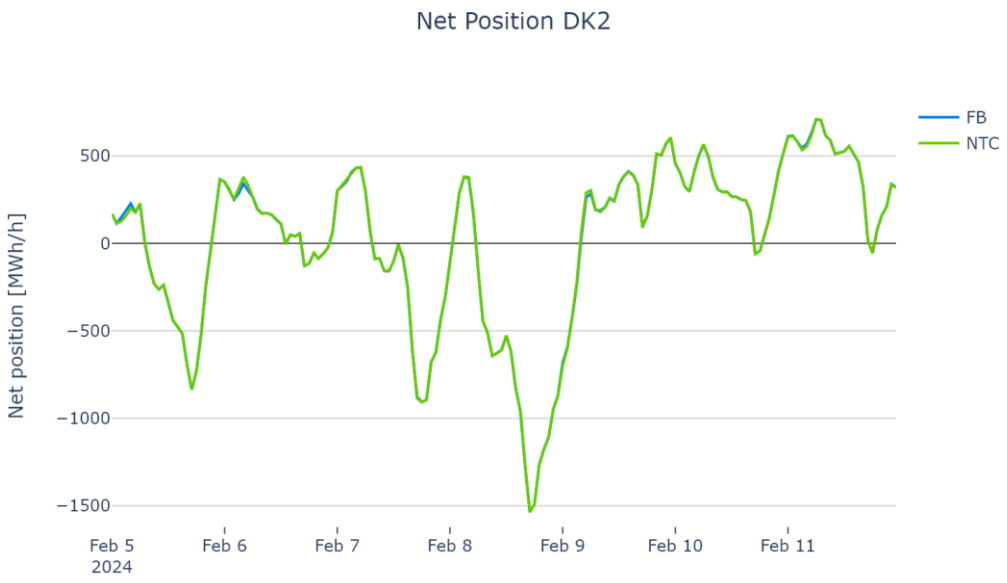
Denmark

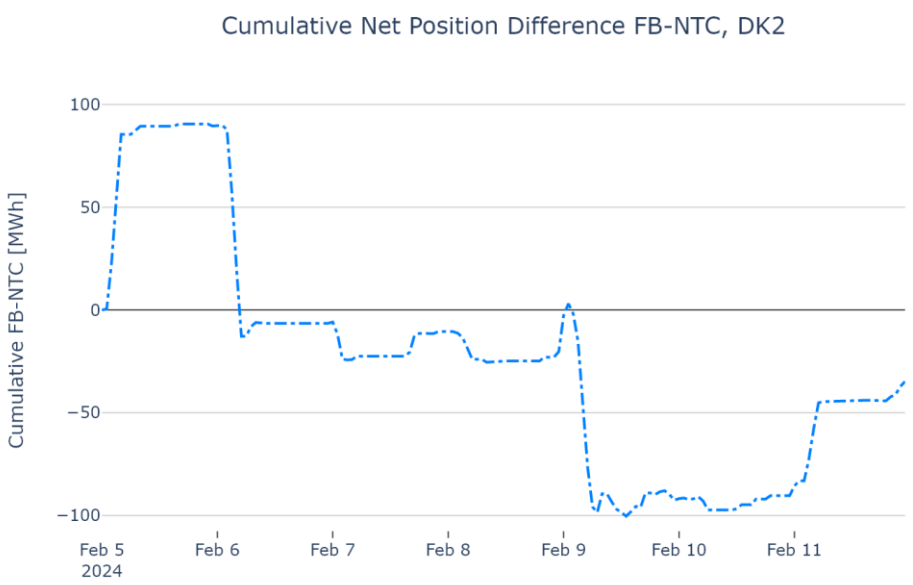

Total Net Position DK
FB
NTC
Net position [MWh/h]
4000
3000
2000
1000
0
−1000
−2000
−3000
Feb 5
2024
Feb 6
Feb 7
Feb 8
Feb 9
Feb 10
Feb 11


Cumulative Net Position Difference FB-NTC, DK
Cumulative FB-NTC [MWh]
−200
−400
−600
−800
−1000
−1200
Feb 5
2024
Feb 6
Feb 7
Feb 8
Feb 9
Feb 10
Feb 11

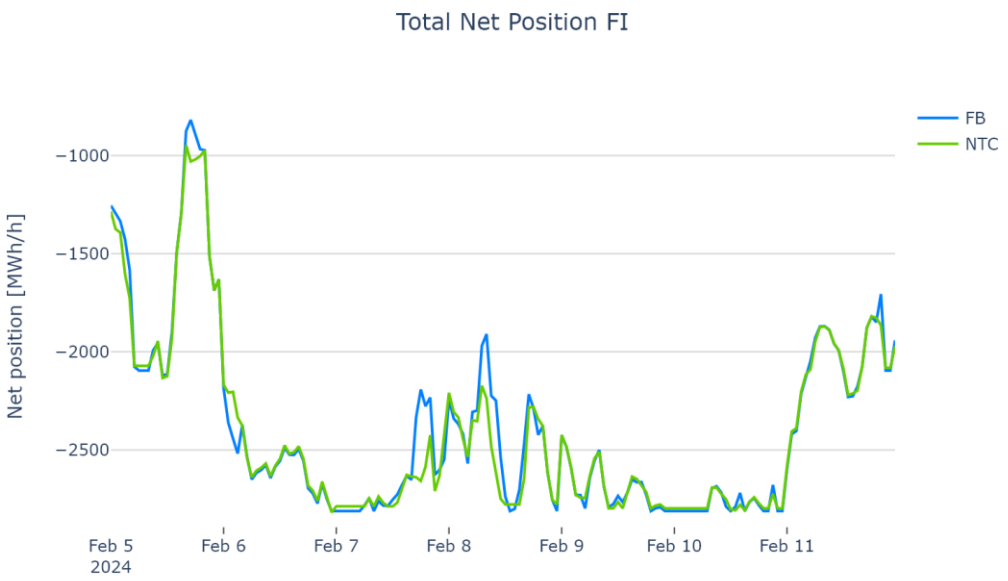

Net Position DK1
FB
NTC
Net position [MWh/h]
4000
3000
2000
1000
0
−1000
Feb 5
2024
Feb 6
Feb 7
Feb 8
Feb 9
Feb 10
Feb 11

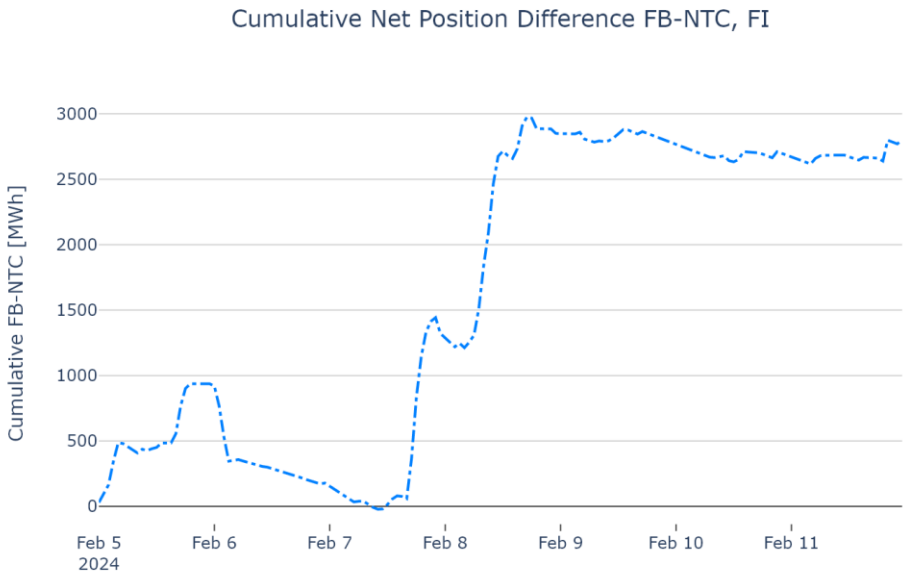

Cumulative Net Position Difference FB-NTC, DK1
Cumulative FB-NTC [MWh]
−200
−400
−600
−800
−1000
Feb 5
2024
Feb 6
Feb 7
Feb 8
Feb 9
Feb 10
Feb 11


Net Position DK2
FB
NTC
Net position [MWh/h]
500
0
−500
−1000
−1500
Feb 5
2024
Feb 6
Feb 7
Feb 8
Feb 9
Feb 10
Feb 11

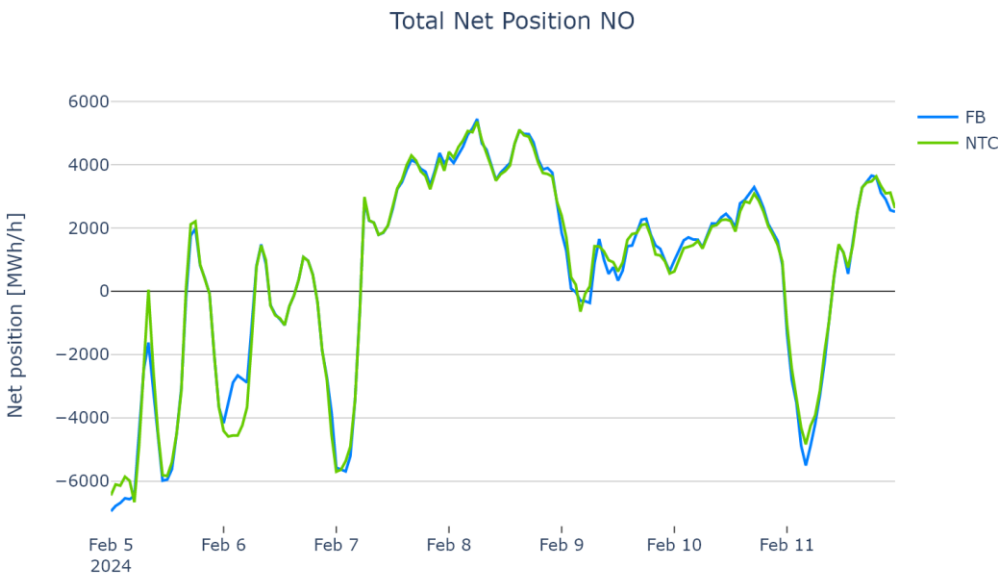

Cumulative Net Position Difference FB-NTC, DK2
Cumulative FB-NTC [MWh]
100
50
0
−50
−100
Feb 5
2024
Feb 6
Feb 7
Feb 8
Feb 9
Feb 10
Feb 11

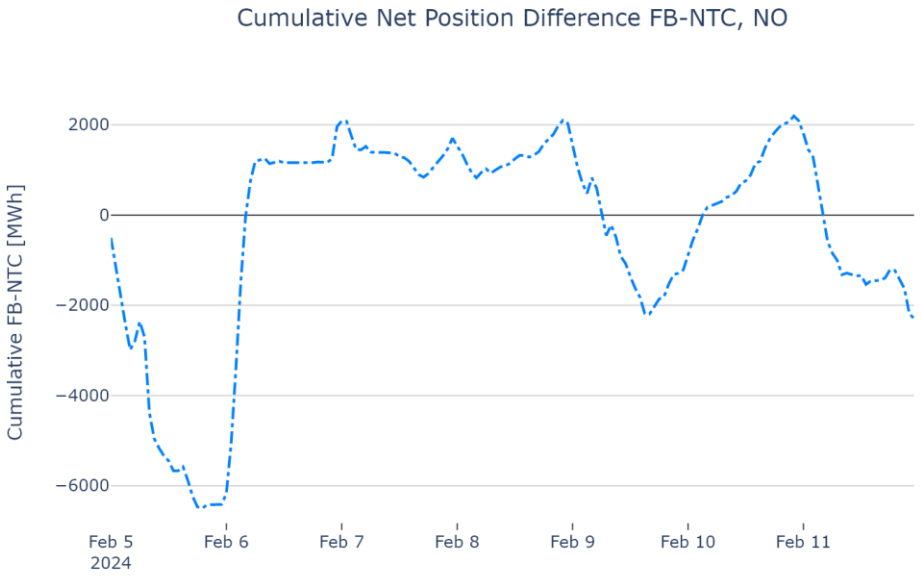
Finland

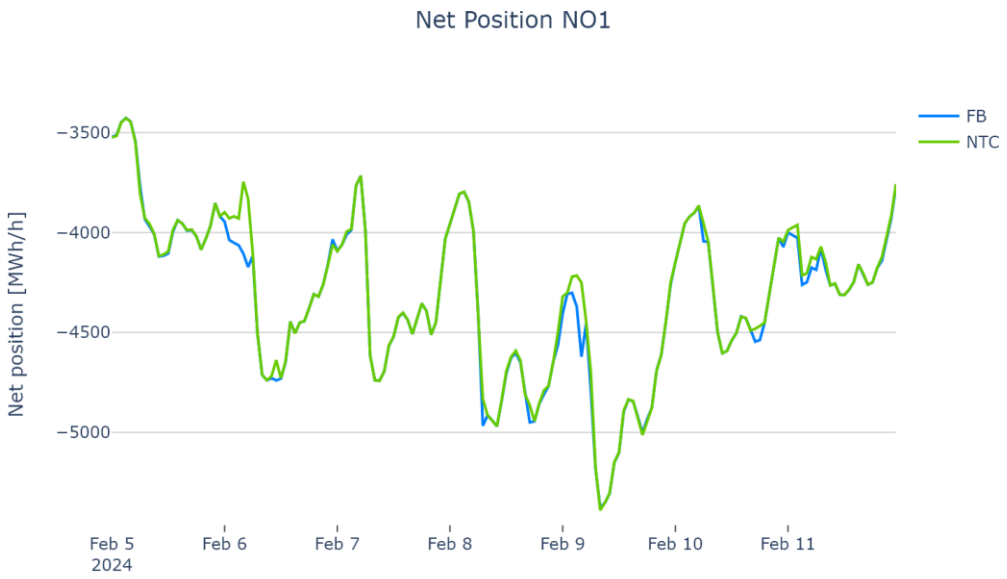

Total Net Position FI
FB
NTC
Net position [MWh/h]
−1000
−1500
−2000
−2500
Feb 5
2024
Feb 6
Feb 7
Feb 8
Feb 9
Feb 10
Feb 11

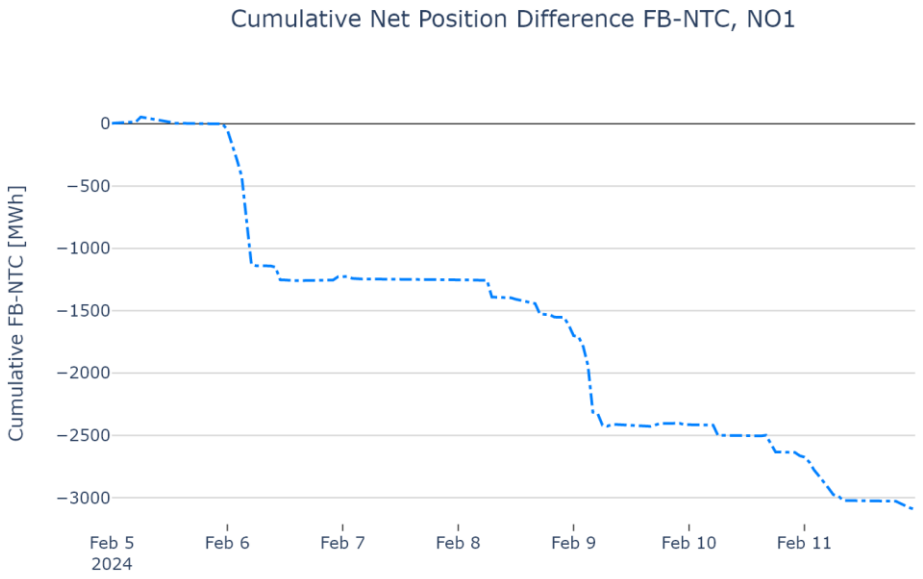

Cumulative Net Position Difference FB-NTC, FI
Cumulative FB-NTC [MWh]
3000
2500
2000
1500
1000
500
0
Feb 5
2024
Feb 6
Feb 7
Feb 8
Feb 9
Feb 10
Feb 11

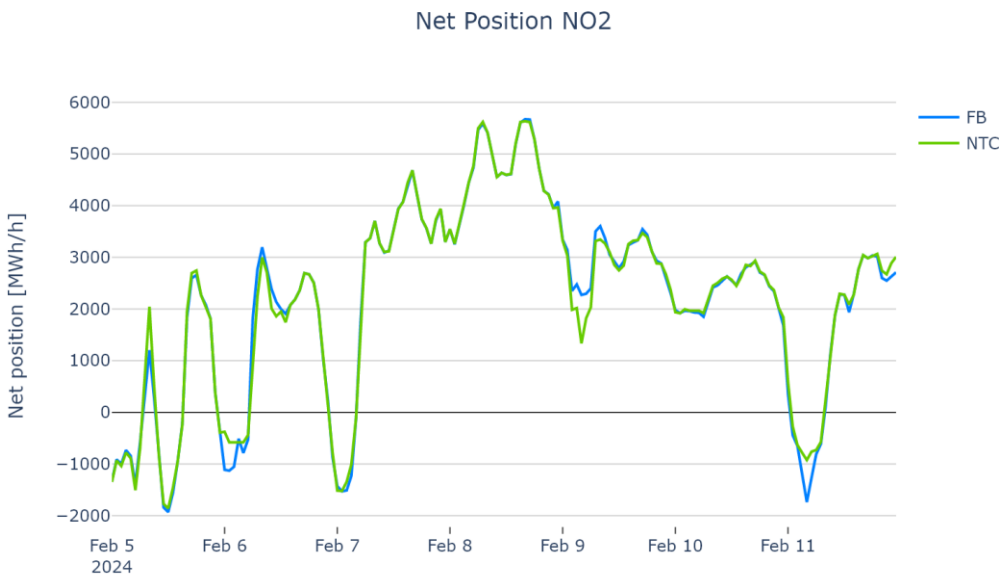
Norway

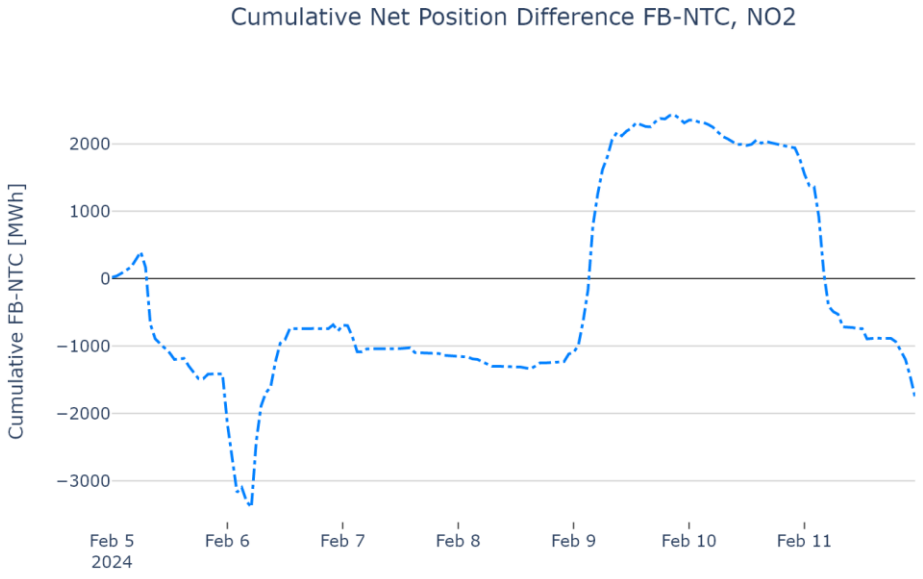

Total Net Position NO
Net position [MWh/h]
6000
4000
2000
0
−2000
−4000
−6000
Feb 5
2024
Feb 6
Feb 7
Feb 8
Feb 9
Feb 10
Feb 11
FB
NTC

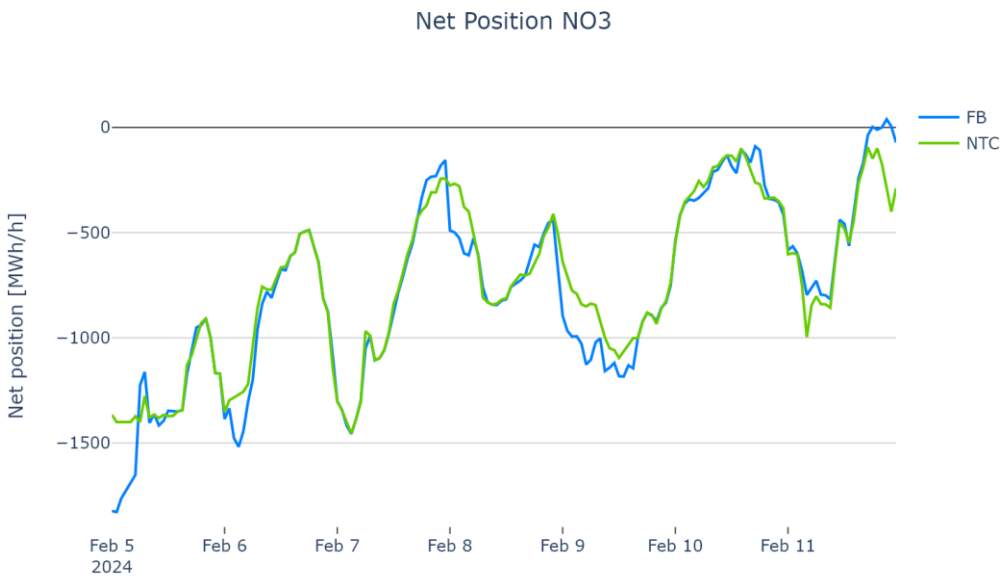

Cumulative Net Position Difference FB-NTC, NO
Cumulative FB-NTC [MWh]
2000
0
−2000
−4000
−6000
Feb 5
2024
Feb 6
Feb 7
Feb 8
Feb 9
Feb 10
Feb 11

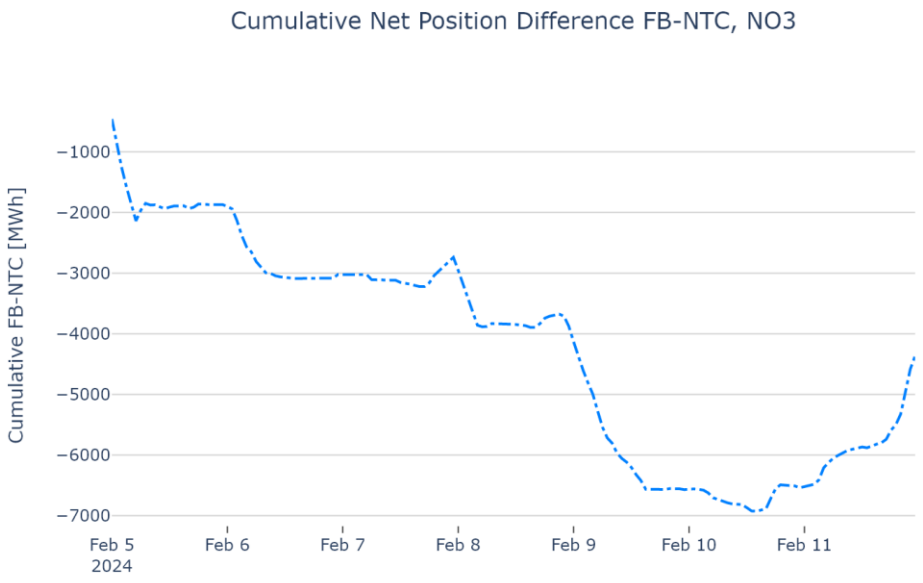

Net Position NO1
FB
NTC
Net position [MWh/h]
−3500
−4000
−4500
−5000
Feb 5
2024
Feb 6
Feb 7
Feb 8
Feb 9
Feb 10
Feb 11

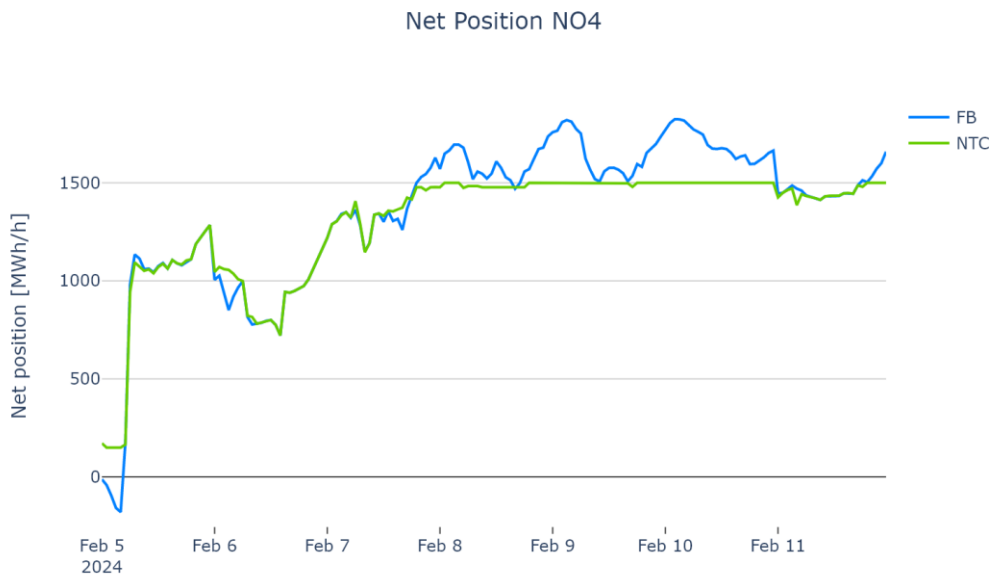

Cumulative Net Position Difference FB-NTC, NO1
Cumulative FB-NTC [MWh]
0
−500
−1000
−1500
−2000
−2500
−3000
Feb 5
2024
Feb 6
Feb 7
Feb 8
Feb 9
Feb 10
Feb 11

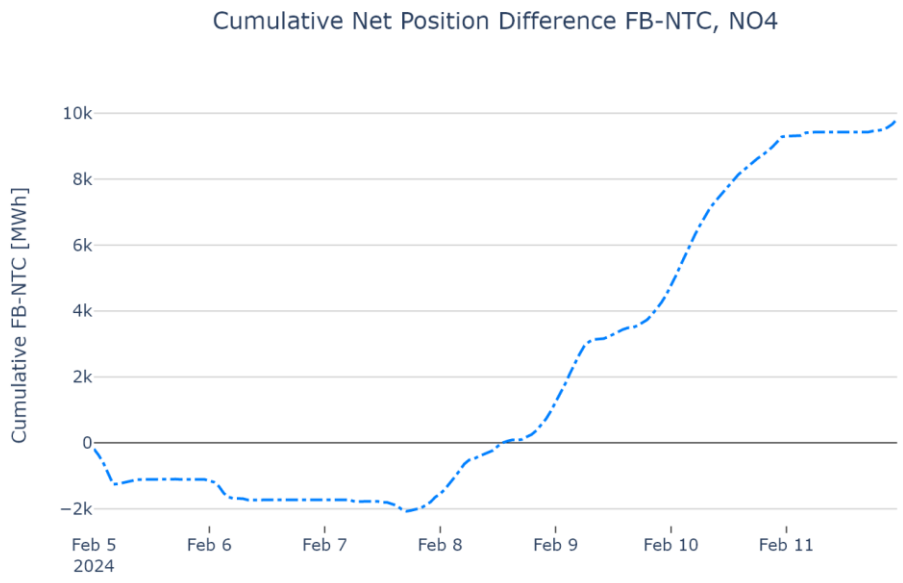

Net Position NO2
Net position [MWh/h]
6000
5000
4000
3000
2000
1000
0
−1000
−2000
Feb 5
2024
Feb 6
Feb 7
Feb 8
Feb 9
Feb 10
Feb 11
FB
NTC

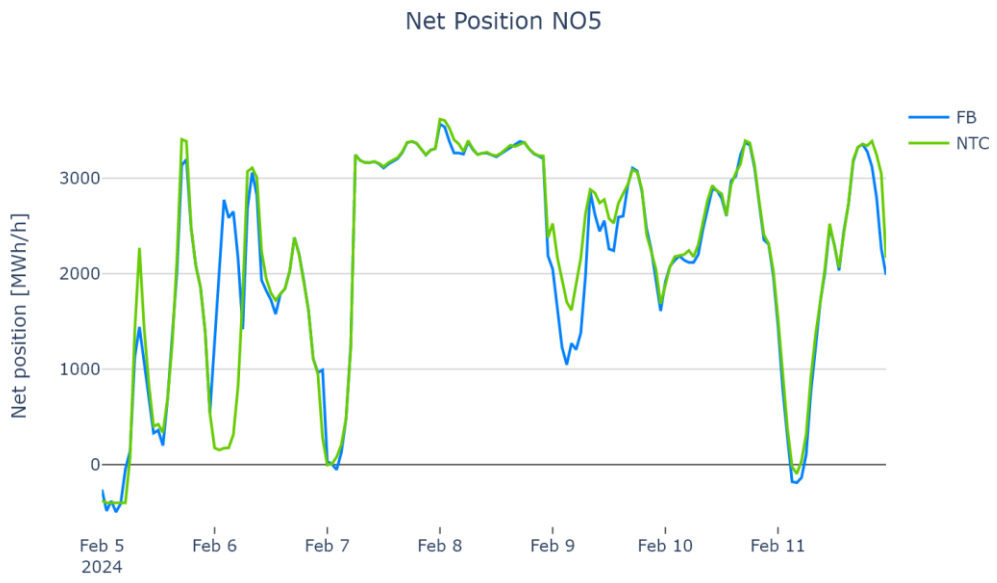

Cumulative Net Position Difference FB-NTC, NO2
Cumulative FB-NTC [MWh]
2000
1000
0
−1000
−2000
−3000
Feb 5
2024
Feb 6
Feb 7
Feb 8
Feb 9
Feb 10
Feb 11

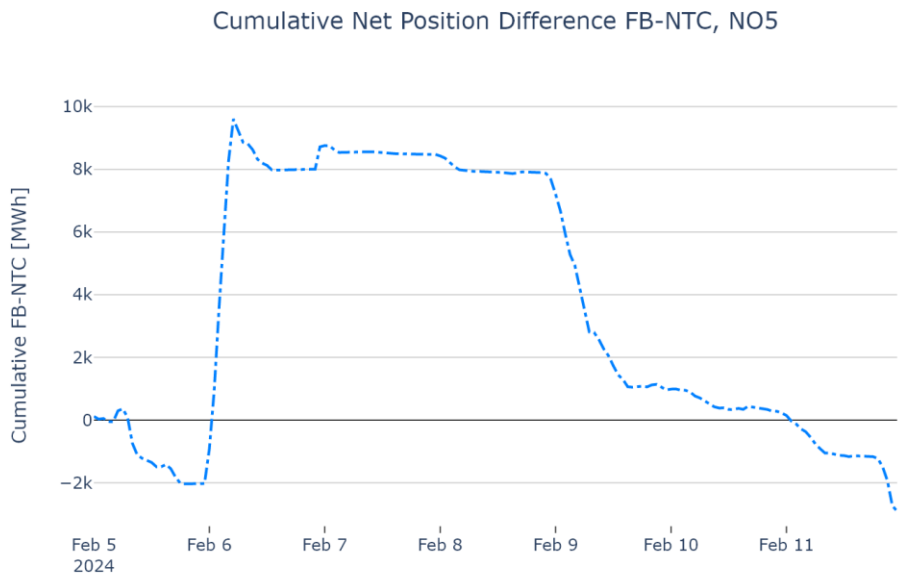

Net Position NO3
FB
NTC
Net position [MWh/h]
0
−500
−1000
−1500
Feb 5
2024
Feb 6
Feb 7
Feb 8
Feb 9
Feb 10
Feb 11


Cumulative Net Position Difference FB-NTC, NO3
Cumulative FB-NTC [MWh]
−1000
−2000
−3000
−4000
−5000
−6000
−7000
Feb 5
2024
Feb 6
Feb 7
Feb 8
Feb 9
Feb 10
Feb 11

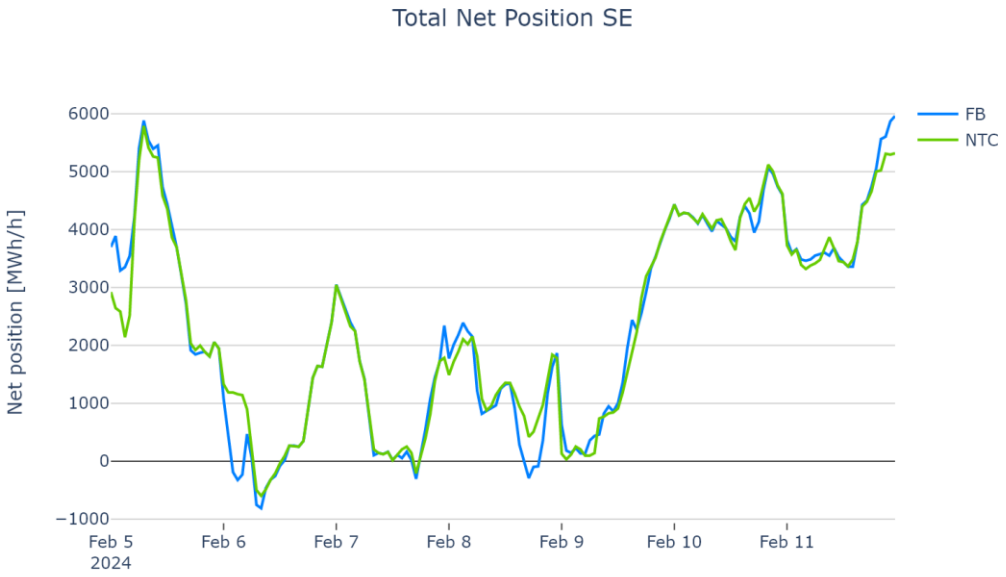

Net Position NO4
FB
NTC
Net position [MWh/h]
1500
1000
500
0
Feb 5
2024
Feb 6
Feb 7
Feb 8
Feb 9
Feb 10
Feb 11

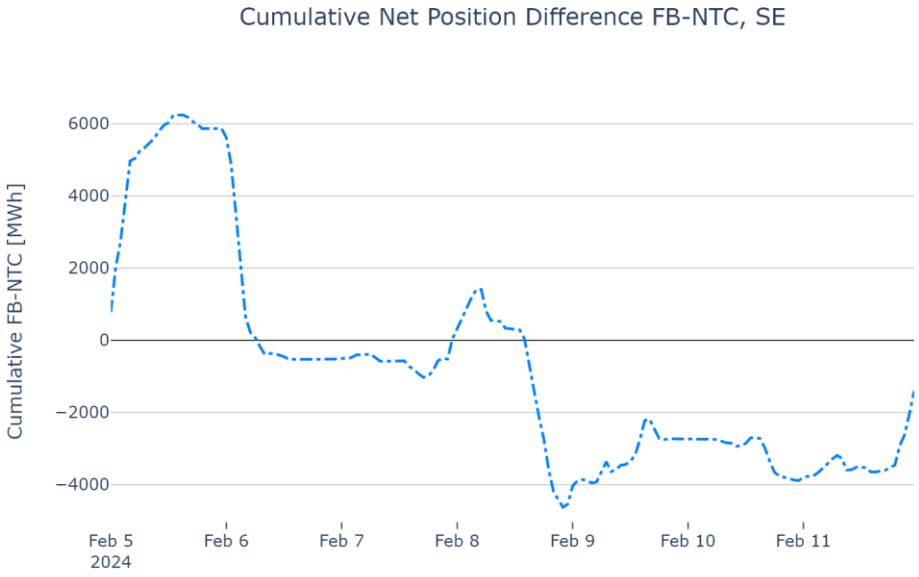

Cumulative Net Position Difference FB-NTC, NO4
Cumulative FB-NTC [MWh]
10k
8k
6k
4k
2k
0
−2k
Feb 5
2024
Feb 6
Feb 7
Feb 8
Feb 9
Feb 10
Feb 11

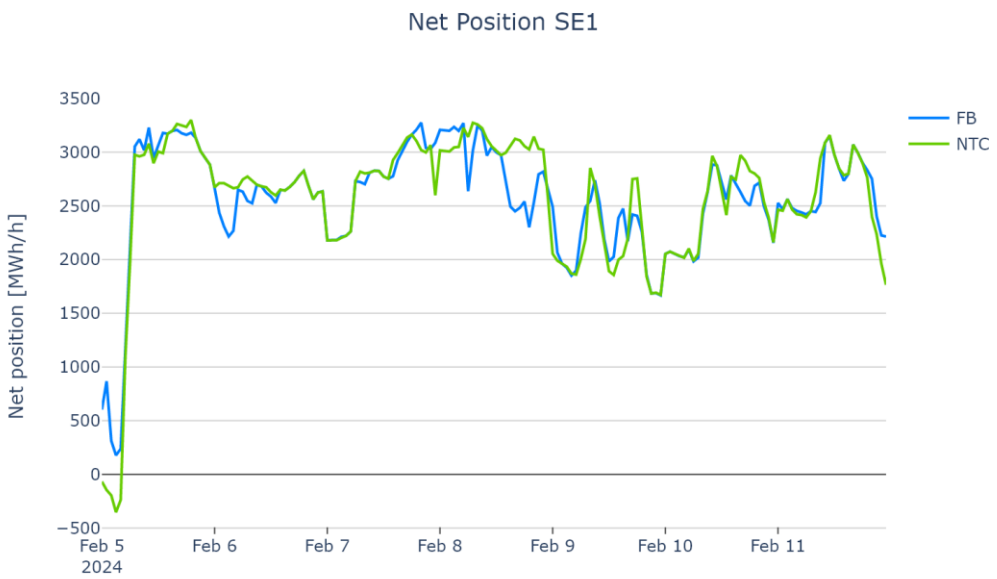

Net Position NO5
FB
NTC
Net position [MWh/h]
3000
2000
1000
0
Feb 5
2024
Feb 6
Feb 7
Feb 8
Feb 9
Feb 10
Feb 11

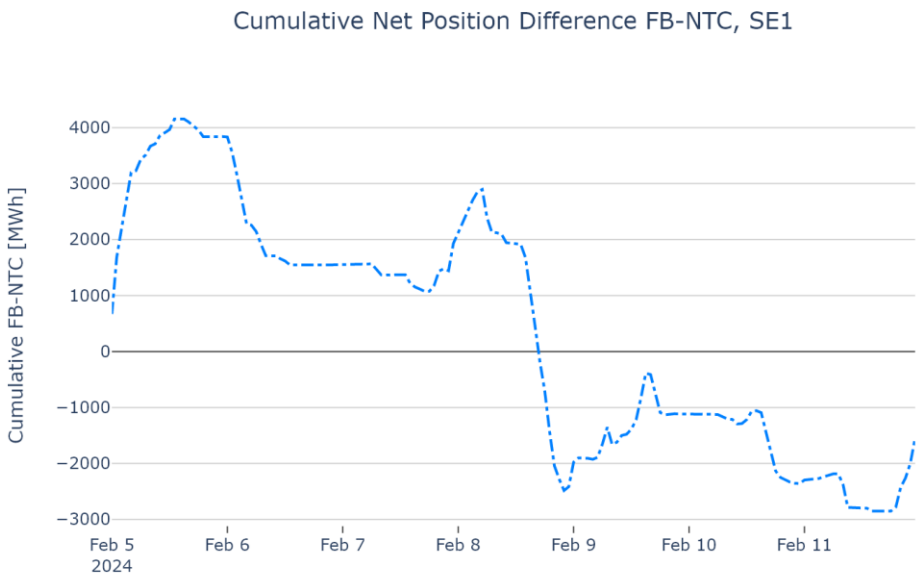

Cumulative Net Position Difference FB-NTC, NO5
Cumulative FB-NTC [MWh]
10k
8k
6k
4k
2k
0
−2k
Feb 5
2024
Feb 6
Feb 7
Feb 8
Feb 9
Feb 10
Feb 11

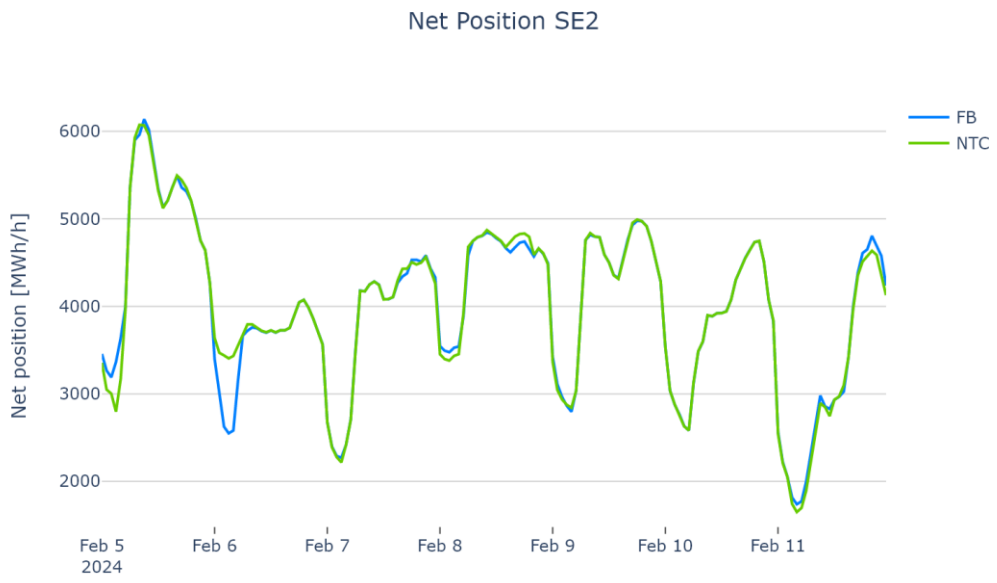
Sweden

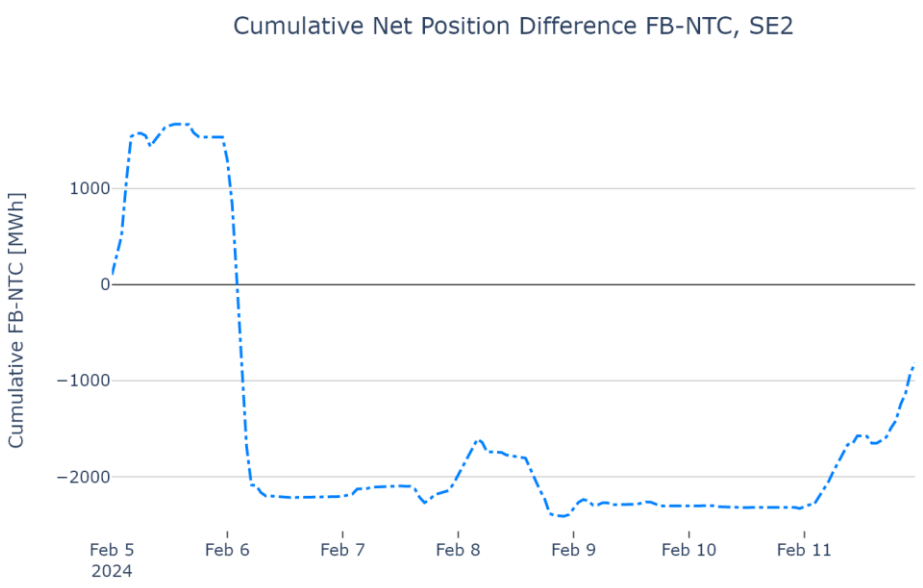

Total Net Position SE
Net position [MWh/h]
6000
5000
4000
3000
2000
1000
0
−1000
Feb 5
2024
Feb 6
Feb 7
Feb 8
Feb 9
Feb 10
Feb 11
FB
NTC

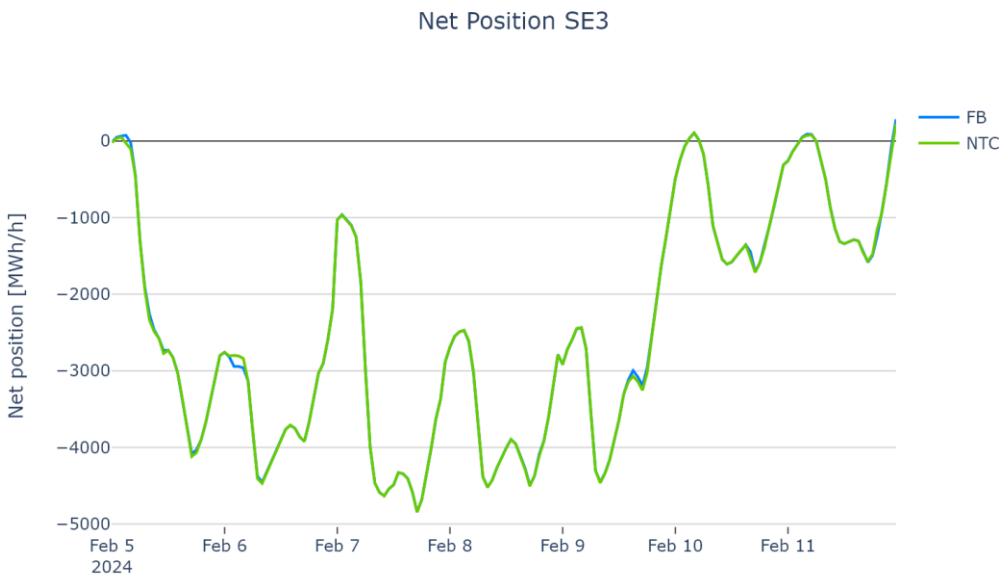

Cumulative Net Position Difference FB-NTC, SE
Cumulative FB-NTC [MWh]
6000
4000
2000
0
−2000
−4000
Feb 5
2024
Feb 6
Feb 7
Feb 8
Feb 9
Feb 10
Feb 11

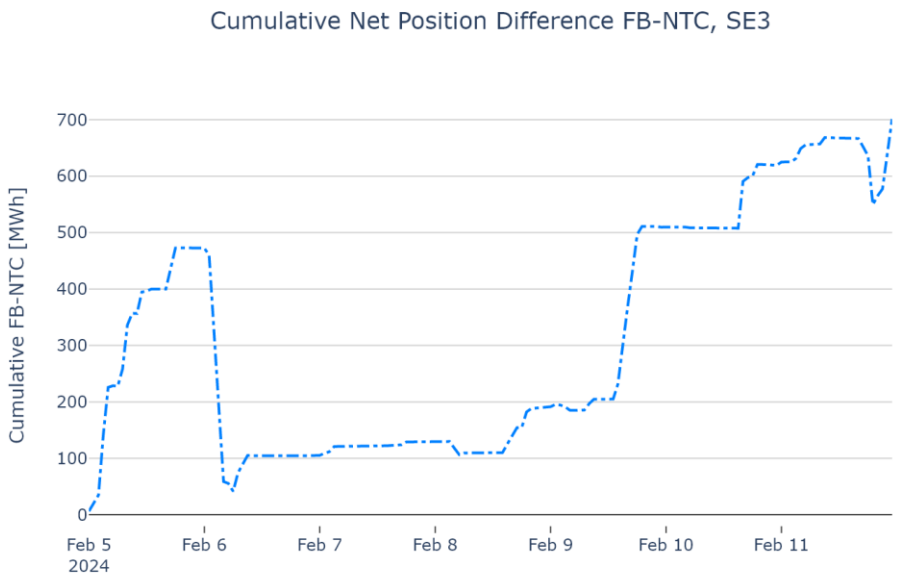

Net Position SE1
Net position [MWh/h]
3500
3000
2500
2000
1500
1000
500
0
−500
Feb 5
2024
Feb 6
Feb 7
Feb 8
Feb 9
Feb 10
Feb 11
FB
NTC

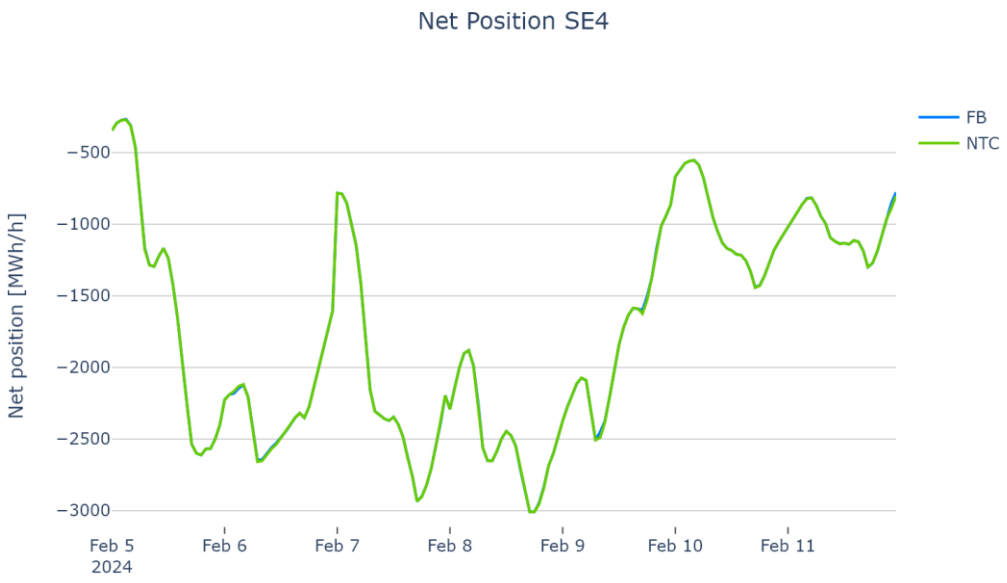

Cumulative Net Position Difference FB-NTC, SE1
Cumulative FB-NTC [MWh]
4000
3000
2000
1000
0
−1000
−2000
−3000
Feb 5
2024
Feb 6
Feb 7
Feb 8
Feb 9
Feb 10
Feb 11

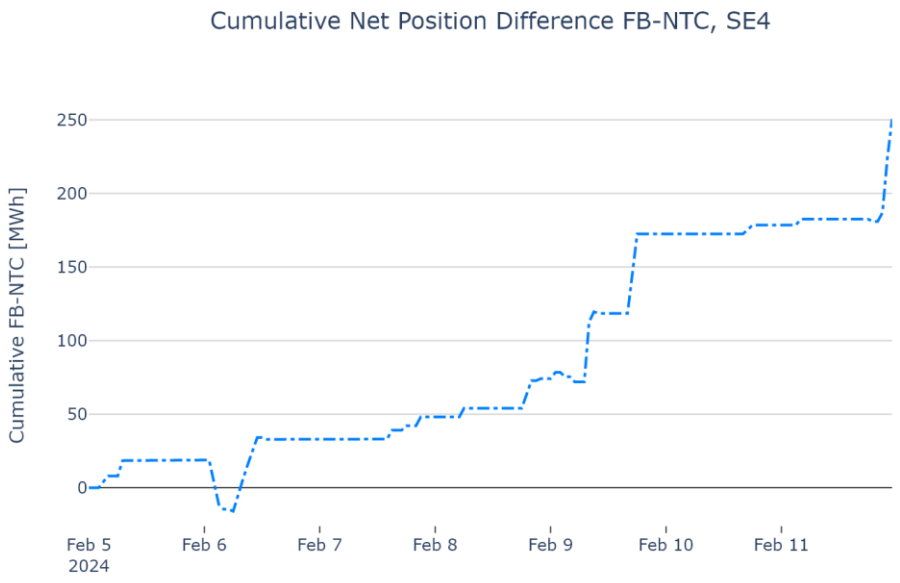

Net Position SE2
FB
NTC
Net position [MWh/h]
6000
5000
4000
3000
2000
Feb 5
2024
Feb 6
Feb 7
Feb 8
Feb 9
Feb 10
Feb 11


Cumulative Net Position Difference FB-NTC, SE2
Cumulative FB-NTC [MWh]
1000
0
−1000
−2000
Feb 5
2024
Feb 6
Feb 7
Feb 8
Feb 9
Feb 10
Feb 11


Net Position SE3
FB
NTC
Net position [MWh/h]
0
−1000
−2000
−3000
−4000
−5000
Feb 5
2024
Feb 6
Feb 7
Feb 8
Feb 9
Feb 10
Feb 11

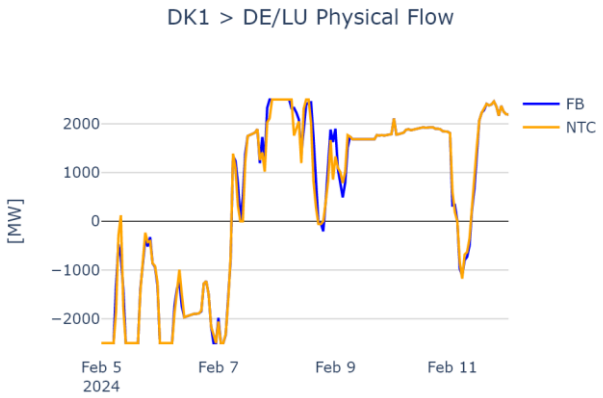

Cumulative Net Position Difference FB-NTC, SE3
Cumulative FB-NTC [MWh]
700
600
500
400
300
200
100
0
Feb 5
2024
Feb 6
Feb 7
Feb 8
Feb 9
Feb 10
Feb 11

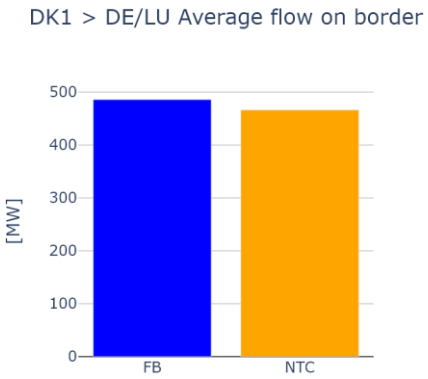

Net Position SE4
FB
NTC
Net position [MWh/h]
−500
−1000
−1500
−2000
−2500
−3000
Feb 5
2024
Feb 6
Feb 7
Feb 8
Feb 9
Feb 10
Feb 11

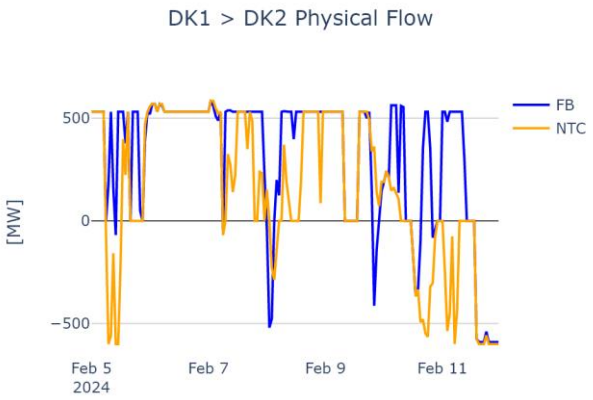

Cumulative Net Position Difference FB-NTC, SE4
Cumulative FB-NTC [MWh]
250
200
150
100
50
0
Feb 5
2024
Feb 6
Feb 7
Feb 8
Feb 9
Feb 10
Feb 11

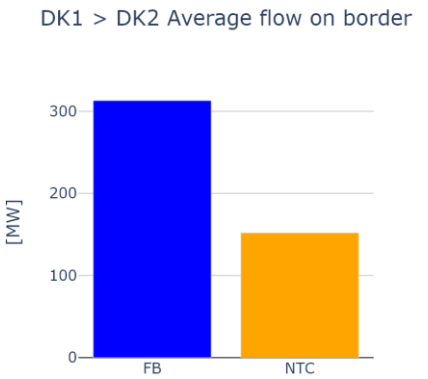
Border flow

The flows present here, both in FB and NTC, represent the physical flow on the lines and are calculated as the product of the NP and the PTDF matrix. When comparing the NTC-results in this report with those present in the DA market there will be a difference as the DA flows are calculated without the use of PTDF matrixes and therefore the flow from DA will not yield the same result.

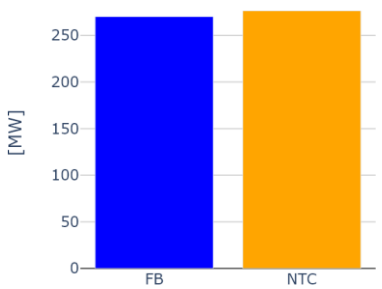


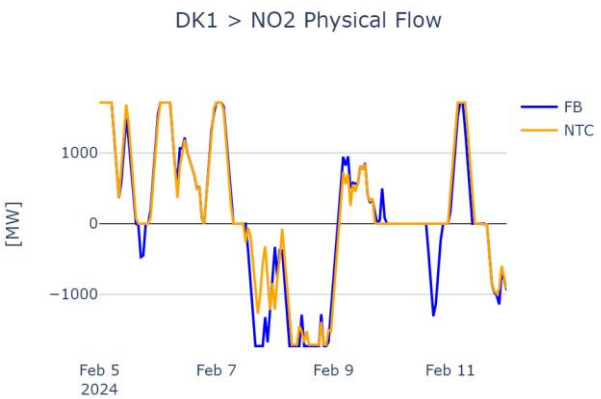


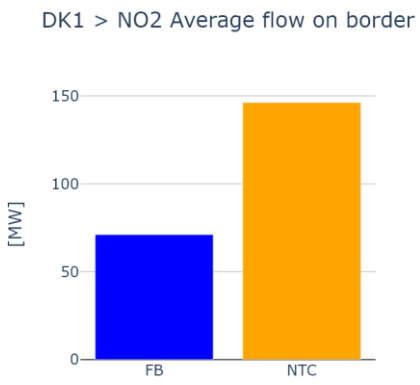


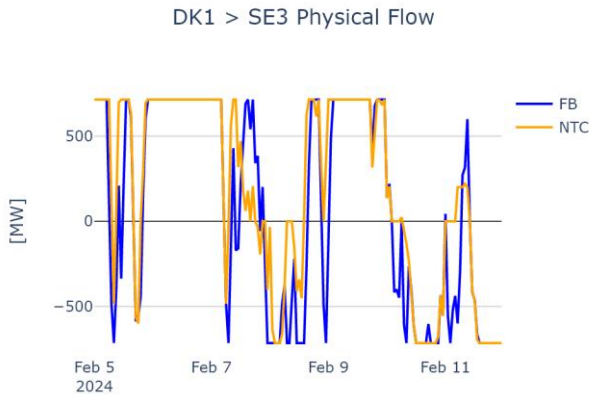


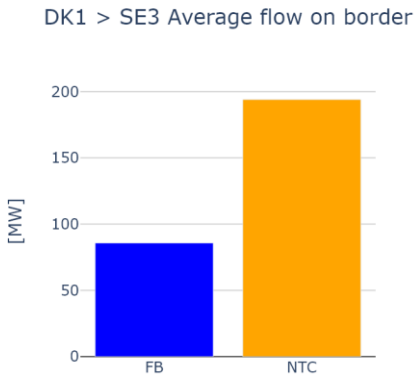
DK1 > NL Physical Flow
FB
NTC
[MW]
500
0
−500
Feb 5
2024
Feb 7
Feb 9
Feb 11


DK1 > NL Average flow on border
[MW]
250
200
150
100
50
0
FB
NTC

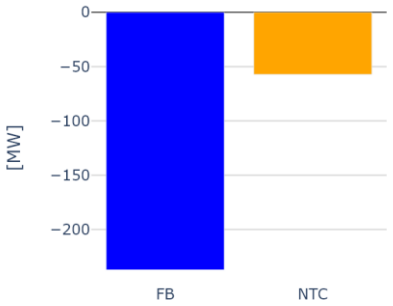

DK1 > NO2 Physical Flow
FB
NTC
[MW]
1000
0
−1000
Feb 5
2024
Feb 7
Feb 9
Feb 11

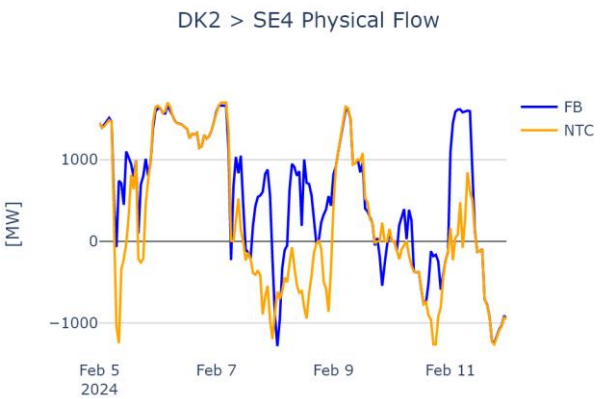

DK1 > NO2 Average flow on border
[MW]
150
100
50
0
FB
NTC

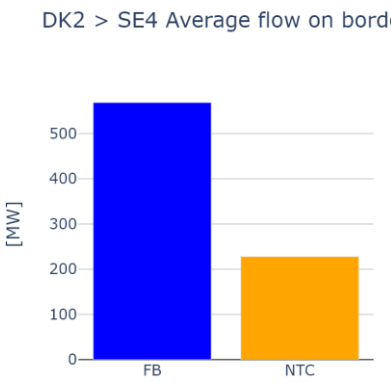

DK1 > SE3 Physical Flow
FB
NTC
[MW]
500
0
−500
Feb 5
2024
Feb 7
Feb 9
Feb 11

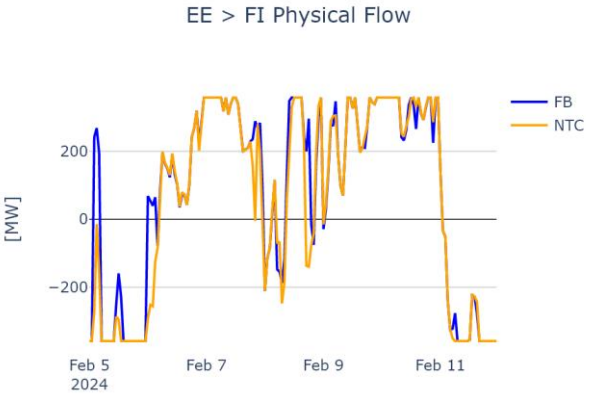

DK1 > SE3 Average flow on border
[MW]
200
150
100
50
0
FB
NTC

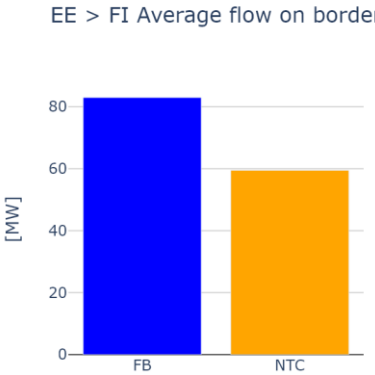
DK2 > DE/LU Physical Flow
FB
NTC
[MW]
500
0
−500
−1000
Feb 5
2024
Feb 7
Feb 9
Feb 11

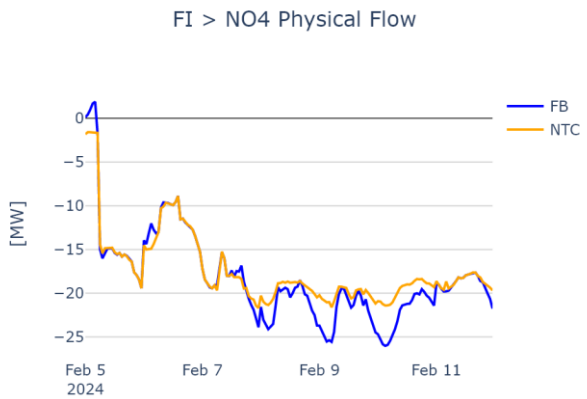

DK2 > DE/LU Average flow on border
[MW]
0
−50
−100
−150
−200
FB
NTC

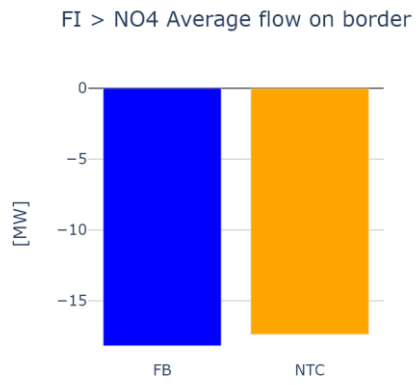

DK2 > SE4 Physical Flow
FB
NTC
[MW]
1000
0
−1000
Feb 5
2024
Feb 7
Feb 9
Feb 11

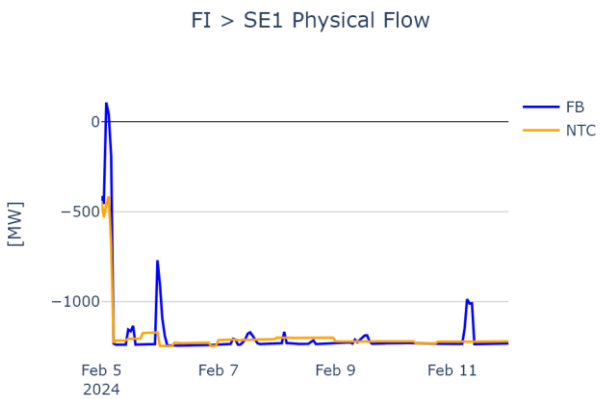

DK2 > SE4 Average flow on border
[MW]
500
400
300
200
100
0
FB
NTC

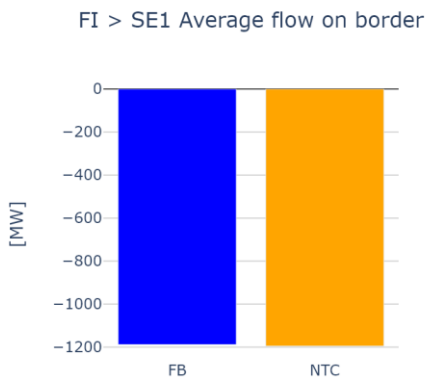

EE > FI Physical Flow
FB
NTC
[MW]
200
0
−200
Feb 5
2024
Feb 7
Feb 9
Feb 11

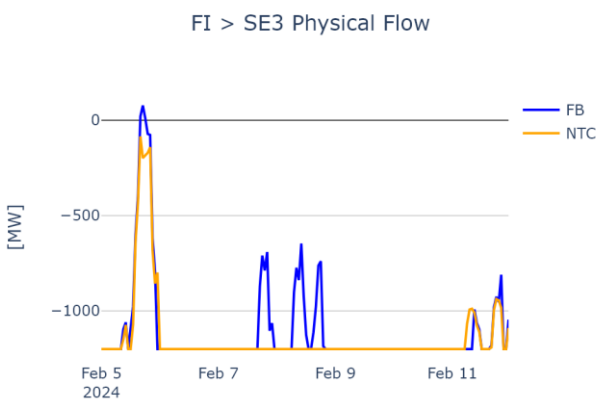

EE > FI Average flow on border
[MW]
80
60
40
20
0
FB
NTC

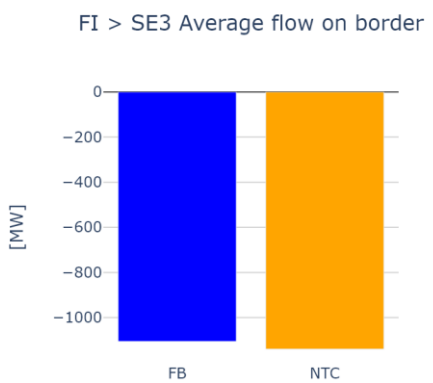

FI > NO4 Physical Flow
FB
NTC
[MW]
0
−5
−10
−15
−20
−25
Feb 5
2024
Feb 7
Feb 9
Feb 11

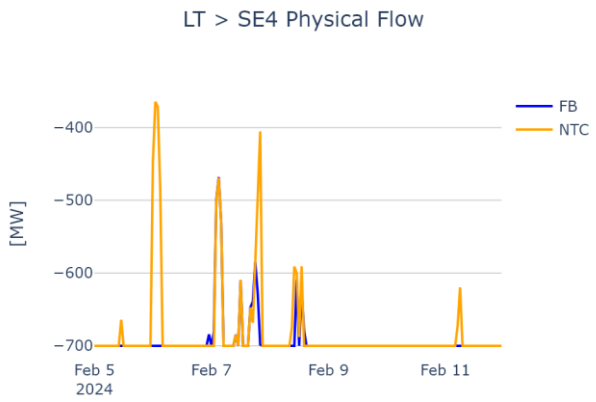

FI > NO4 Average flow on border
[MW]
0
−5
−10
−15
FB
NTC

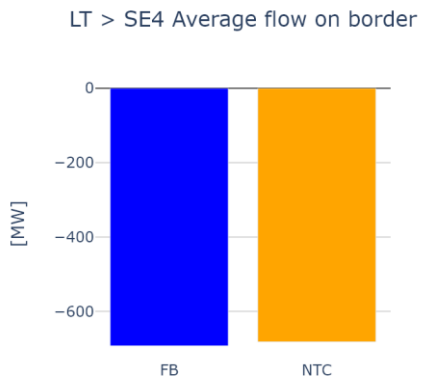

FI > SE1 Physical Flow
FB
NTC
[MW]
0
−500
−1000
Feb 5
2024
Feb 7
Feb 9
Feb 11

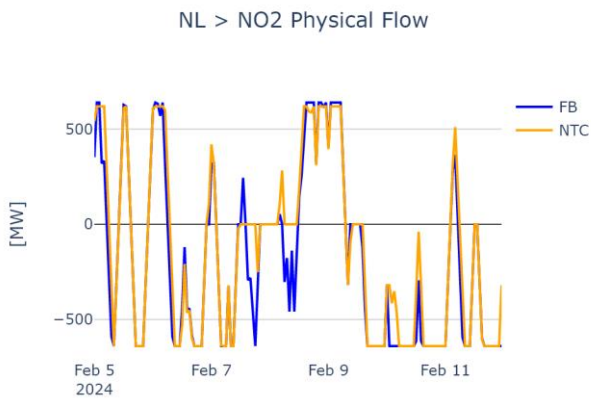

FI > SE1 Average flow on border
[MW]
0
−200
−400
−600
−800
−1000
−1200
FB
NTC

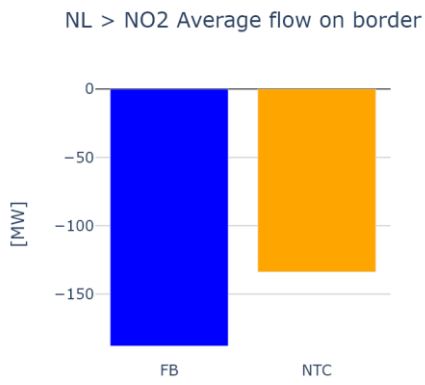

FI > SE3 Physical Flow
FB
NTC
[MW]
0
−500
−1000
Feb 5
2024
Feb 7
Feb 9
Feb 11

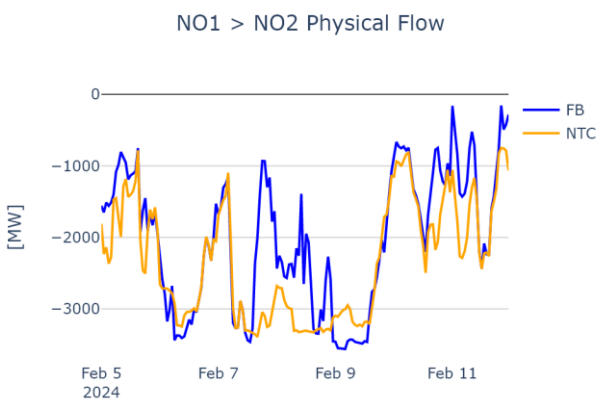

FI > SE3 Average flow on border
[MW]
0
−200
−400
−600
−800
−1000
FB
NTC

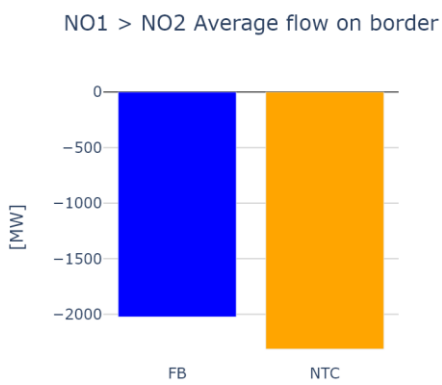

LT > SE4 Physical Flow
FB
NTC
[MW]
−400
−500
−600
−700
Feb 5
2024
Feb 7
Feb 9
Feb 11

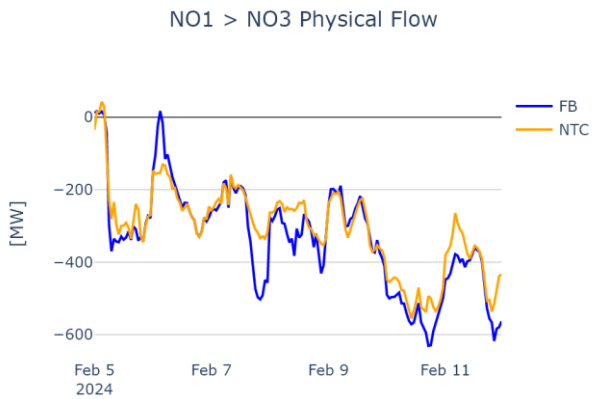

LT > SE4 Average flow on border
[MW]
0
−200
−400
−600
FB
NTC

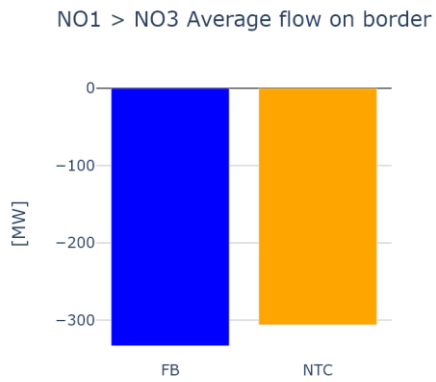

NL > NO2 Physical Flow
FB
NTC
[MW]
500
0
−500
Feb 5
2024
Feb 7
Feb 9
Feb 11

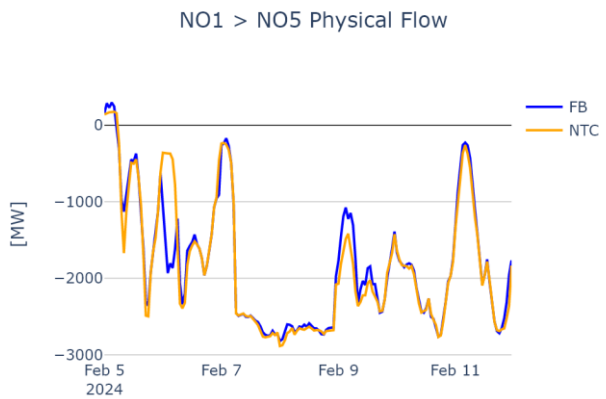

NL > NO2 Average flow on border
[MW]
0
−50
−100
−150
FB
NTC

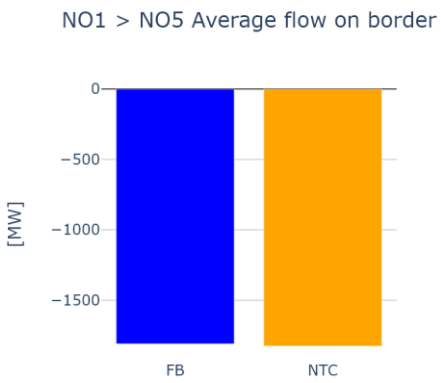

NO1 > NO2 Physical Flow
FB
NTC
[MW]
0
−1000
−2000
−3000
Feb 5
2024
Feb 7
Feb 9
Feb 11

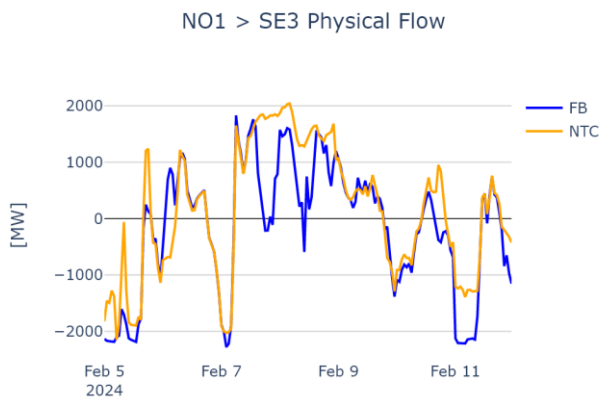

NO1 > NO2 Average flow on border
[MW]
0
−500
−1000
−1500
−2000
FB
NTC

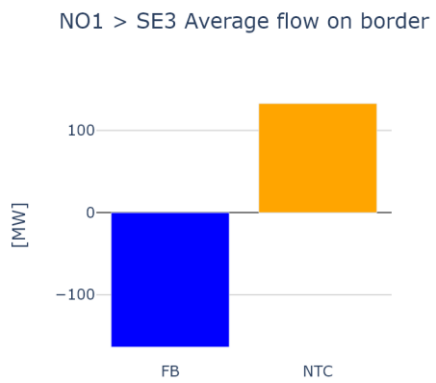

NO1 > NO3 Physical Flow
FB
NTC
[MW]
0
−200
−400
−600
Feb 5
2024
Feb 7
Feb 9
Feb 11

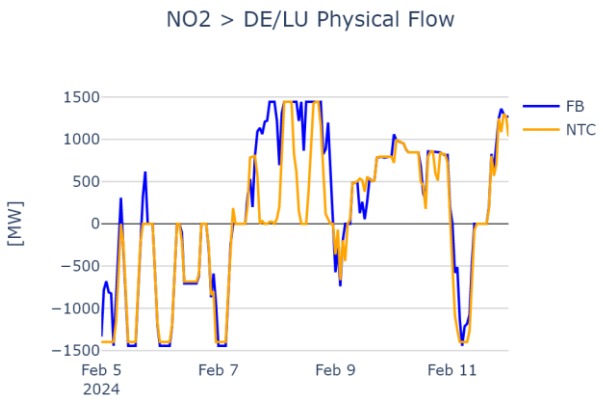

NO1 > NO3 Average flow on border
[MW]
0
−100
−200
−300
FB
NTC

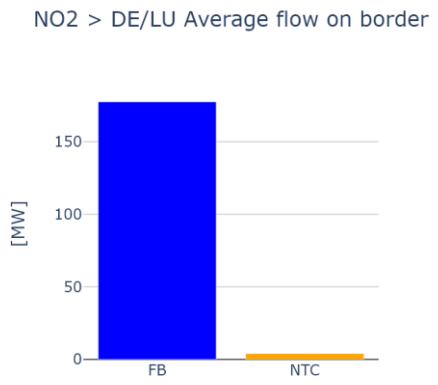

NO1 > NO5 Physical Flow
FB
NTC
[MW]
0
−1000
−2000
−3000
Feb 5
2024
Feb 7
Feb 9
Feb 11

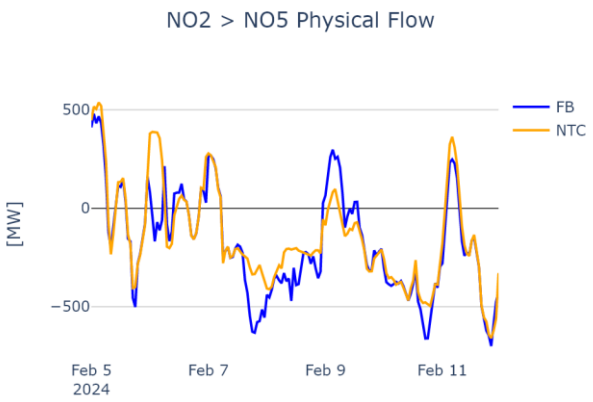

NO1 > NO5 Average flow on border
[MW]
0
−500
−1000
−1500
FB
NTC

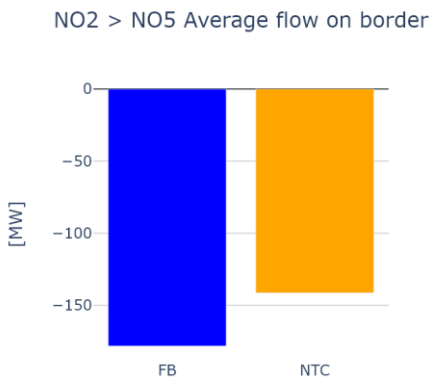

NO1 > SE3 Physical Flow
FB
NTC
[MW]
2000
1000
0
−1000
−2000
Feb 5
2024
Feb 7
Feb 9
Feb 11

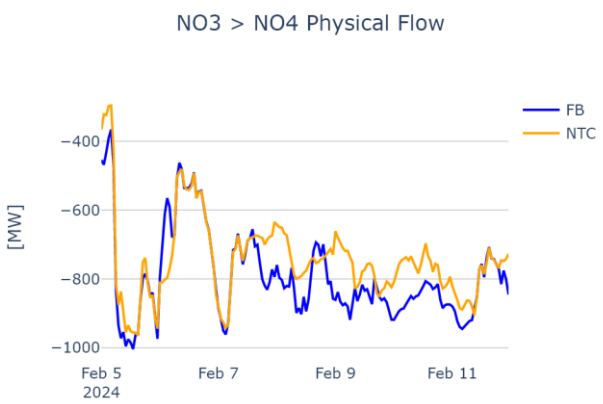

NO1 > SE3 Average flow on border
[MW]
100
0
−100
FB
NTC

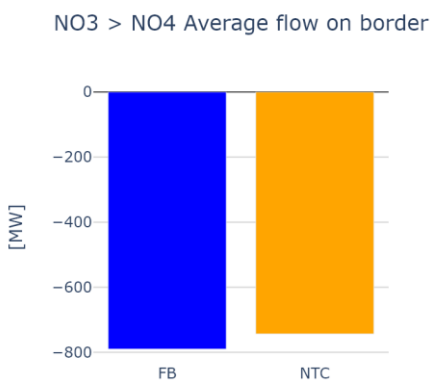

NO2 > DE/LU Physical Flow
[MW]
1500
1000
500
0
−500
−1000
−1500
Feb 5
2024
Feb 7
Feb 9
Feb 11
FB
NTC


NO2 > DE/LU Average flow on border
[MW]
150
100
50
0
FB
NTC

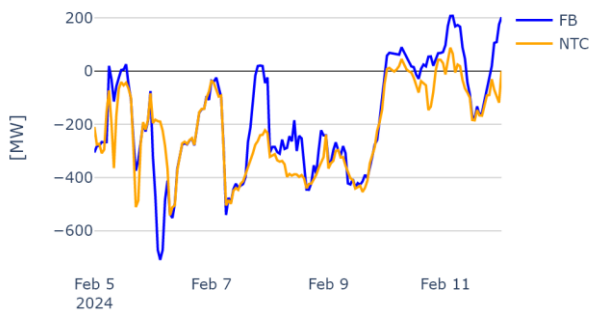

NO2 > NO5 Physical Flow
[MW]
500
0
−500
Feb 5
2024
Feb 7
Feb 9
Feb 11
FB
NTC


NO2 > NO5 Average flow on border
[MW]
0
−50
−100
−150
FB
NTC

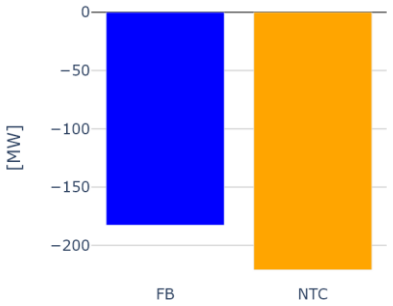

NO3 > NO4 Physical Flow
[MW]
−400
−600
−800
−1000
Feb 5
2024
Feb 7
Feb 9
Feb 11
FB
NTC


NO3 > NO4 Average flow on border
[MW]
0
−200
−400
−600
−800
FB
NTC

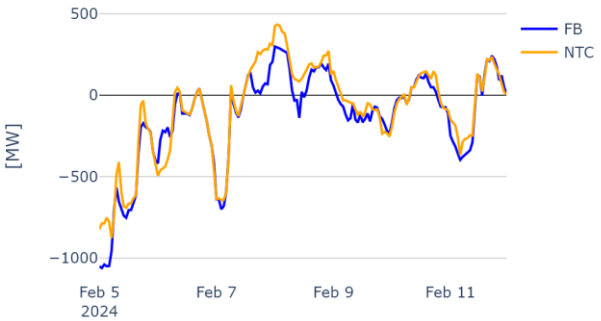
NO3 > NO5 Physical Flow



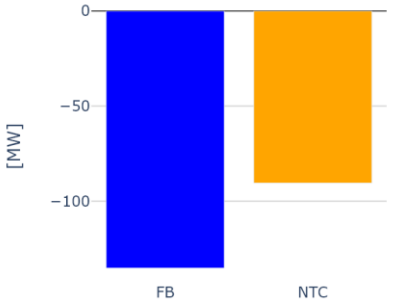
NO3 > NO5 Average flow on border



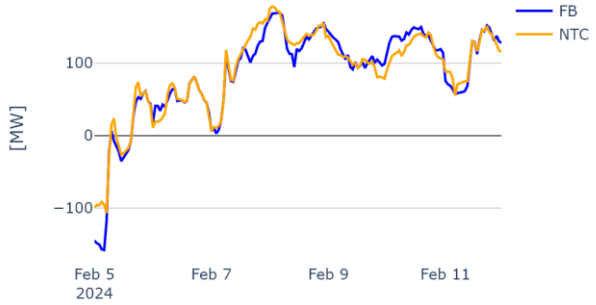
NO3 > SE2 Physical Flow



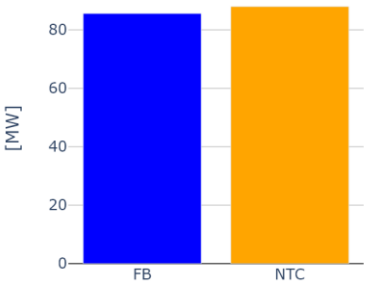
NO3 > SE2 Average flow on border

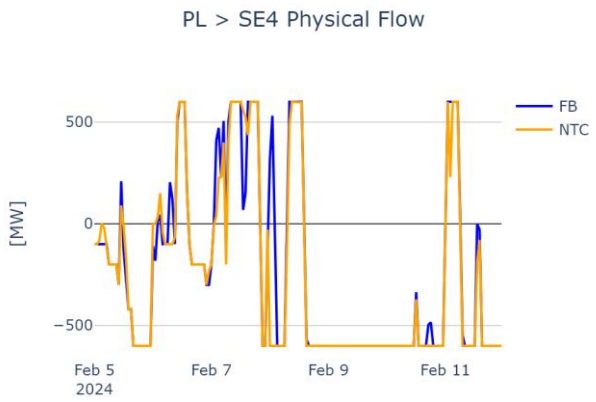


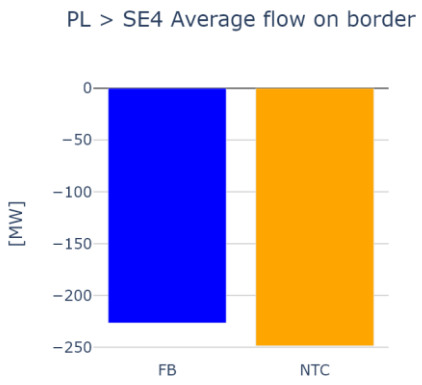
NO4 > SE2 Physical Flow

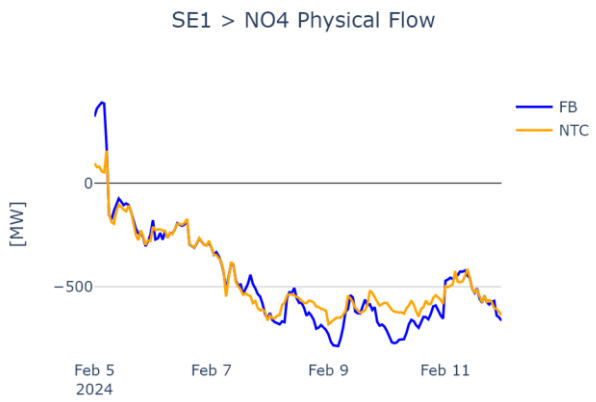


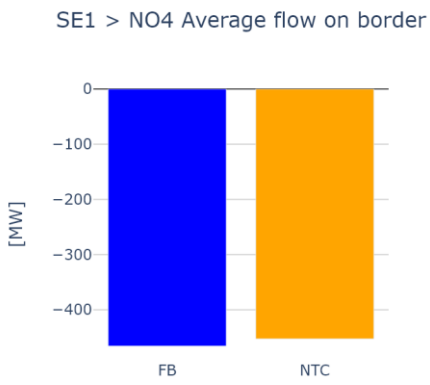
NO4 > SE2 Average flow on border

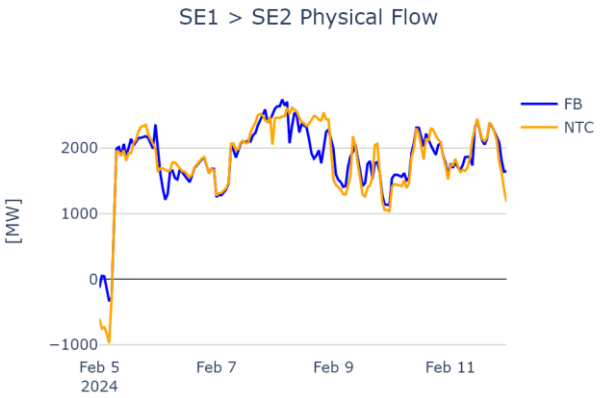


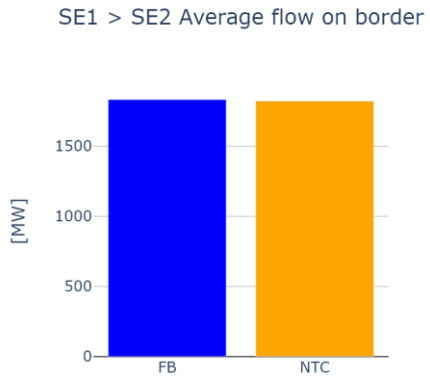

PL > SE4 Physical Flow
FB
NTC
[MW]
500
0
−500
Feb 5
2024
Feb 7
Feb 9
Feb 11

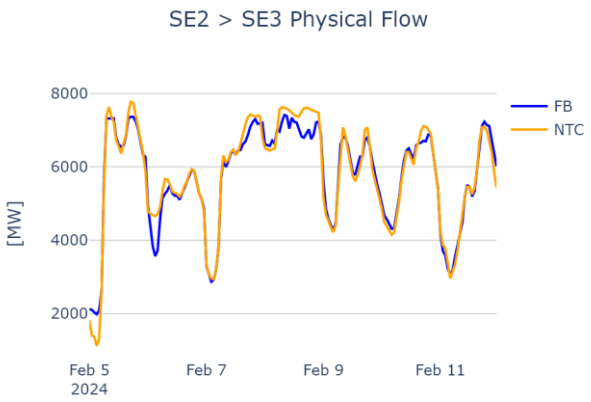

PL > SE4 Average flow on border
[MW]
0
−50
−100
−150
−200
−250
FB
NTC

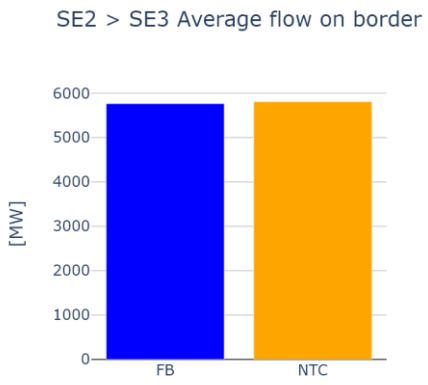

SE1 > NO4 Physical Flow
FB
NTC
[MW]
0
−500
Feb 5
2024
Feb 7
Feb 9
Feb 11

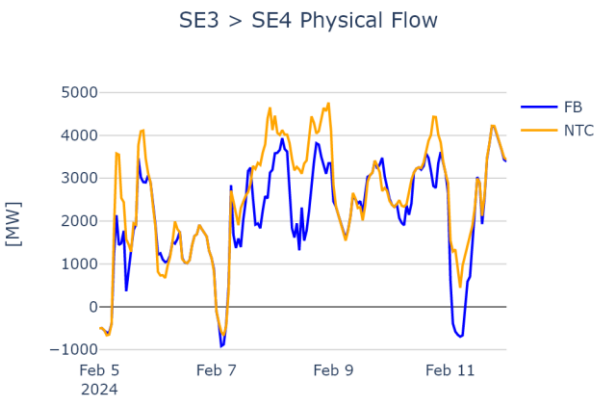

SE1 > NO4 Average flow on border
[MW]
0
−100
−200
−300
−400
FB
NTC

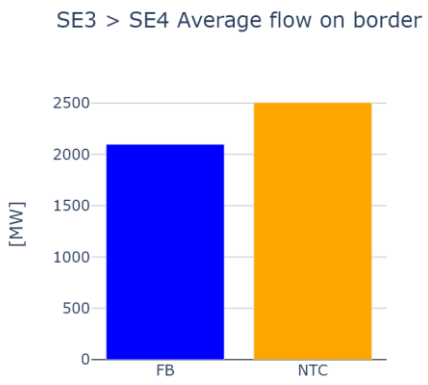

SE1 > SE2 Physical Flow
FB
NTC
[MW]
2000
1000
0
−1000
Feb 5
2024
Feb 7
Feb 9
Feb 11

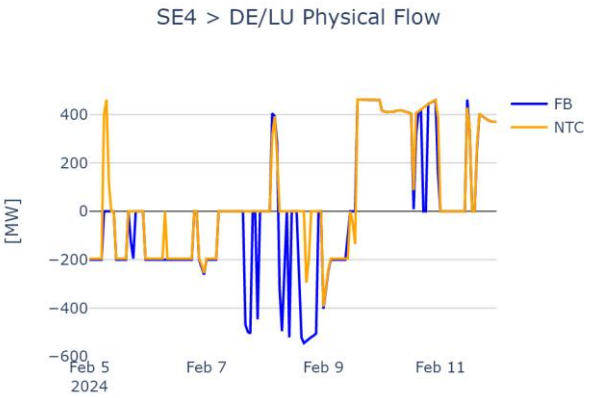

SE1 > SE2 Average flow on border
[MW]
1500
1000
500
0
FB
NTC

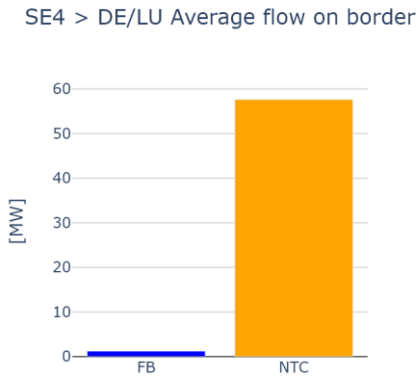

SE2 > SE3 Physical Flow
8000
6000
4000
2000
[MW]
Feb 5
2024
Feb 7
Feb 9
Feb 11
FB
NTC


SE2 > SE3 Average flow on border
6000
5000
4000
3000
2000
1000
0
[MW]
FB
NTC


SE3 > SE4 Physical Flow
5000
4000
3000
2000
1000
0
−1000
[MW]
Feb 5
2024
Feb 7
Feb 9
Feb 11
FB
NTC


SE3 > SE4 Average flow on border
2500
2000
1500
1000
500
0
[MW]
FB
NTC


SE4 > DE/LU Physical Flow
400
200
0
−200
−400
−600
[MW]
Feb 5
2024
Feb 7
Feb 9
Feb 11
FB
NTC


SE4 > DE/LU Average flow on border
60
50
40
30
20
10
0
[MW]
FB
NTC

Flows per border (FB)

Values are rounded to the nearest integer.

Border	Congestion Income (total)	Avg. Price Spread
DK1 > DE/LU	1241027	4
DK1 > DK2	241259	3
DK1 > NL	816547	7
DK1 > NO2	712025	4
DK1 > SE3	404908	3
DK2 > DE/LU	736152	6
DK2 > SE4	206768	1
EE > FI	623269	10
FI > NO4	143305	45
FI > SE1	8851461	43
FI > SE3	7399247	37
LT > SE4	3465842	29
NL > NO2	653890	9
NO1 > NO2	328364	1
NO1 > NO3	105323	2
NO1 > NO5	-62628	0
NO1 > SE3	491494	2
NO2 > DE/LU	1020377	7
NO2 > NO5	54506	0
NO3 > NO4	434703	3
NO3 > NO5	-135619	-2
NO3 > SE2	111053	0
NO4 > SE2	53937	2
PL > SE4	925001	11
SE1 > NO4	201397	2
SE1 > SE2	181767	0
SE2 > SE3	5848674	5
SE3 > SE4	-86519	0
SE4 > DE/LU	254781	7

Non-Intuitive flows (FB)

Values are rounded to the nearest integer.

Border	Pct. of non-intuitive flows	Negative congestion income	Avg. price spread for non-intuitive flows
DK1 > DE/LU	0	0	0
DK1 > DK2	1	-2468	-4
DK1 > NL	0	0	0
DK1 > NO2	5	-27719	-4
DK1 > SE3	27	-35415	-2
DK2 > DE/LU	1	-58	-1
DK2 > SE4	11	-858	0
EE > FI	0	0	0
FI > NO4	6	-68	0
FI > SE1	1	-19	0
FI > SE3	3	-1425	-4
LT > SE4	0	0	0
NL > NO2	2	-3982	-4
NO1 > NO2	32	-21850	0
NO1 > NO3	4	-1449	-3
NO1 > NO5	5	-189570	-12
NO1 > SE3	13	-57217	-4
NO2 > DE/LU	2	-3861	-3
NO2 > NO5	13	-15578	-6
NO3 > NO4	1	-173	0
NO3 > NO5	48	-138203	-5
NO3 > SE2	29	-25338	-5
NO4 > SE2	29	-4916	-1
PL > SE4	14	-90697	-10
SE1 > NO4	33	-73448	-3
SE1 > SE2	29	-54028	-1
SE2 > SE3	32	-95294	0
SE3 > SE4	45	-98243	-1
SE4 > DE/LU	0	0	0