Nordic Capacity Calculation Methodology Project (Nordic CCM)

Nordic CCM

External Parallel Run Market Report
Appendix for Week 30 of 2023

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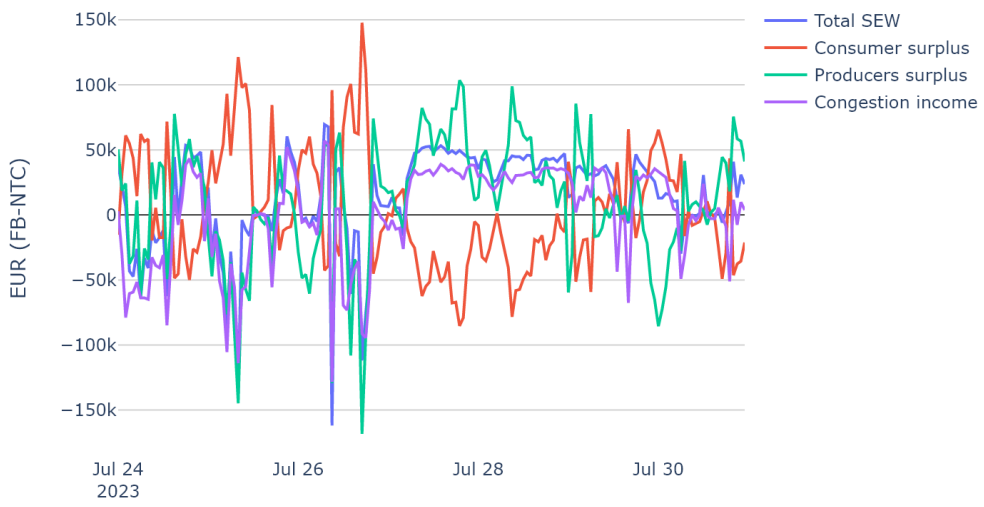
Domain validation

Energy Delivery Day:	Mon. 24.7	Tue. 25.7.	Wed. 26.7.	Thu. 27.7.	Fri. 28.7.	Sat. 29.7.	Sun. 30.7.
Invalid/missing IGMs	0	6	5	0	0	0	0
Substituted IGMs	0	6	5	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	0	0	0	0	0	0
Final domain acceptance (1 TSO =25%)	100%	100%	100%	100%	100%	100%	100%

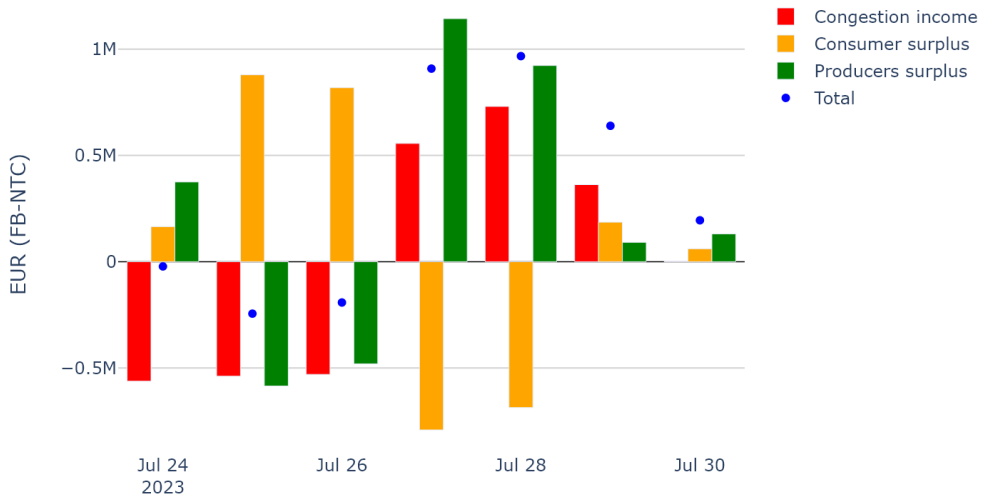
Socio Economic Welfare

Nordics

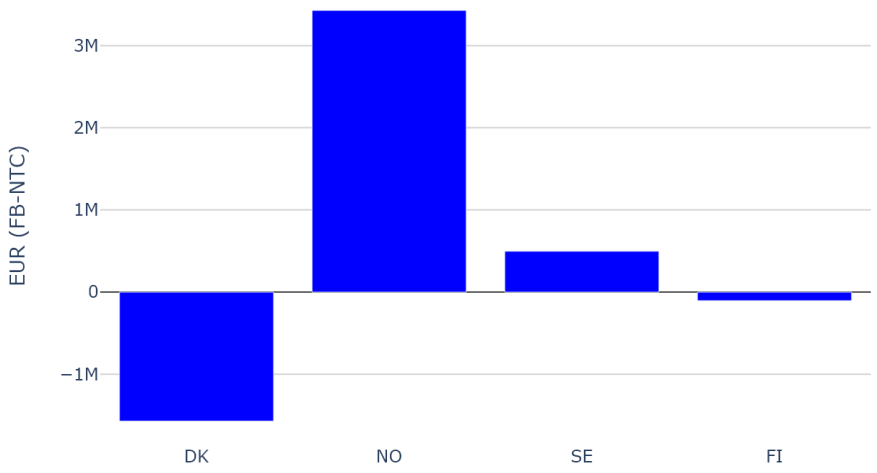
Hourly Nordic socio-economic welfare gain, FB-NTC



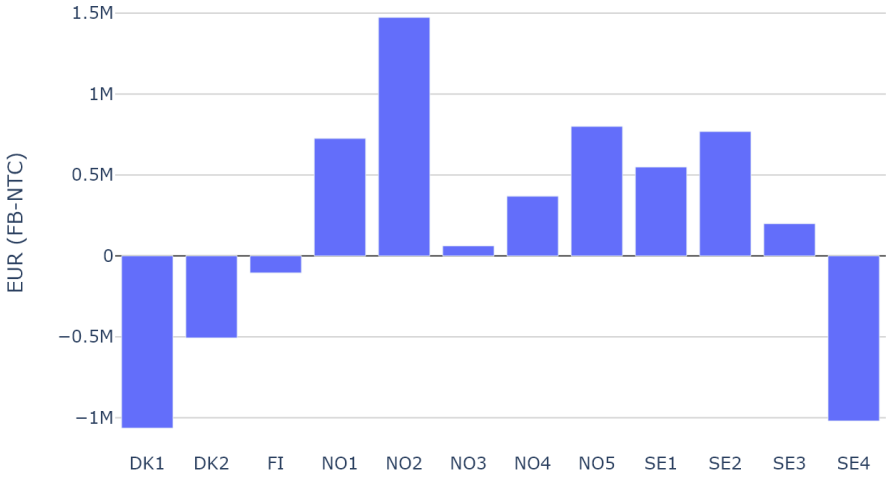
Nordics socio-economic welfare per stakeholder and day



Total Nordic socio-economic welfare per country

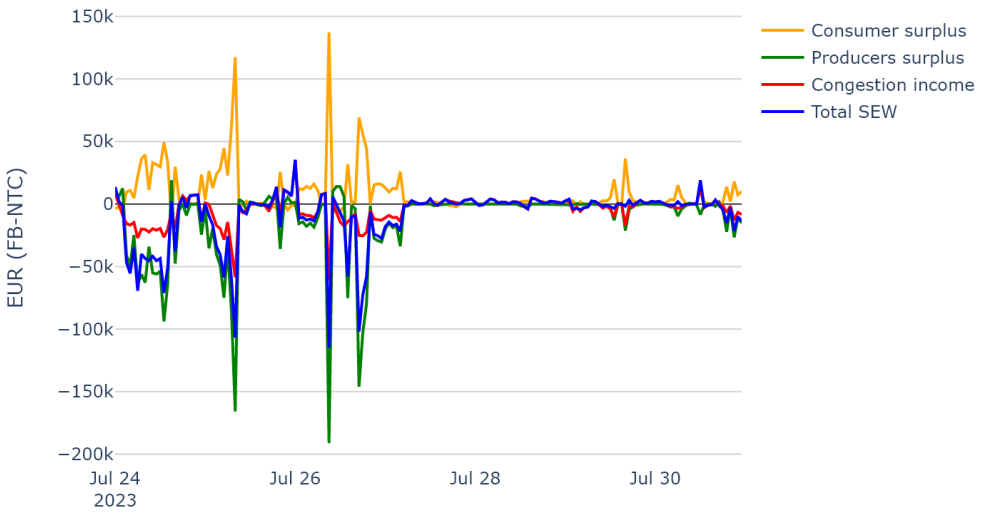


Socio economic welfaregain FB-NTC per BZ - Total_sew

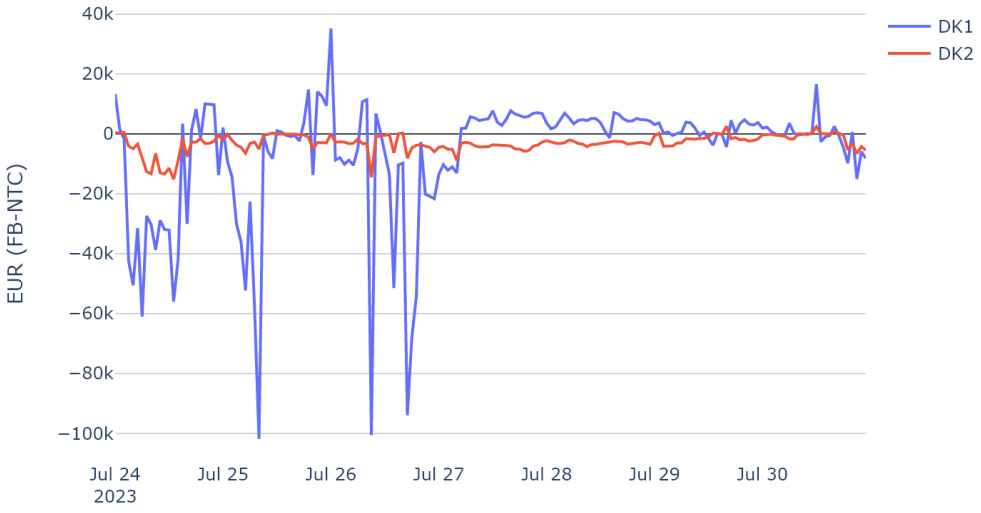


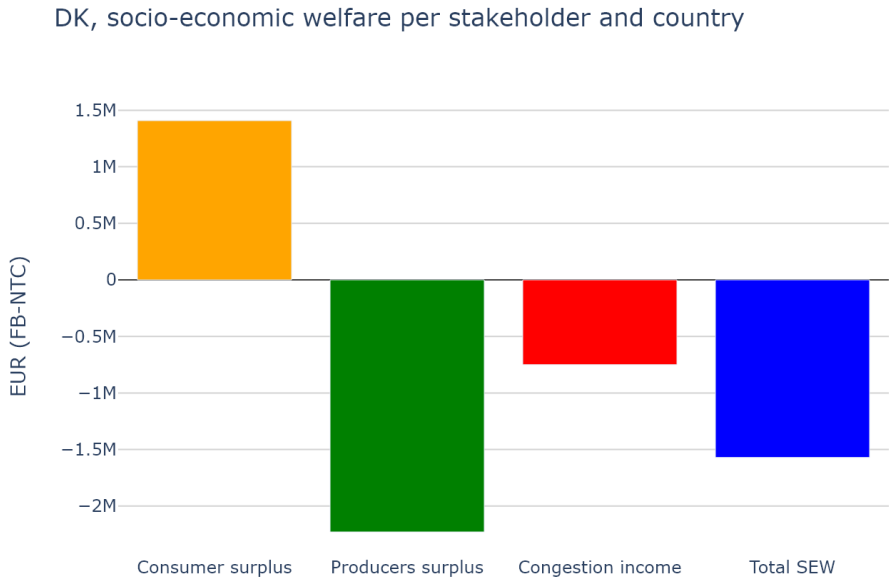
Denmark

DK, socio-economic welfare per stakeholder and country

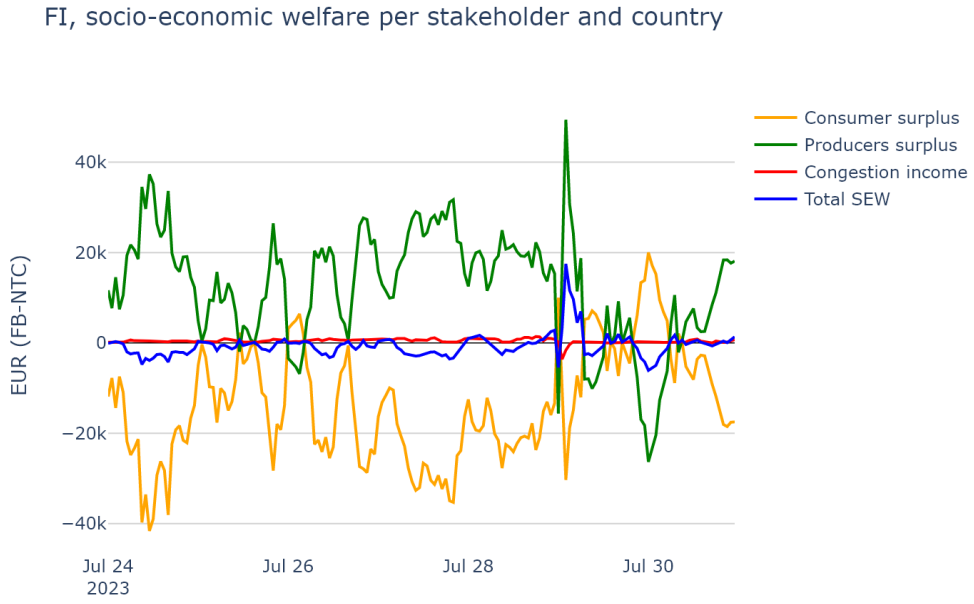


Total socio economic welfaregain FB-NTC per BZ in DK

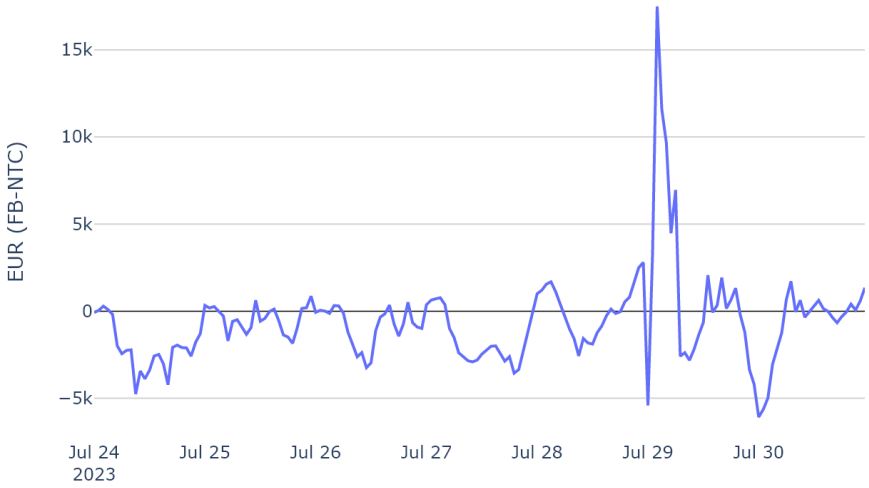



DK, socio-economic welfare per stakeholder and country
EUR (FB-NTC)
1.5M
1M
0.5M
0
−0.5M
−1M
−1.5M
−2M
Consumer surplus
Producers surplus
Congestion income
Total SEW

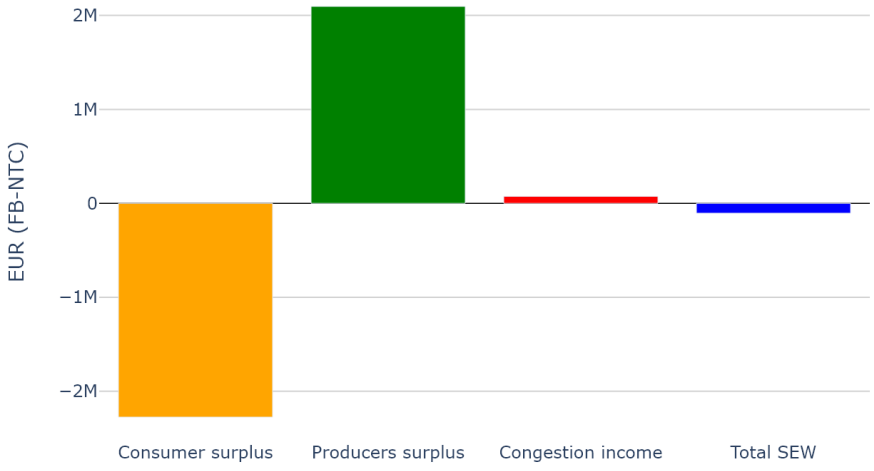
Finland


FI, socio-economic welfare per stakeholder and country
EUR (FB-NTC)
40k
20k
0
−20k
−40k
Jul 24
2023
Jul 26
Jul 28
Jul 30
Consumer surplus
Producers surplus
Congestion income
Total SEW

Total socio economic welfaregain FB-NTC per BZ in FI

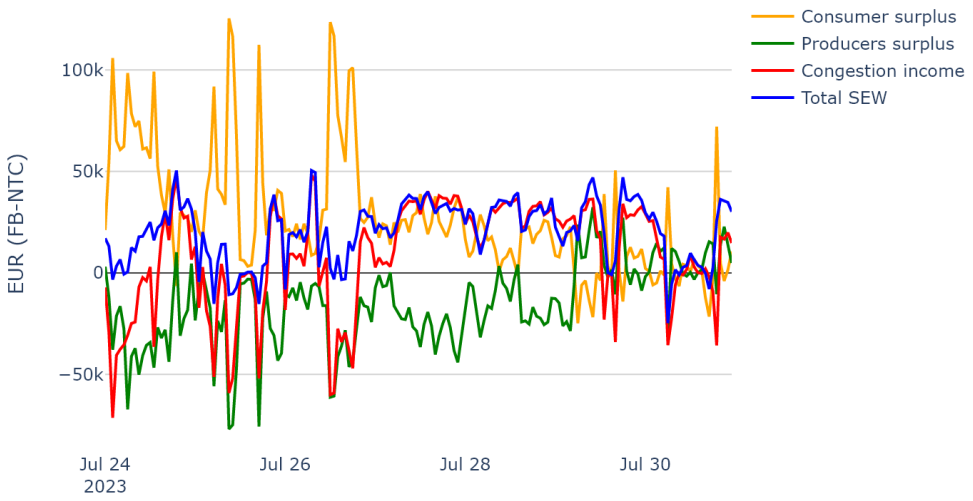


FI, socio-economic welfare per stakeholder and country

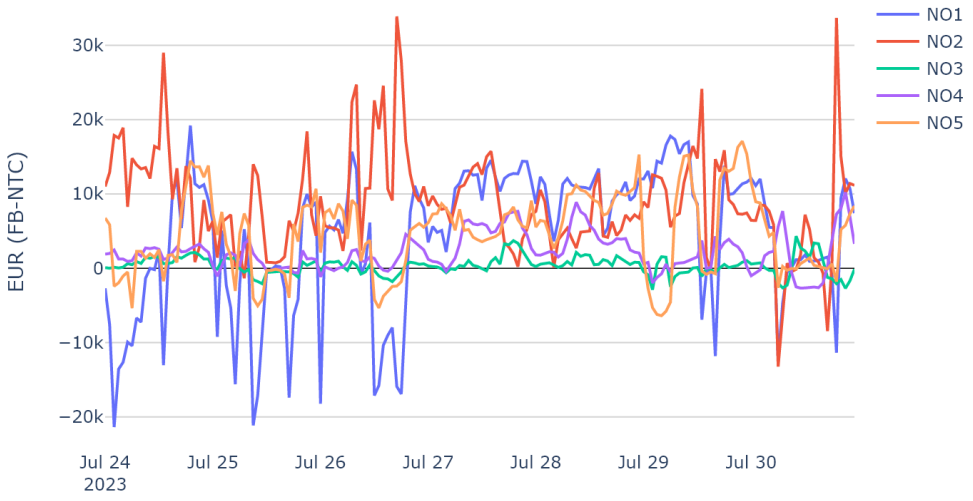


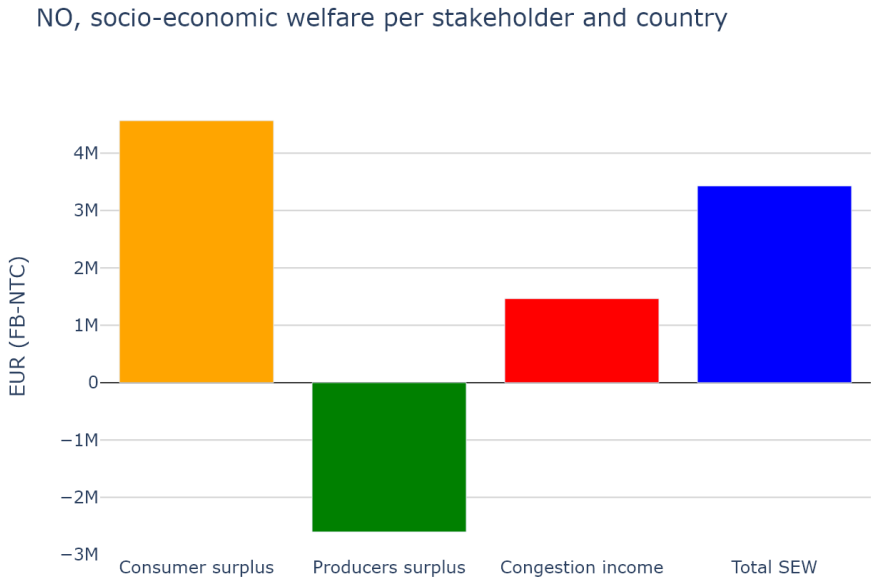
Norway

NO, socio-economic welfare per stakeholder and country

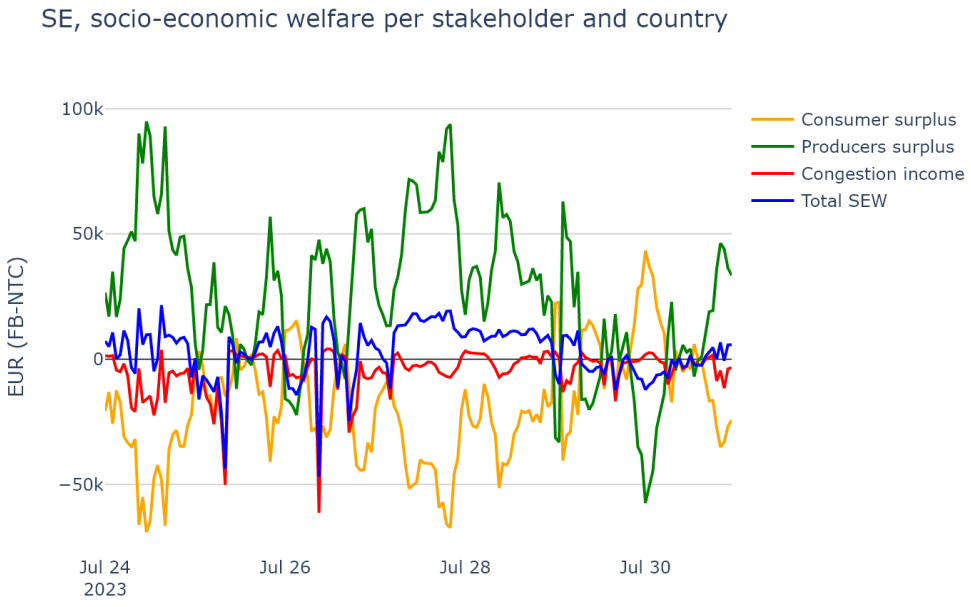


Total socio economic welfaregain FB-NTC per BZ in NO

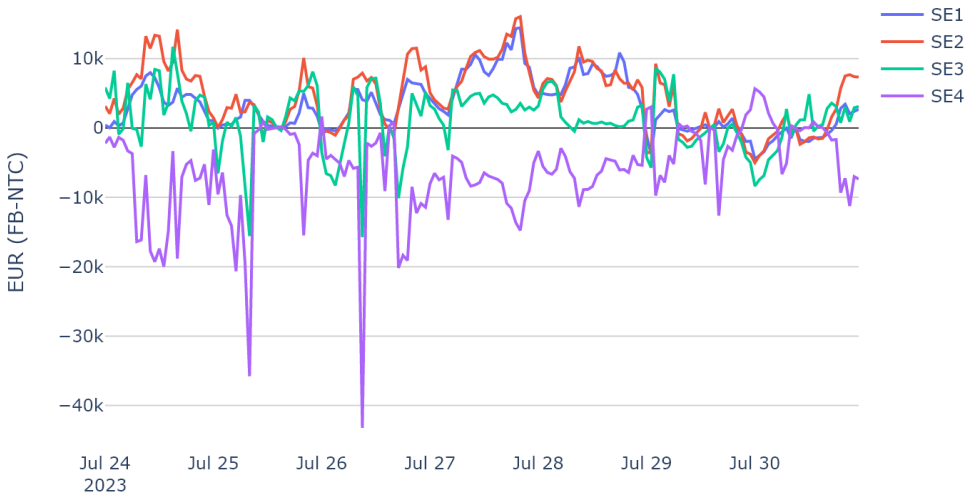



NO, socio-economic welfare per stakeholder and country
EUR (FB-NTC)
4M
3M
2M
1M
0
−1M
−2M
−3M
Consumer surplus
Producers surplus
Congestion income
Total SEW

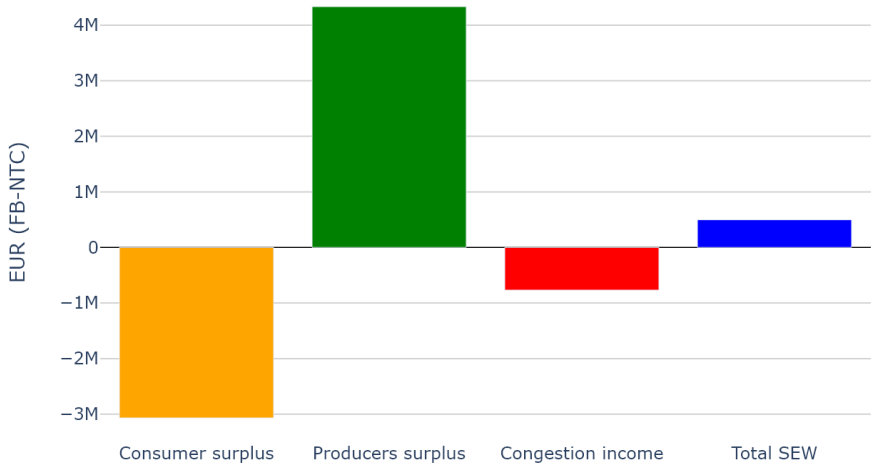
Sweden


SE, socio-economic welfare per stakeholder and country
EUR (FB-NTC)
100k
50k
0
−50k
Jul 24
2023
Jul 26
Jul 28
Jul 30
Consumer surplus
Producers surplus
Congestion income
Total SEW

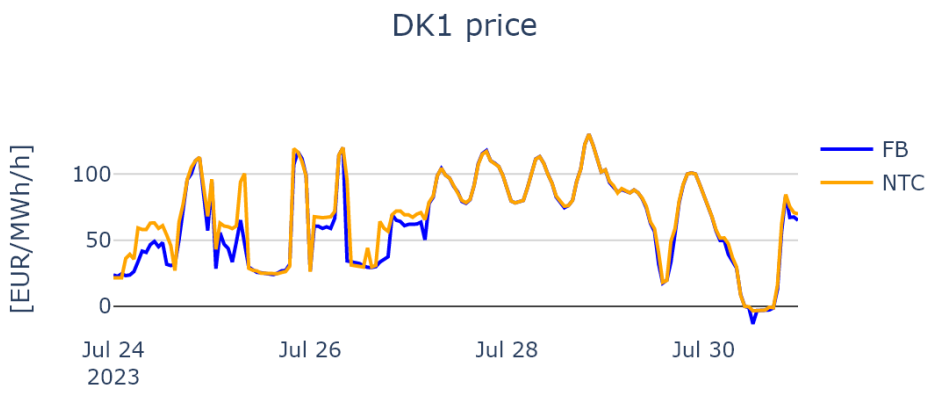
Total socio economic welfaregain FB-NTC per BZ in SE

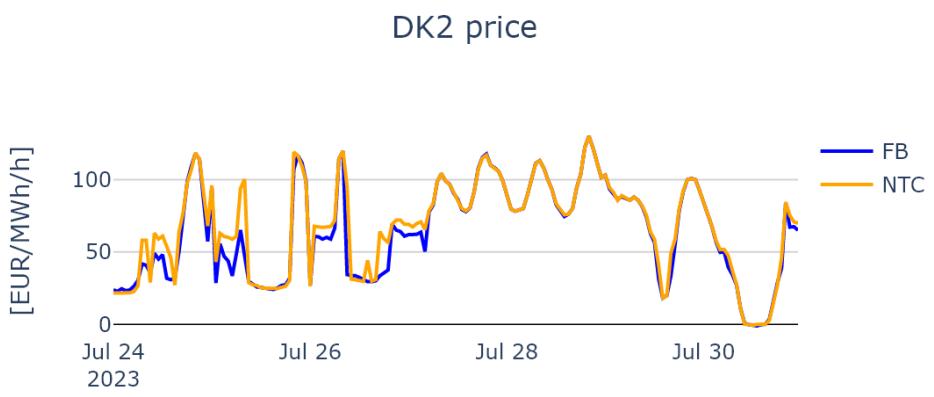


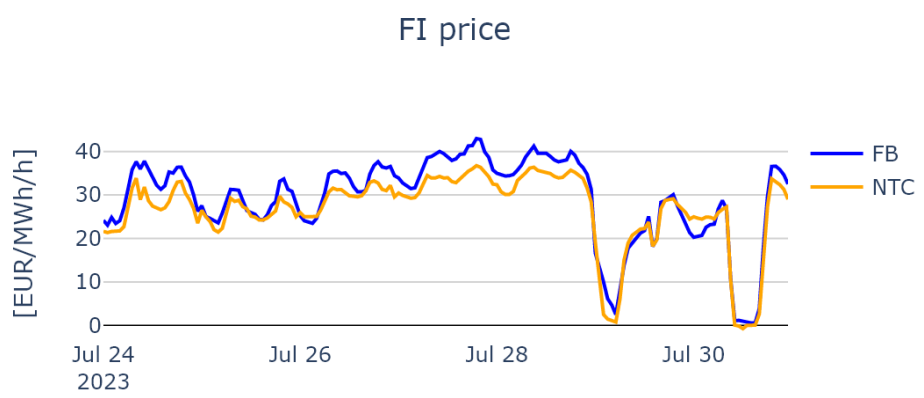
SE, socio-economic welfare per stakeholder and country

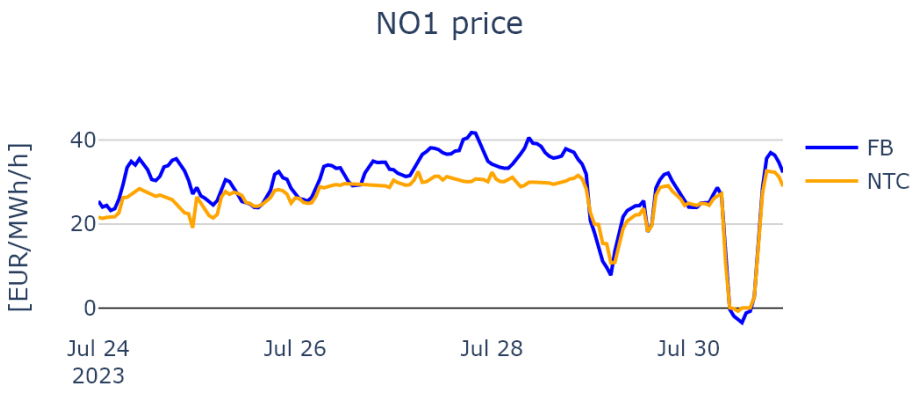


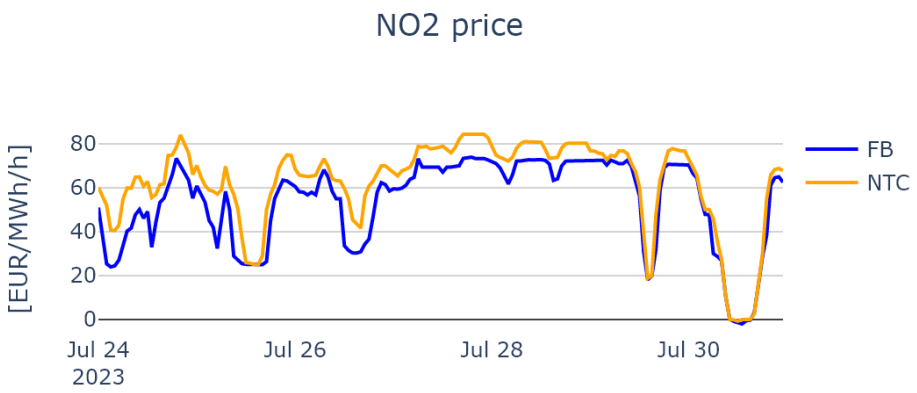
Prices

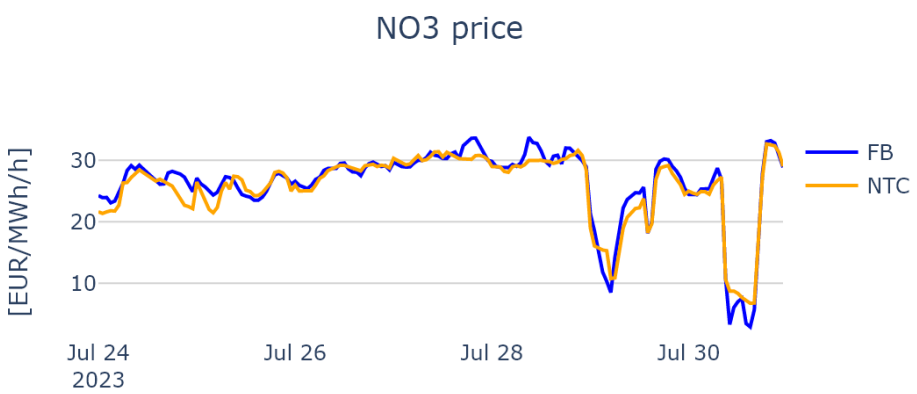

DK1 price
[EUR/MWh/h]
100
50
0
Jul 24
2023
Jul 26
Jul 28
Jul 30
FB
NTC

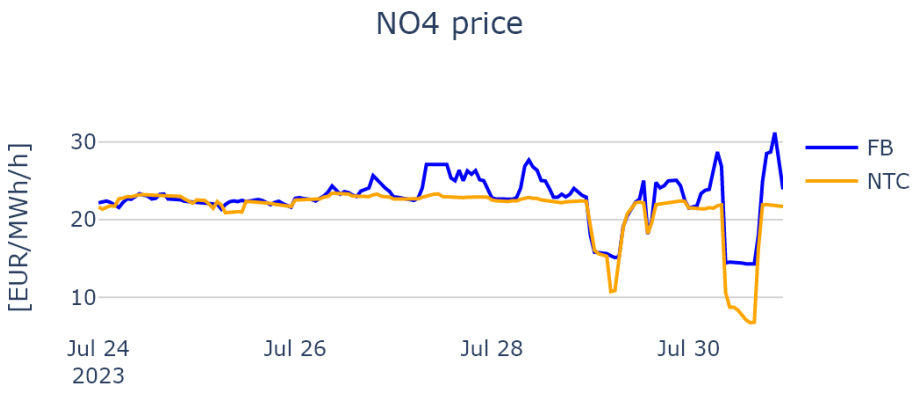

DK2 price
[EUR/MWh/h]
100
50
0
Jul 24
2023
Jul 26
Jul 28
Jul 30
FB
NTC

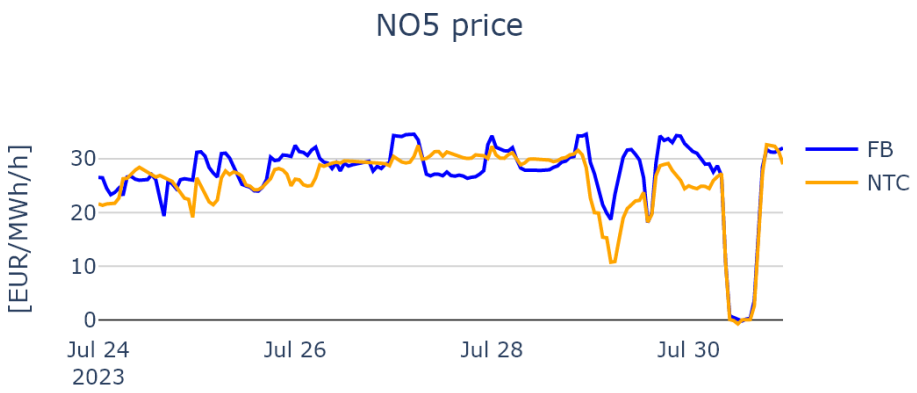

FI price
[EUR/MWh/h]
40
30
20
10
0
Jul 24
2023
Jul 26
Jul 28
Jul 30
FB
NTC

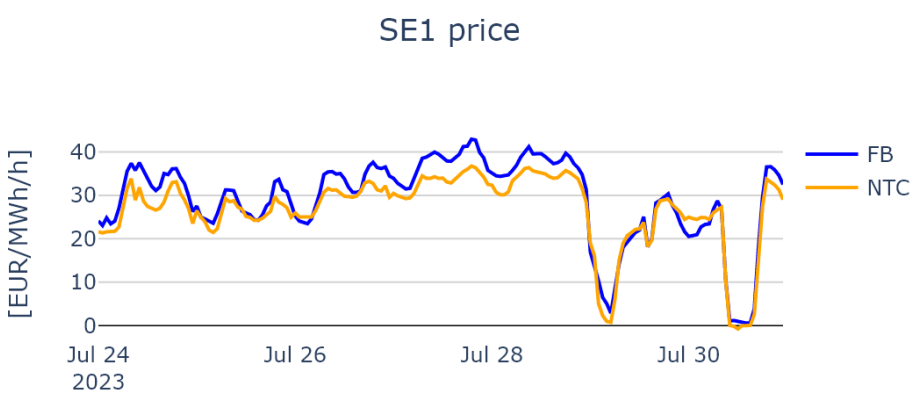

NO1 price
[EUR/MWh/h]
40
20
0
Jul 24
2023
Jul 26
Jul 28
Jul 30
FB
NTC

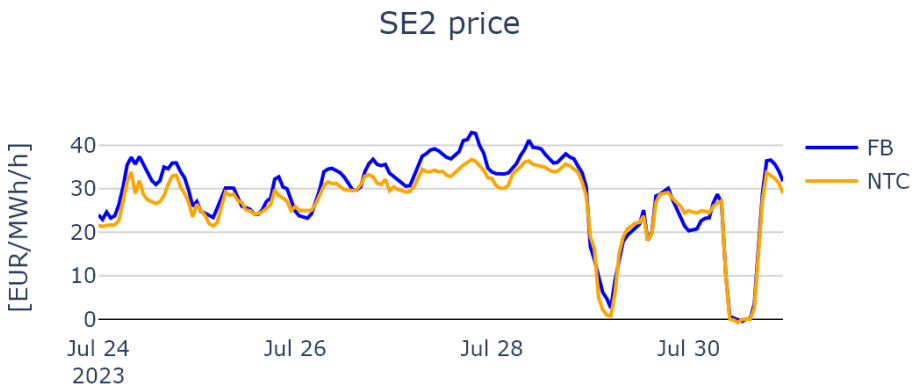

NO2 price
[EUR/MWh/h]
80
60
40
20
0
Jul 24
2023
Jul 26
Jul 28
Jul 30
FB
NTC

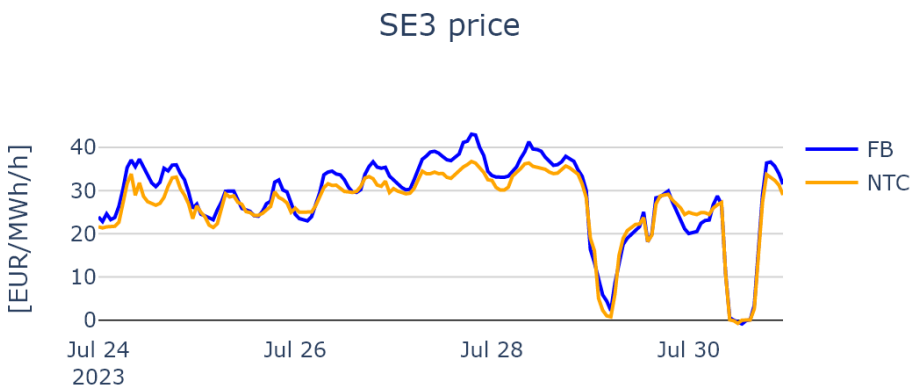

NO3 price
[EUR/MWh/h]
30
20
10
Jul 24
2023
Jul 26
Jul 28
Jul 30
FB
NTC

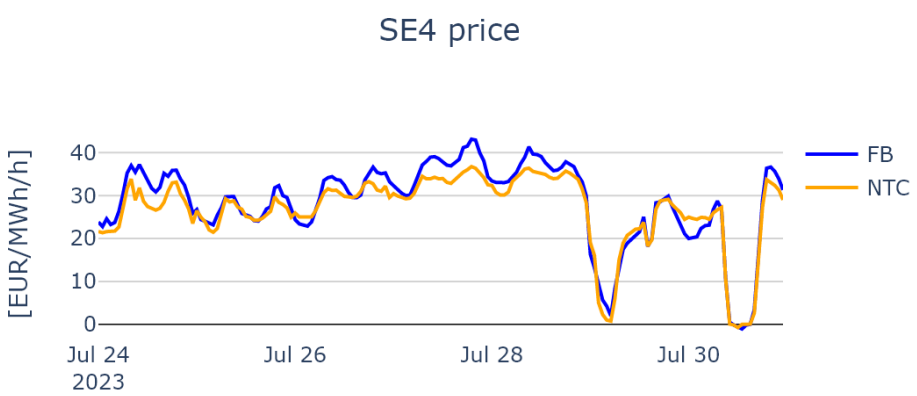

NO4 price
[EUR/MWh/h]
30
20
10
Jul 24
2023
Jul 26
Jul 28
Jul 30
FB
NTC


NO5 price
[EUR/MWh/h]
30
20
10
0
Jul 24
2023
Jul 26
Jul 28
Jul 30
FB
NTC


SE1 price
[EUR/MWh/h]
40
30
20
10
0
Jul 24
2023
Jul 26
Jul 28
Jul 30
FB
NTC

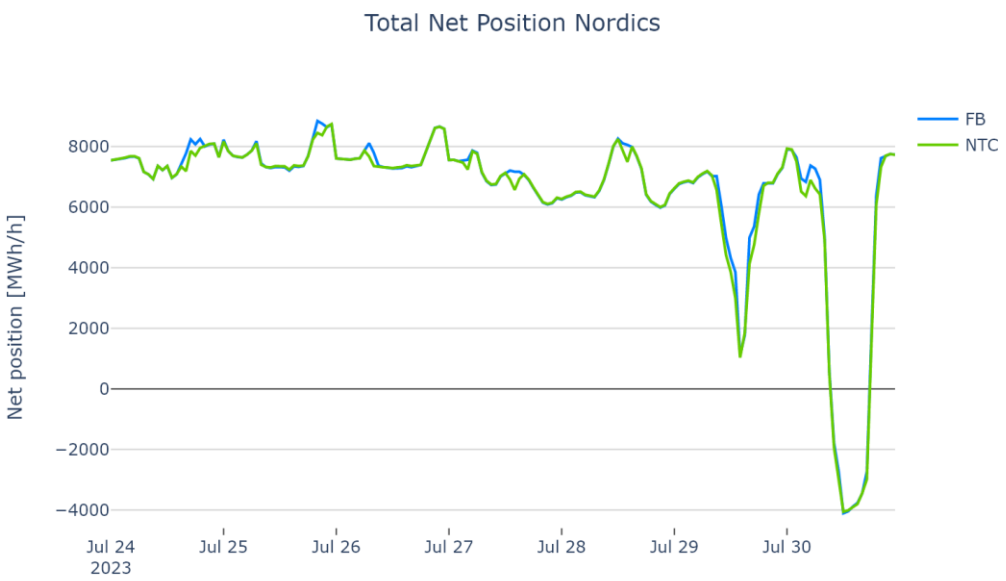

SE2 price
[EUR/MWh/h]
40
30
20
10
0
Jul 24
2023
Jul 26
Jul 28
Jul 30
FB
NTC

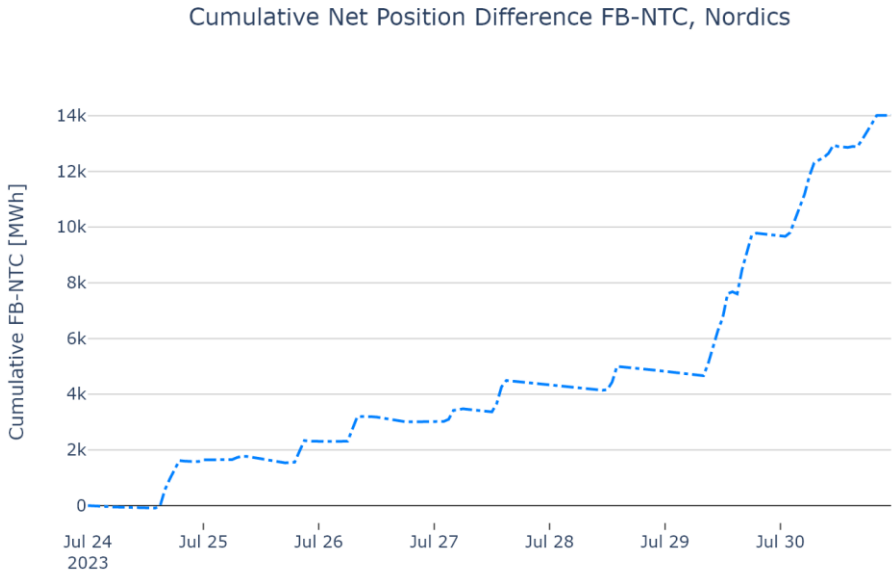

SE3 price
[EUR/MWh/h]
40
30
20
10
0
Jul 24
2023
Jul 26
Jul 28
Jul 30
FB
NTC


SE4 price
[EUR/MWh/h]
40
30
20
10
0
Jul 24
2023
Jul 26
Jul 28
Jul 30
FB
NTC

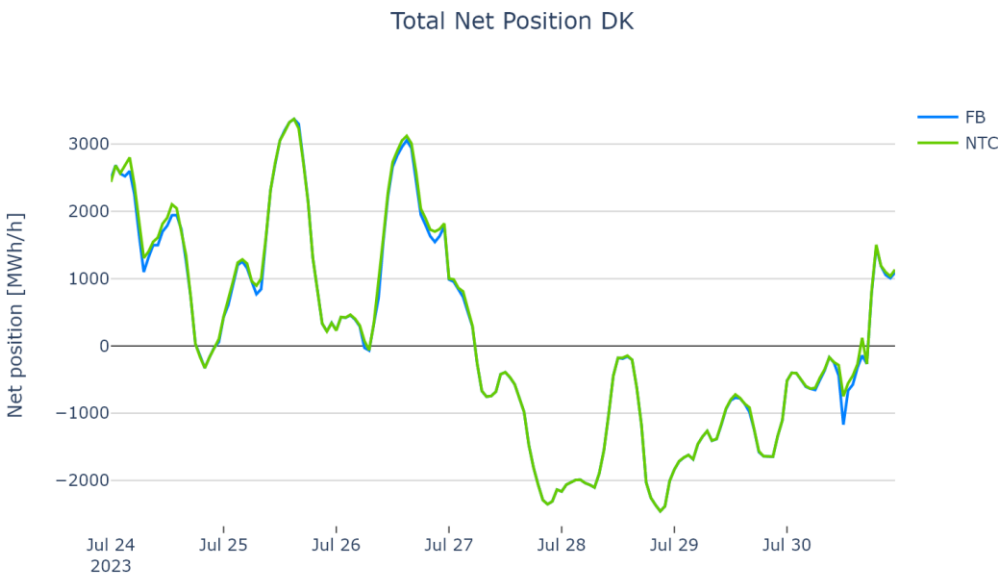
Net positions

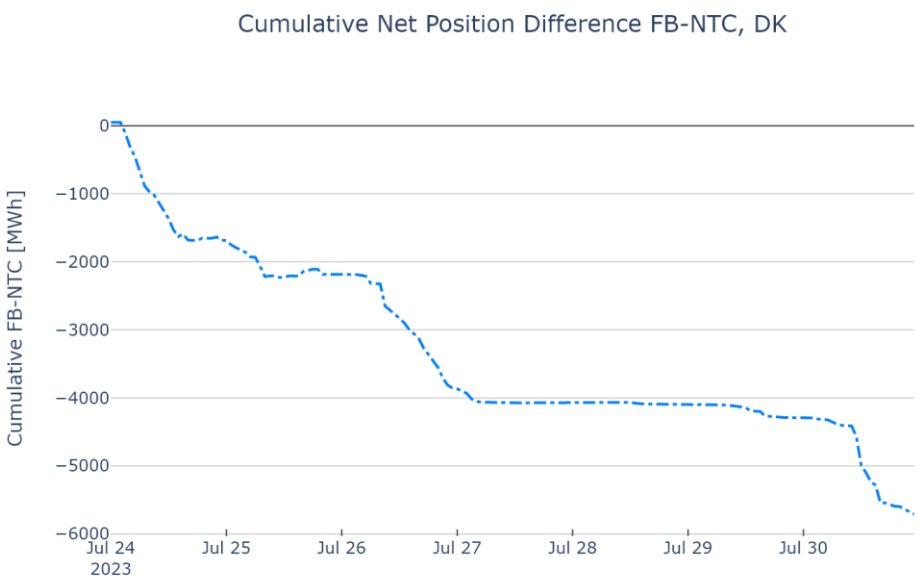
Nordics

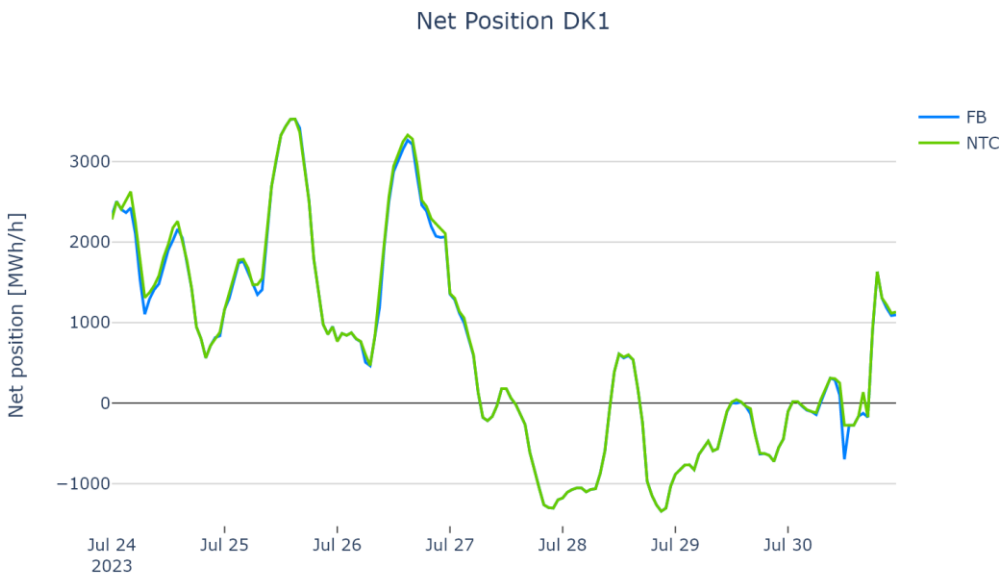


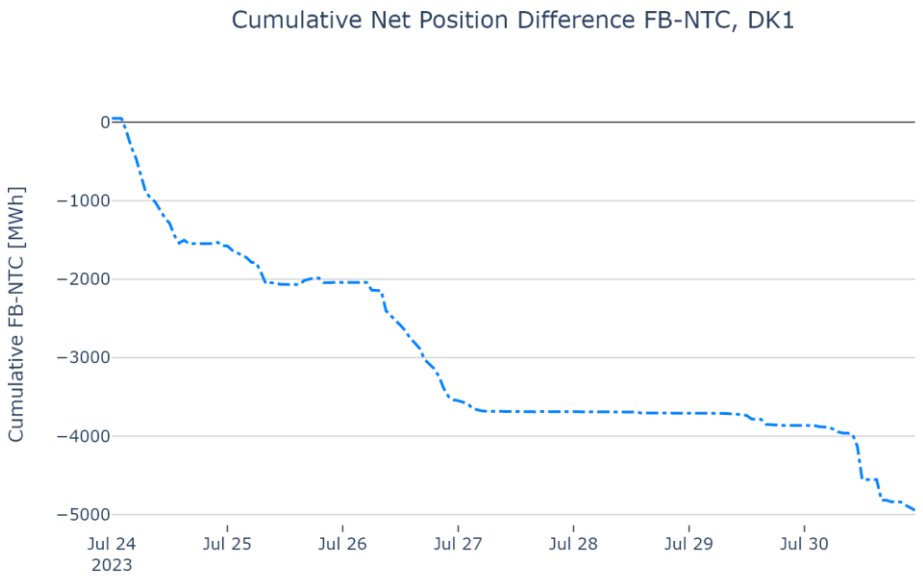


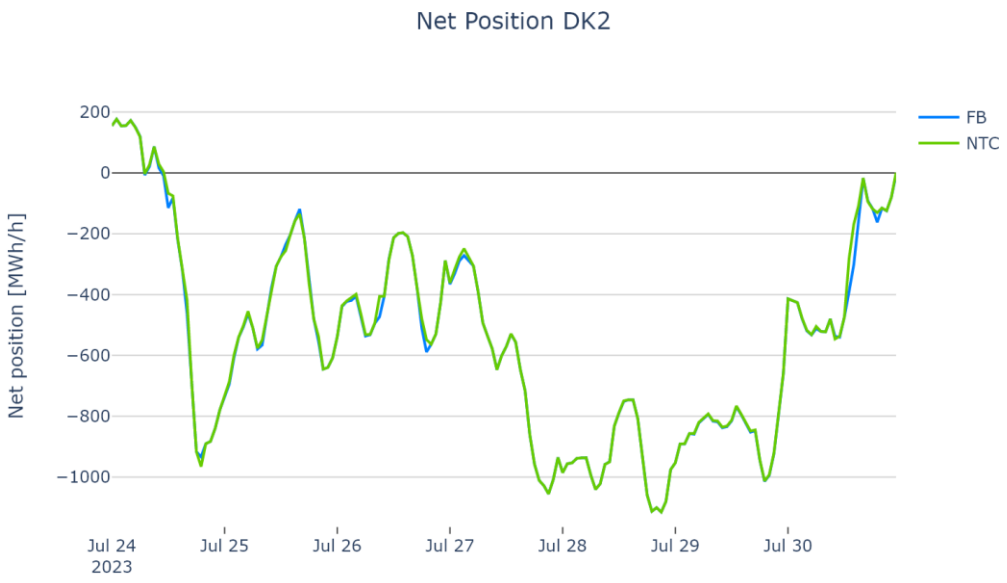
Denmark

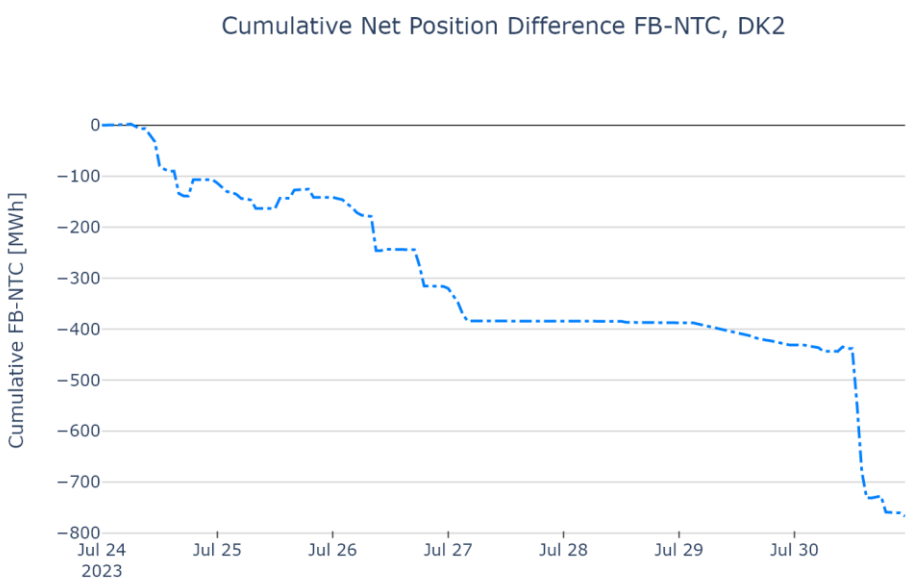

Total Net Position DK
FB
NTC
Net position [MWh/h]
3000
2000
1000
0
−1000
−2000
Jul 24
2023
Jul 25
Jul 26
Jul 27
Jul 28
Jul 29
Jul 30


Cumulative Net Position Difference FB-NTC, DK
Cumulative FB-NTC [MWh]
0
−1000
−2000
−3000
−4000
−5000
−6000
Jul 24
2023
Jul 25
Jul 26
Jul 27
Jul 28
Jul 29
Jul 30

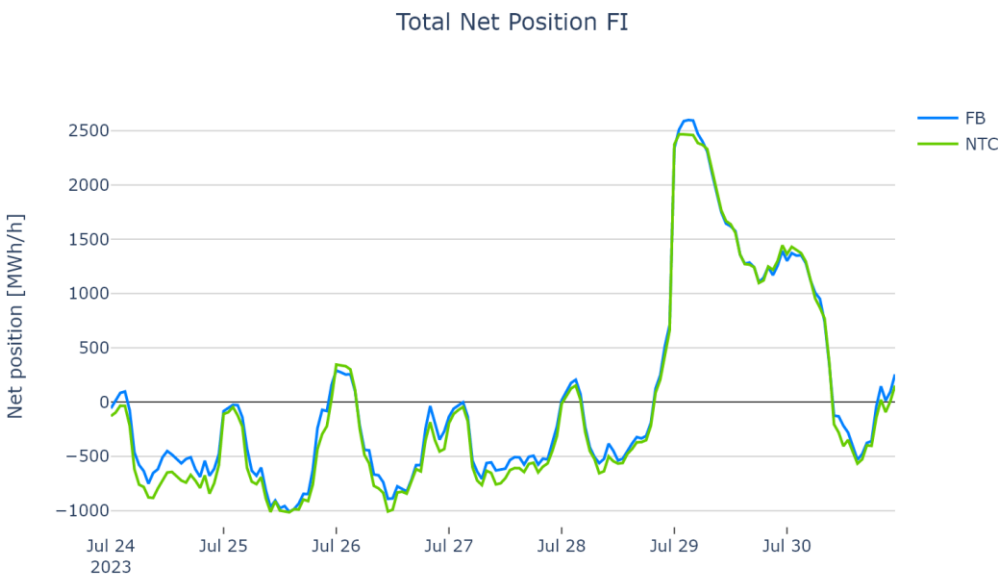

Net Position DK1
FB
NTC
Net position [MWh/h]
3000
2000
1000
0
−1000
Jul 24
2023
Jul 25
Jul 26
Jul 27
Jul 28
Jul 29
Jul 30

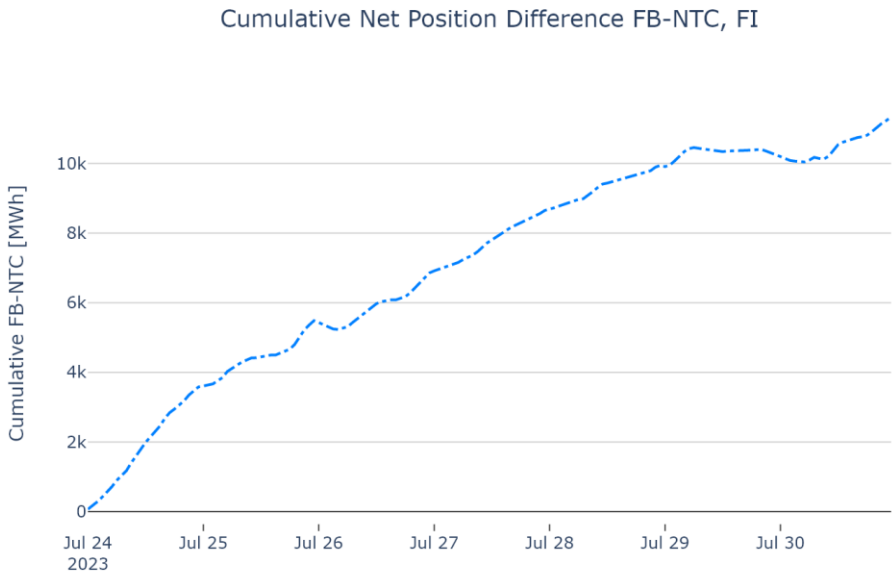

Cumulative Net Position Difference FB-NTC, DK1
Cumulative FB-NTC [MWh]
0
−1000
−2000
−3000
−4000
−5000
Jul 24
2023
Jul 25
Jul 26
Jul 27
Jul 28
Jul 29
Jul 30


Net Position DK2
Net position [MWh/h]
200
0
−200
−400
−600
−800
−1000
Jul 24
2023
Jul 25
Jul 26
Jul 27
Jul 28
Jul 29
Jul 30
FB
NTC

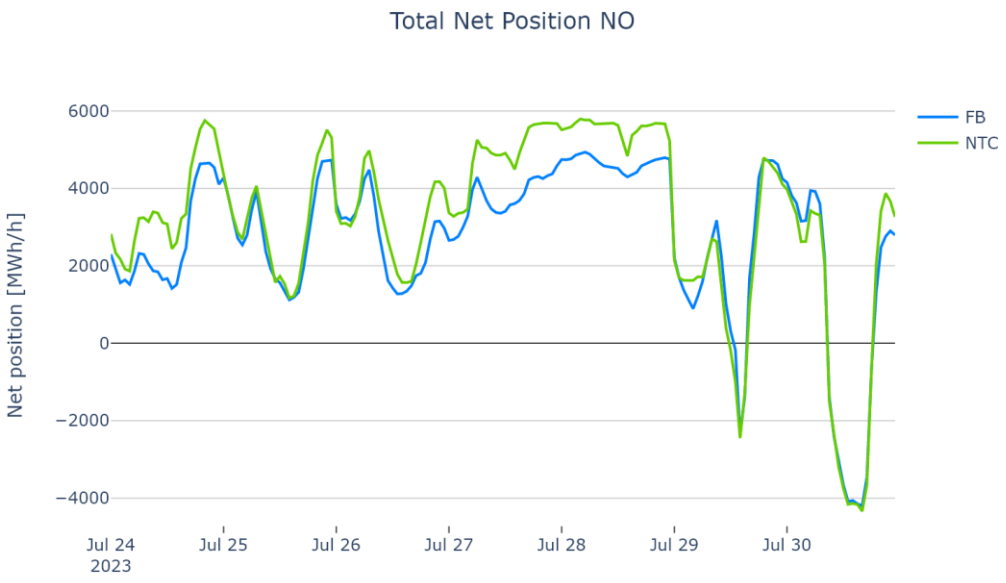

Cumulative Net Position Difference FB-NTC, DK2
Cumulative FB-NTC [MWh]
0
−100
−200
−300
−400
−500
−600
−700
−800
Jul 24
2023
Jul 25
Jul 26
Jul 27
Jul 28
Jul 29
Jul 30

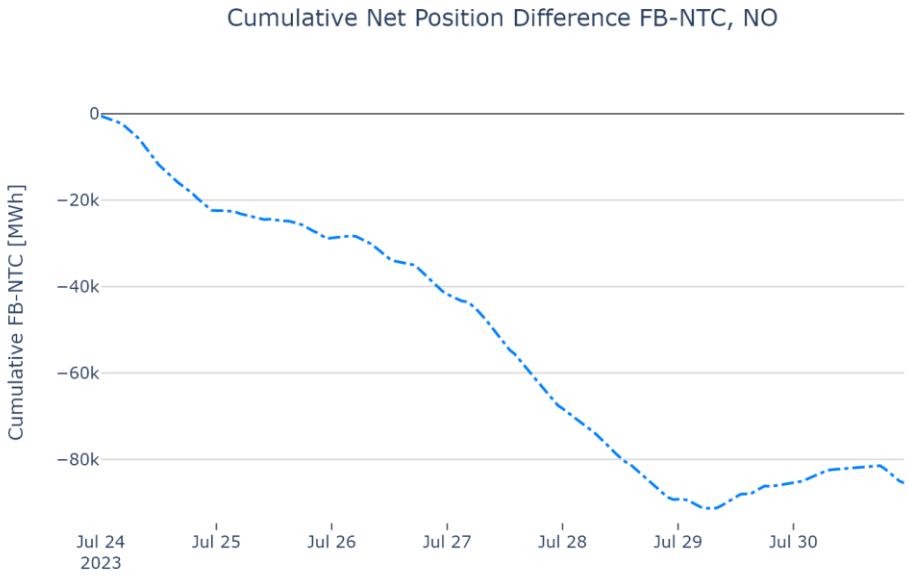
Finland

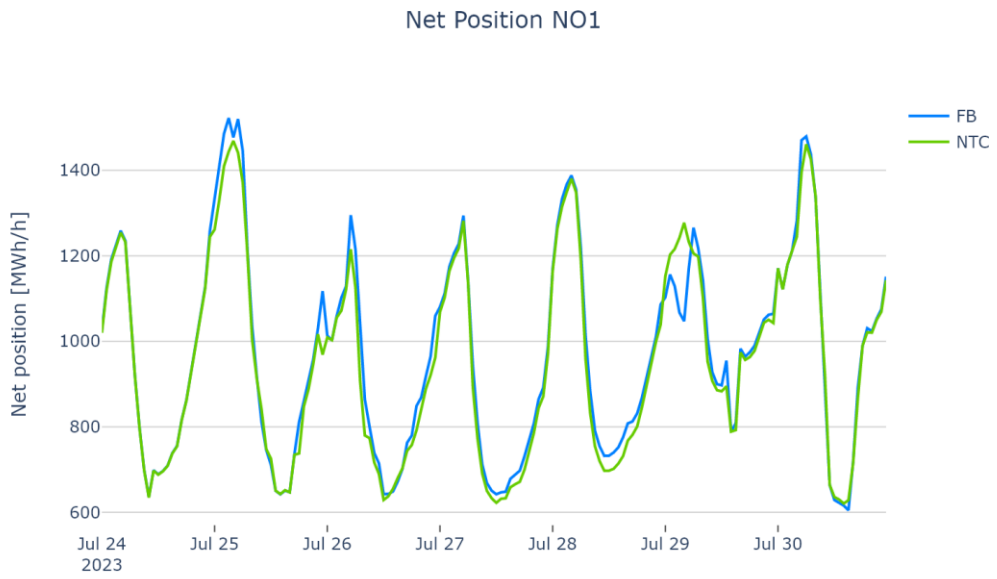

Total Net Position FI
FB
NTC
Net position [MWh/h]
2500
2000
1500
1000
500
0
−500
−1000
Jul 24
2023
Jul 25
Jul 26
Jul 27
Jul 28
Jul 29
Jul 30

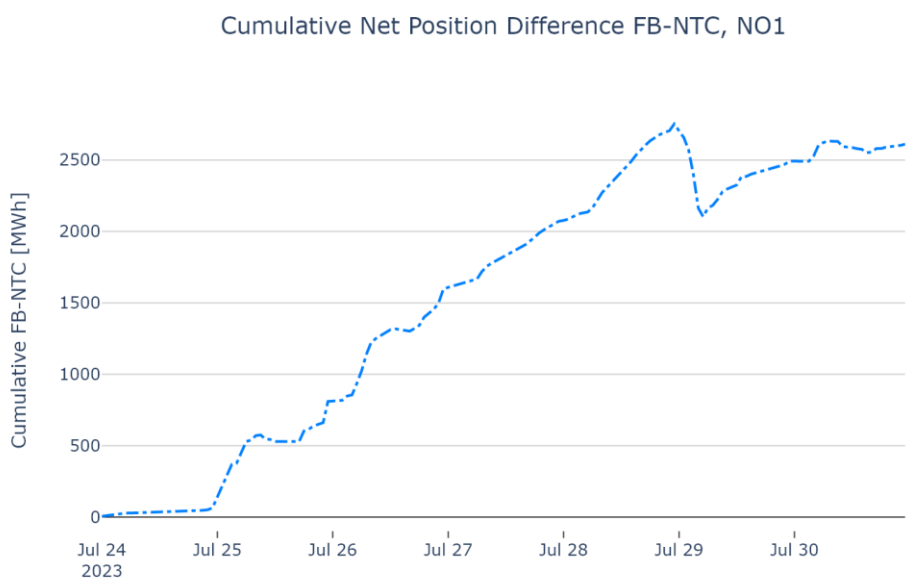

Cumulative Net Position Difference FB-NTC, FI
Cumulative FB-NTC [MWh]
10k
8k
6k
4k
2k
0
Jul 24
2023
Jul 25
Jul 26
Jul 27
Jul 28
Jul 29
Jul 30

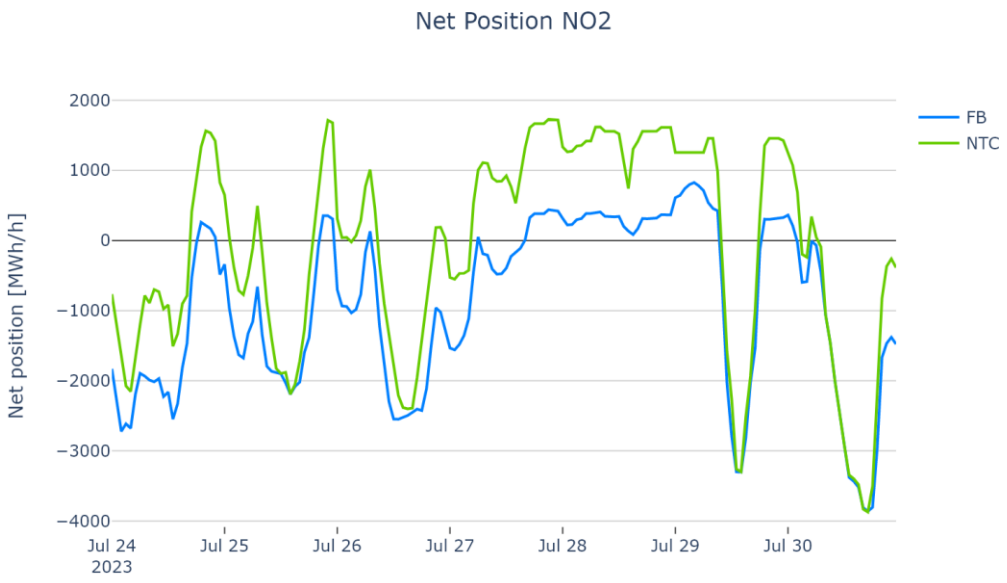
Norway

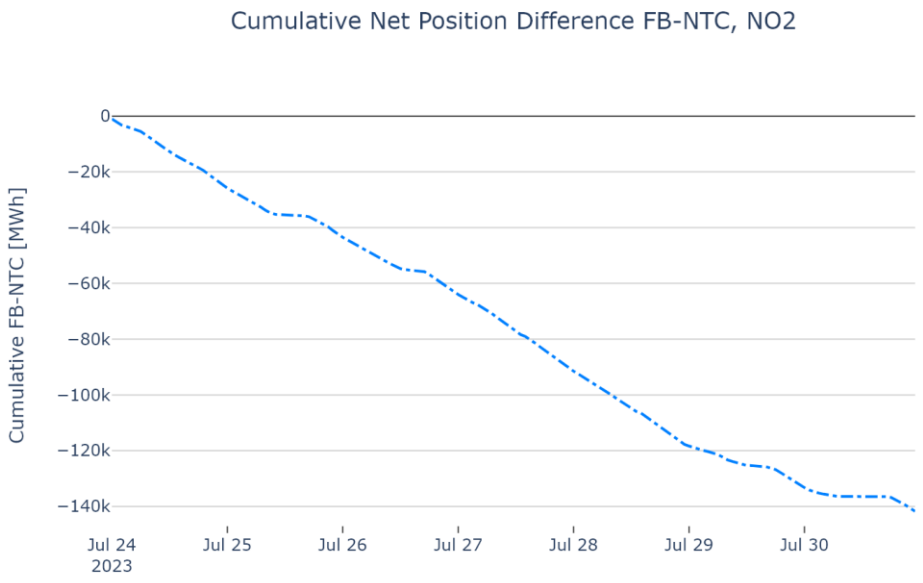

Total Net Position NO
Net position [MWh/h]
6000
4000
2000
0
−2000
−4000
Jul 24
2023
Jul 25
Jul 26
Jul 27
Jul 28
Jul 29
Jul 30
FB
NTC

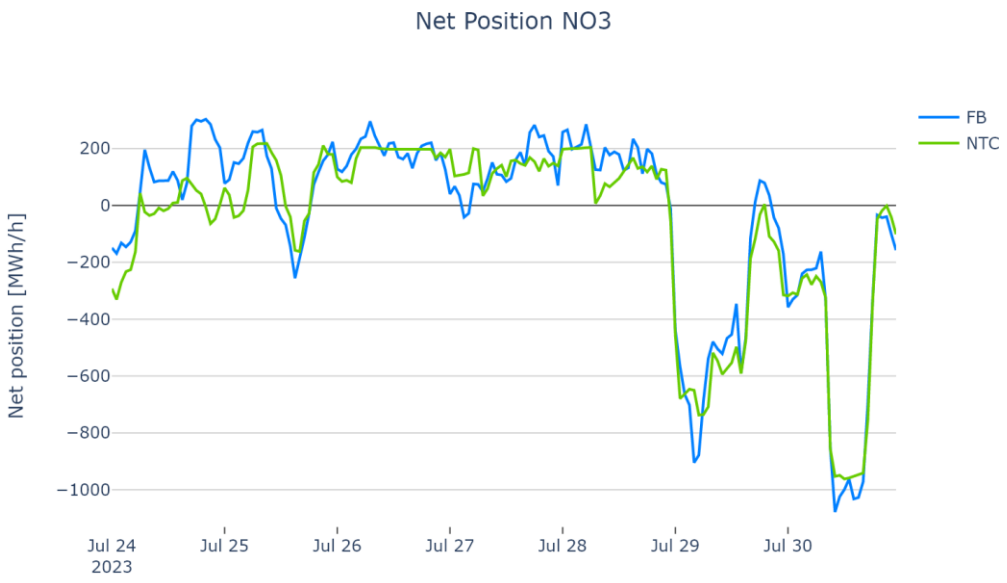

Cumulative Net Position Difference FB-NTC, NO
Cumulative FB-NTC [MWh]
0
−20k
−40k
−60k
−80k
Jul 24
2023
Jul 25
Jul 26
Jul 27
Jul 28
Jul 29
Jul 30

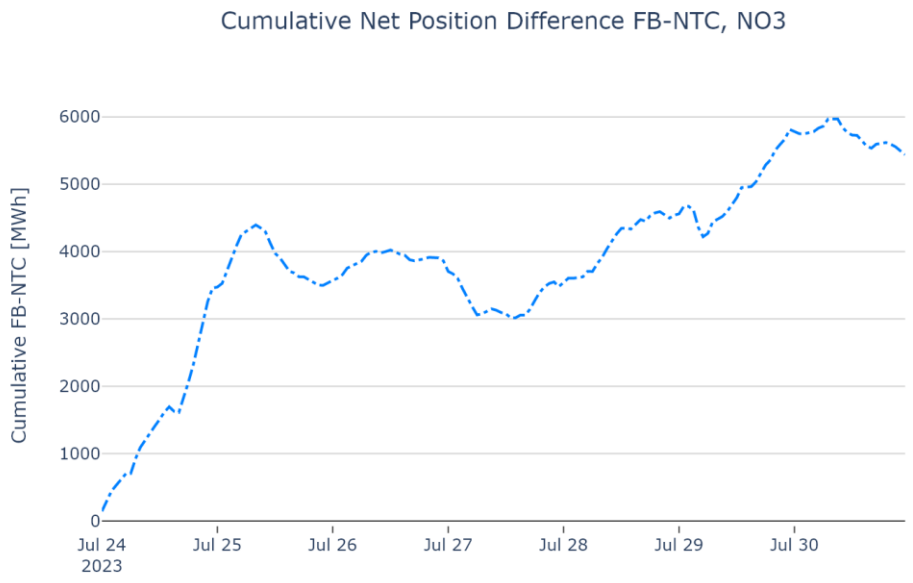

Net Position NO1
FB
NTC
Net position [MWh/h]
1400
1200
1000
800
600
Jul 24
2023
Jul 25
Jul 26
Jul 27
Jul 28
Jul 29
Jul 30

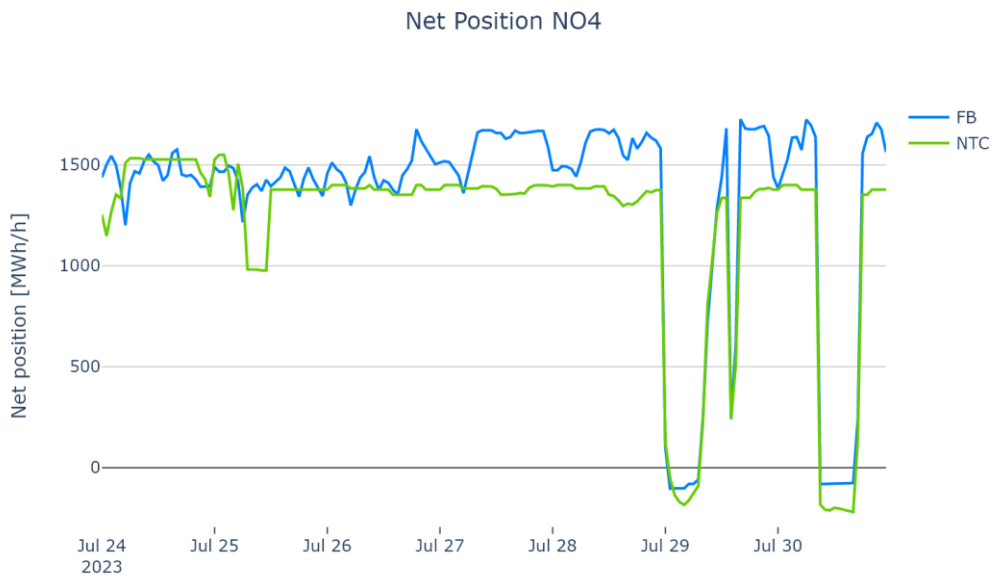

Cumulative Net Position Difference FB-NTC, NO1
Cumulative FB-NTC [MWh]
2500
2000
1500
1000
500
0
Jul 24
2023
Jul 25
Jul 26
Jul 27
Jul 28
Jul 29
Jul 30

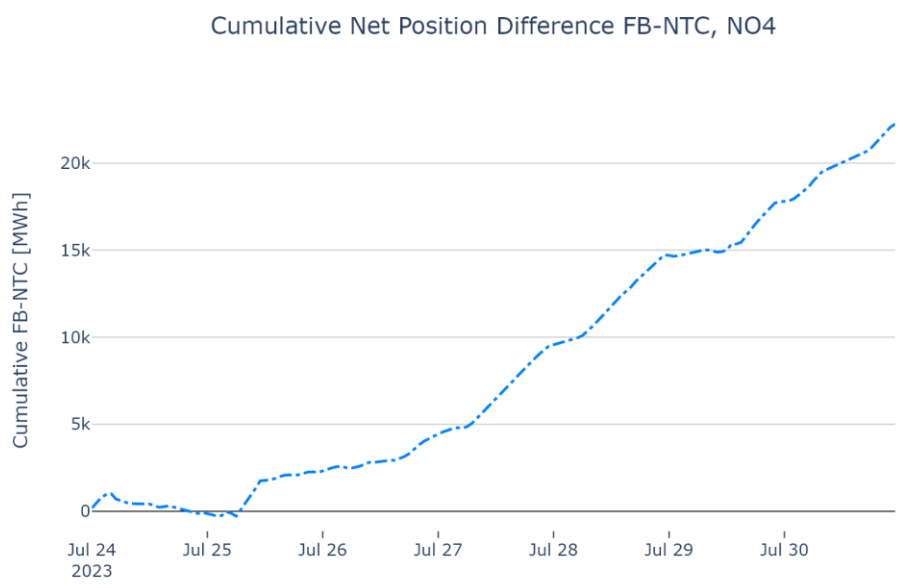

Net Position NO2
Net position [MWh/h]
2000
1000
0
−1000
−2000
−3000
−4000
Jul 24
2023
Jul 25
Jul 26
Jul 27
Jul 28
Jul 29
Jul 30
FB
NTC

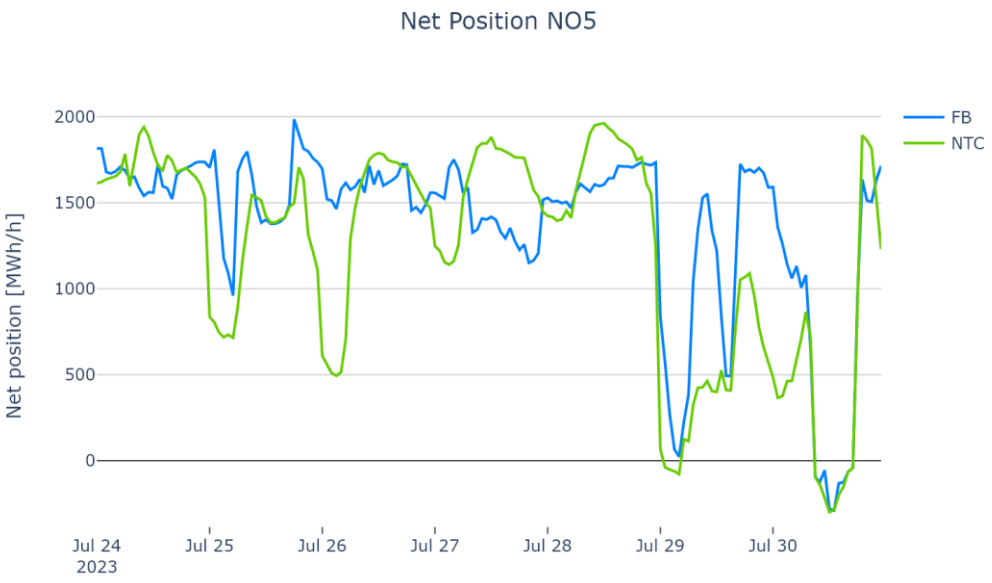

Cumulative Net Position Difference FB-NTC, NO2
Cumulative FB-NTC [MWh]
0
−20k
−40k
−60k
−80k
−100k
−120k
−140k
Jul 24
2023
Jul 25
Jul 26
Jul 27
Jul 28
Jul 29
Jul 30

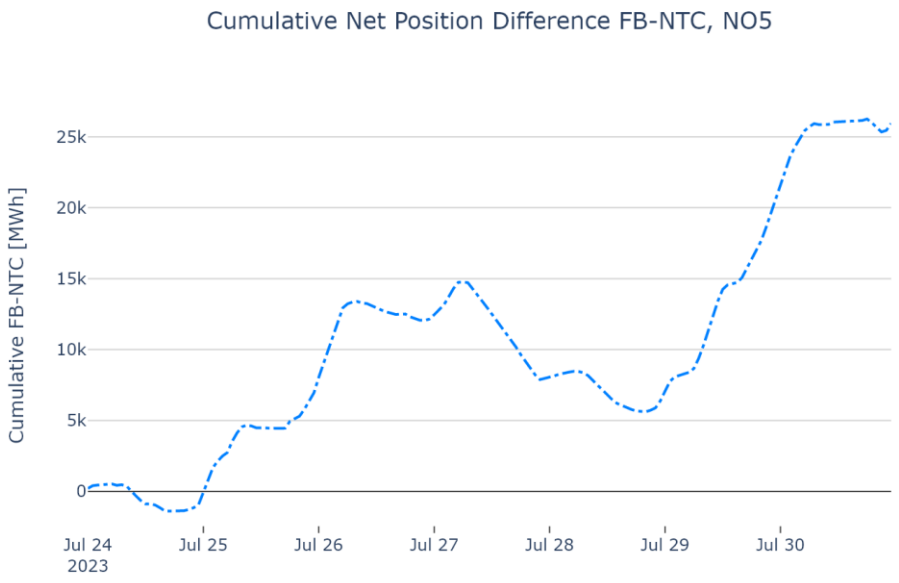

Net Position NO3
FB
NTC
Net position [MWh/h]
200
0
−200
−400
−600
−800
−1000
Jul 24
2023
Jul 25
Jul 26
Jul 27
Jul 28
Jul 29
Jul 30


Cumulative Net Position Difference FB-NTC, NO3
Cumulative FB-NTC [MWh]
6000
5000
4000
3000
2000
1000
0
Jul 24
2023
Jul 25
Jul 26
Jul 27
Jul 28
Jul 29
Jul 30

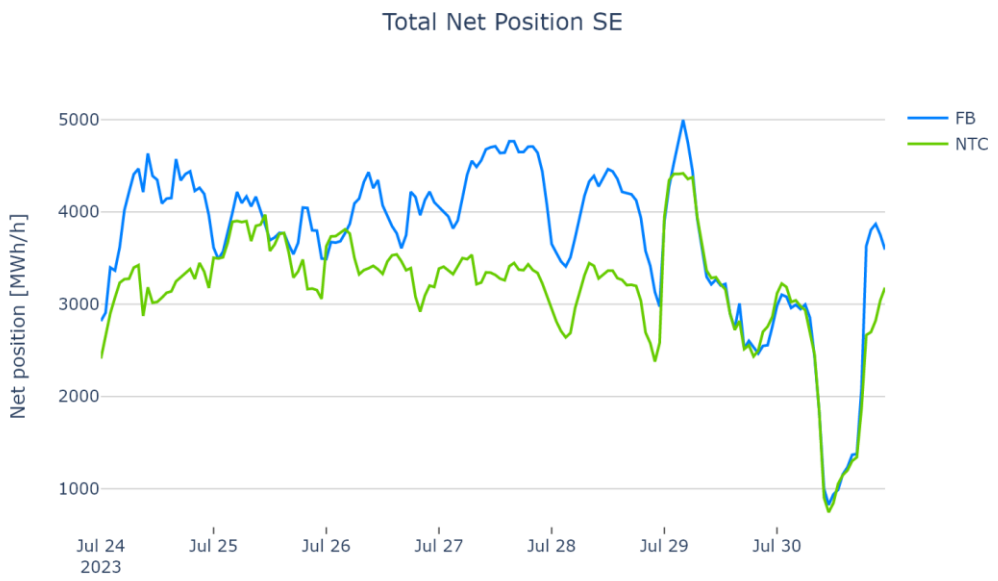

Net Position NO4
FB
NTC
Net position [MWh/h]
1500
1000
500
0
Jul 24
2023
Jul 25
Jul 26
Jul 27
Jul 28
Jul 29
Jul 30

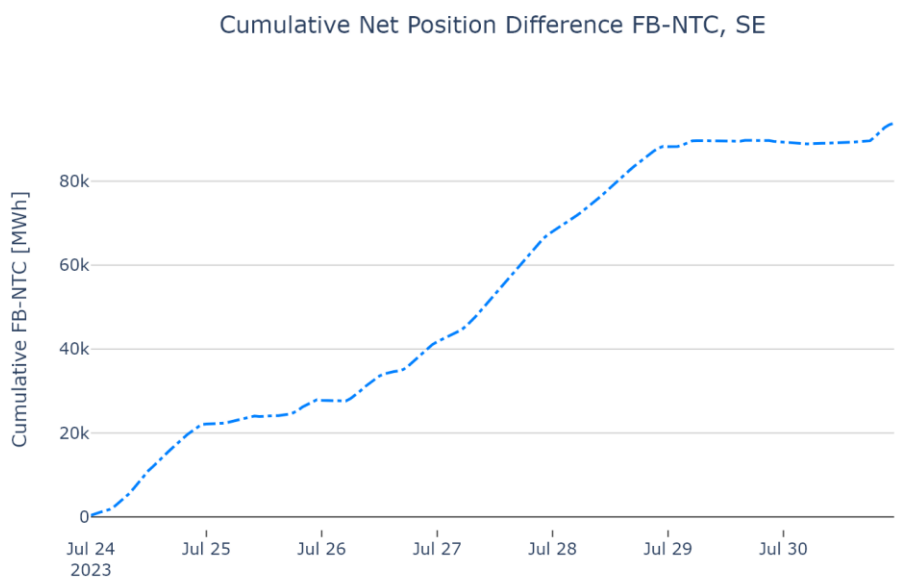

Cumulative Net Position Difference FB-NTC, NO4
Cumulative FB-NTC [MWh]
20k
15k
10k
5k
0
Jul 24
2023
Jul 25
Jul 26
Jul 27
Jul 28
Jul 29
Jul 30

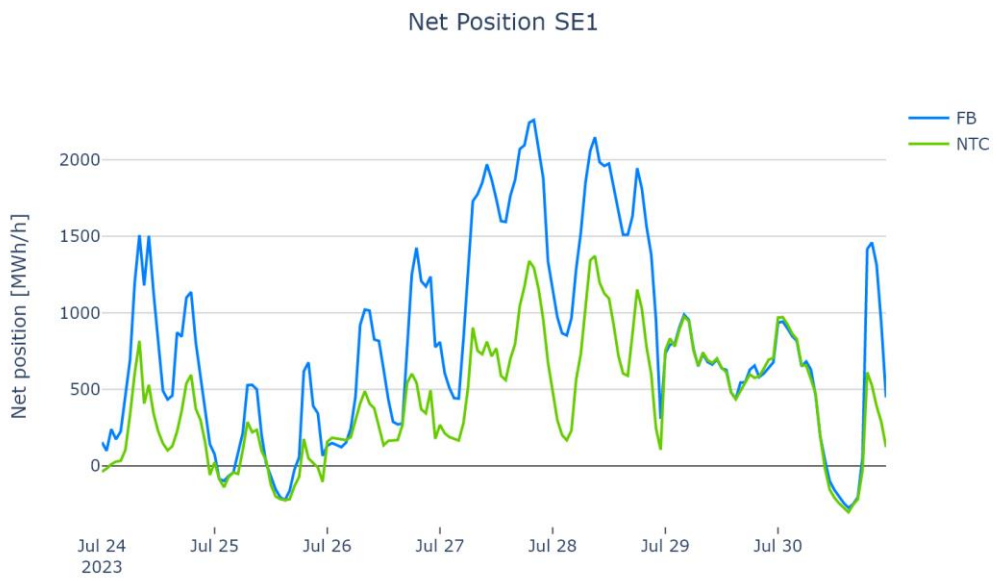

Net Position NO5
Net position [MWh/h]
2000
1500
1000
500
0
Jul 24
2023
Jul 25
Jul 26
Jul 27
Jul 28
Jul 29
Jul 30
FB
NTC

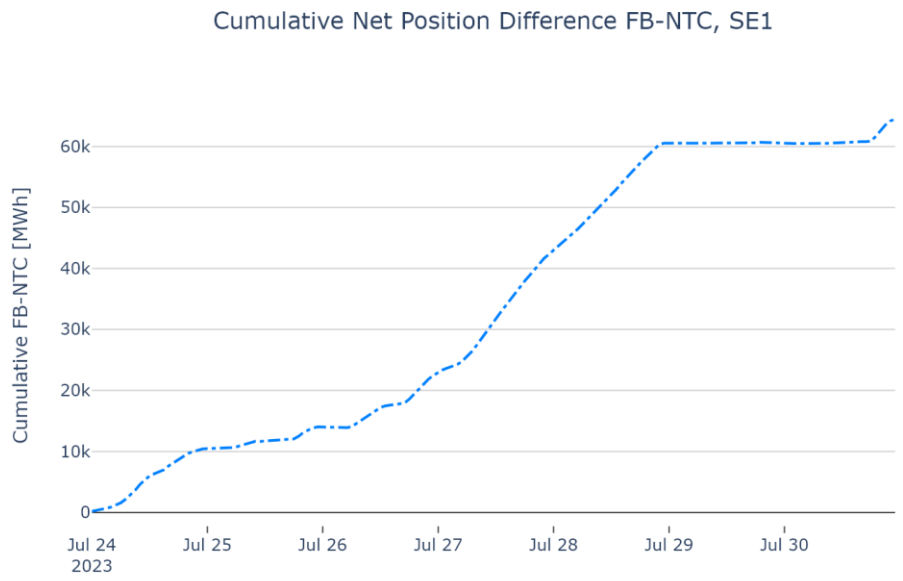

Cumulative Net Position Difference FB-NTC, NO5
Cumulative FB-NTC [MWh]
25k
20k
15k
10k
5k
0
Jul 24
2023
Jul 25
Jul 26
Jul 27
Jul 28
Jul 29
Jul 30

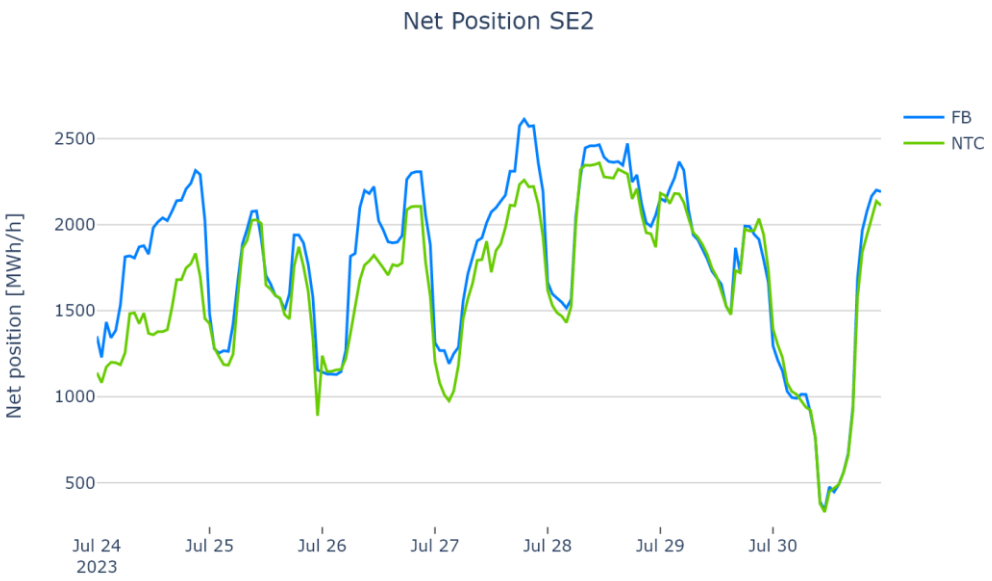
Sweden

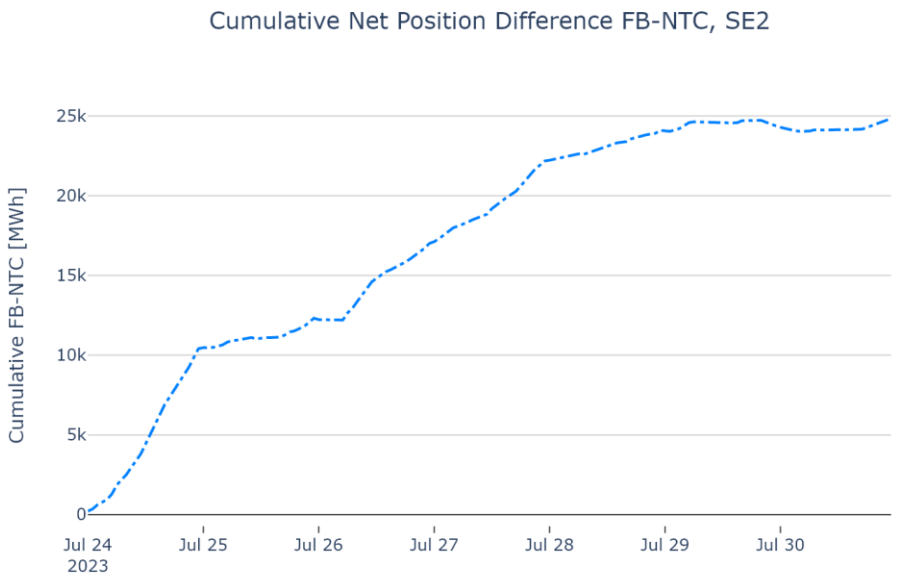

Total Net Position SE
Net position [MWh/h]
5000
4000
3000
2000
1000
Jul 24
2023
Jul 25
Jul 26
Jul 27
Jul 28
Jul 29
Jul 30
FB
NTC

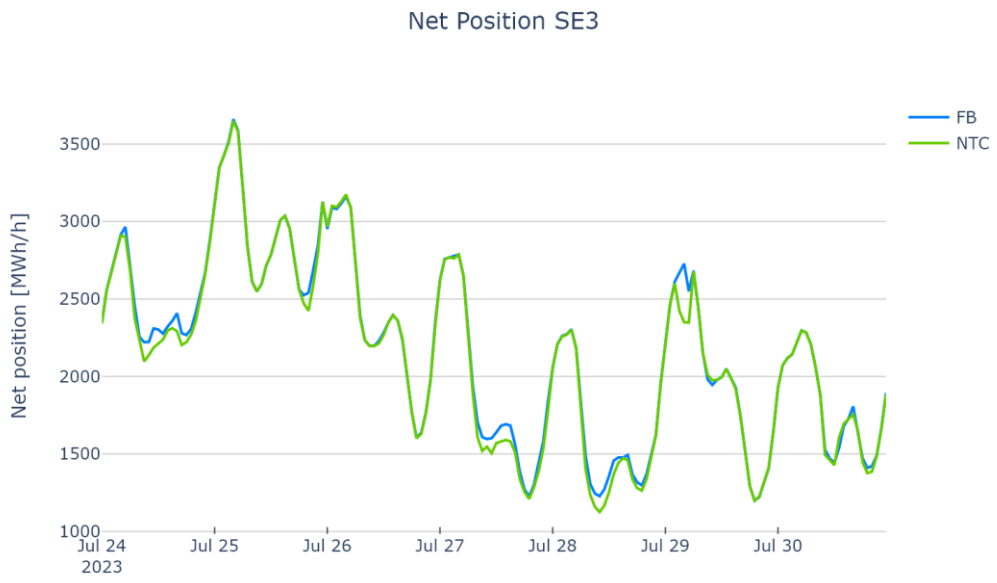

Cumulative Net Position Difference FB-NTC, SE
Cumulative FB-NTC [MWh]
80k
60k
40k
20k
0
Jul 24
2023
Jul 25
Jul 26
Jul 27
Jul 28
Jul 29
Jul 30

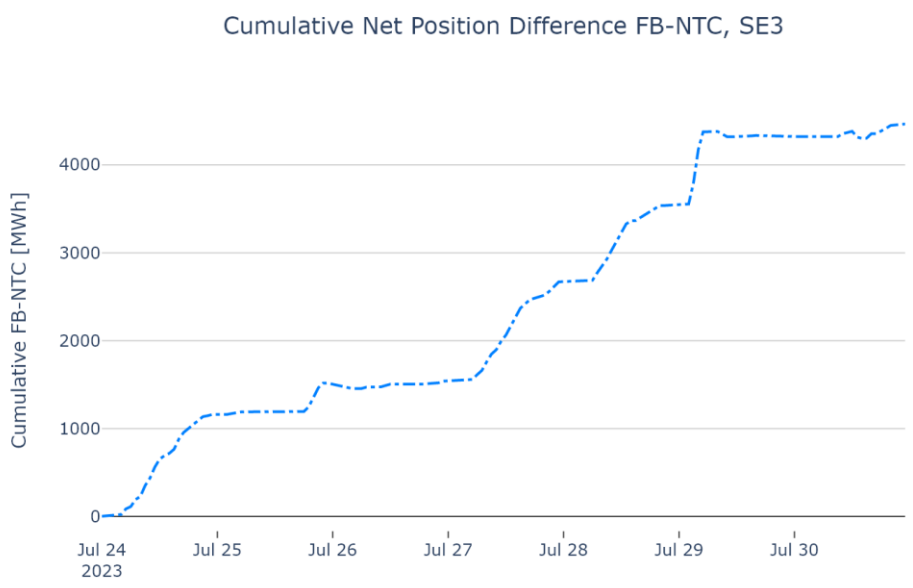

Net Position SE1
FB
NTC
Net position [MWh/h]
2000
1500
1000
500
0
Jul 24
2023
Jul 25
Jul 26
Jul 27
Jul 28
Jul 29
Jul 30

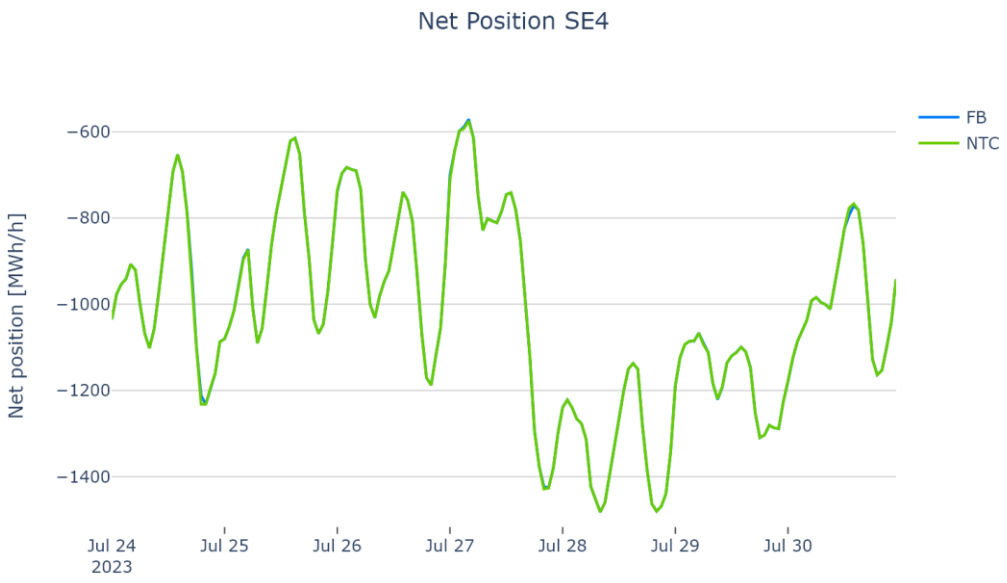

Cumulative Net Position Difference FB-NTC, SE1
Cumulative FB-NTC [MWh]
60k
50k
40k
30k
20k
10k
0
Jul 24
2023
Jul 25
Jul 26
Jul 27
Jul 28
Jul 29
Jul 30

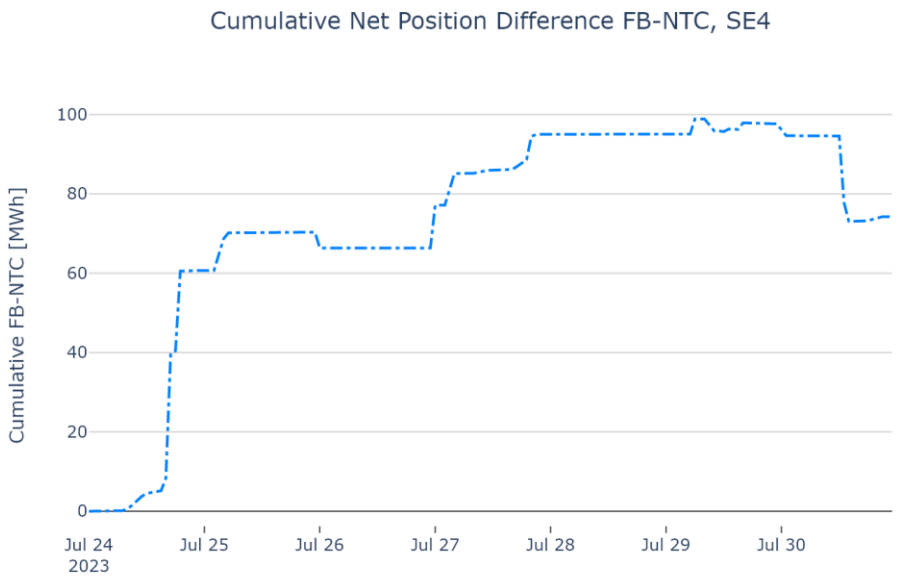

Net Position SE2
FB
NTC
Net position [MWh/h]
2500
2000
1500
1000
500
Jul 24
2023
Jul 25
Jul 26
Jul 27
Jul 28
Jul 29
Jul 30


Cumulative Net Position Difference FB-NTC, SE2
Cumulative FB-NTC [MWh]
25k
20k
15k
10k
5k
0
Jul 24
2023
Jul 25
Jul 26
Jul 27
Jul 28
Jul 29
Jul 30


Net Position SE3
FB
NTC
Net position [MWh/h]
3500
3000
2500
2000
1500
1000
Jul 24
2023
Jul 25
Jul 26
Jul 27
Jul 28
Jul 29
Jul 30

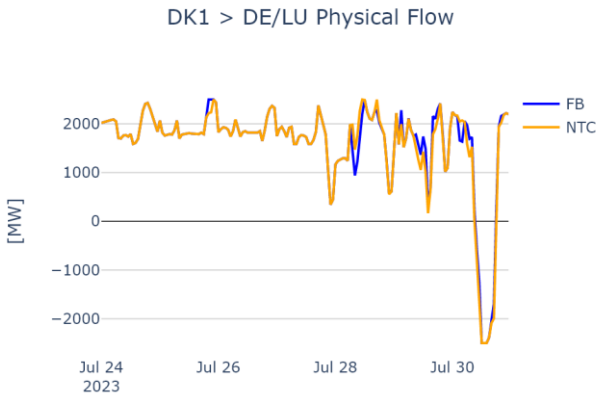

Cumulative Net Position Difference FB-NTC, SE3
Cumulative FB-NTC [MWh]
4000
3000
2000
1000
0
Jul 24
2023
Jul 25
Jul 26
Jul 27
Jul 28
Jul 29
Jul 30

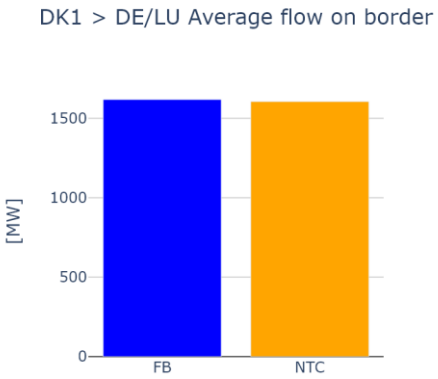

Net Position SE4
FB
NTC
Net position [MWh/h]
−600
−800
−1000
−1200
−1400
Jul 24
2023
Jul 25
Jul 26
Jul 27
Jul 28
Jul 29
Jul 30

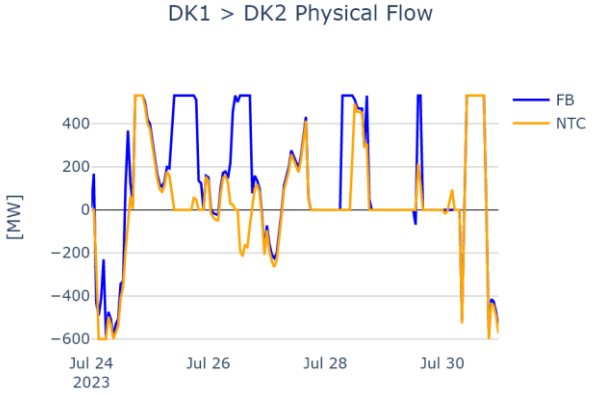

Cumulative Net Position Difference FB-NTC, SE4
Cumulative FB-NTC [MWh]
100
80
60
40
20
0
Jul 24
2023
Jul 25
Jul 26
Jul 27
Jul 28
Jul 29
Jul 30

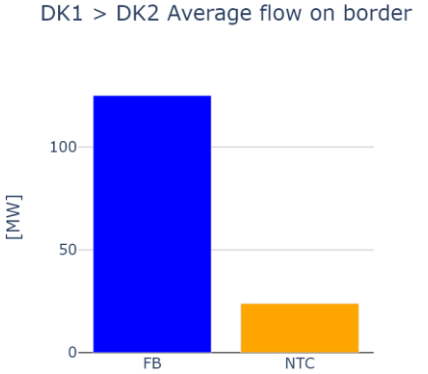
Border flow

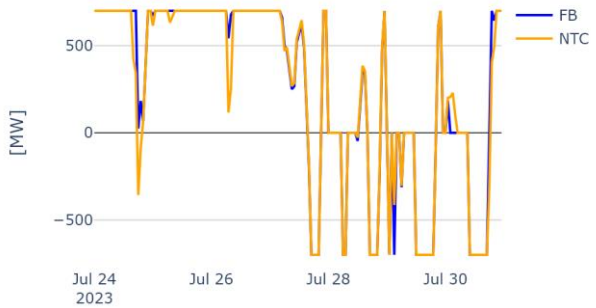
The flows present here, both in FB and NTC, represent the physical flow on the lines and are calculated as the product of the NP and the PTDF matrix. When comparing the NTC-results in this report with those present in the DA market there will be a difference as the DA flows are calculated without the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

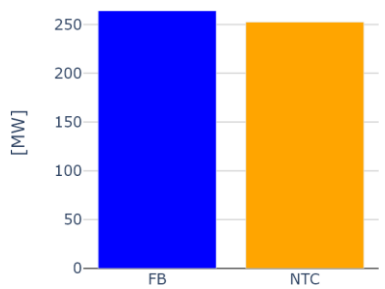


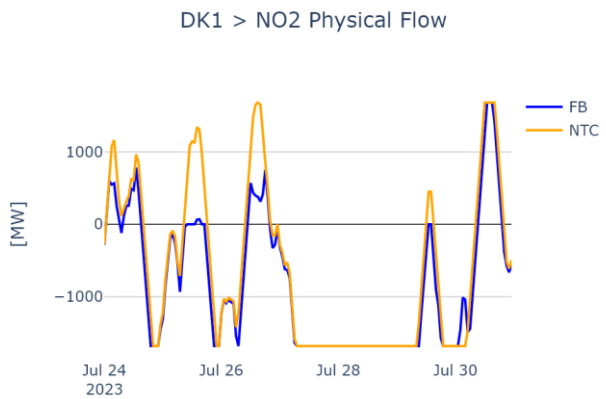


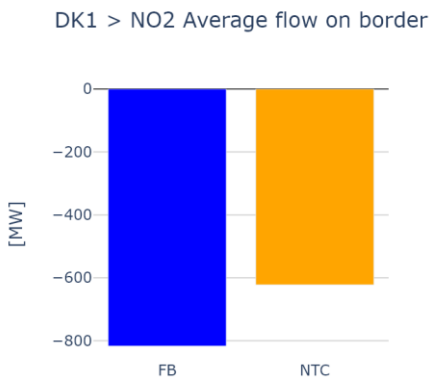


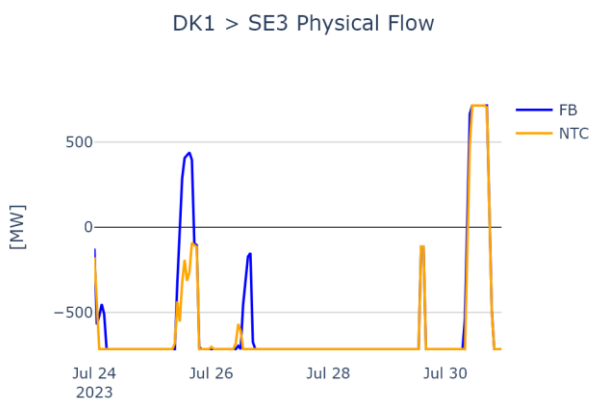


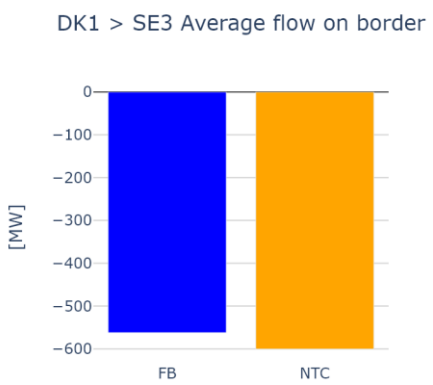

DK1 > NL Physical Flow
FB
NTC
[MW]
500
0
−500
Jul 24
2023
Jul 26
Jul 28
Jul 30

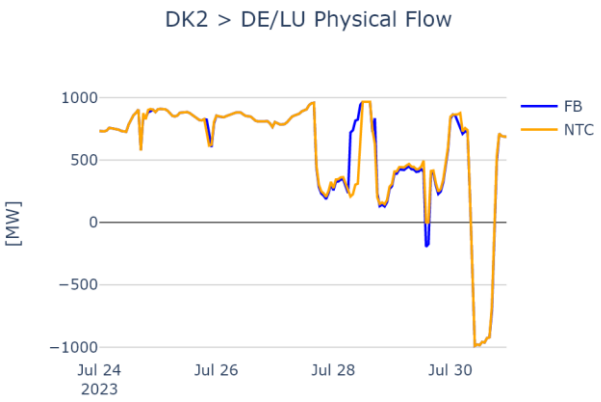

DK1 > NL Average flow on border
[MW]
250
200
150
100
50
0
FB
NTC

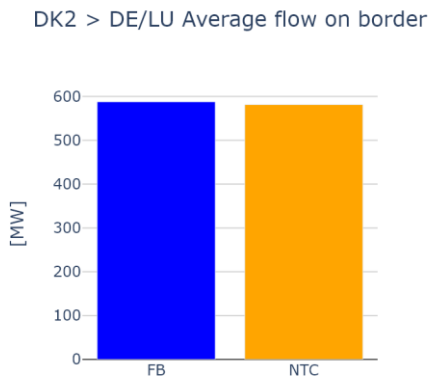

DK1 > NO2 Physical Flow
FB
NTC
[MW]
1000
0
−1000
Jul 24
2023
Jul 26
Jul 28
Jul 30

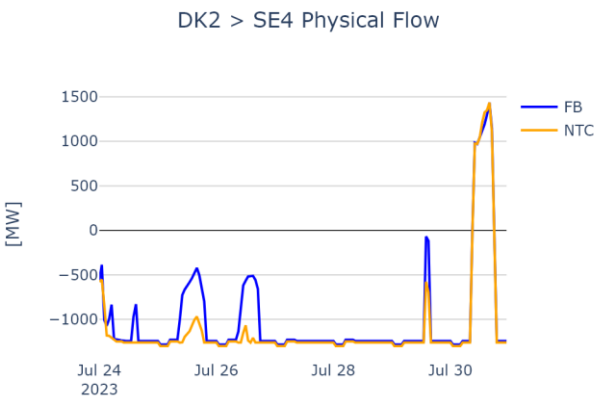

DK1 > NO2 Average flow on border
[MW]
0
−200
−400
−600
−800
FB
NTC

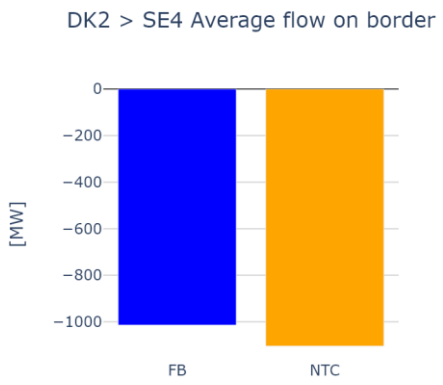

DK1 > SE3 Physical Flow
FB
NTC
[MW]
500
0
−500
Jul 24
2023
Jul 26
Jul 28
Jul 30

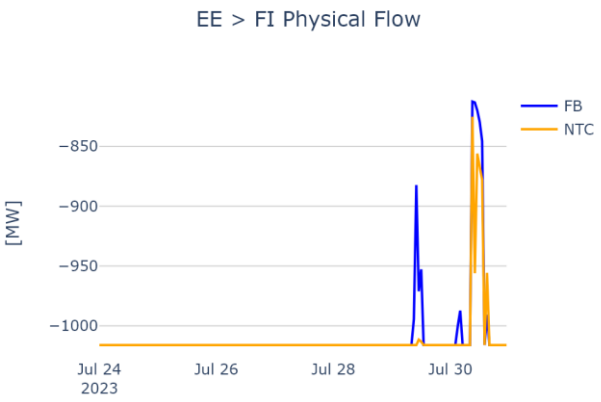

DK1 > SE3 Average flow on border
[MW]
0
−100
−200
−300
−400
−500
−600
FB
NTC

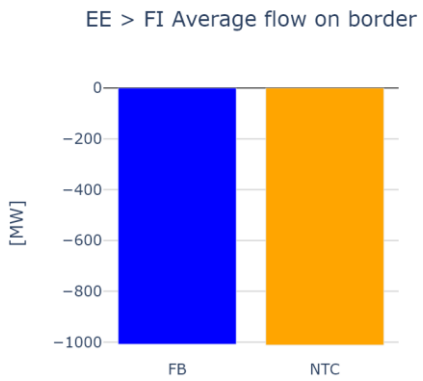

DK2 > DE/LU Physical Flow
1000
500
0
−500
−1000
[MW]
Jul 24
2023
Jul 26
Jul 28
Jul 30
FB
NTC

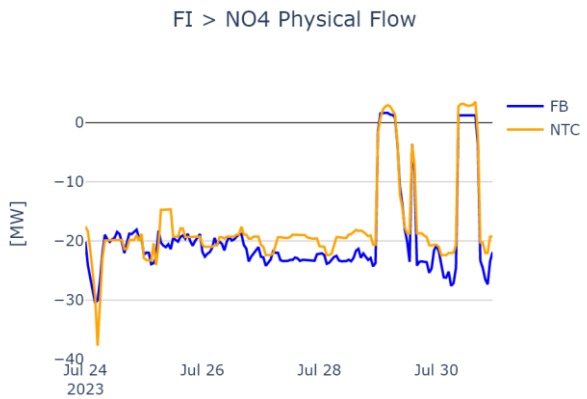

DK2 > DE/LU Average flow on border
600
500
400
300
200
100
0
[MW]
FB
NTC

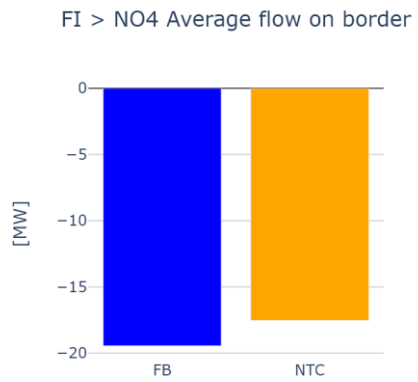

DK2 > SE4 Physical Flow
1500
1000
500
0
−500
−1000
[MW]
Jul 24
2023
Jul 26
Jul 28
Jul 30
FB
NTC

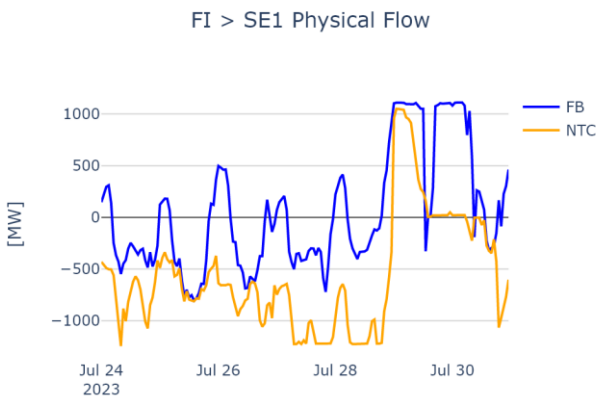

DK2 > SE4 Average flow on border
0
−200
−400
−600
−800
−1000
[MW]
FB
NTC

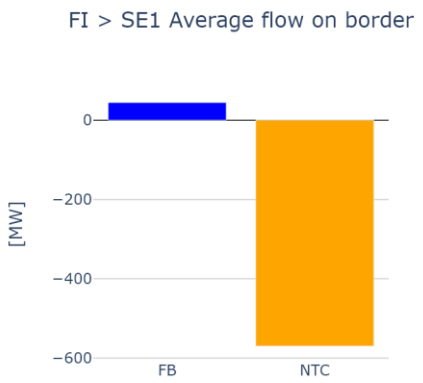

EE > FI Physical Flow
−850
−900
−950
−1000
[MW]
Jul 24
2023
Jul 26
Jul 28
Jul 30
FB
NTC

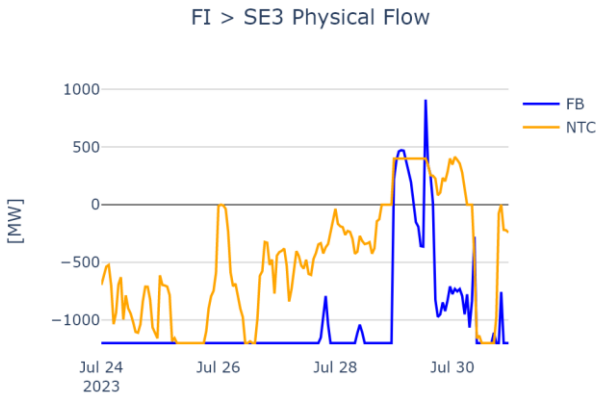

EE > FI Average flow on border
0
−200
−400
−600
−800
−1000
[MW]
FB
NTC

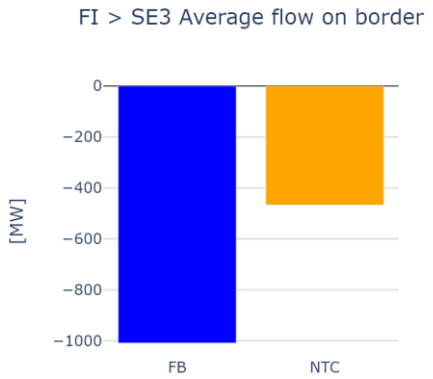

FI > NO4 Physical Flow
FB
NTC
[MW]
0
−10
−20
−30
−40
Jul 24
2023
Jul 26
Jul 28
Jul 30

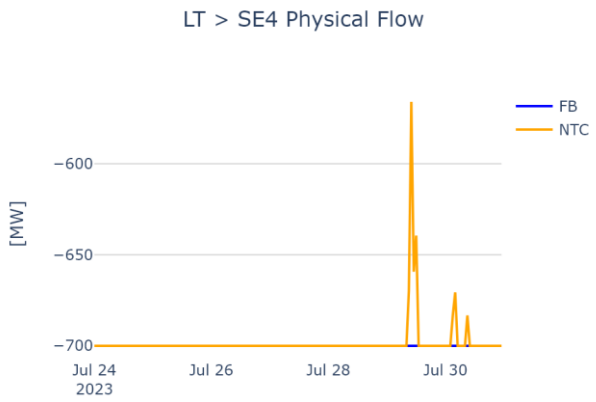

FI > NO4 Average flow on border
[MW]
0
−5
−10
−15
−20
FB
NTC

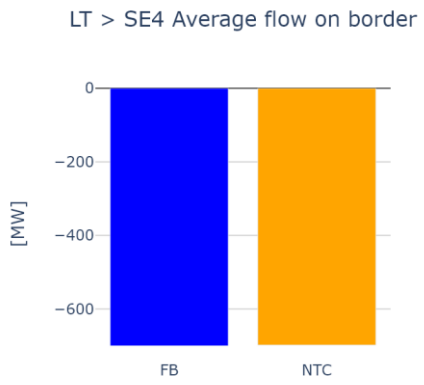

FI > SE1 Physical Flow
FB
NTC
[MW]
1000
500
0
−500
−1000
Jul 24
2023
Jul 26
Jul 28
Jul 30

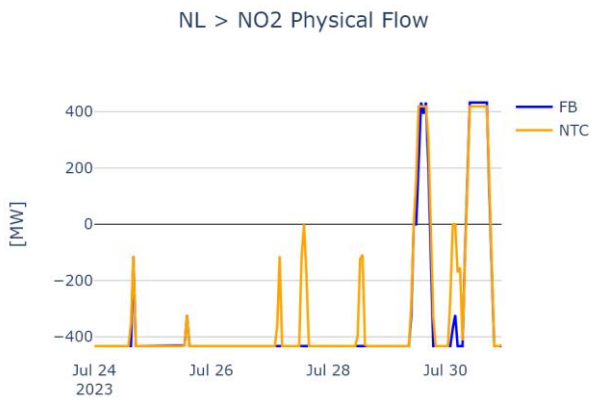

FI > SE1 Average flow on border
[MW]
0
−200
−400
−600
FB
NTC

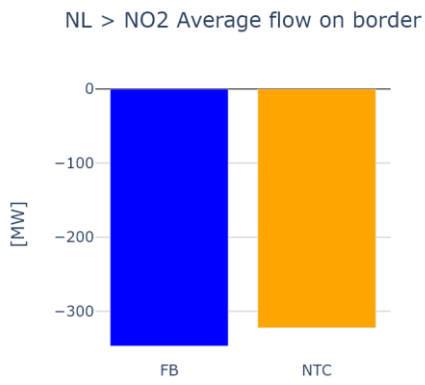

FI > SE3 Physical Flow
FB
NTC
[MW]
1000
500
0
−500
−1000
Jul 24
2023
Jul 26
Jul 28
Jul 30

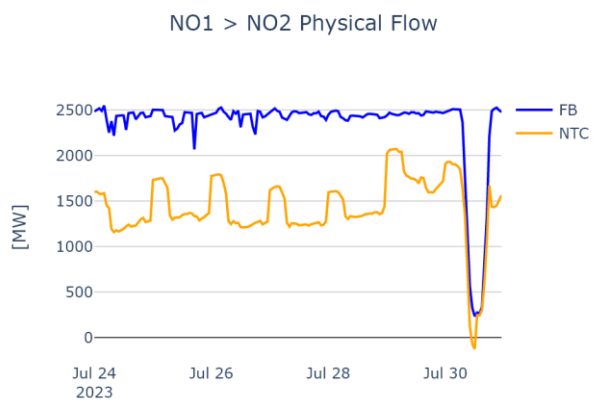

FI > SE3 Average flow on border
[MW]
0
−200
−400
−600
−800
−1000
FB
NTC

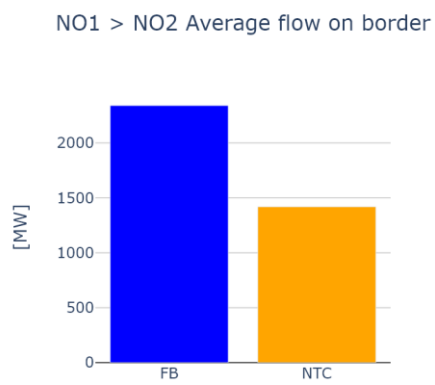

LT > SE4 Physical Flow
FB
NTC
[MW]
−600
−650
−700
Jul 24
2023
Jul 26
Jul 28
Jul 30

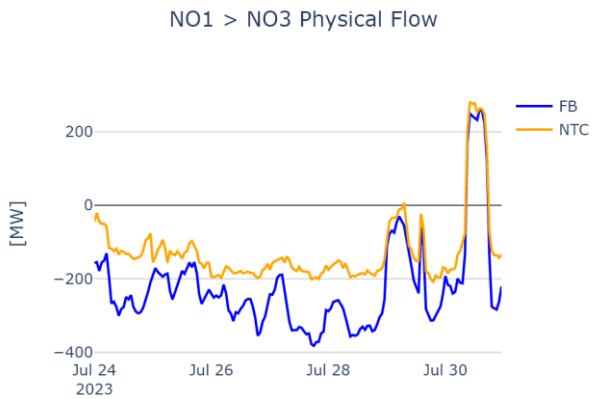

LT > SE4 Average flow on border
[MW]
0
−200
−400
−600
FB
NTC

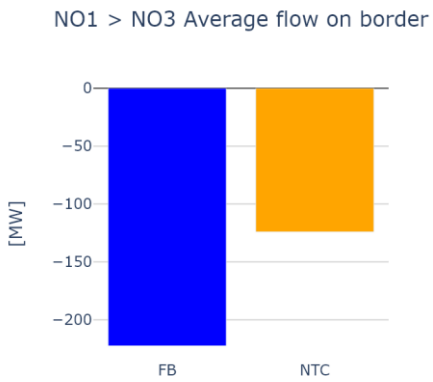

NL > NO2 Physical Flow
FB
NTC
[MW]
400
200
0
−200
−400
Jul 24
2023
Jul 26
Jul 28
Jul 30

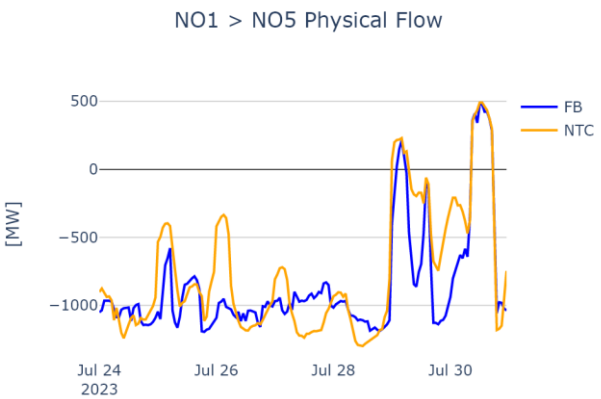

NL > NO2 Average flow on border
[MW]
0
−100
−200
−300
FB
NTC

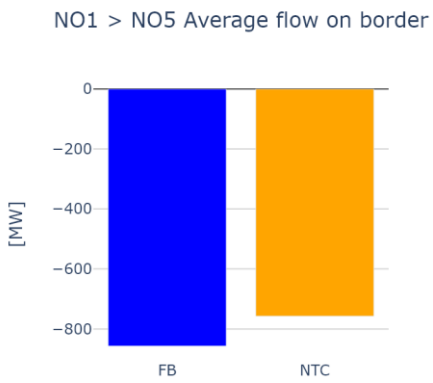

NO1 > NO2 Physical Flow
FB
NTC
[MW]
2500
2000
1500
1000
500
0
Jul 24
2023
Jul 26
Jul 28
Jul 30

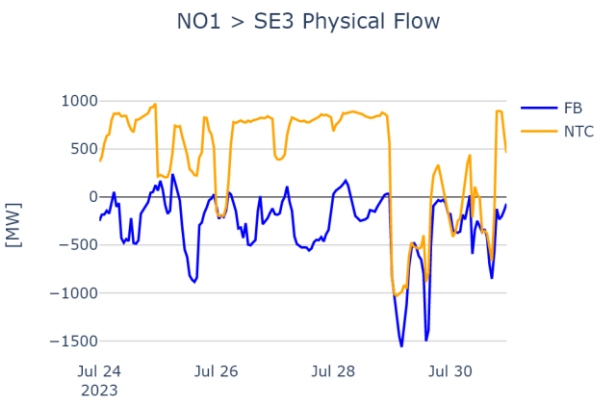

NO1 > NO2 Average flow on border
[MW]
2000
1500
1000
500
0
FB
NTC

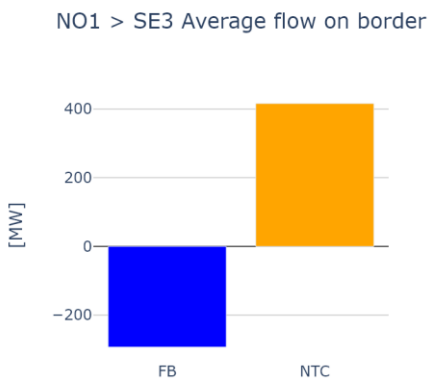

NO1 > NO3 Physical Flow
FB
NTC
[MW]
200
0
−200
−400
Jul 24
2023
Jul 26
Jul 28
Jul 30

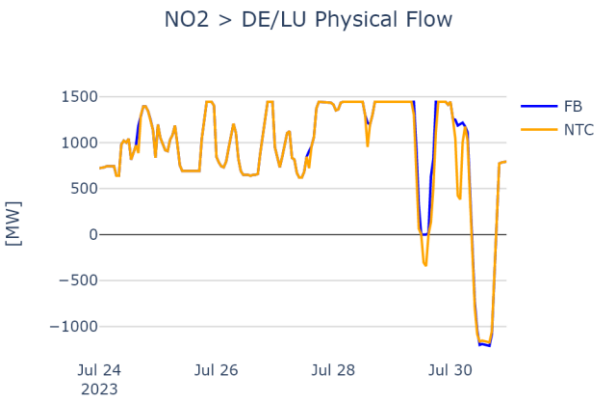

NO1 > NO3 Average flow on border
[MW]
0
−50
−100
−150
−200
FB
NTC

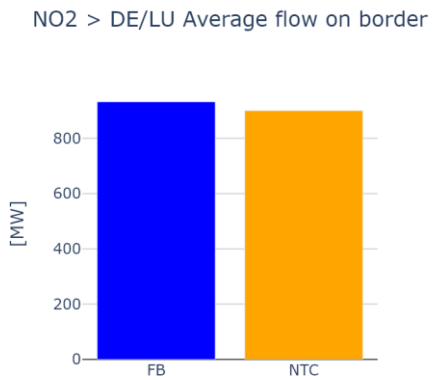

NO1 > NO5 Physical Flow
FB
NTC
[MW]
500
0
−500
−1000
Jul 24
2023
Jul 26
Jul 28
Jul 30

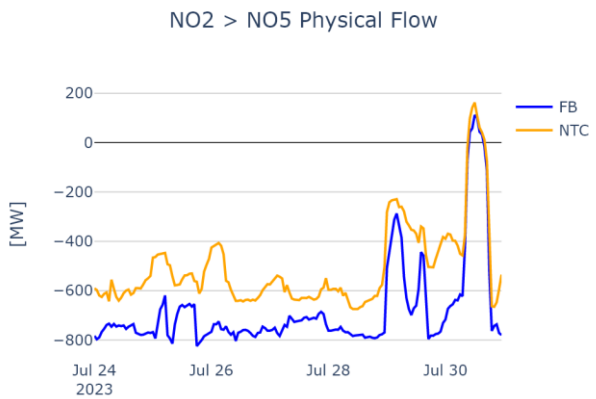

NO1 > NO5 Average flow on border
[MW]
0
−200
−400
−600
−800
FB
NTC

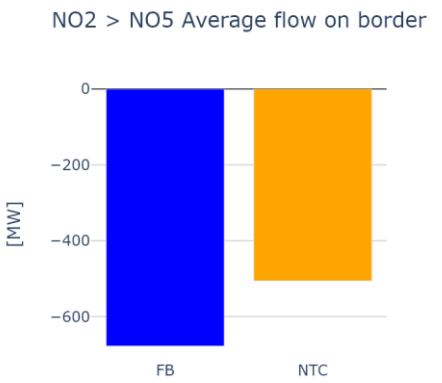

NO1 > SE3 Physical Flow
FB
NTC
[MW]
1000
500
0
−500
−1000
−1500
Jul 24
2023
Jul 26
Jul 28
Jul 30

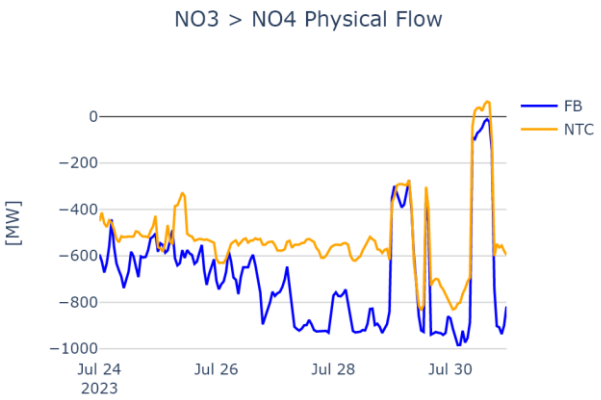

NO1 > SE3 Average flow on border
[MW]
400
200
0
−200
FB
NTC

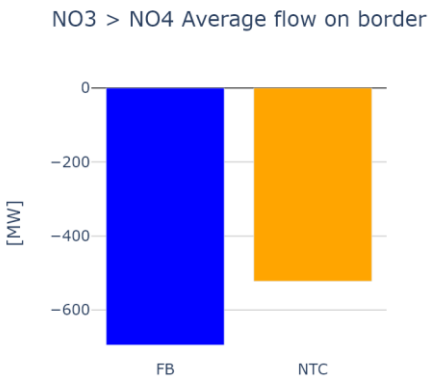

NO2 > DE/LU Physical Flow
1500
1000
500
0
−500
−1000
[MW]
Jul 24
2023
Jul 26
Jul 28
Jul 30
FB
NTC

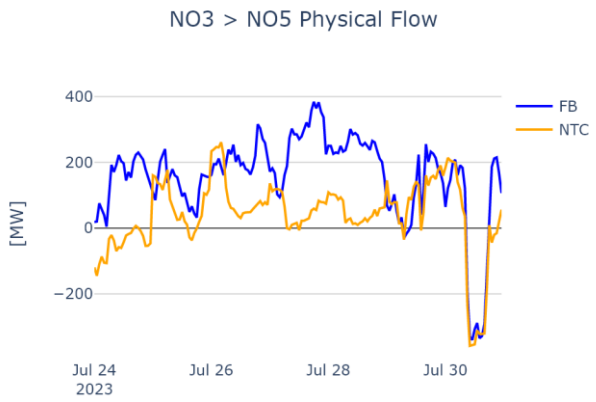

NO2 > DE/LU Average flow on border
800
600
400
200
0
[MW]
FB
NTC

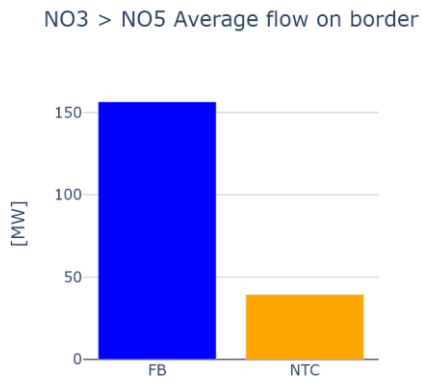

NO2 > NO5 Physical Flow
200
0
−200
−400
−600
−800
[MW]
Jul 24
2023
Jul 26
Jul 28
Jul 30
FB
NTC

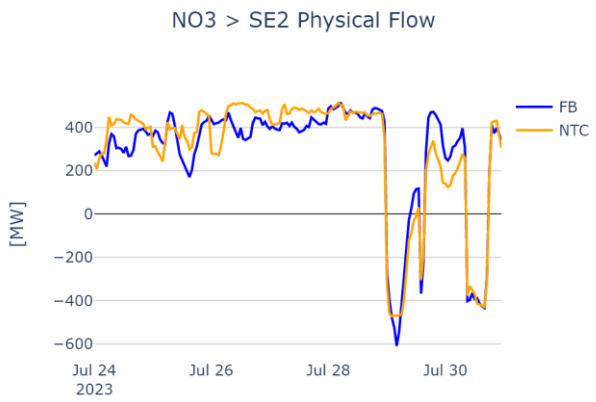

NO2 > NO5 Average flow on border
0
−200
−400
−600
[MW]
FB
NTC

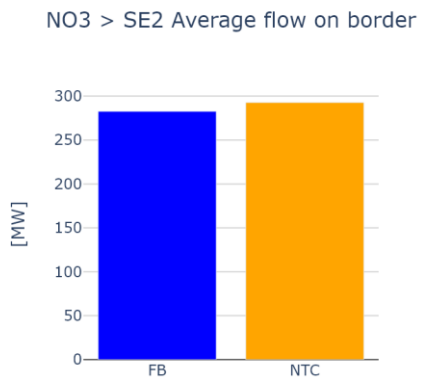

NO3 > NO4 Physical Flow
0
−200
−400
−600
−800
−1000
[MW]
Jul 24
2023
Jul 26
Jul 28
Jul 30
FB
NTC

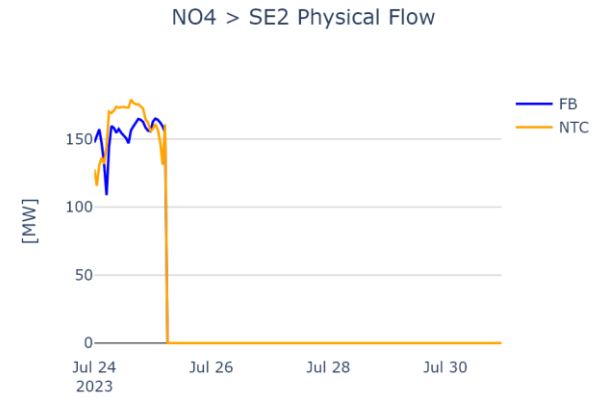

NO3 > NO4 Average flow on border
0
−200
−400
−600
[MW]
FB
NTC

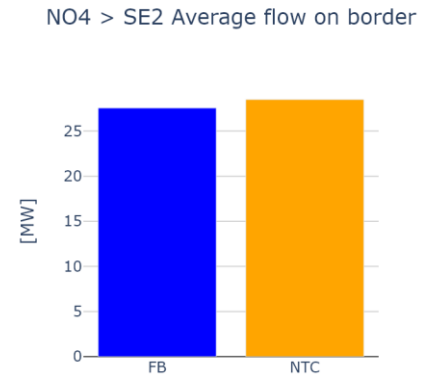

NO3 > NO5 Physical Flow
400
200
0
−200
[MW]
Jul 24
2023
Jul 26
Jul 28
Jul 30
FB
NTC

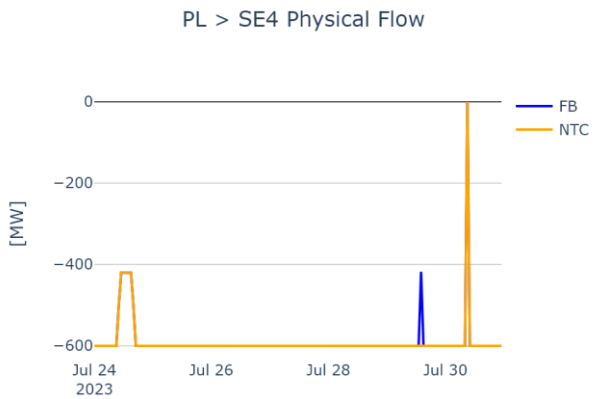

NO3 > NO5 Average flow on border
150
100
50
0
[MW]
FB
NTC

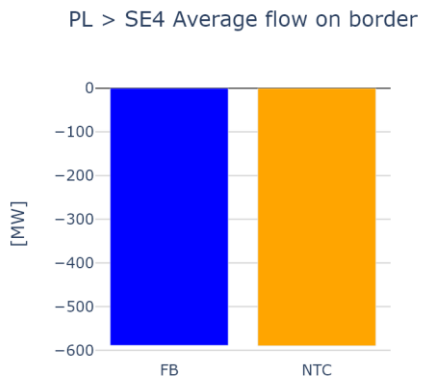

NO3 > SE2 Physical Flow
400
200
0
−200
−400
−600
[MW]
Jul 24
2023
Jul 26
Jul 28
Jul 30
FB
NTC

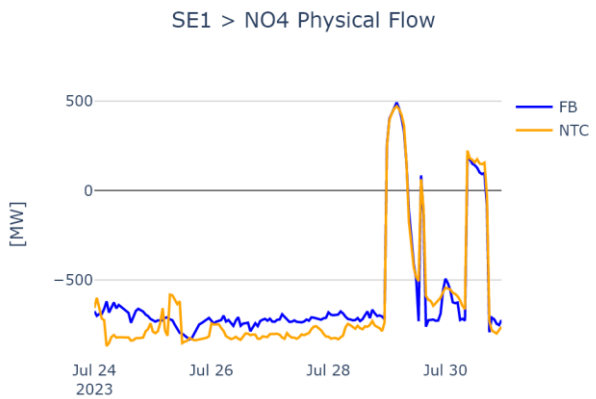

NO3 > SE2 Average flow on border
300
250
200
150
100
50
0
[MW]
FB
NTC

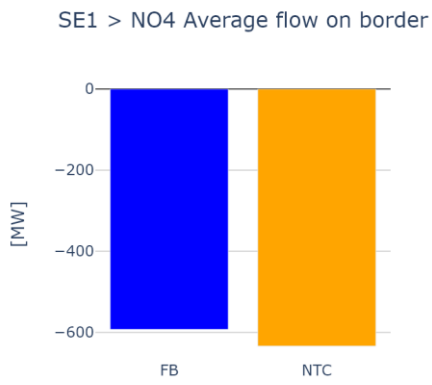

NO4 > SE2 Physical Flow
150
100
50
0
[MW]
Jul 24
2023
Jul 26
Jul 28
Jul 30
FB
NTC

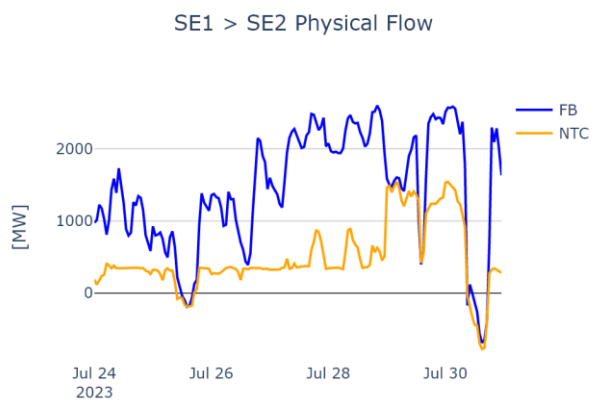

NO4 > SE2 Average flow on border
25
20
15
10
5
0
[MW]
FB
NTC

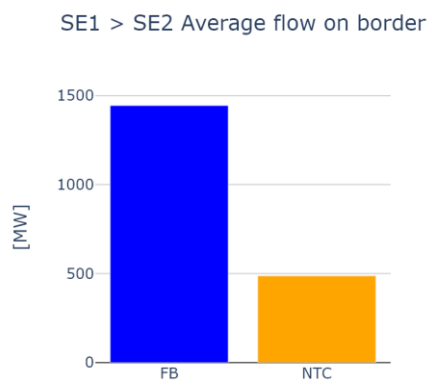

PL > SE4 Physical Flow
FB
NTC
[MW]
0
−200
−400
−600
Jul 24
2023
Jul 26
Jul 28
Jul 30


PL > SE4 Average flow on border
[MW]
0
−100
−200
−300
−400
−500
−600
FB
NTC

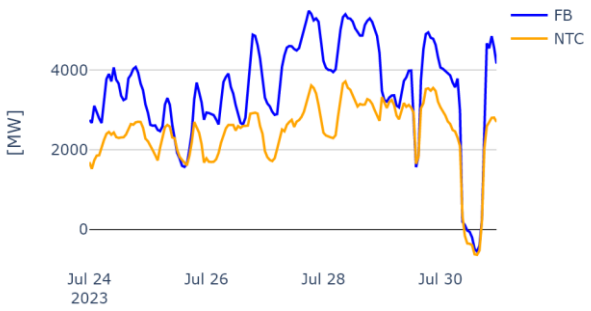

SE1 > NO4 Physical Flow
FB
NTC
[MW]
500
0
−500
Jul 24
2023
Jul 26
Jul 28
Jul 30


SE1 > NO4 Average flow on border
[MW]
0
−200
−400
−600
FB
NTC

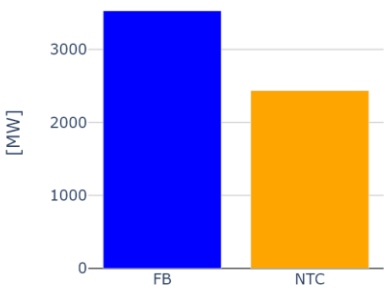

SE1 > SE2 Physical Flow
FB
NTC
[MW]
2000
1000
0
Jul 24
2023
Jul 26
Jul 28
Jul 30


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

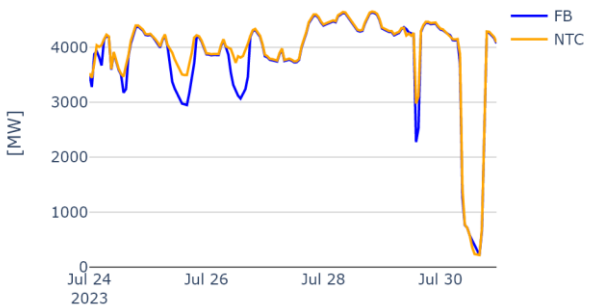
SE2 > SE3 Physical Flow



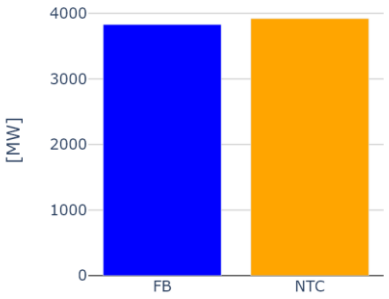
SE2 > SE3 Average flow on border



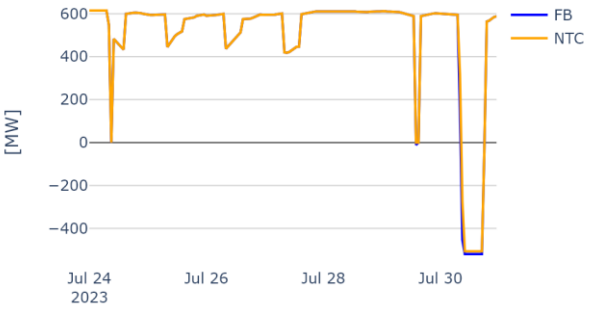
SE3 > SE4 Physical Flow



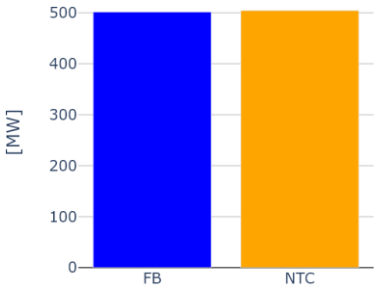
SE3 > SE4 Average flow on border



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	6855777	22
DK1 > DK2	57228	1
DK1 > NL	2261866	19
DK1 > NO2	2791057	12
DK1 > SE3	4323828	36
DK2 > DE/LU	3041996	22
DK2 > SE4	7490569	36
EE > FI	11664543	68
FI > NO4	26969	8
FI > SE1	10019	0
FI > SE3	133493	1
LT > SE4	8254587	70
NL > NO2	1953141	30
NO1 > NO2	10119302	25
NO1 > NO3	163707	3
NO1 > NO5	401256	2
NO1 > SE3	45876	0
NO2 > DE/LU	5194616	32
NO2 > NO5	3181693	26
NO3 > NO4	503535	3
NO3 > NO5	15539	1
NO3 > SE2	233095	3
NO4 > SE2	33944	1
PL > SE4	9064973	91
SE1 > NO4	902524	8
SE1 > SE2	-126071	0
SE2 > SE3	-94675	0
SE3 > SE4	-46951	0
SE4 > DE/LU	5335329	57

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	2	-2	0
DK1 > NL	0	0	0
DK1 > NO2	8	-154455	-16
DK1 > SE3	15	-1406	0
DK2 > DE/LU	2	-1	0
DK2 > SE4	16	-449	0
EE > FI	0	0	0
FI > NO4	8	-258	-1
FI > SE1	17	-176	0
FI > SE3	11	-1225	0
LT > SE4	0	0	0
NL > NO2	0	0	0
NO1 > NO2	0	0	0
NO1 > NO3	14	-1331	0
NO1 > NO5	34	-176078	-4
NO1 > SE3	60	-21630	-1
NO2 > DE/LU	1	-4613	-2
NO2 > NO5	1	-12	0
NO3 > NO4	8	-10161	-7
NO3 > NO5	35	-43312	-3
NO3 > SE2	18	-17048	-2
NO4 > SE2	0	0	0
PL > SE4	0	0	0
SE1 > NO4	7	-4483	-1
SE1 > SE2	86	-127913	-1
SE2 > SE3	83	-101517	0
SE3 > SE4	89	-49039	0
SE4 > DE/LU	0	0	0