Nordic Capacity Calculation Methodology Project (Nordic CCM)

Nordic CCM

External Parallel Run Market Report
Appendix for Week 48 of 2023

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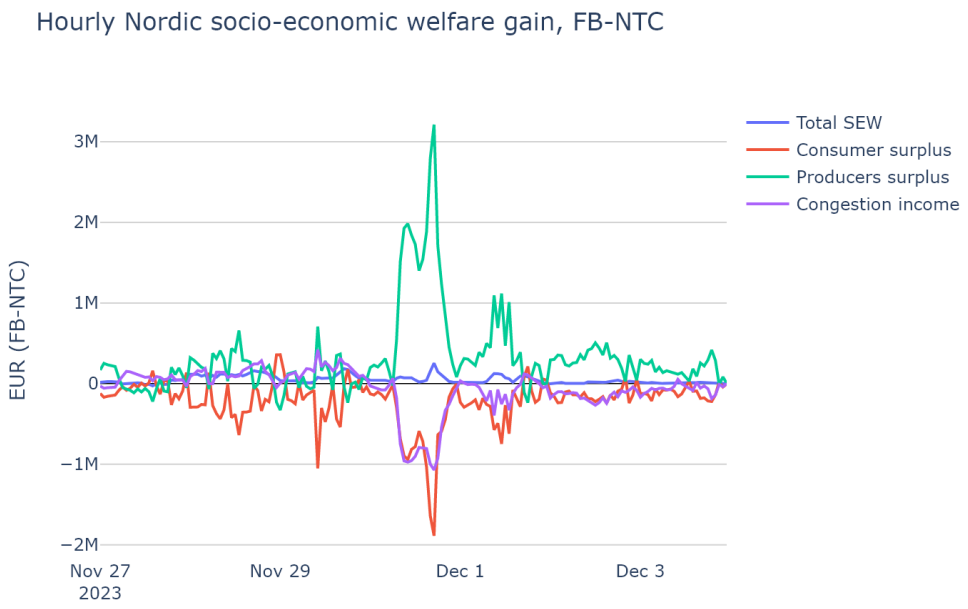
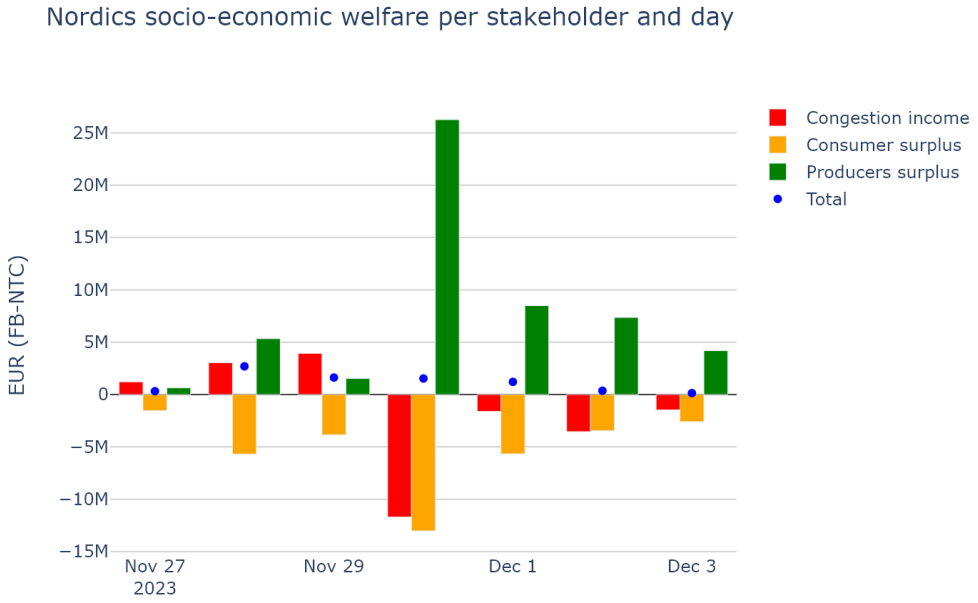
Domain validation

Energy Delivery Day:	Mon. 27.11	Tue. 28.11	Wed. 29.11	Thu. 30.11	Fri. 01.12	Sat. 02.12	Sun. 03.12
Invalid/missing IGMs	0	0	0	1	2	0	3
Substituted IGMs	0	0	0	1	2	0	3
Invalid CGMs	0	0	0	0	0	0	0
FB domain back-up	0	0	0	0	0	0	0
FAV provision	1	1	2	1	1	2	0
Final domain acceptance (1 TSO =25%)	100%	100%	100%	100%	100%	100%	100%

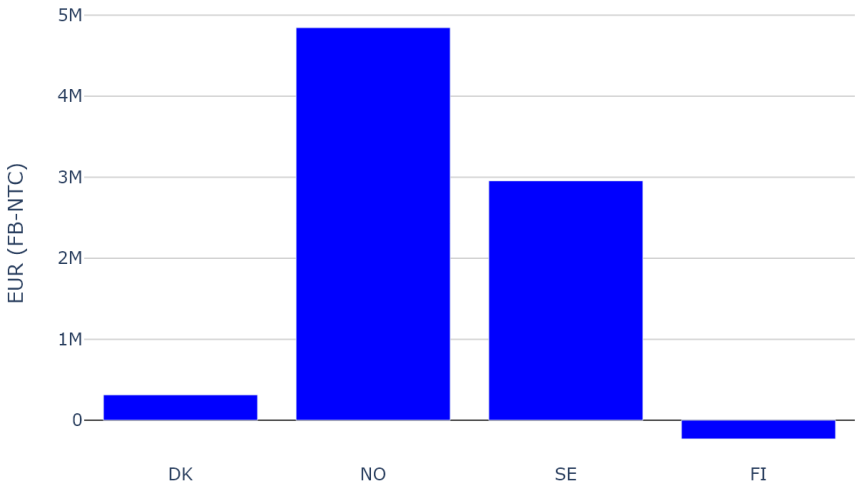
Socio Economic Welfare

Nordics

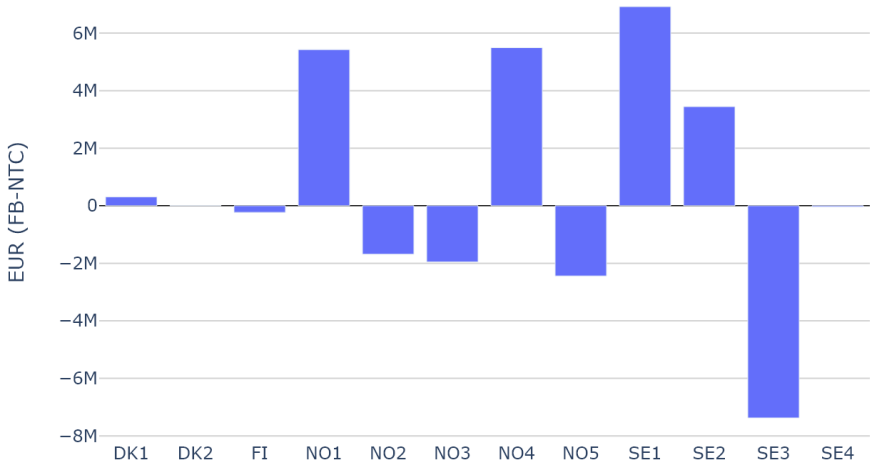




Total Nordic socio-economic welfare per country

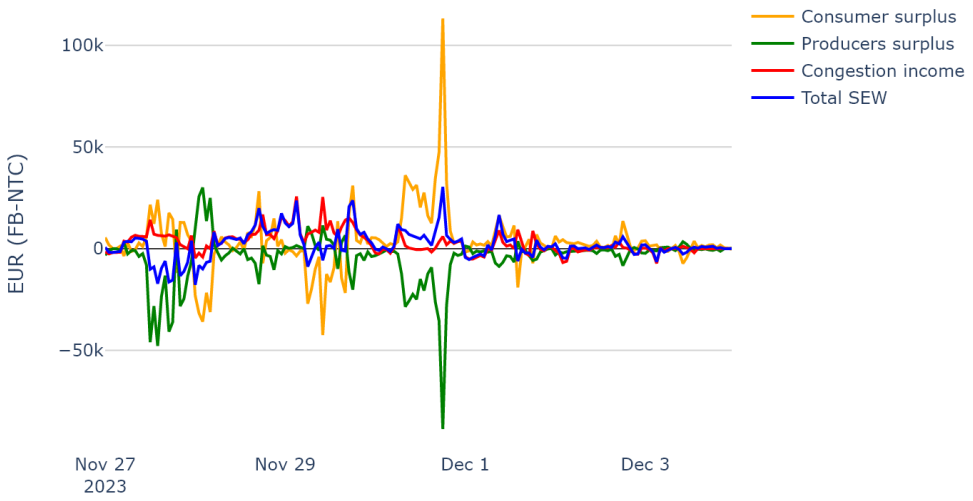


Socio economic welfaregain FB-NTC per BZ - Total_sew

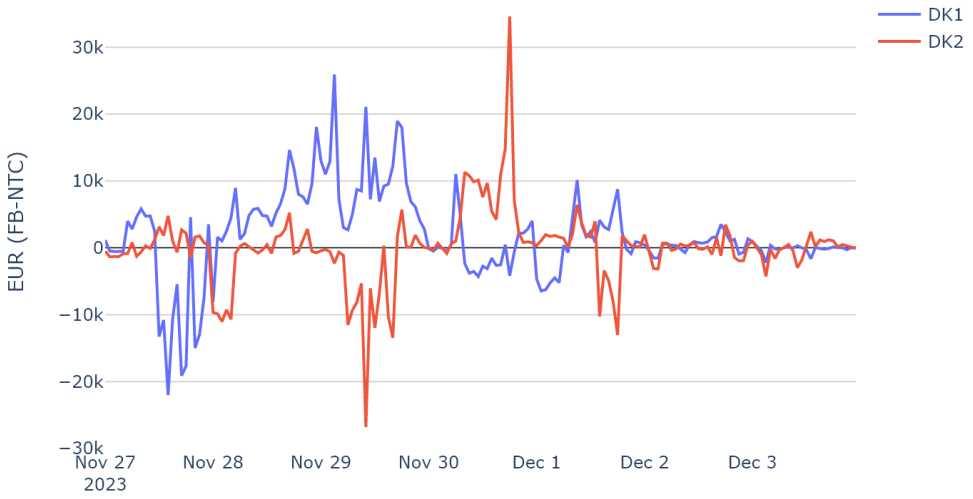


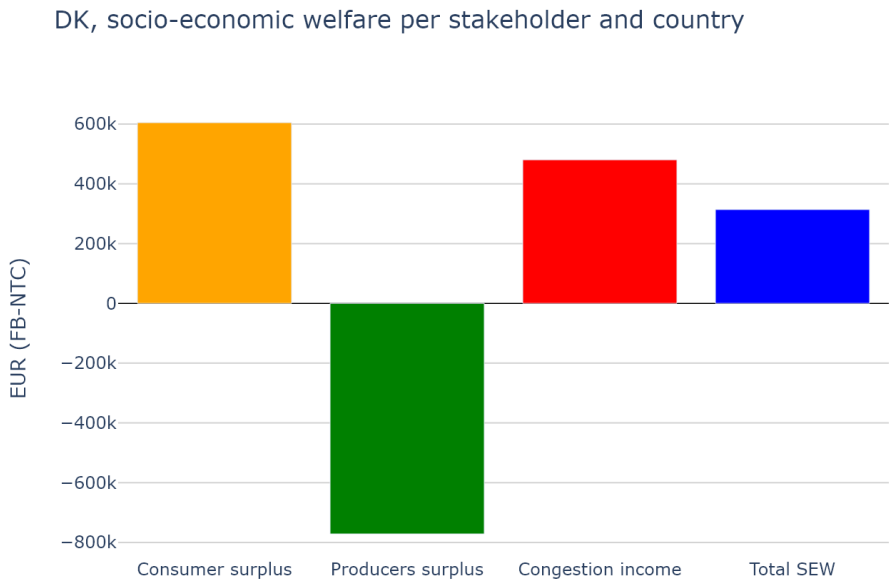
Denmark

DK, socio-economic welfare per stakeholder and country

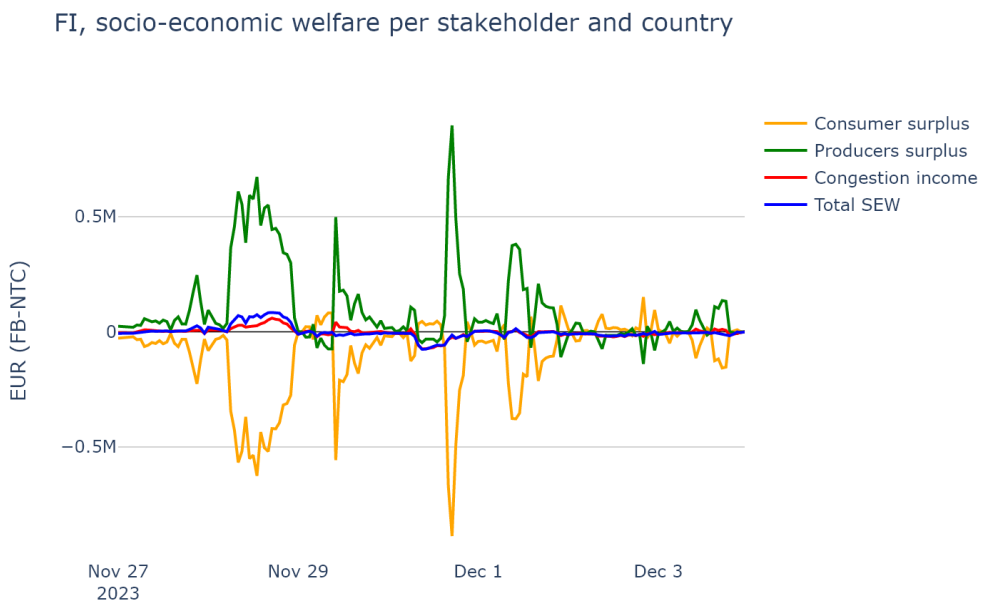


Total socio economic welfaregain FB-NTC per BZ in DK



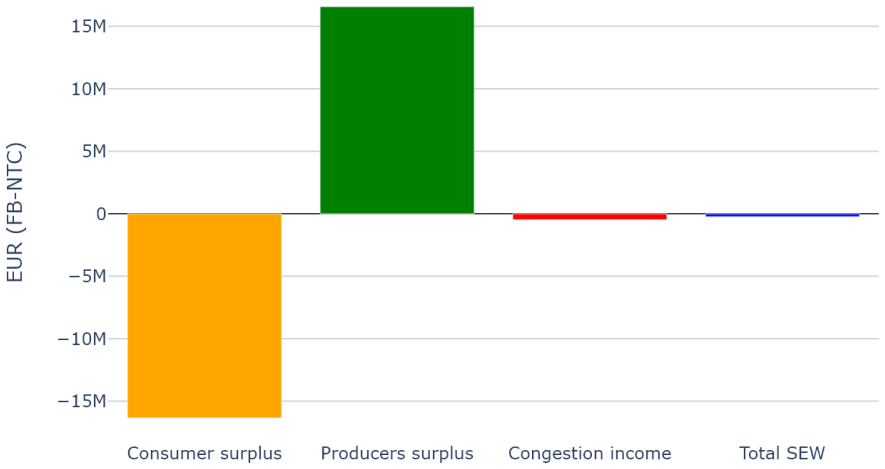

DK, socio-economic welfare per stakeholder and country
600k
400k
200k
0
−200k
−400k
−600k
−800k
EUR (FB-NTC)
Consumer surplus
Producers surplus
Congestion income
Total SEW

Finland


FI, socio-economic welfare per stakeholder and country
Consumer surplus
Producers surplus
Congestion income
Total SEW
0.5M
0
−0.5M
EUR (FB-NTC)
Nov 27
2023
Nov 29
Dec 1
Dec 3

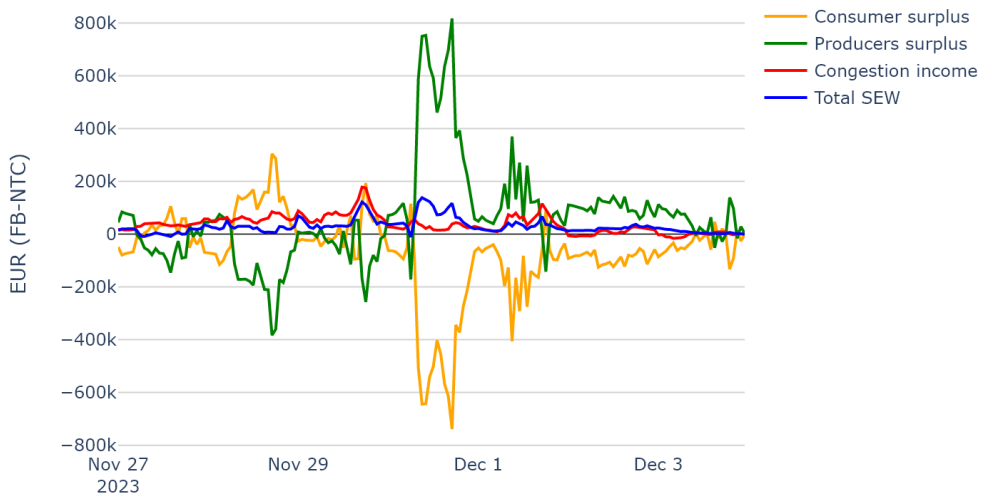
Total socio economic welfaregain FB-NTC per BZ in FI

FI, socio-economic welfare per stakeholder and country

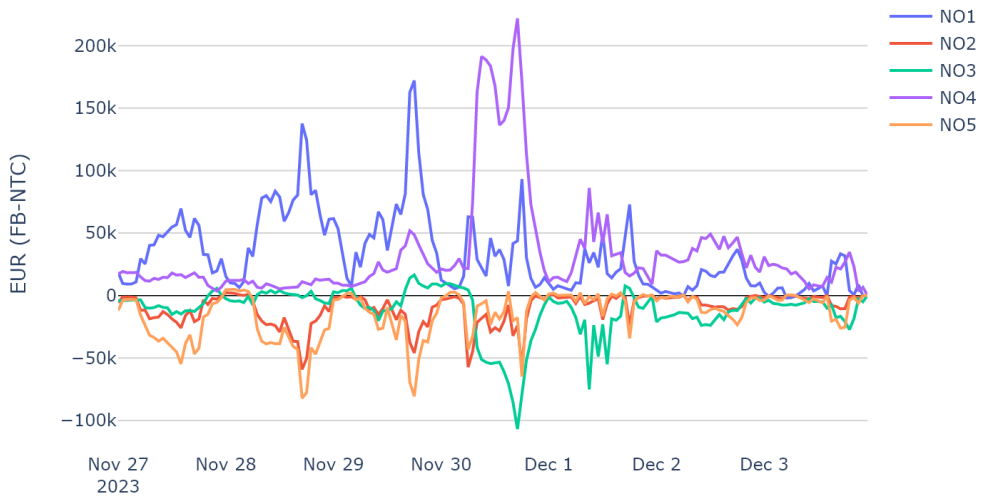


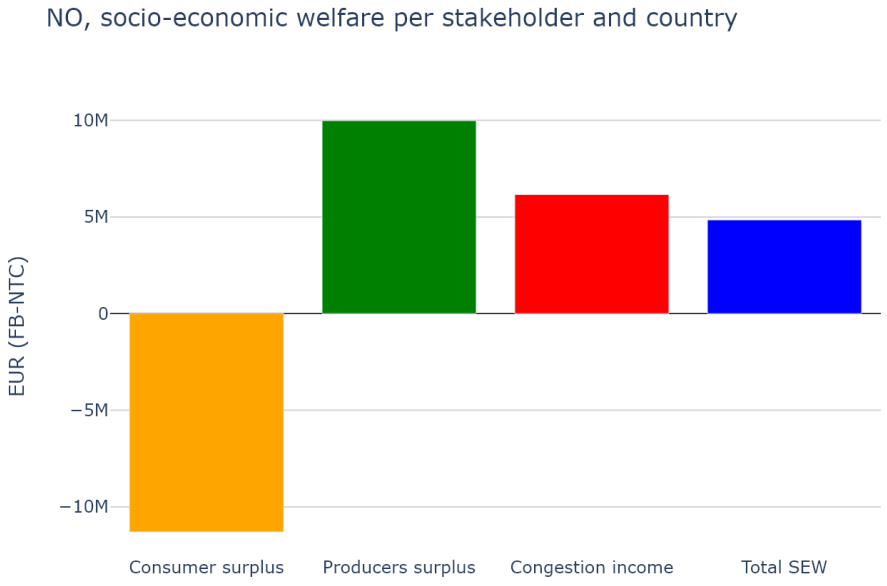
Norway

NO, socio-economic welfare per stakeholder and country

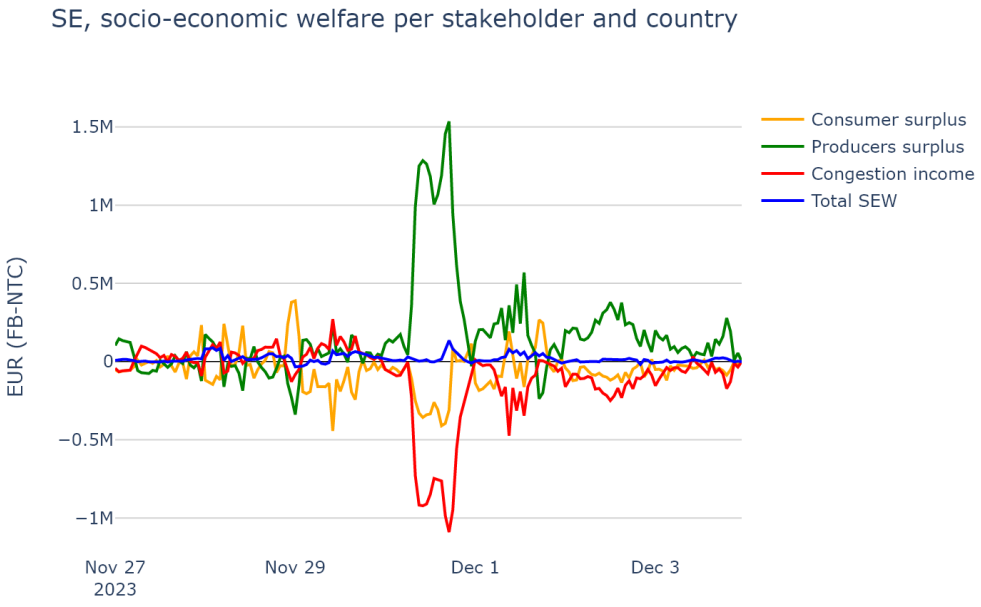


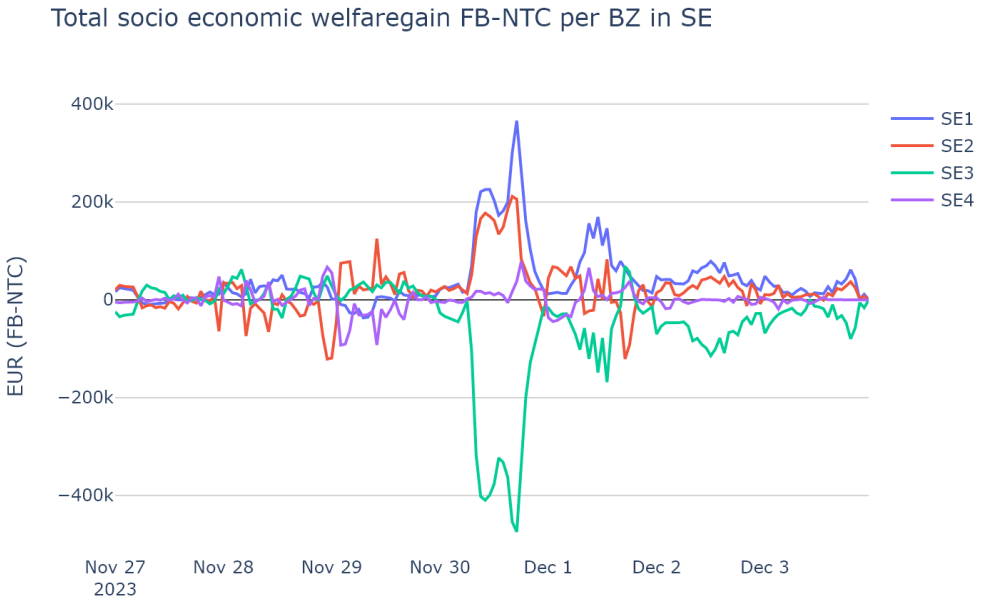
Total socio economic welfaregain FB-NTC per BZ in NO

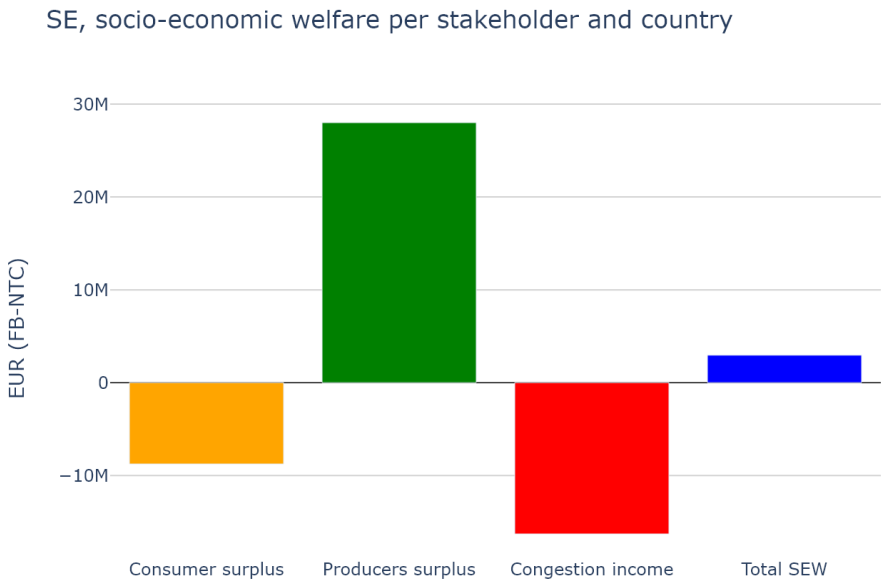



NO, socio-economic welfare per stakeholder and country
10M
5M
0
−5M
−10M
EUR (FB-NTC)
Consumer surplus
Producers surplus
Congestion income
Total SEW

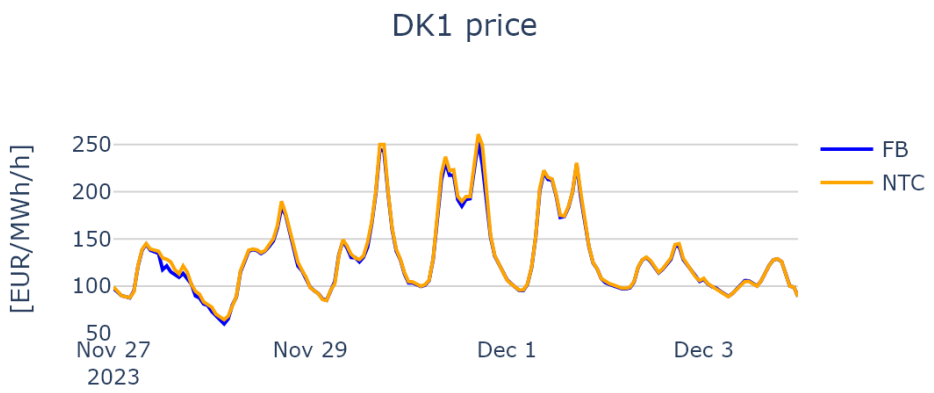
Sweden


SE, socio-economic welfare per stakeholder and country
1.5M
1M
0.5M
0
−0.5M
−1M
EUR (FB-NTC)
Nov 27
2023
Nov 29
Dec 1
Dec 3
Consumer surplus
Producers surplus
Congestion income
Total SEW

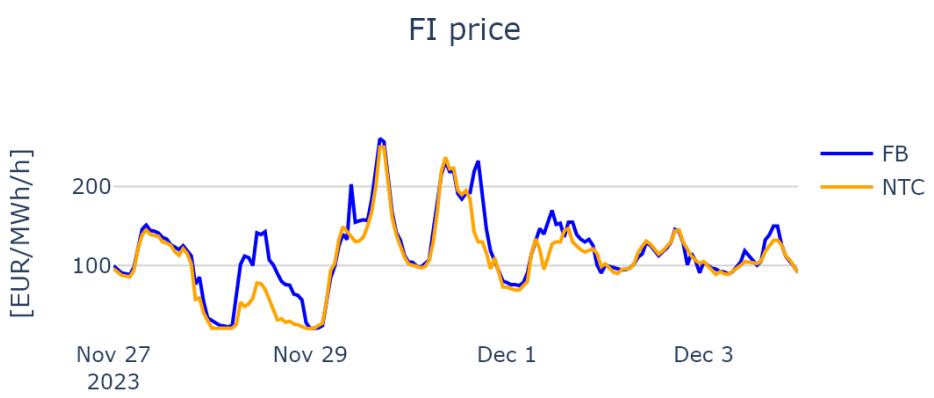

Total socio economic welfaregain FB-NTC per BZ in SE
400k
200k
0
−200k
−400k
EUR (FB-NTC)
Nov 27
2023
Nov 28
Nov 29
Nov 30
Dec 1
Dec 2
Dec 3
SE1
SE2
SE3
SE4

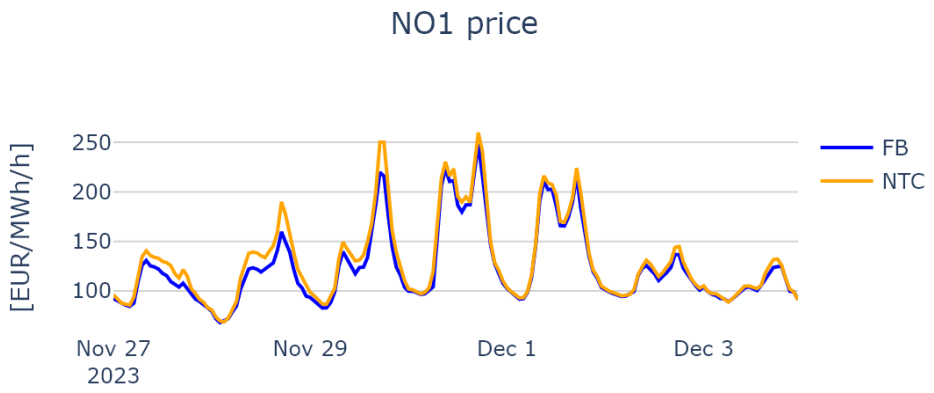

SE, socio-economic welfare per stakeholder and country
30M
20M
10M
0
−10M
EUR (FB-NTC)
Consumer surplus
Producers surplus
Congestion income
Total SEW

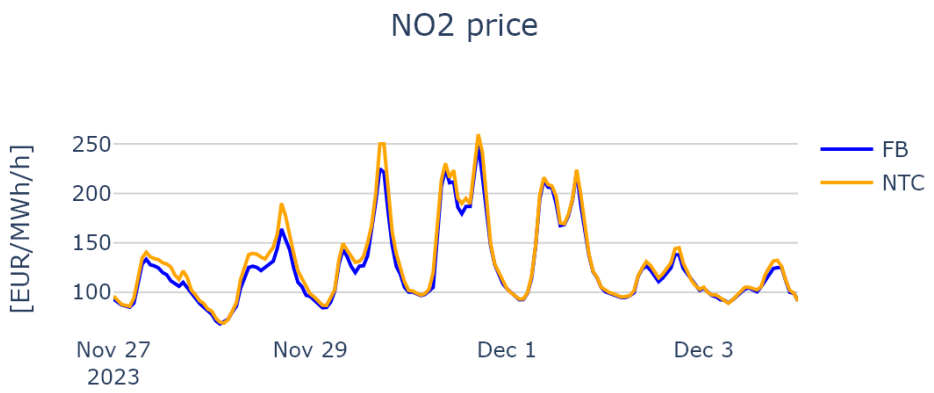
Prices

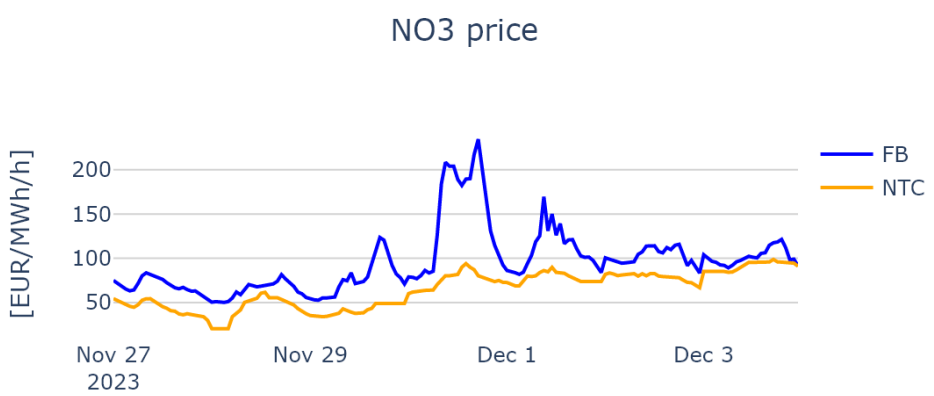

DK1 price
[EUR/MWh/h]
250
200
150
100
50
Nov 27
2023
Nov 29
Dec 1
Dec 3
FB
NTC

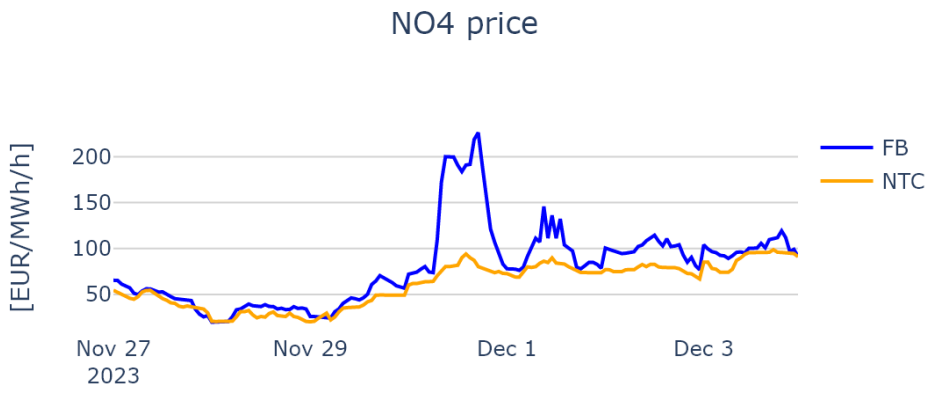
DK2 price
[EUR/MWh/h]
200
100
Nov 27
2023
Nov 29
Dec 1
Dec 3
FB
NTC

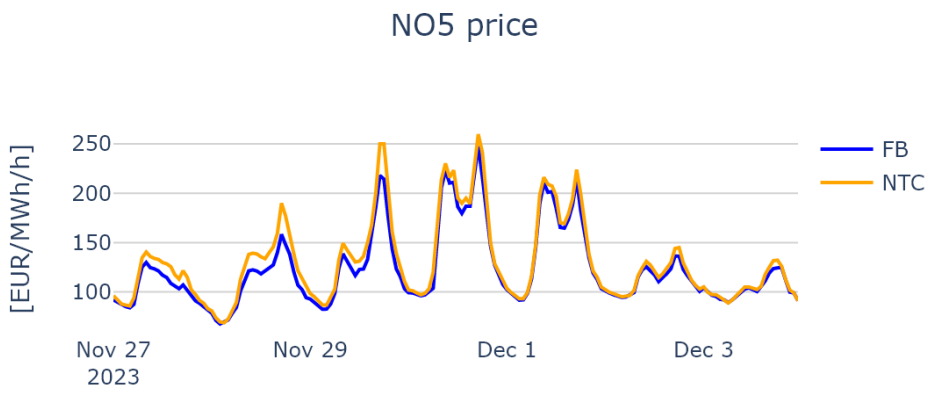

FI price
[EUR/MWh/h]
200
100
Nov 27
2023
Nov 29
Dec 1
Dec 3
FB
NTC

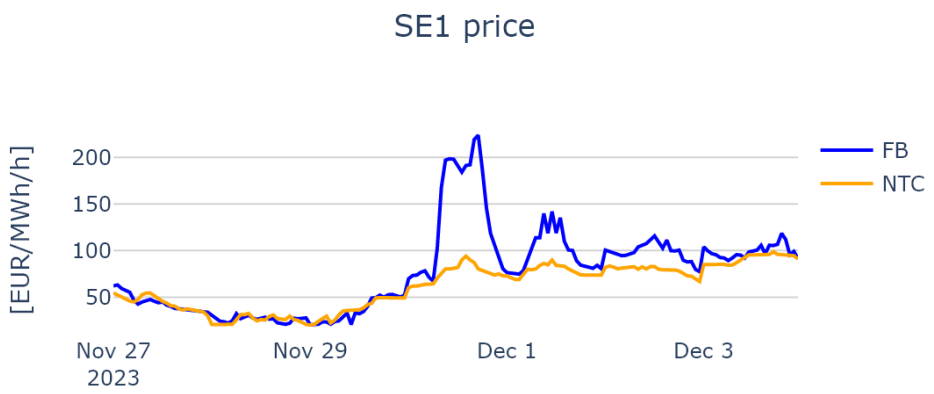

NO1 price
[EUR/MWh/h]
250
200
150
100
Nov 27
2023
Nov 29
Dec 1
Dec 3
FB
NTC

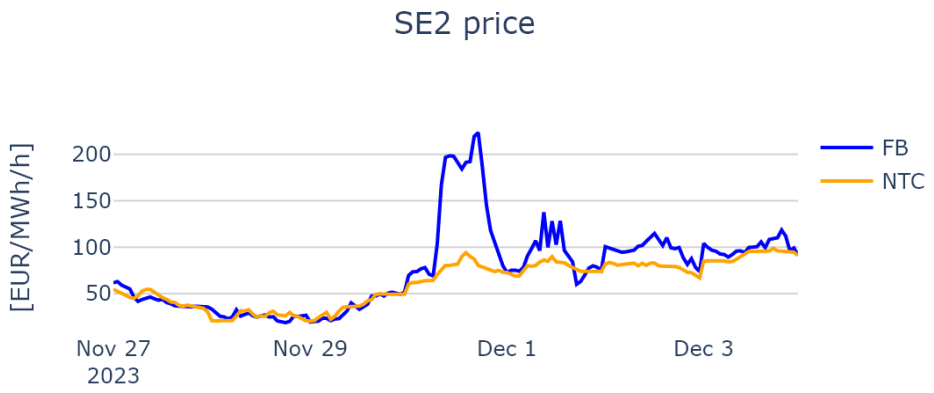

NO2 price
[EUR/MWh/h]
250
200
150
100
Nov 27
2023
Nov 29
Dec 1
Dec 3
FB
NTC

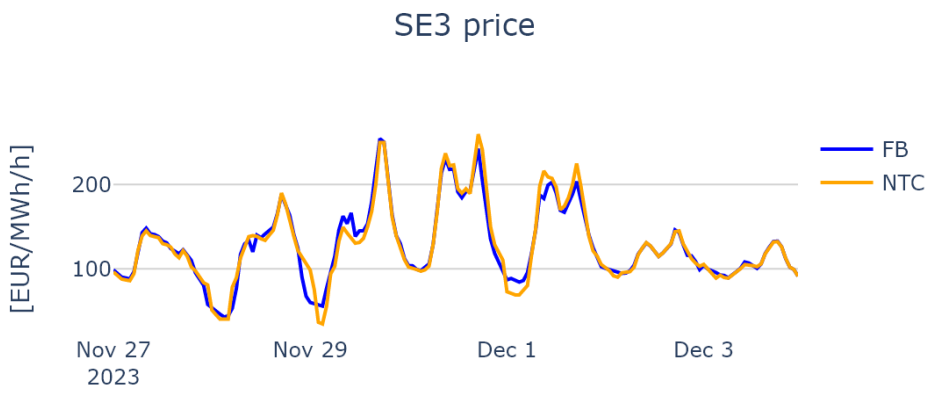

NO3 price
[EUR/MWh/h]
200
150
100
50
Nov 27
2023
Nov 29
Dec 1
Dec 3
FB
NTC


NO4 price
[EUR/MWh/h]
200
150
100
50
Nov 27
2023
Nov 29
Dec 1
Dec 3
FB
NTC


NO5 price
[EUR/MWh/h]
250
200
150
100
Nov 27
2023
Nov 29
Dec 1
Dec 3
FB
NTC


SE1 price
[EUR/MWh/h]
200
150
100
50
Nov 27
2023
Nov 29
Dec 1
Dec 3
FB
NTC

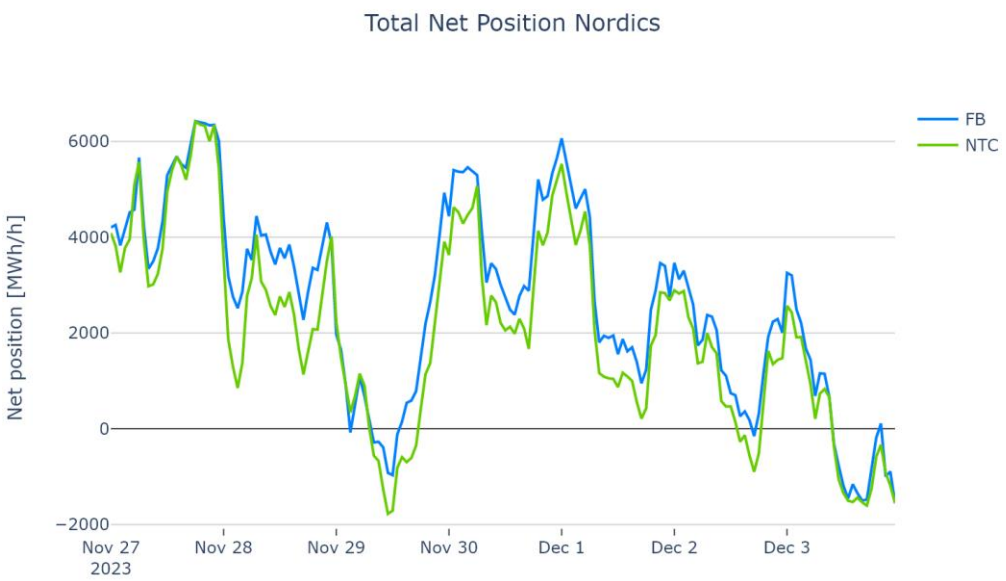

SE2 price
[EUR/MWh/h]
200
150
100
50
Nov 27
2023
Nov 29
Dec 1
Dec 3
FB
NTC

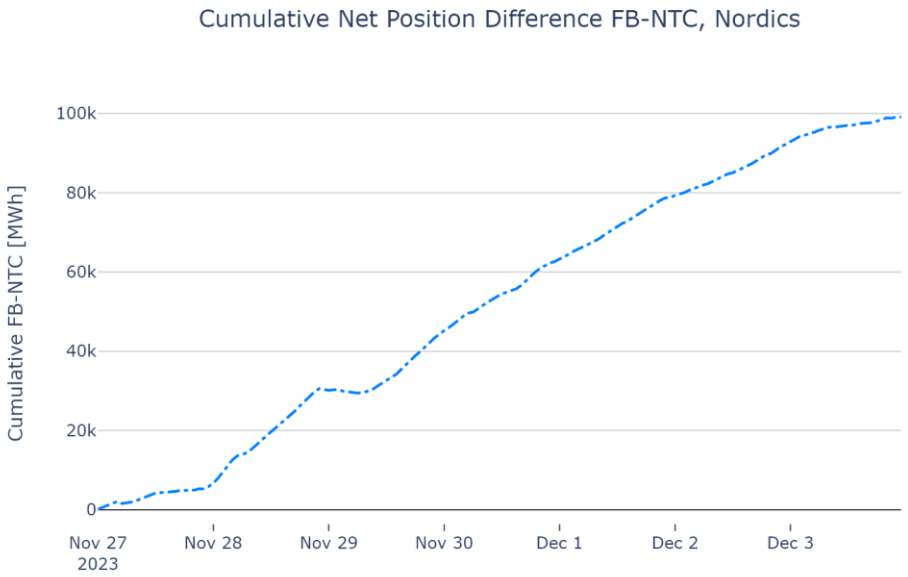

SE3 price
[EUR/MWh/h]
200
100
Nov 27
2023
Nov 29
Dec 1
Dec 3
FB
NTC

SE4 price
[EUR/MWh/h]
250
200
150
100
50
Nov 27
2023
Nov 29
Dec 1
Dec 3
FB
NTC

Net positions

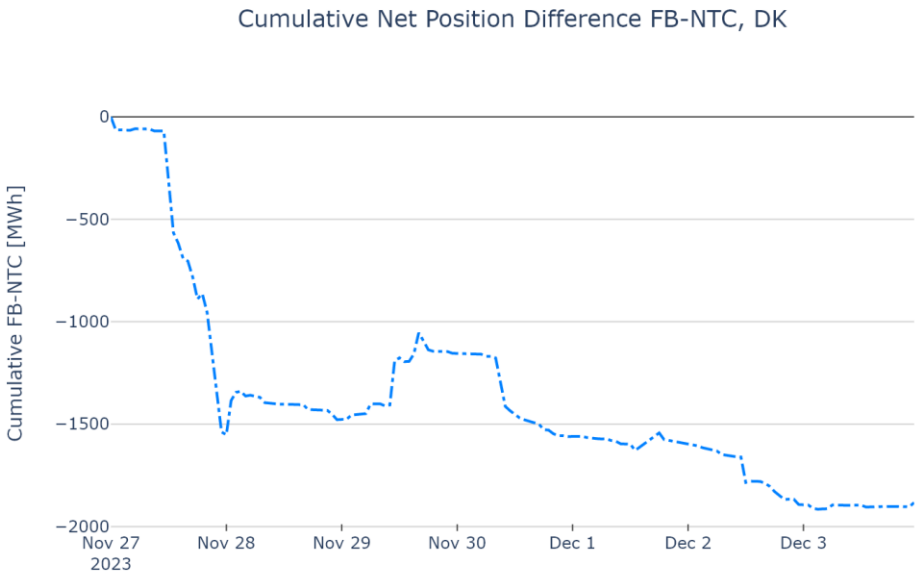
Nordics

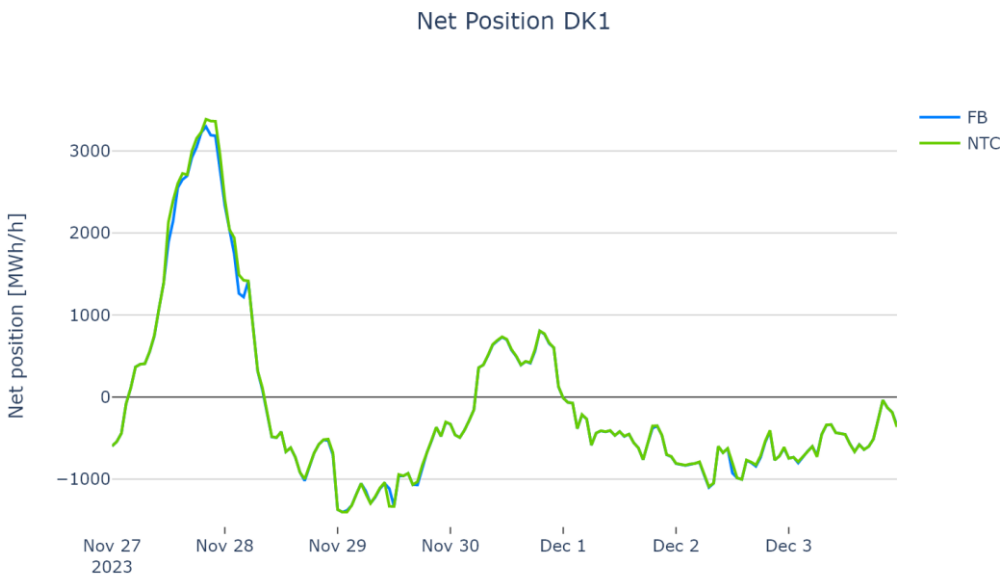


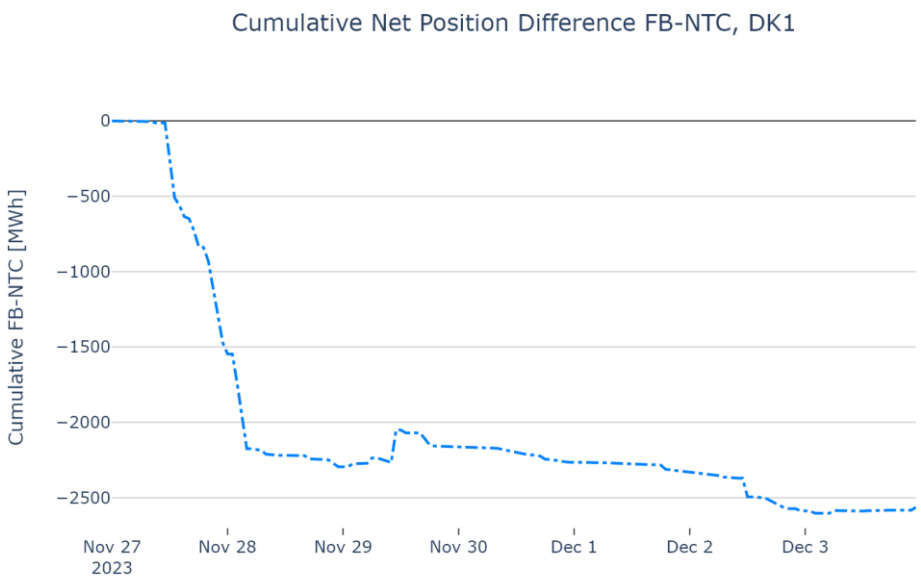


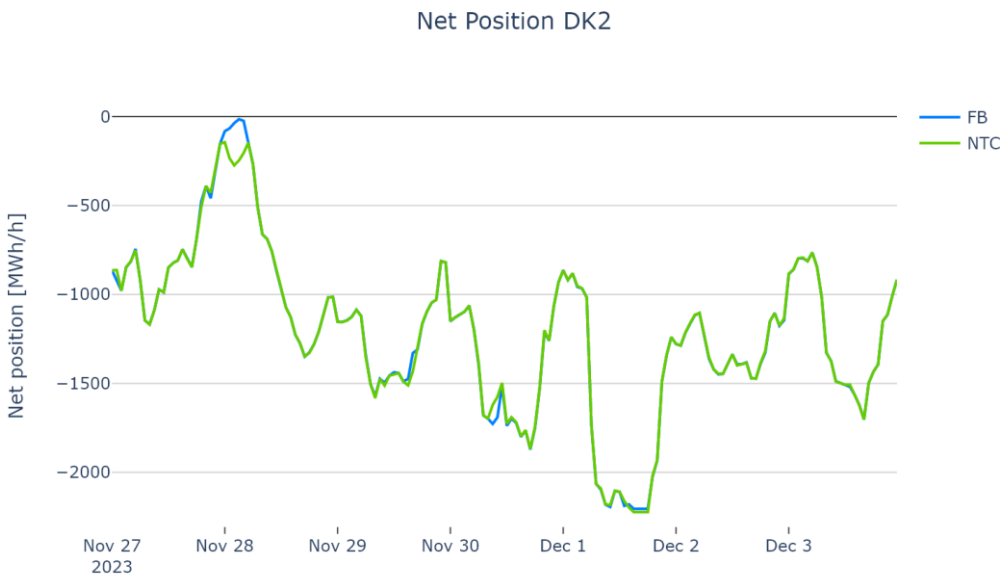
Denmark

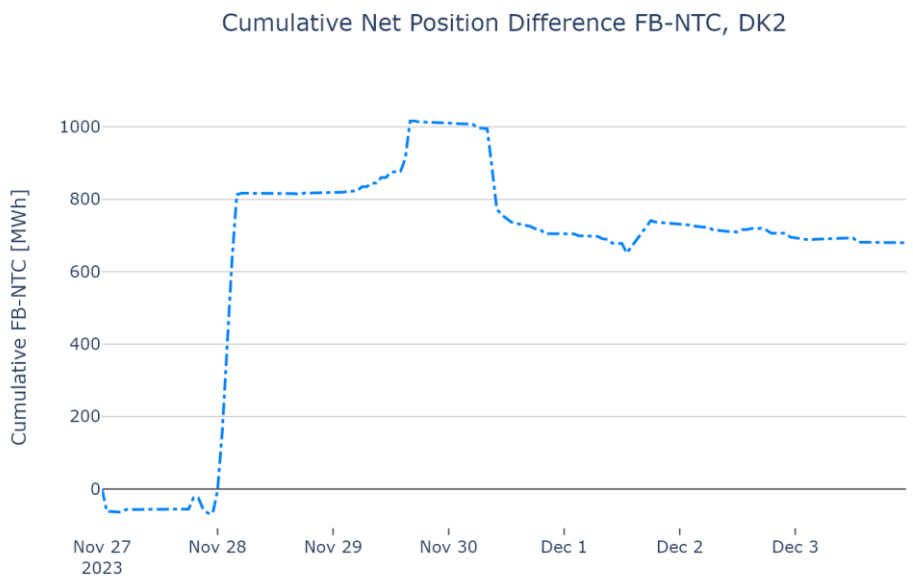
Total Net Position DK
FB
NTC
Net position [MWh/h]
3000
2000
1000
0
−1000
−2000
−3000
Nov 27
2023
Nov 28
Nov 29
Nov 30
Dec 1
Dec 2
Dec 3


Cumulative Net Position Difference FB-NTC, DK
Cumulative FB-NTC [MWh]
0
−500
−1000
−1500
−2000
Nov 27
2023
Nov 28
Nov 29
Nov 30
Dec 1
Dec 2
Dec 3

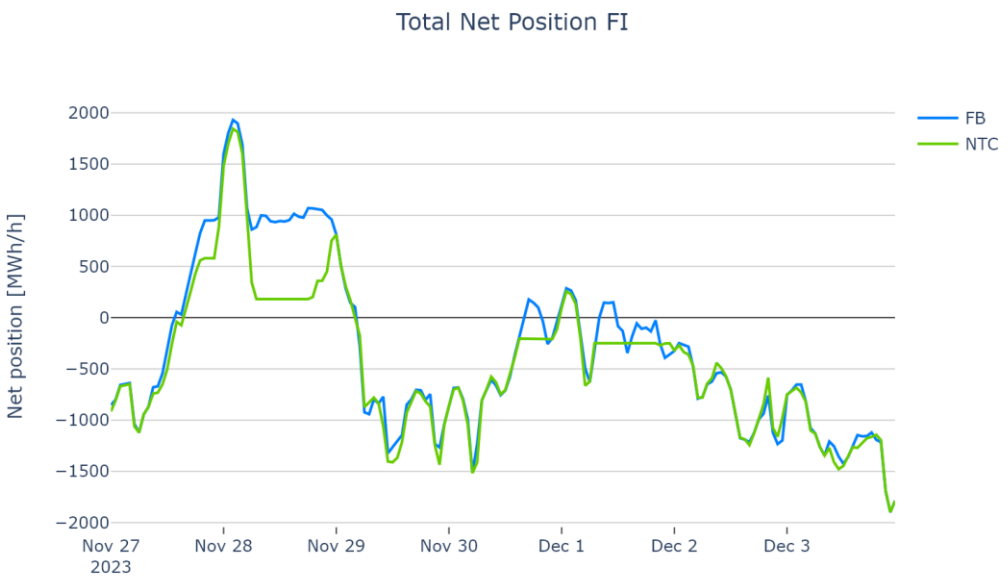

Net Position DK1
FB
NTC
Net position [MWh/h]
3000
2000
1000
0
−1000
Nov 27
2023
Nov 28
Nov 29
Nov 30
Dec 1
Dec 2
Dec 3

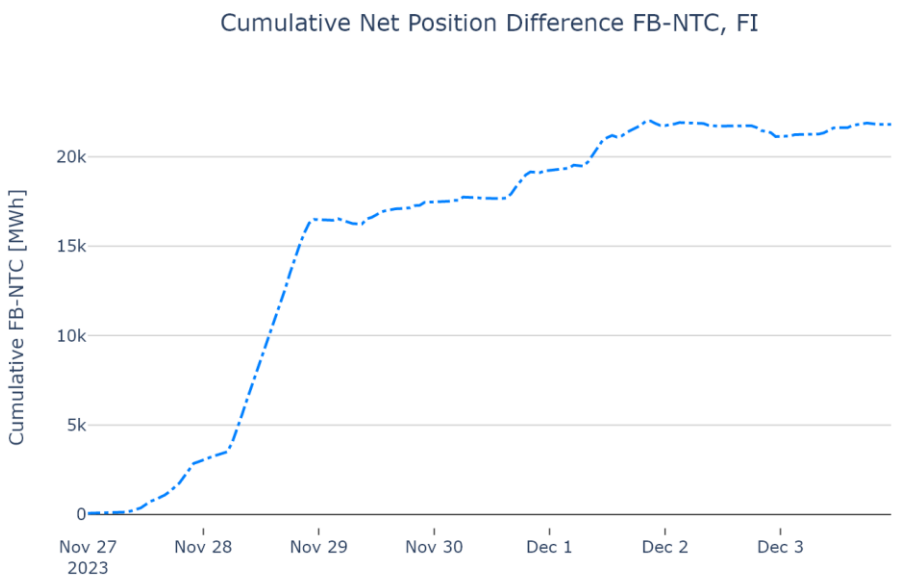

Cumulative Net Position Difference FB-NTC, DK1
Cumulative FB-NTC [MWh]
0
−500
−1000
−1500
−2000
−2500
Nov 27
2023
Nov 28
Nov 29
Nov 30
Dec 1
Dec 2
Dec 3


Net Position DK2
FB
NTC
Net position [MWh/h]
0
−500
−1000
−1500
−2000
Nov 27
2023
Nov 28
Nov 29
Nov 30
Dec 1
Dec 2
Dec 3

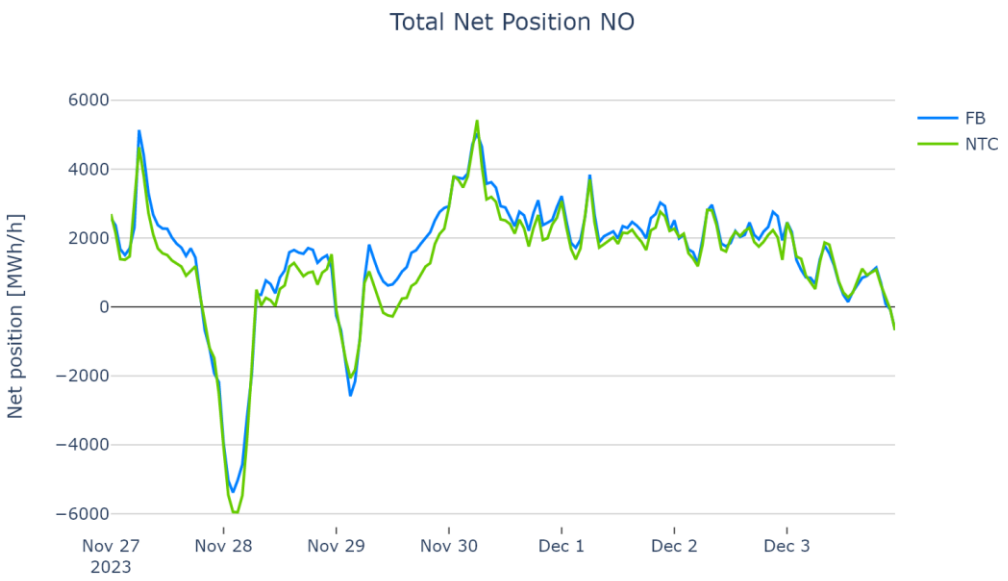

Cumulative Net Position Difference FB-NTC, DK2
Cumulative FB-NTC [MWh]
1000
800
600
400
200
0
Nov 27
2023
Nov 28
Nov 29
Nov 30
Dec 1
Dec 2
Dec 3

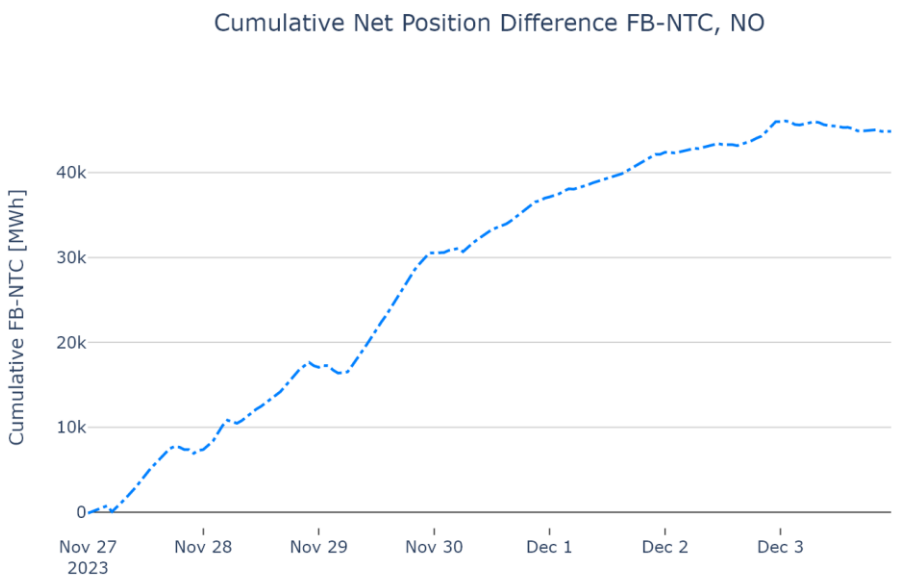
Finland

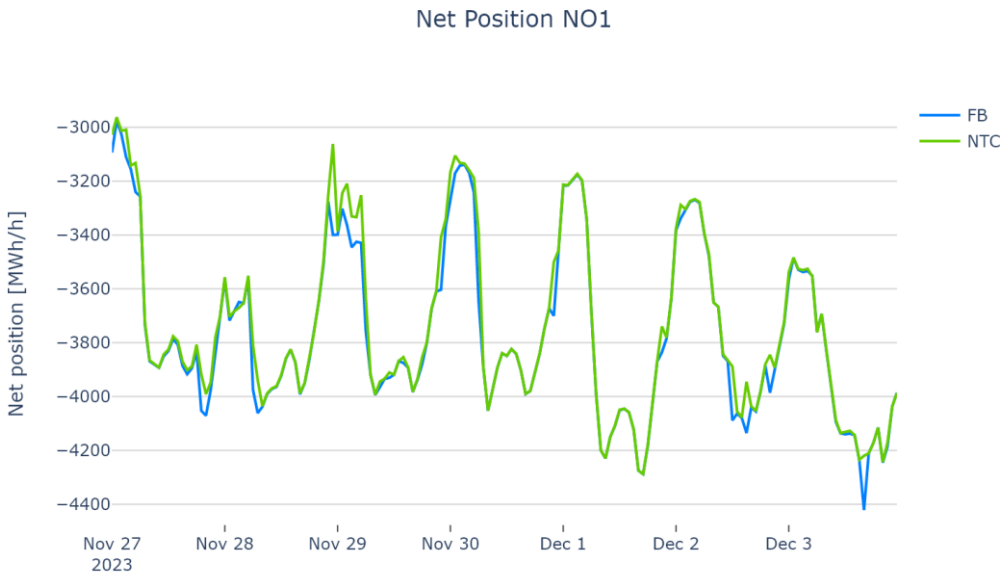

Total Net Position FI
Net position [MWh/h]
2000
1500
1000
500
0
−500
−1000
−1500
−2000
Nov 27
2023
Nov 28
Nov 29
Nov 30
Dec 1
Dec 2
Dec 3
FB
NTC

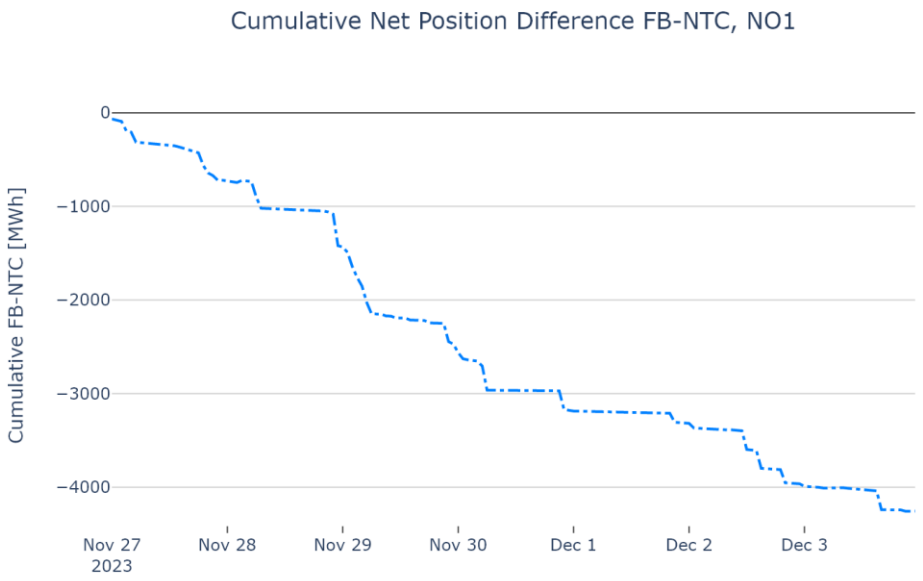

Cumulative Net Position Difference FB-NTC, FI
Cumulative FB-NTC [MWh]
20k
15k
10k
5k
0
Nov 27
2023
Nov 28
Nov 29
Nov 30
Dec 1
Dec 2
Dec 3

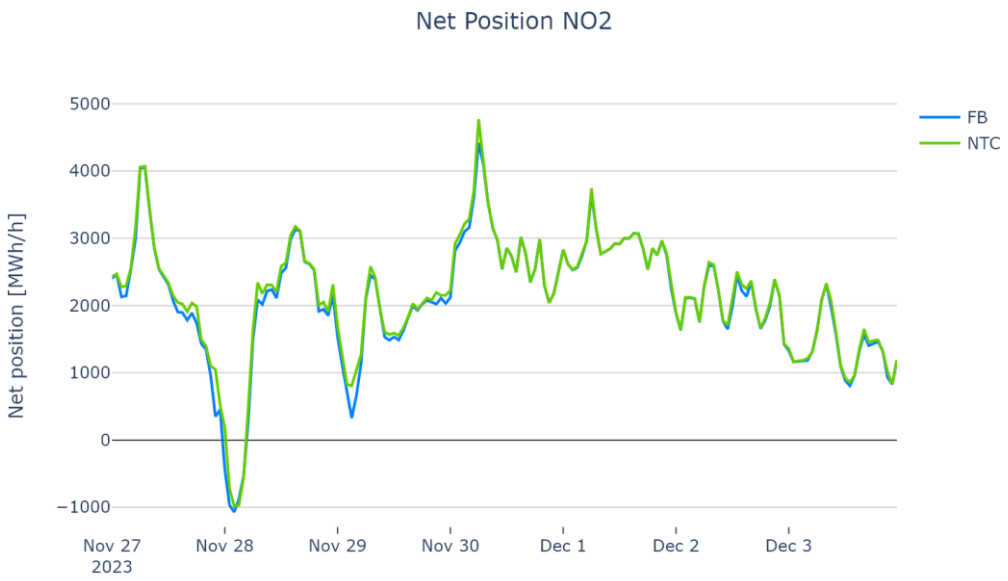
Norway

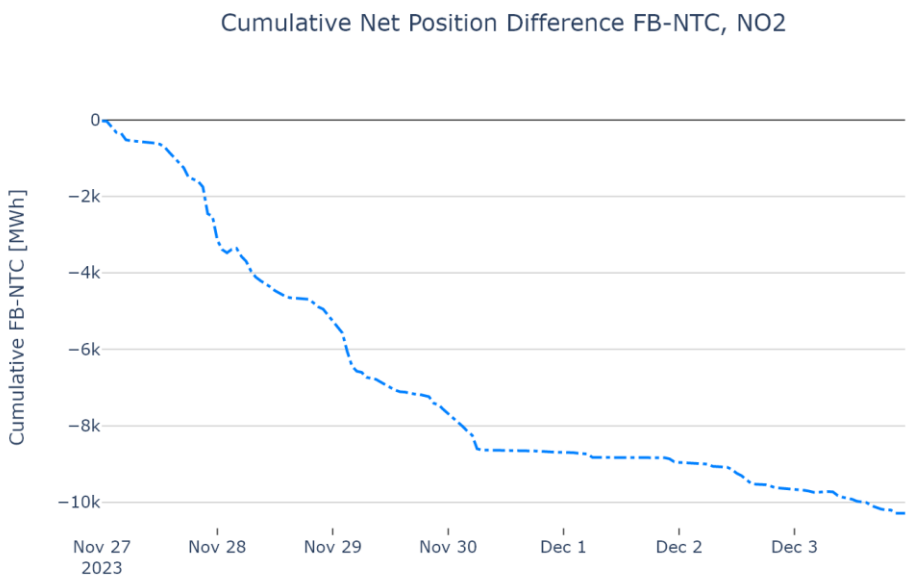

Total Net Position NO
6000
4000
2000
0
−2000
−4000
−6000
Net position [MWh/h]
Nov 27
2023
Nov 28
Nov 29
Nov 30
Dec 1
Dec 2
Dec 3
FB
NTC

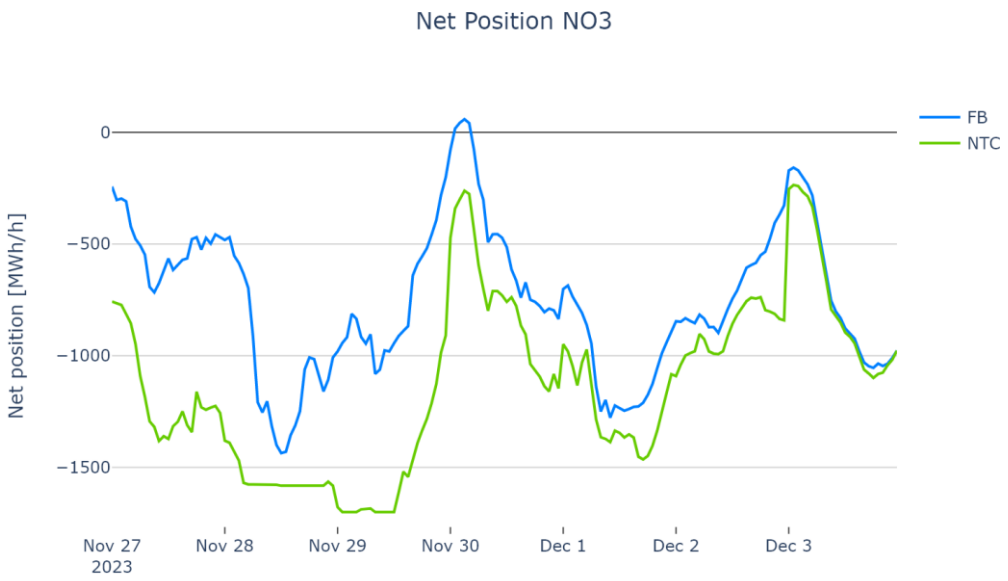

Cumulative Net Position Difference FB-NTC, NO
40k
30k
20k
10k
0
Cumulative FB-NTC [MWh]
Nov 27
2023
Nov 28
Nov 29
Nov 30
Dec 1
Dec 2
Dec 3

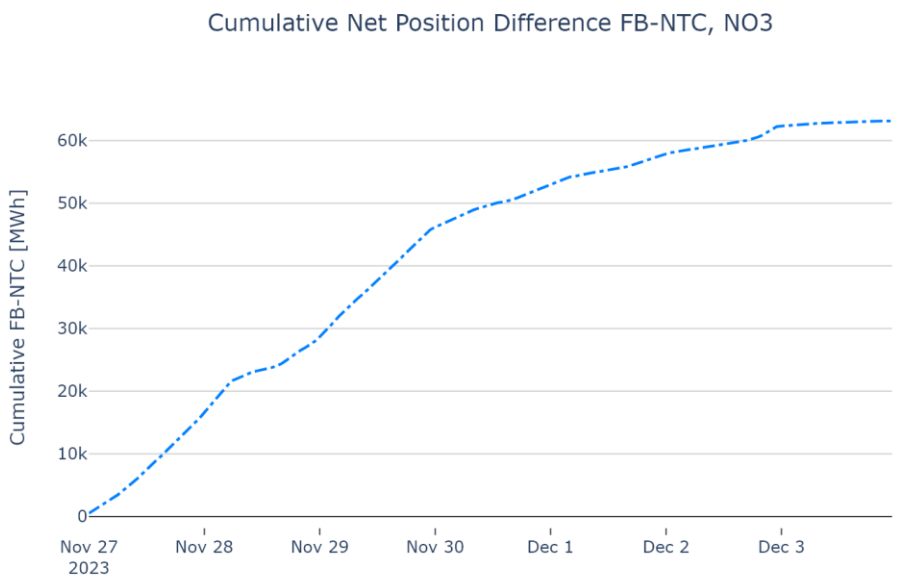

Net Position NO1
FB
NTC
Net position [MWh/h]
−3000
−3200
−3400
−3600
−3800
−4000
−4200
−4400
Nov 27
2023
Nov 28
Nov 29
Nov 30
Dec 1
Dec 2
Dec 3

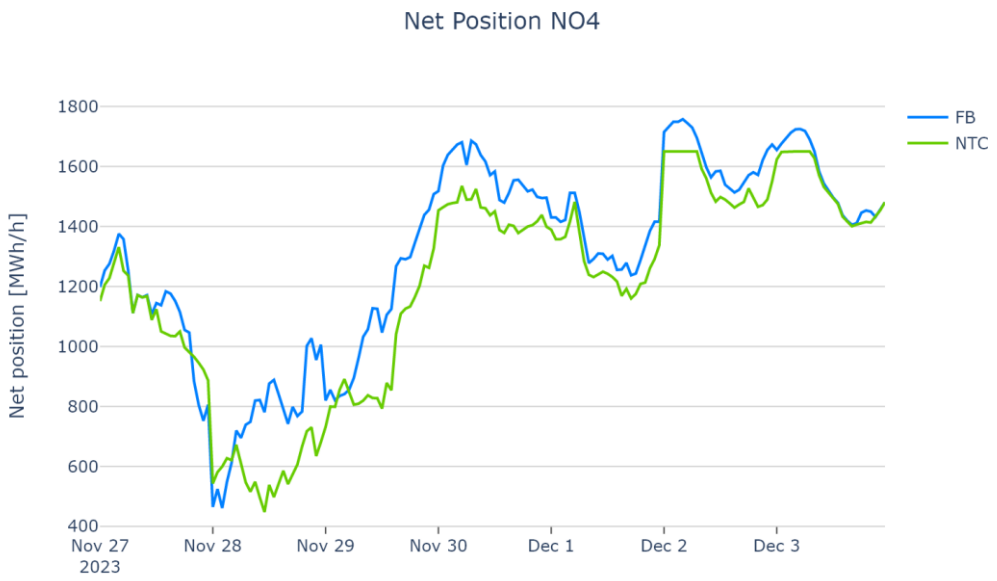

Cumulative Net Position Difference FB-NTC, NO1
Cumulative FB-NTC [MWh]
0
−1000
−2000
−3000
−4000
Nov 27
2023
Nov 28
Nov 29
Nov 30
Dec 1
Dec 2
Dec 3

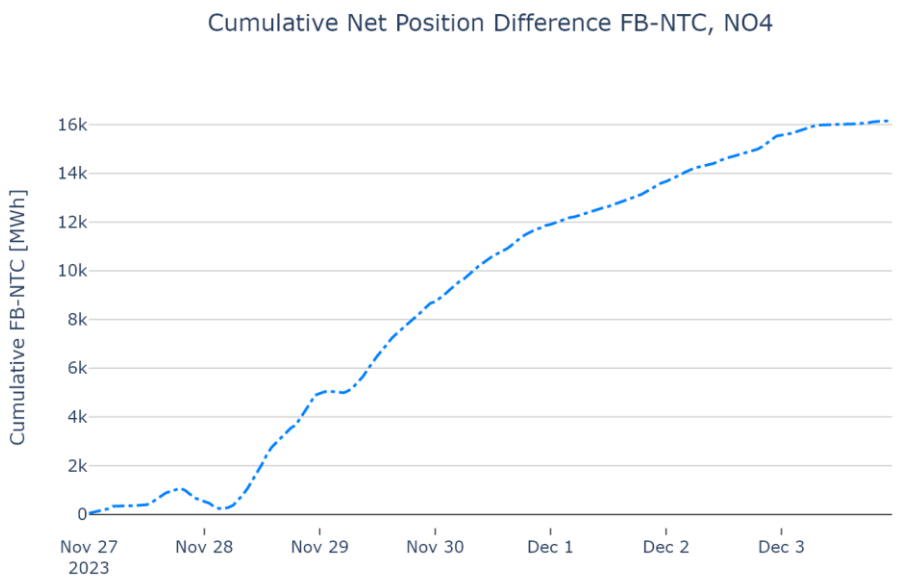

Net Position NO2
Net position [MWh/h]
5000
4000
3000
2000
1000
0
−1000
Nov 27
2023
Nov 28
Nov 29
Nov 30
Dec 1
Dec 2
Dec 3
FB
NTC

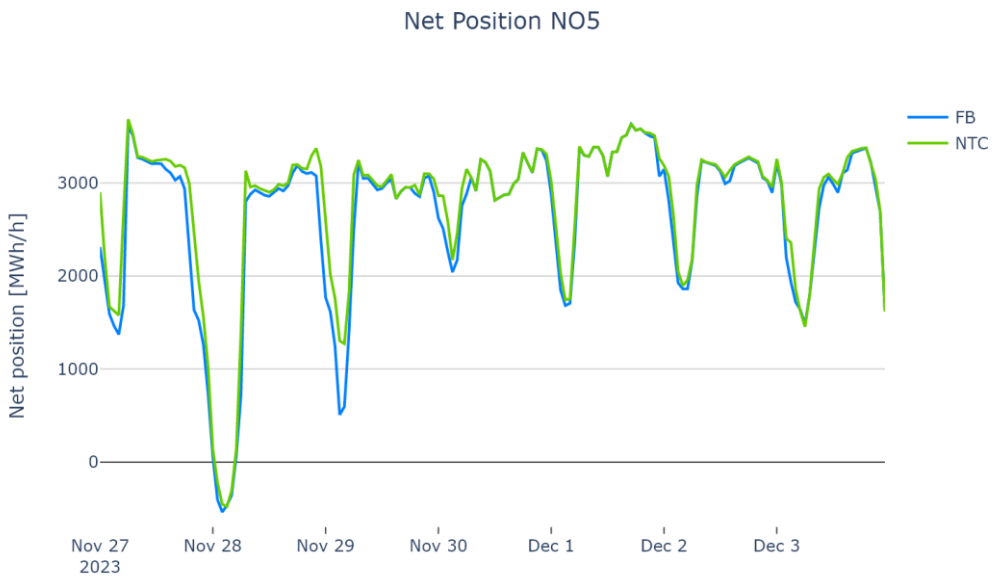

Cumulative Net Position Difference FB-NTC, NO2
Cumulative FB-NTC [MWh]
0
−2k
−4k
−6k
−8k
−10k
Nov 27
2023
Nov 28
Nov 29
Nov 30
Dec 1
Dec 2
Dec 3

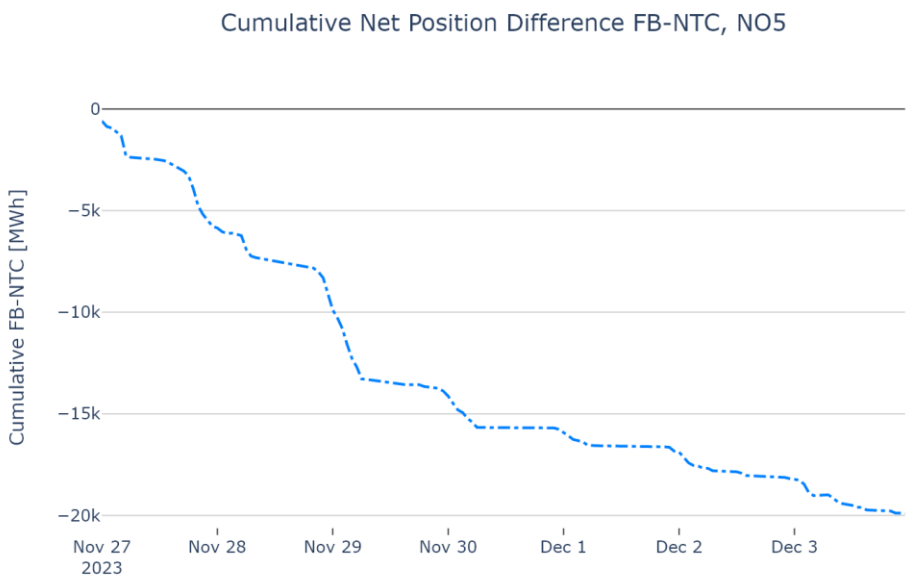

Net Position NO3
FB
NTC
Net position [MWh/h]
0
−500
−1000
−1500
Nov 27
2023
Nov 28
Nov 29
Nov 30
Dec 1
Dec 2
Dec 3


Cumulative Net Position Difference FB-NTC, NO3
Cumulative FB-NTC [MWh]
60k
50k
40k
30k
20k
10k
0
Nov 27
2023
Nov 28
Nov 29
Nov 30
Dec 1
Dec 2
Dec 3

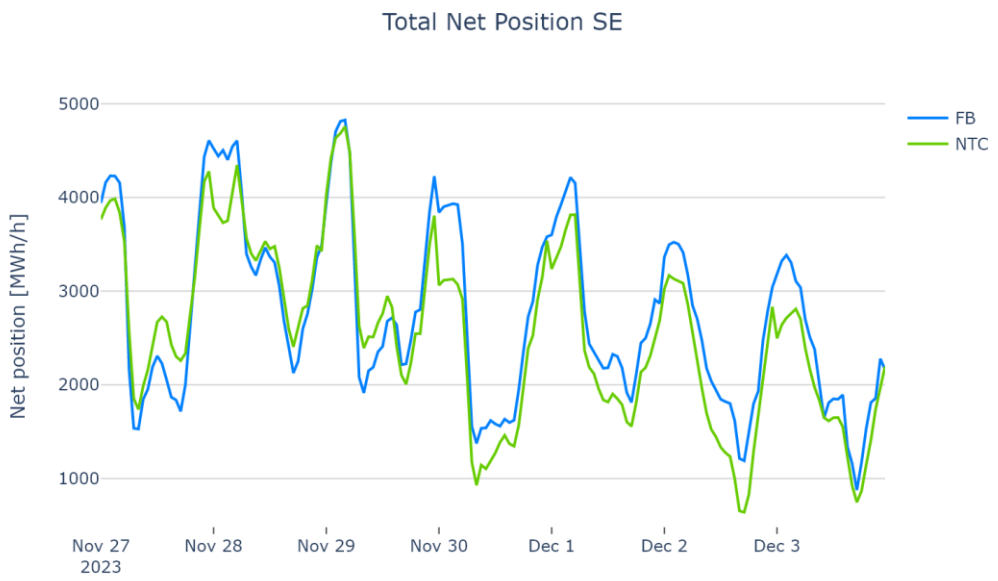

Net Position NO4
Net position [MWh/h]
1800
1600
1400
1200
1000
800
600
400
Nov 27
2023
Nov 28
Nov 29
Nov 30
Dec 1
Dec 2
Dec 3
FB
NTC

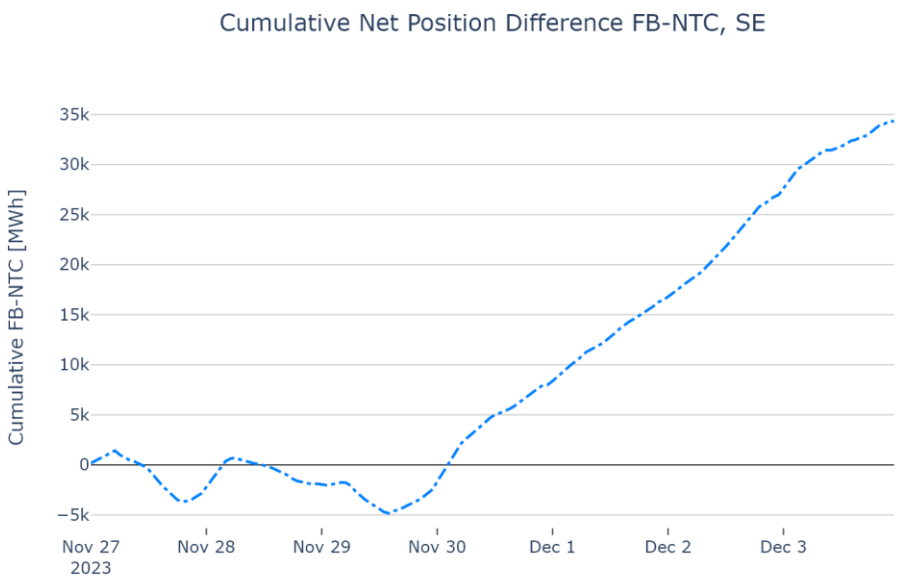

Cumulative Net Position Difference FB-NTC, NO4
Cumulative FB-NTC [MWh]
16k
14k
12k
10k
8k
6k
4k
2k
0
Nov 27
2023
Nov 28
Nov 29
Nov 30
Dec 1
Dec 2
Dec 3

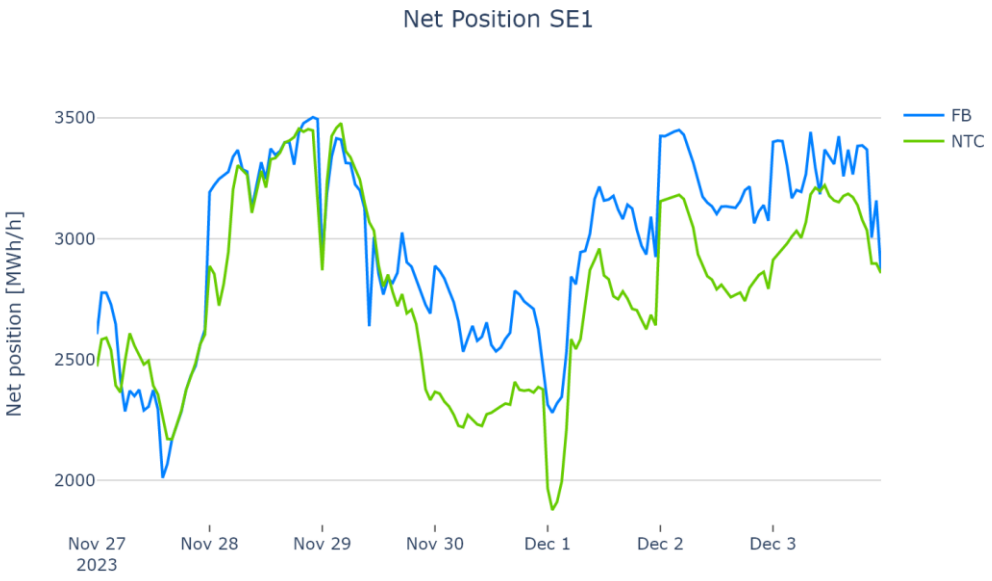

Net Position NO5
FB
NTC
Net position [MWh/h]
3000
2000
1000
0
Nov 27
2023
Nov 28
Nov 29
Nov 30
Dec 1
Dec 2
Dec 3

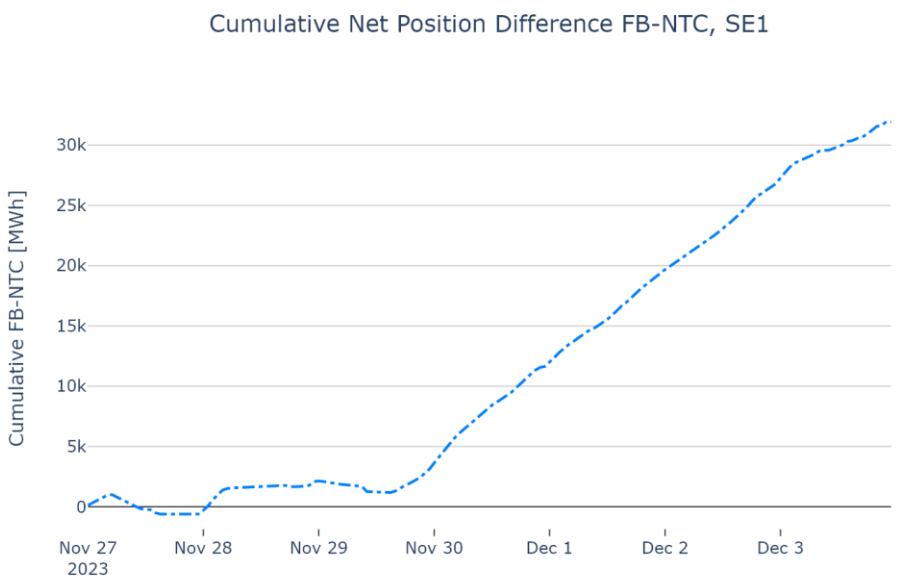

Cumulative Net Position Difference FB-NTC, NO5
Cumulative FB-NTC [MWh]
0
−5k
−10k
−15k
−20k
Nov 27
2023
Nov 28
Nov 29
Nov 30
Dec 1
Dec 2
Dec 3

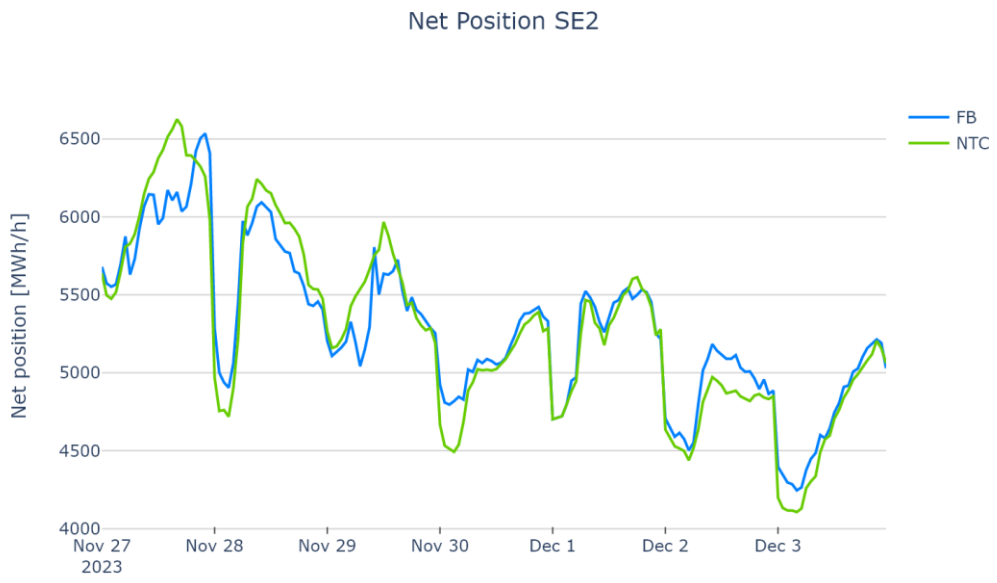
Sweden

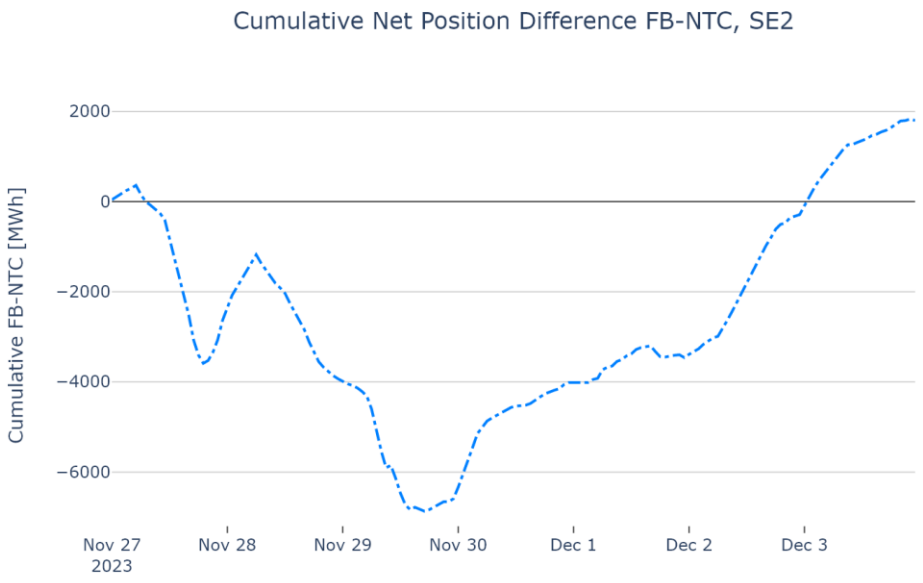

Total Net Position SE
Net position [MWh/h]
5000
4000
3000
2000
1000
Nov 27
2023
Nov 28
Nov 29
Nov 30
Dec 1
Dec 2
Dec 3
FB
NTC

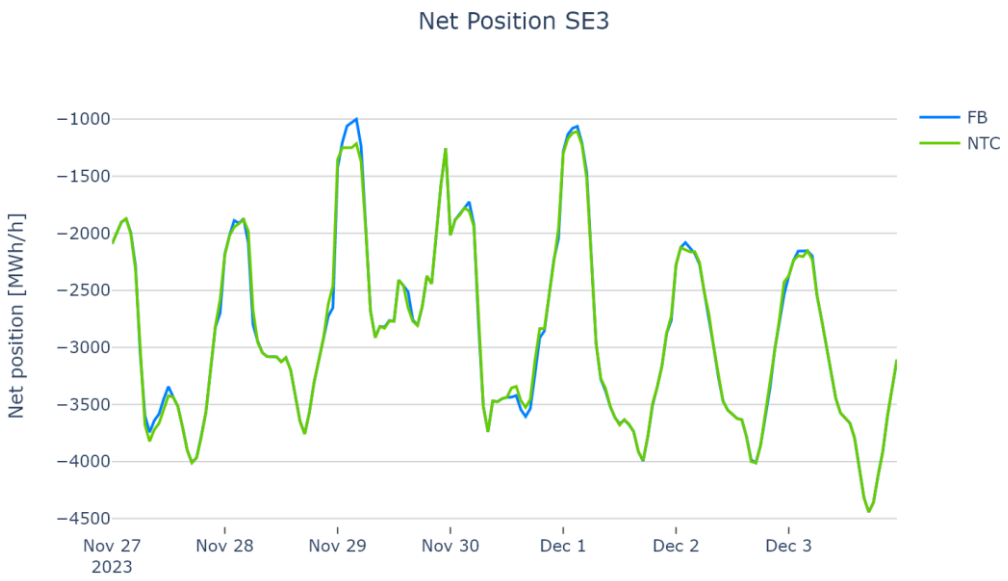

Cumulative Net Position Difference FB-NTC, SE
Cumulative FB-NTC [MWh]
35k
30k
25k
20k
15k
10k
5k
0
−5k
Nov 27
2023
Nov 28
Nov 29
Nov 30
Dec 1
Dec 2
Dec 3

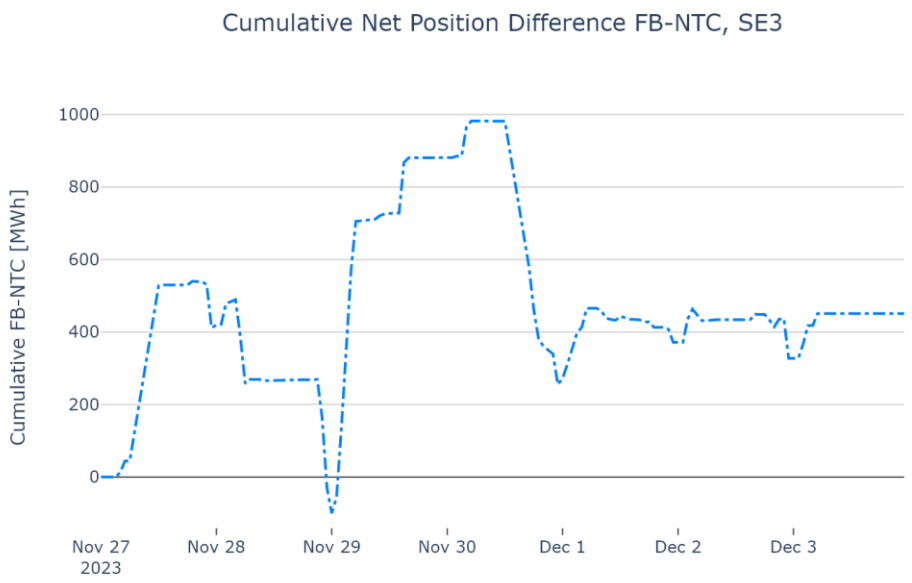

Net Position SE1
FB
NTC
Net position [MWh/h]
3500
3000
2500
2000
Nov 27
2023
Nov 28
Nov 29
Nov 30
Dec 1
Dec 2
Dec 3

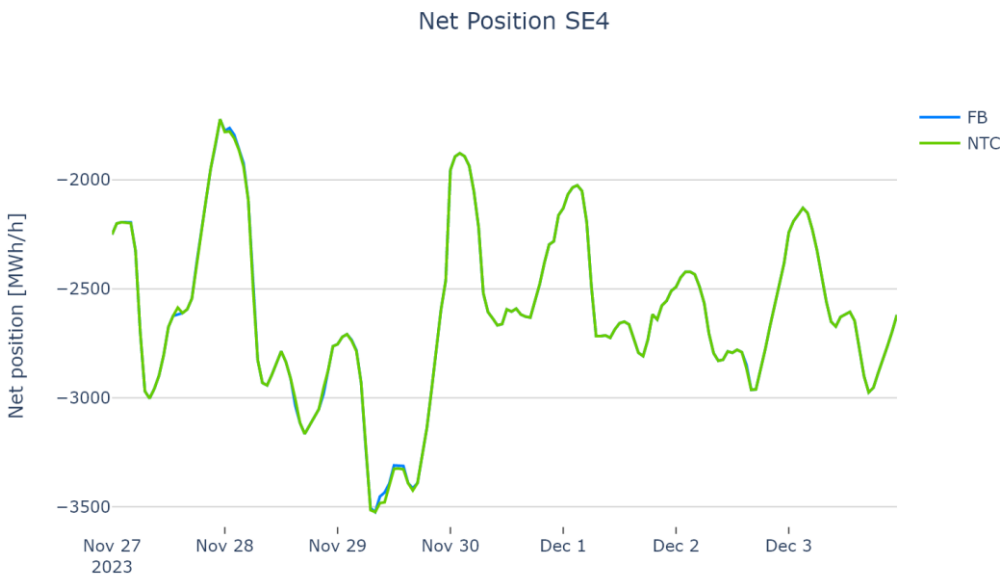

Cumulative Net Position Difference FB-NTC, SE1
Cumulative FB-NTC [MWh]
30k
25k
20k
15k
10k
5k
0
Nov 27
2023
Nov 28
Nov 29
Nov 30
Dec 1
Dec 2
Dec 3

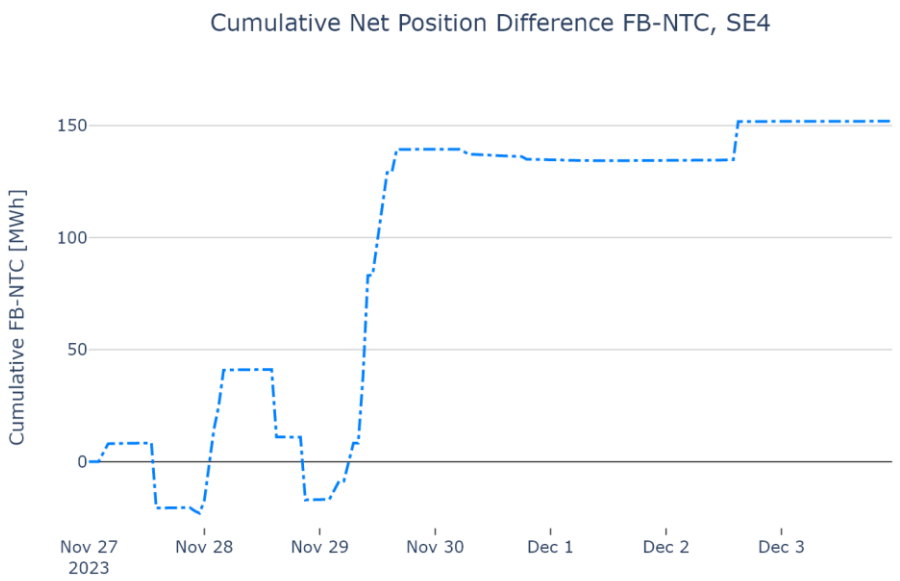

Net Position SE2
FB
NTC
Net position [MWh/h]
6500
6000
5500
5000
4500
4000
Nov 27
2023
Nov 28
Nov 29
Nov 30
Dec 1
Dec 2
Dec 3


Cumulative Net Position Difference FB-NTC, SE2
Cumulative FB-NTC [MWh]
2000
0
−2000
−4000
−6000
Nov 27
2023
Nov 28
Nov 29
Nov 30
Dec 1
Dec 2
Dec 3


Net Position SE3
FB
NTC
Net position [MWh/h]
−1000
−1500
−2000
−2500
−3000
−3500
−4000
−4500
Nov 27
2023
Nov 28
Nov 29
Nov 30
Dec 1
Dec 2
Dec 3

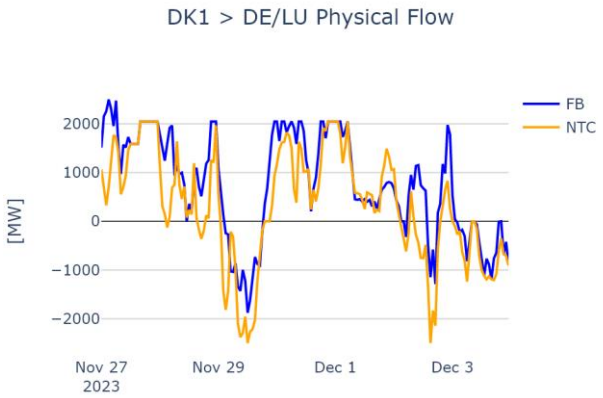

Cumulative Net Position Difference FB-NTC, SE3
Cumulative FB-NTC [MWh]
1000
800
600
400
200
0
Nov 27
2023
Nov 28
Nov 29
Nov 30
Dec 1
Dec 2
Dec 3

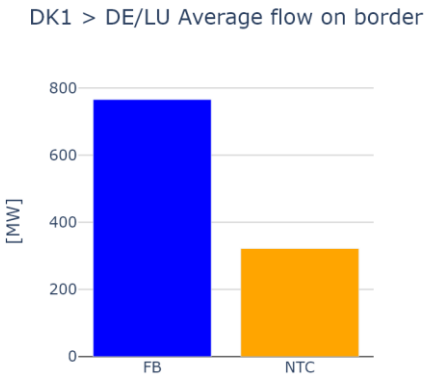

Net Position SE4
FB
NTC
Net position [MWh/h]
−2000
−2500
−3000
−3500
Nov 27
2023
Nov 28
Nov 29
Nov 30
Dec 1
Dec 2
Dec 3

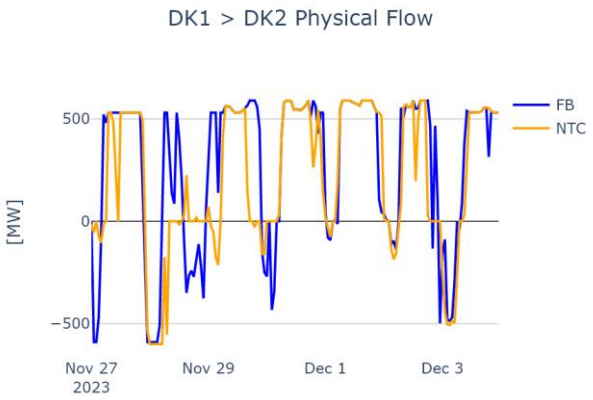

Cumulative Net Position Difference FB-NTC, SE4
Cumulative FB-NTC [MWh]
150
100
50
0
Nov 27
2023
Nov 28
Nov 29
Nov 30
Dec 1
Dec 2
Dec 3

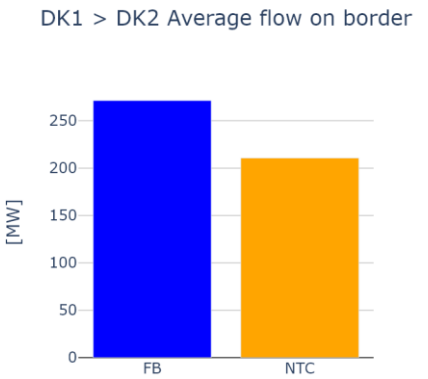
Border flow

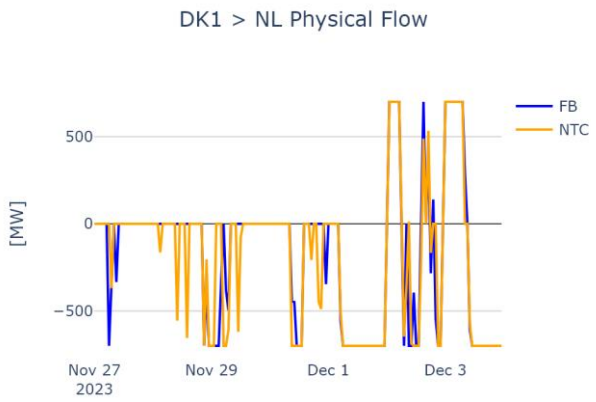
The flows present here, both in FB and NTC, represent the physical flow on the lines and are calculated as the product of the NP and the PTDF matrix. When comparing the NTC-results in this report with those present in the DA market there will be a difference as the DA flows are calculated without the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

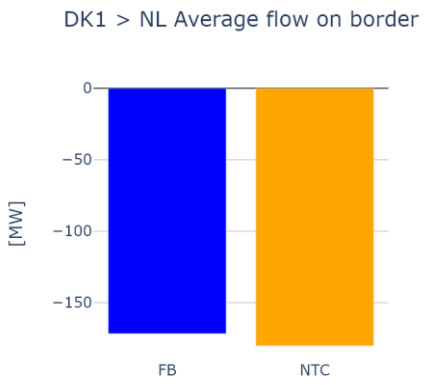


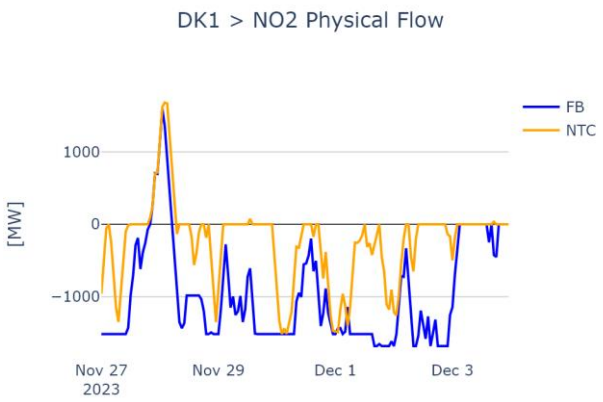


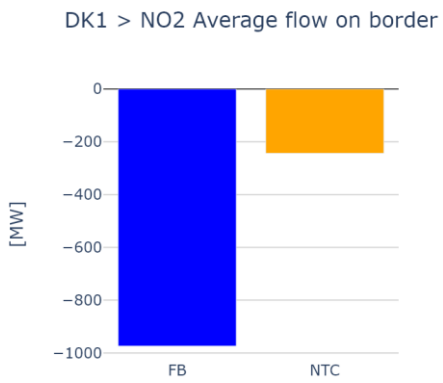


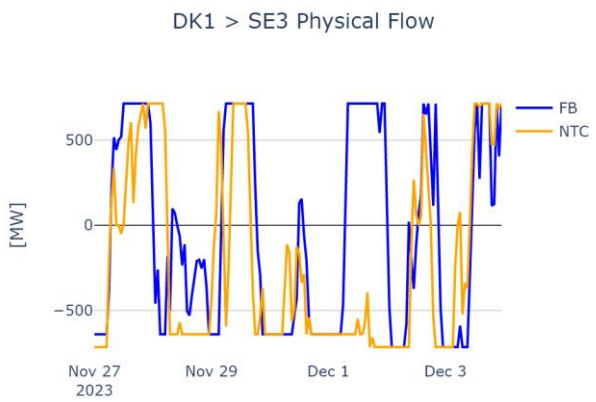


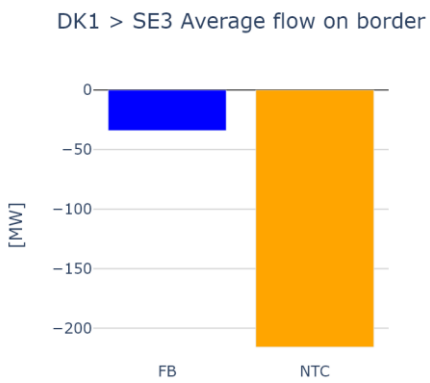

DK1 > NL Physical Flow
FB
NTC
500
0
−500
[MW]
Nov 27
2023
Nov 29
Dec 1
Dec 3

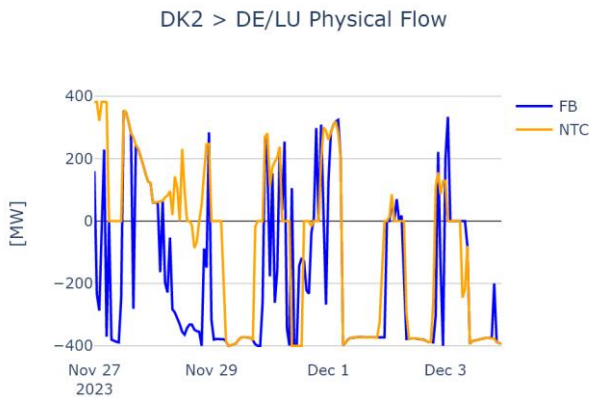

DK1 > NL Average flow on border
0
−50
−100
−150
[MW]
FB
NTC

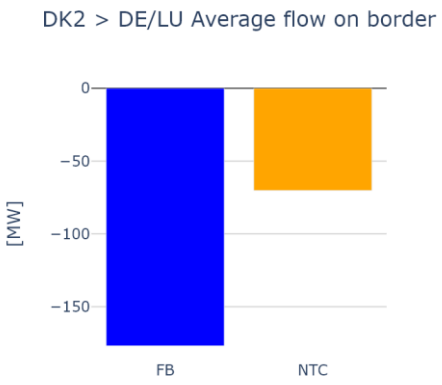

DK1 > NO2 Physical Flow
FB
NTC
1000
0
−1000
[MW]
Nov 27
2023
Nov 29
Dec 1
Dec 3

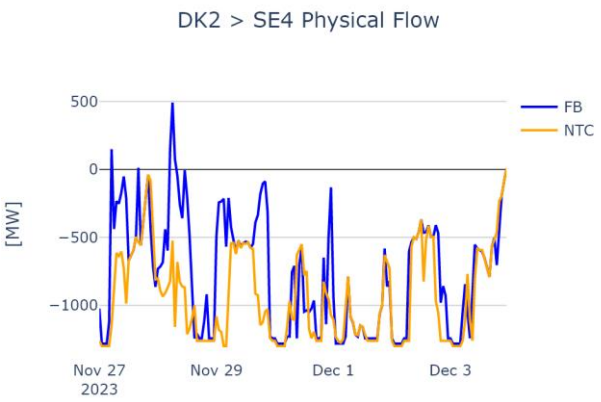

DK1 > NO2 Average flow on border
0
−200
−400
−600
−800
−1000
[MW]
FB
NTC

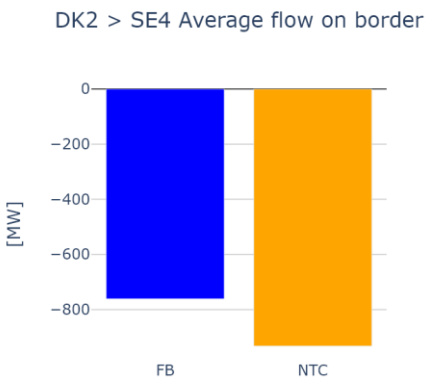

DK1 > SE3 Physical Flow
FB
NTC
500
0
−500
[MW]
Nov 27
2023
Nov 29
Dec 1
Dec 3

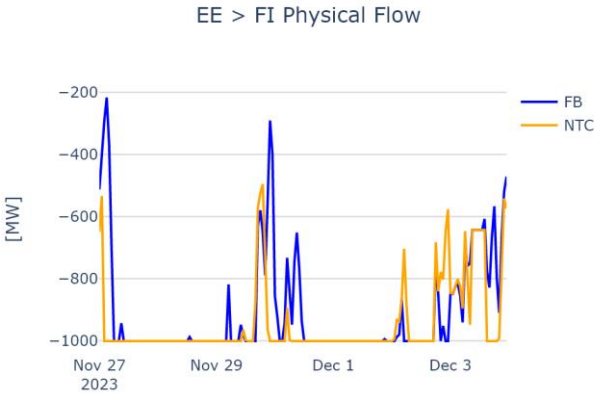

DK1 > SE3 Average flow on border
0
−50
−100
−150
−200
[MW]
FB
NTC

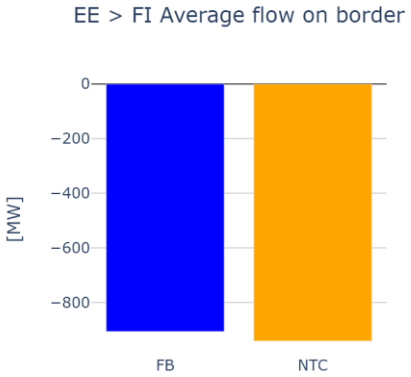

DK2 > DE/LU Physical Flow
400
200
0
−200
−400
[MW]
Nov 27
2023
Nov 29
Dec 1
Dec 3
FB
NTC


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

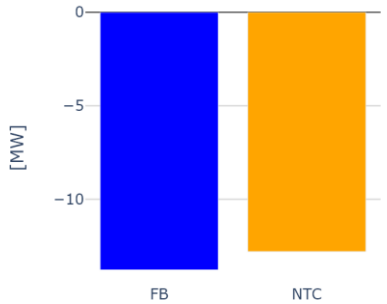

DK2 > SE4 Physical Flow
500
0
−500
−1000
[MW]
Nov 27
2023
Nov 29
Dec 1
Dec 3
FB
NTC

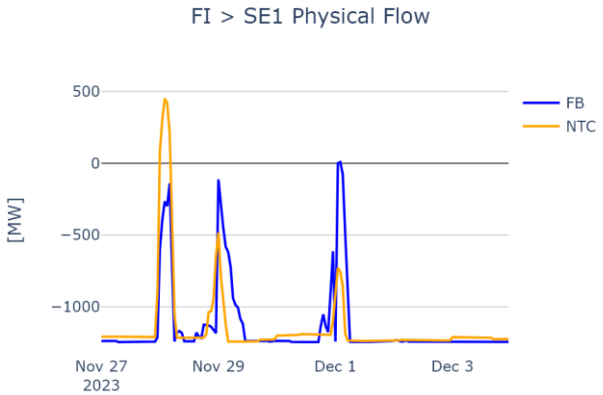

DK2 > SE4 Average flow on border
0
−200
−400
−600
−800
[MW]
FB
NTC

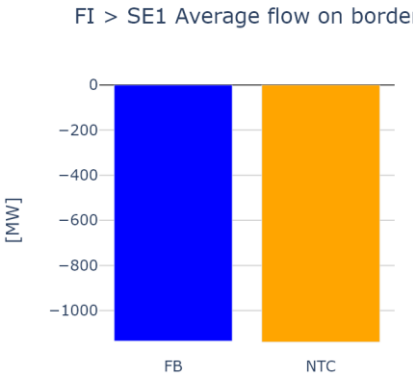

EE > FI Physical Flow
−200
−400
−600
−800
−1000
[MW]
Nov 27
2023
Nov 29
Dec 1
Dec 3
FB
NTC

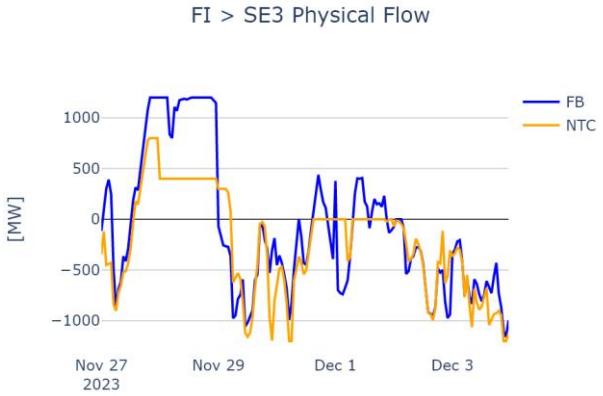

EE > FI Average flow on border
0
−200
−400
−600
−800
[MW]
FB
NTC

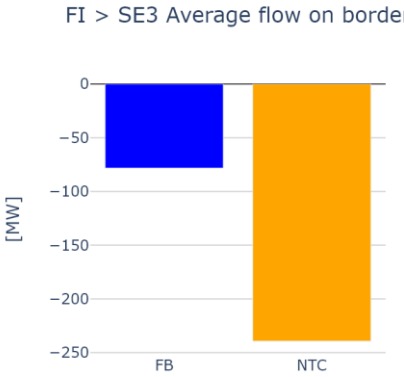
FI > NO4 Physical Flow
FB
NTC
[MW]
−5
−10
−15
−20
Nov 27
2023
Nov 29
Dec 1
Dec 3

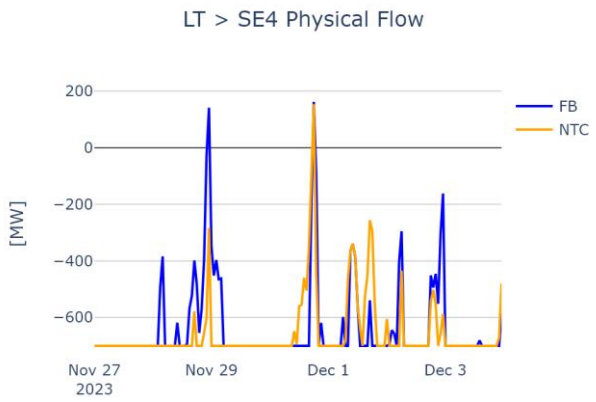

FI > NO4 Average flow on border
[MW]
0
−5
−10
FB
NTC

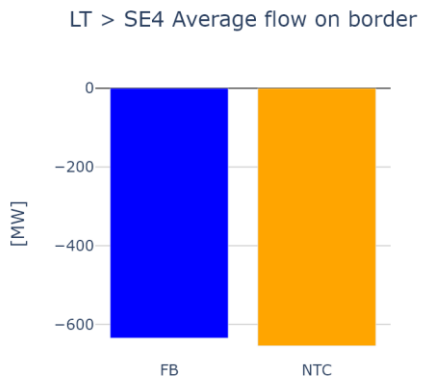

FI > SE1 Physical Flow
FB
NTC
[MW]
500
0
−500
−1000
Nov 27
2023
Nov 29
Dec 1
Dec 3

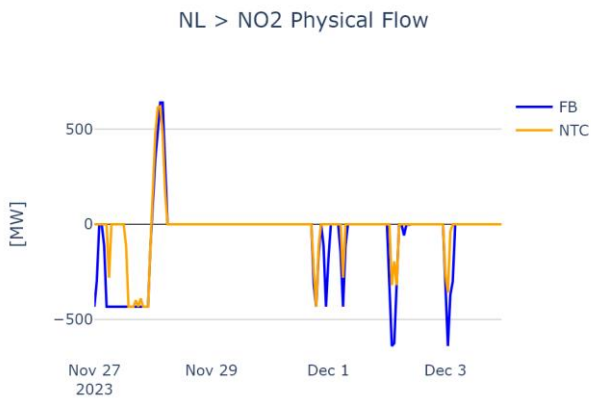

FI > SE1 Average flow on border
[MW]
0
−200
−400
−600
−800
−1000
FB
NTC

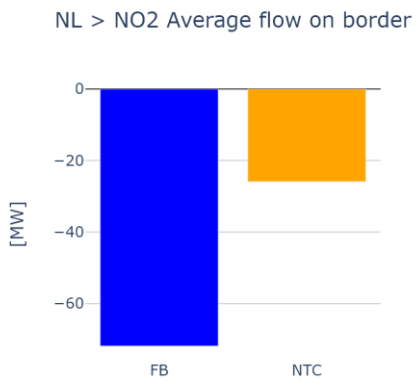

FI > SE3 Physical Flow
FB
NTC
[MW]
1000
500
0
−500
−1000
Nov 27
2023
Nov 29
Dec 1
Dec 3

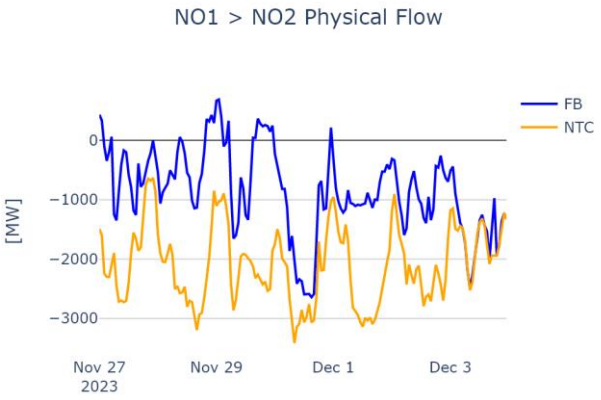

FI > SE3 Average flow on border
[MW]
0
−50
−100
−150
−200
−250
FB
NTC

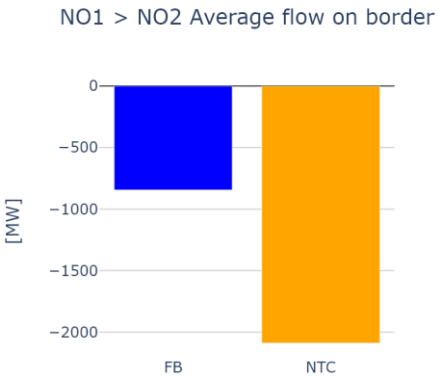

LT > SE4 Physical Flow
200
0
−200
−400
−600
[MW]
Nov 27
2023
Nov 29
Dec 1
Dec 3
FB
NTC

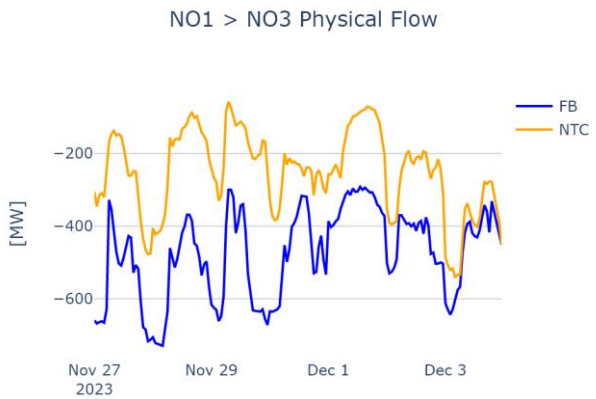

LT > SE4 Average flow on border
0
−200
−400
−600
[MW]
FB
NTC

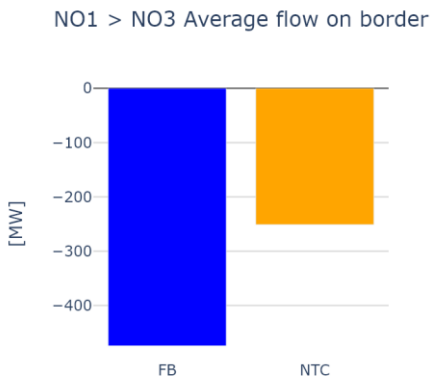

NL > NO2 Physical Flow
500
0
−500
[MW]
Nov 27
2023
Nov 29
Dec 1
Dec 3
FB
NTC

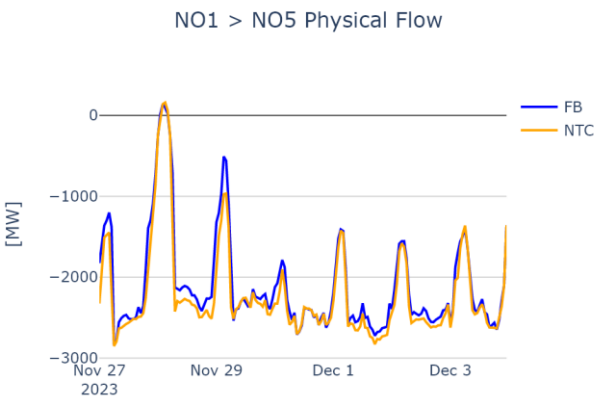

NL > NO2 Average flow on border
0
−20
−40
−60
[MW]
FB
NTC

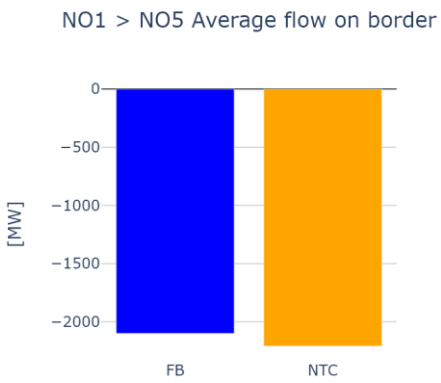

NO1 > NO2 Physical Flow
0
−1000
−2000
−3000
[MW]
Nov 27
2023
Nov 29
Dec 1
Dec 3
FB
NTC

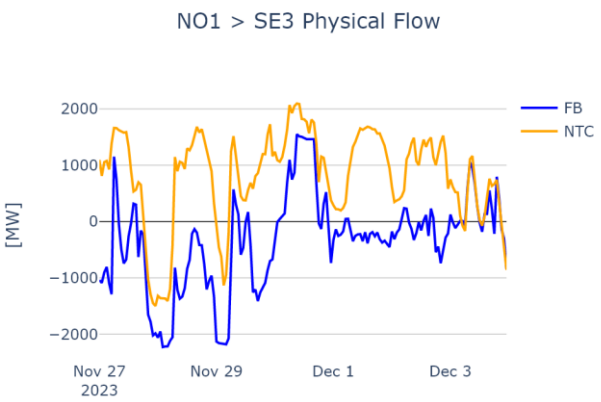

NO1 > NO2 Average flow on border
0
−500
−1000
−1500
−2000
[MW]
FB
NTC

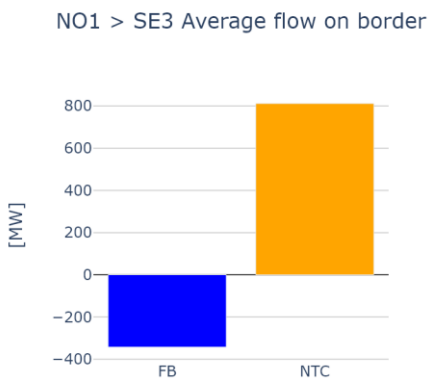

NO1 > NO3 Physical Flow
FB
NTC
[MW]
−200
−400
−600
Nov 27
2023
Nov 29
Dec 1
Dec 3

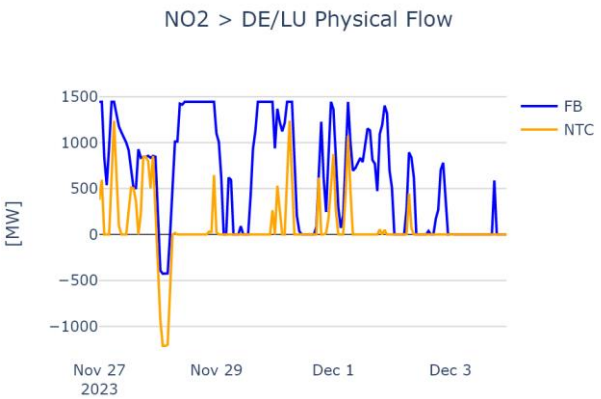

NO1 > NO3 Average flow on border
[MW]
0
−100
−200
−300
−400
FB
NTC

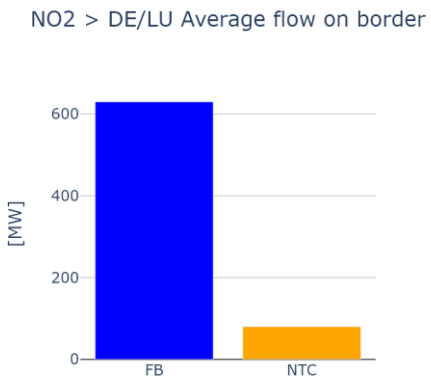

NO1 > NO5 Physical Flow
FB
NTC
[MW]
0
−1000
−2000
−3000
Nov 27
2023
Nov 29
Dec 1
Dec 3

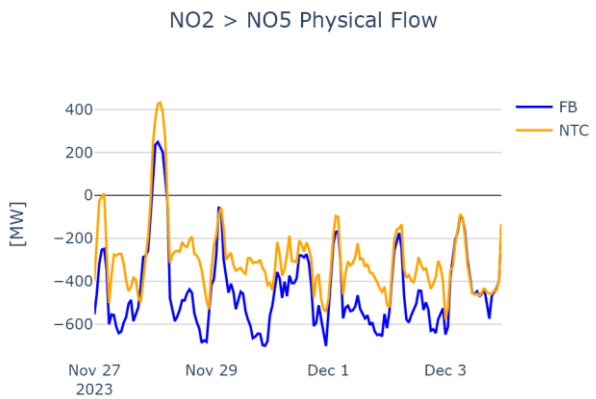

NO1 > NO5 Average flow on border
[MW]
0
−500
−1000
−1500
−2000
FB
NTC

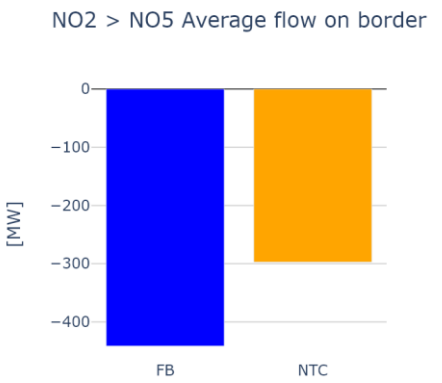

NO1 > SE3 Physical Flow
FB
NTC
[MW]
2000
1000
0
−1000
−2000
Nov 27
2023
Nov 29
Dec 1
Dec 3

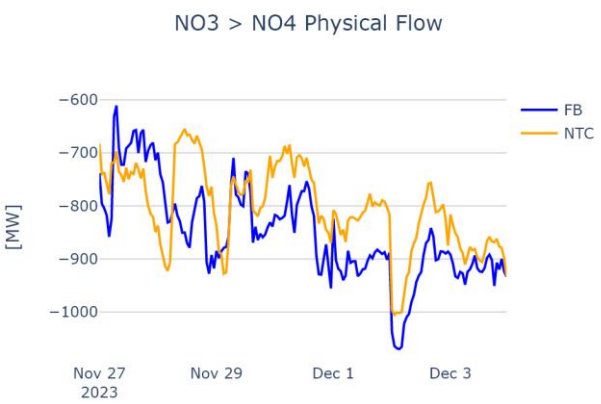

NO1 > SE3 Average flow on border
[MW]
800
600
400
200
0
−200
−400
FB
NTC

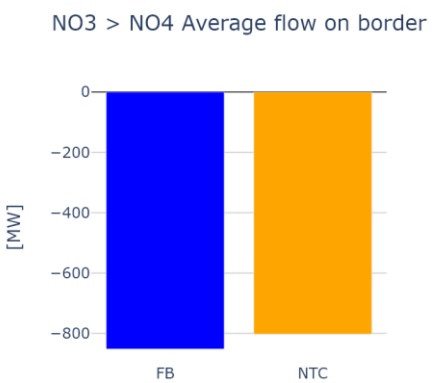

NO2 > DE/LU Physical Flow
1500
1000
500
0
−500
−1000
[MW]
Nov 27
2023
Nov 29
Dec 1
Dec 3
FB
NTC

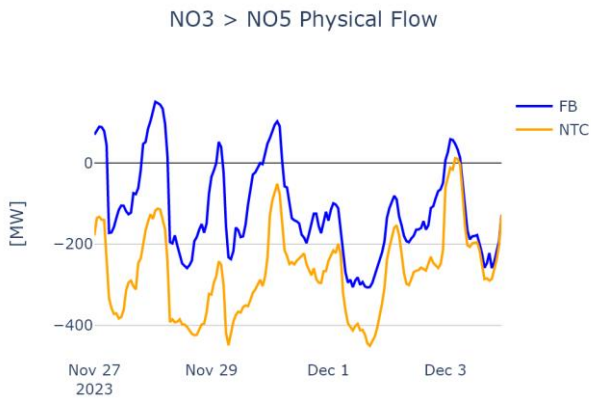

NO2 > DE/LU Average flow on border
600
400
200
0
[MW]
FB
NTC

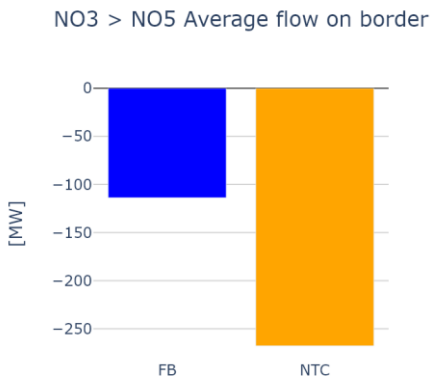

NO2 > NO5 Physical Flow
400
200
0
−200
−400
−600
[MW]
Nov 27
2023
Nov 29
Dec 1
Dec 3
FB
NTC

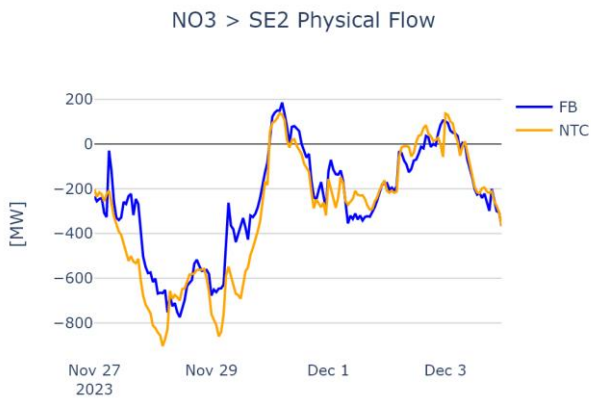

NO2 > NO5 Average flow on border
0
−100
−200
−300
−400
[MW]
FB
NTC

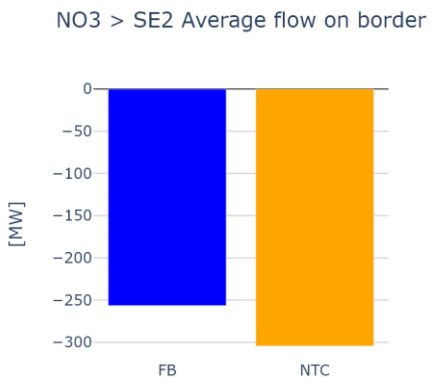

NO3 > NO4 Physical Flow
−600
−700
−800
−900
−1000
[MW]
Nov 27
2023
Nov 29
Dec 1
Dec 3
FB
NTC

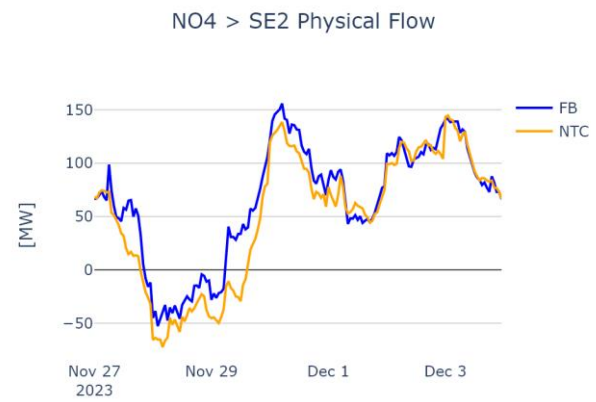

NO3 > NO4 Average flow on border
0
−200
−400
−600
−800
[MW]
FB
NTC

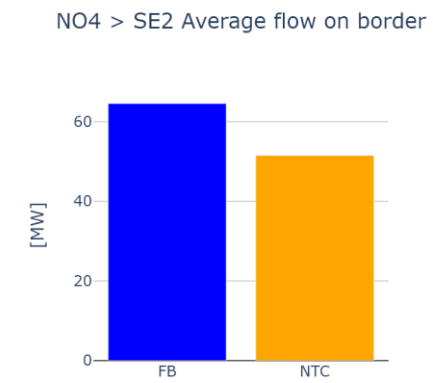

NO3 > NO5 Physical Flow
FB
NTC
[MW]
0
−200
−400
Nov 27
2023
Nov 29
Dec 1
Dec 3

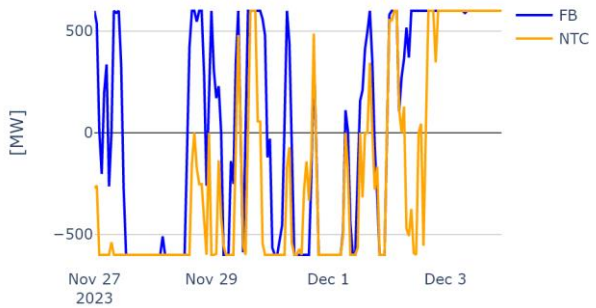

NO3 > NO5 Average flow on border
[MW]
0
−50
−100
−150
−200
−250
FB
NTC

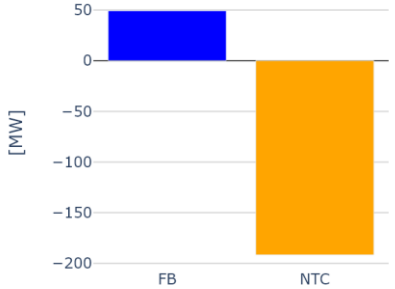

NO3 > SE2 Physical Flow
FB
NTC
[MW]
200
0
−200
−400
−600
−800
Nov 27
2023
Nov 29
Dec 1
Dec 3

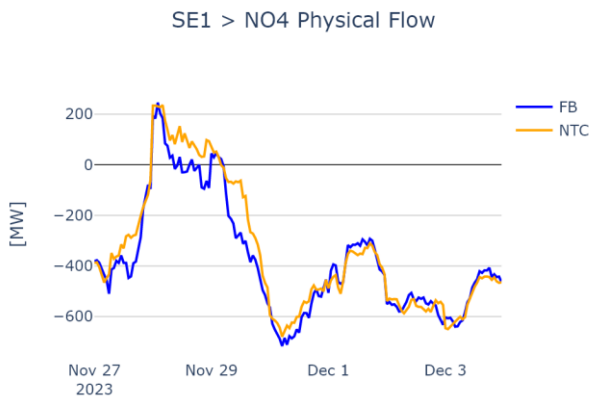

NO3 > SE2 Average flow on border
[MW]
0
−50
−100
−150
−200
−250
−300
FB
NTC

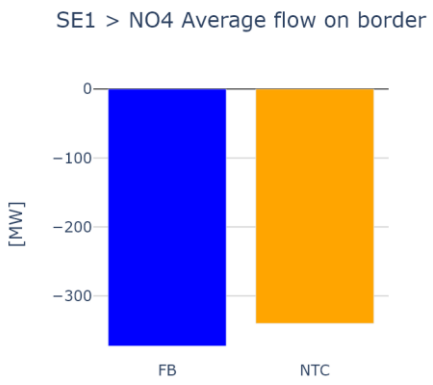

NO4 > SE2 Physical Flow
FB
NTC
[MW]
150
100
50
0
−50
Nov 27
2023
Nov 29
Dec 1
Dec 3

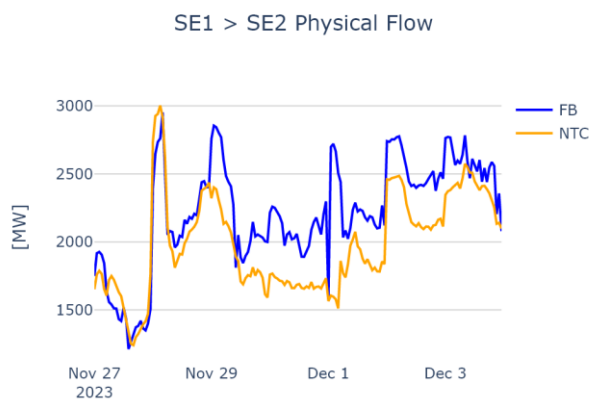

NO4 > SE2 Average flow on border
[MW]
60
40
20
0
FB
NTC

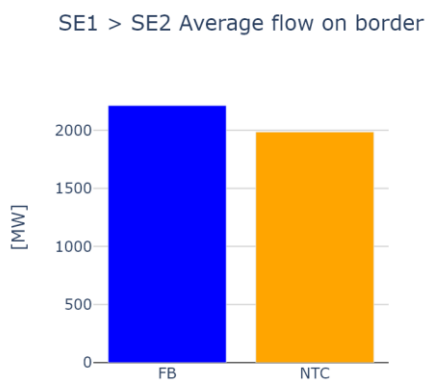

PL > SE4 Physical Flow
FB
NTC
[MW]
500
0
−500
Nov 27
2023
Nov 29
Dec 1
Dec 3


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

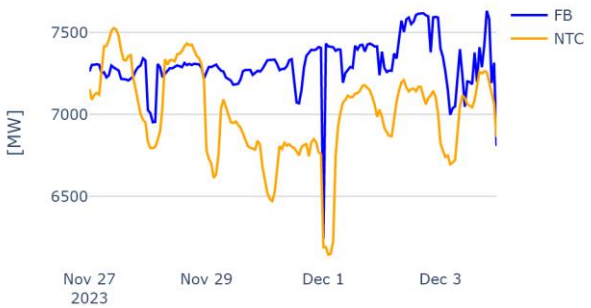

SE1 > NO4 Physical Flow
FB
NTC
[MW]
200
0
−200
−400
−600
Nov 27
2023
Nov 29
Dec 1
Dec 3


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

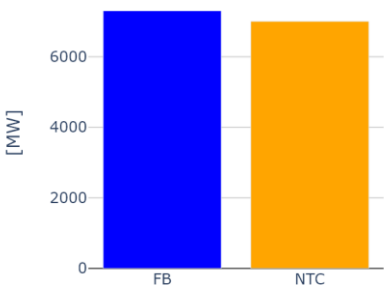

SE1 > SE2 Physical Flow
FB
NTC
[MW]
3000
2500
2000
1500
Nov 27
2023
Nov 29
Dec 1
Dec 3


SE1 > SE2 Average flow on border
[MW]
2000
1500
1000
500
0
FB
NTC

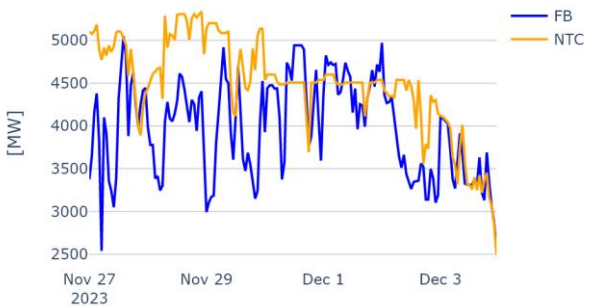
SE2 > SE3 Physical Flow



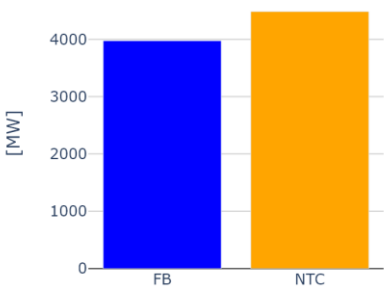
SE2 > SE3 Average flow on border



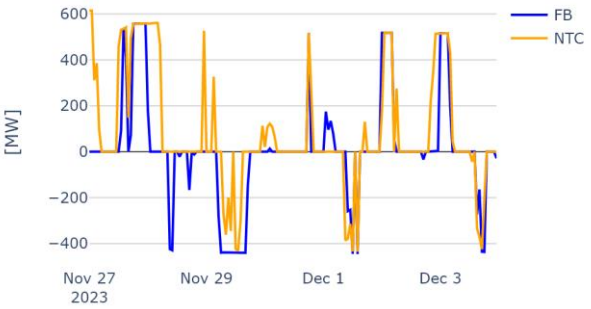
SE3 > SE4 Physical Flow



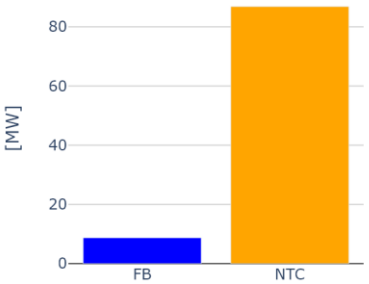
SE3 > SE4 Average flow on border



SE4 > DE/LU Physical Flow



SE4 > DE/LU Average flow on border



Flows per border (FB)

Values are rounded to the nearest integer.

Border	Congestion Income (total)	Avg. Price Spread
DK1 > DE/LU	258711	1
DK1 > DK2	257747	3
DK1 > NL	14440	0
DK1 > NO2	449771	5
DK1 > SE3	392473	4
DK2 > DE/LU	175948	3
DK2 > SE4	264914	1
EE > FI	4695092	28
FI > NO4	75514	37
FI > SE1	8168275	40
FI > SE3	1213455	7
LT > SE4	1660336	14
NL > NO2	85755	2
NO1 > NO2	-135009	-1
NO1 > NO3	2193097	28
NO1 > NO5	186011	0
NO1 > SE3	345030	0
NO2 > DE/LU	487090	5
NO2 > NO5	165565	2
NO3 > NO4	2120585	15
NO3 > NO5	-608229	-19
NO3 > SE2	1329237	18
NO4 > SE2	-36021	-3
PL > SE4	517965	5
SE1 > NO4	-161408	-2
SE1 > SE2	-569890	-2
SE2 > SE3	63112314	52
SE3 > SE4	2880259	4
SE4 > DE/LU	75596	2

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	5	-6896	-1
DK1 > DK2	6	-5035	-2
DK1 > NL	0	0	0
DK1 > NO2	1	-8899	-2
DK1 > SE3	36	-163322	-5
DK2 > DE/LU	1	-3	0
DK2 > SE4	51	-23959	-1
EE > FI	0	0	0
FI > NO4	11	-654	-3
FI > SE1	3	-136	0
FI > SE3	33	-202912	-9
LT > SE4	10	-9578	-1
NL > NO2	0	0	0
NO1 > NO2	67	-156176	-2
NO1 > NO3	3	-4463	-3
NO1 > NO5	2	-112	0
NO1 > SE3	43	-630159	-12
NO2 > DE/LU	1	-1548	-5
NO2 > NO5	7	-1008	0
NO3 > NO4	5	-7286	-1
NO3 > NO5	68	-658402	-34
NO3 > SE2	14	-14590	-7
NO4 > SE2	68	-42008	-6
PL > SE4	20	-237797	-17
SE1 > NO4	61	-193769	-6
SE1 > SE2	69	-694118	-3
SE2 > SE3	0	0	0
SE3 > SE4	45	-359412	-1
SE4 > DE/LU	0	0	0