

2022w50 ATC Extraction Results

Nordic RCC

March 14, 2023

Notes

ATCE industrial tool: The ATC extraction in NorCap entered parallel run in November 2022. The execution is dependent on market simulation results. Due to the grace period on market simulations, ATCE is executed on historical EDDs.

ATCE Backup: The ATC extraction module contain a software defect causing the calculation to fail for some EDDs. This defect is related to the calculation on historical EDDs, where the calculation module loses an index to a previously published flow-based domain. Our vendor is working to resolve the issue. Meanwhile, ATCE backup will be triggered for the failed calculations. The ATCE backup process copies for each border and direction the minimum NTC among three candidates; [NTC of previous MTU, if valid; NTC of following MTU, if valid; NTC for same MTU on previous valid EDD].

Bidding zone lock-in statistics

An area operates at maximum export when the sum of ATC on all exporting directions of that area is less than 1MW.

An area operates at maximum import when the sum of ATC on all importing directions of that area is less than 1MW.

An area operates in lock-in if during the same MTU it is operating at both maximum export and maximum import.

Bidding zone	#MTUs at max Export	#MTUs at max Import	#MTUs at lock-in
DK1	0	0	0
DK2	0	0	0
SE1	0	0	0
SE2	5	0	0
SE3	0	0	0
SE4	0	0	0
NO1	0	0	0
NO2	0	0	0
NO3	0	0	0
NO4	136	0	0
NO5	0	0	0
FI	0	0	0

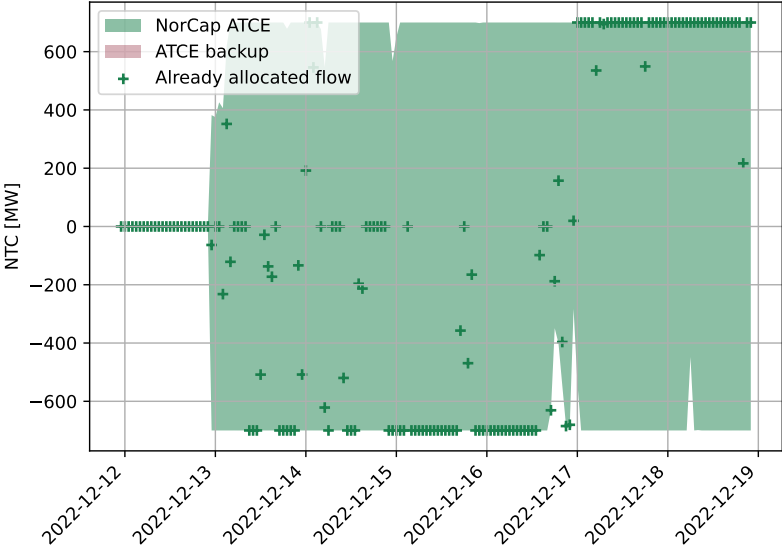
Border lock-in statistics

A bidding zone border is operating in a lock-in situation, if at a given MTU, the ATC of the bidding zone border is smaller than 1MW in both forward and reverse trading direction.

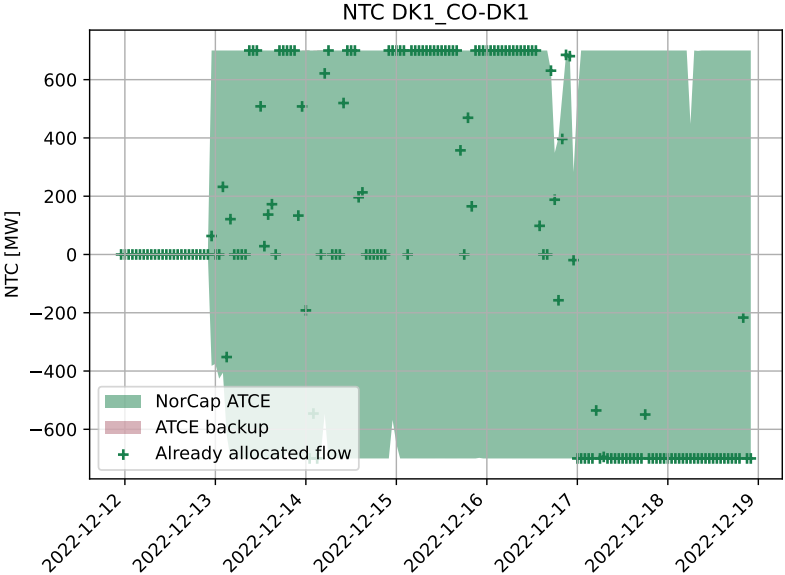
Border	#MTUs at lock-in
DK1A-SE3	1
SE3-DK1A	1
NO1-SE3	4
SE3-NO1	4
NO3-SE2	3
SE2-NO3	3
NO4-SE1	6
SE1-NO4	6
NO4-SE2	7
SE2-NO4	7

DK1-DK1_CO

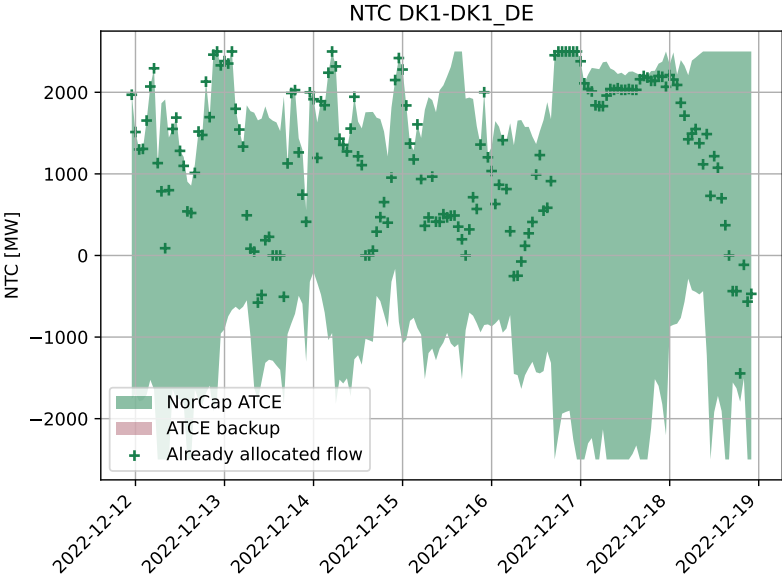
NTC DK1-DK1_CO



DK1_CO-DK1

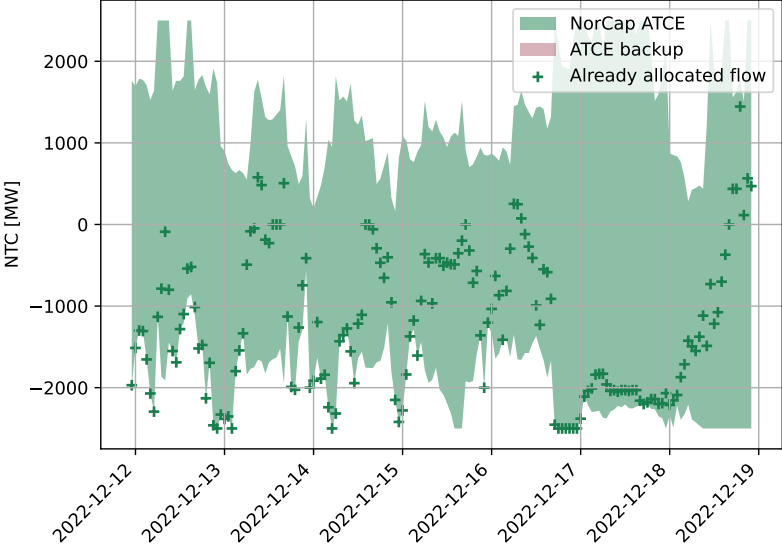


DK1-DK1_DE



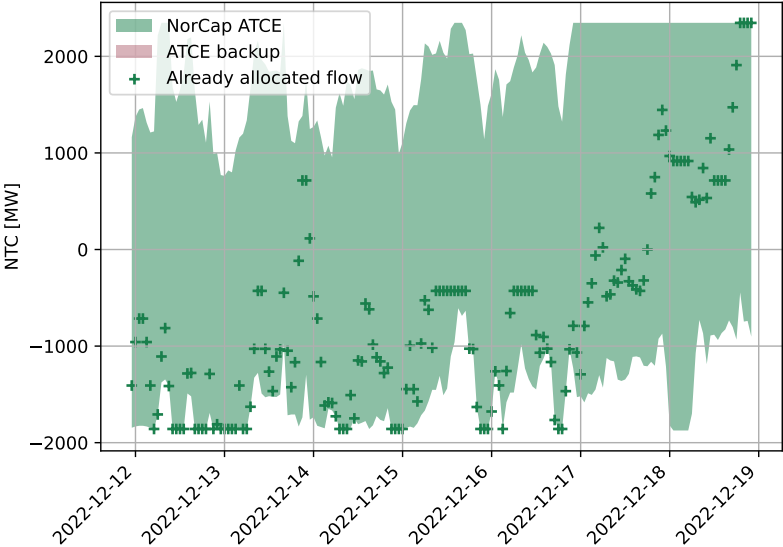
DK1_DE-DK1

NTC DK1_DE-DK1

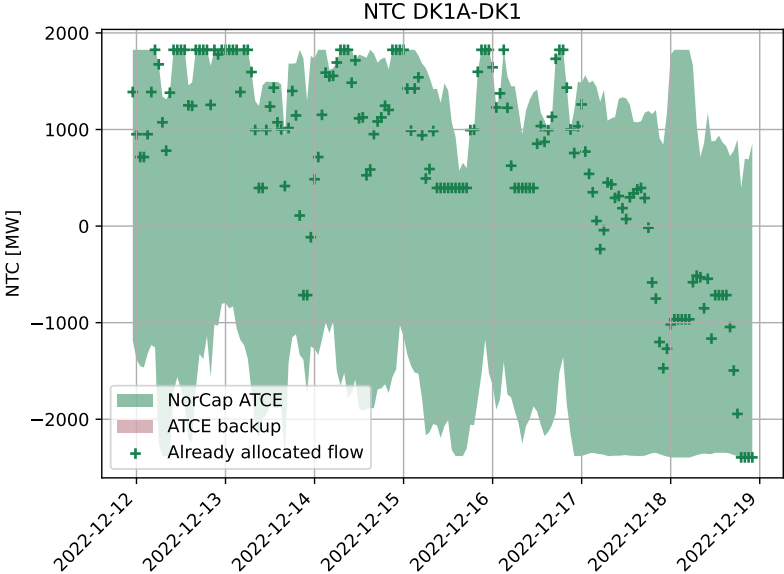


DK1-DK1A

NTC DK1-DK1A

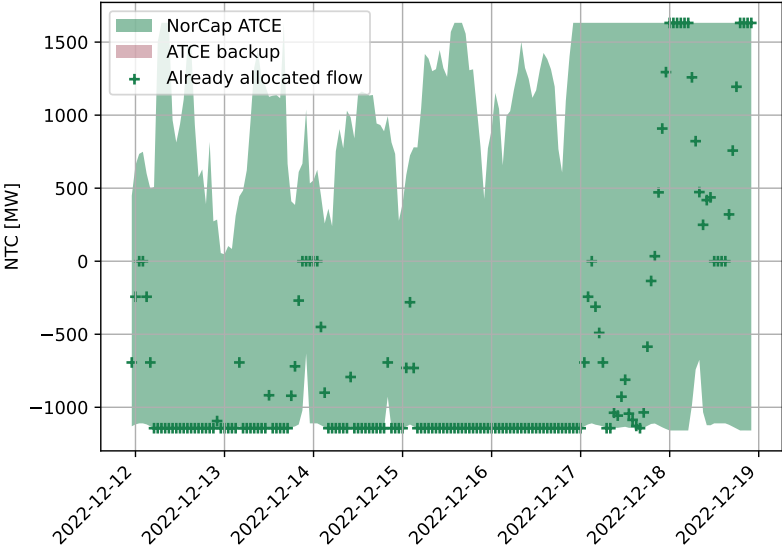


DK1A-DK1



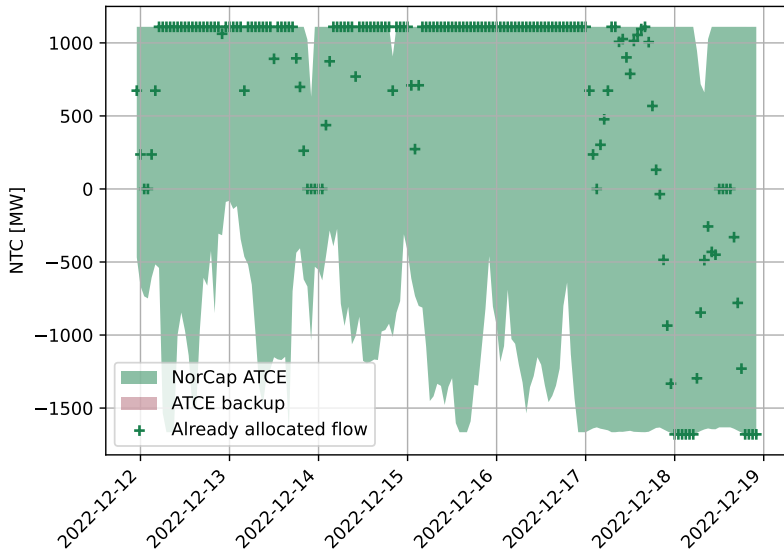
DK1A-NO2

NTC DK1A-NO2



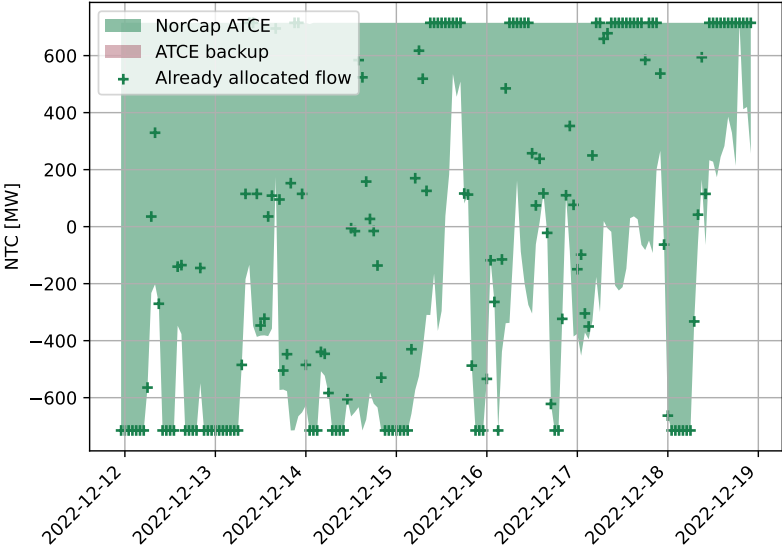
NO2-DK1A

NTC NO2-DK1A



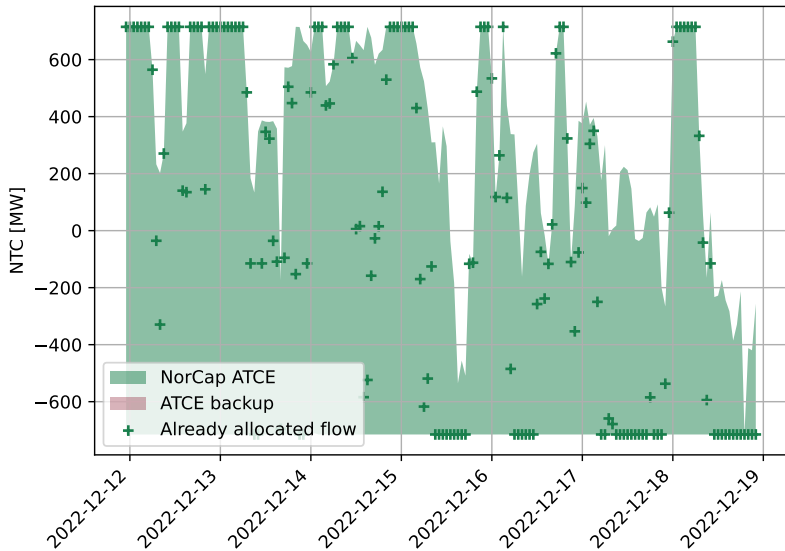
DK1A-SE3

NTC DK1A-SE3



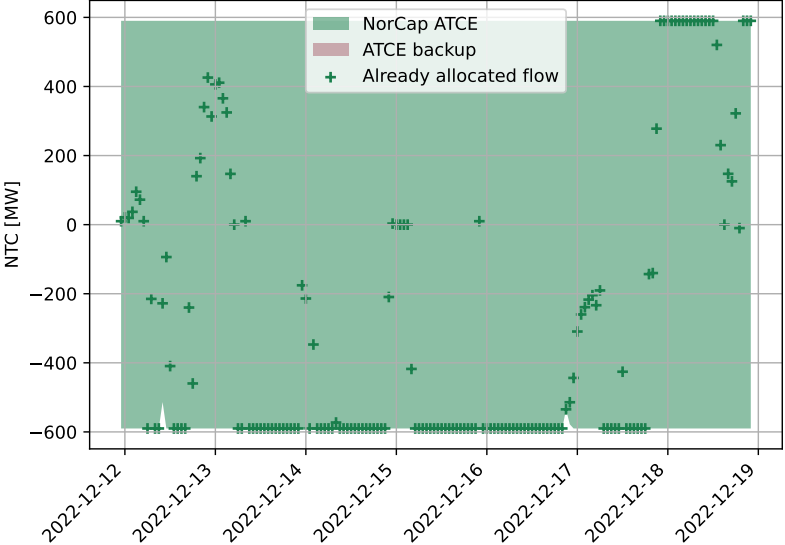
SE3-DK1A

NTC SE3-DK1A

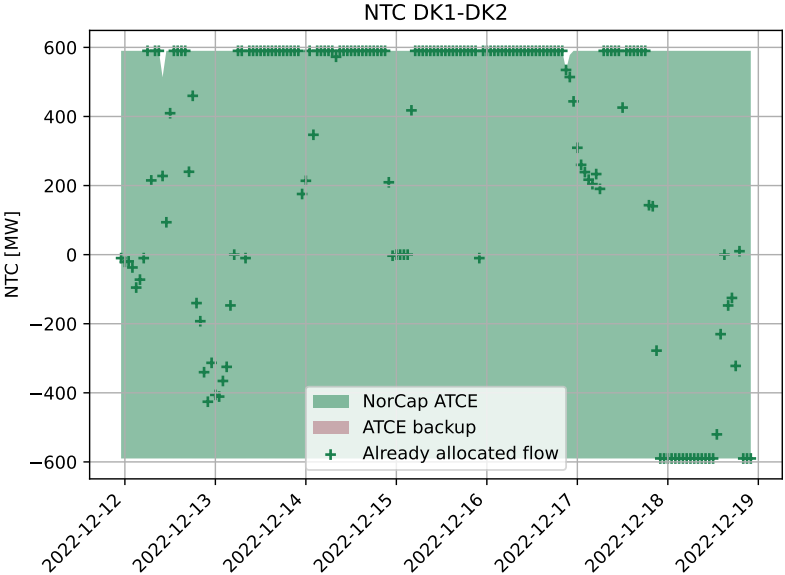


DK2-DK1

NTC DK2-DK1

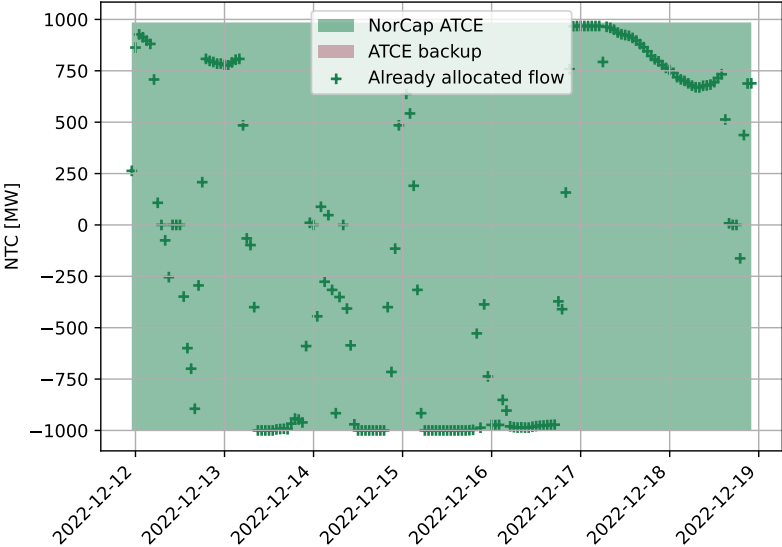


DK1-DK2



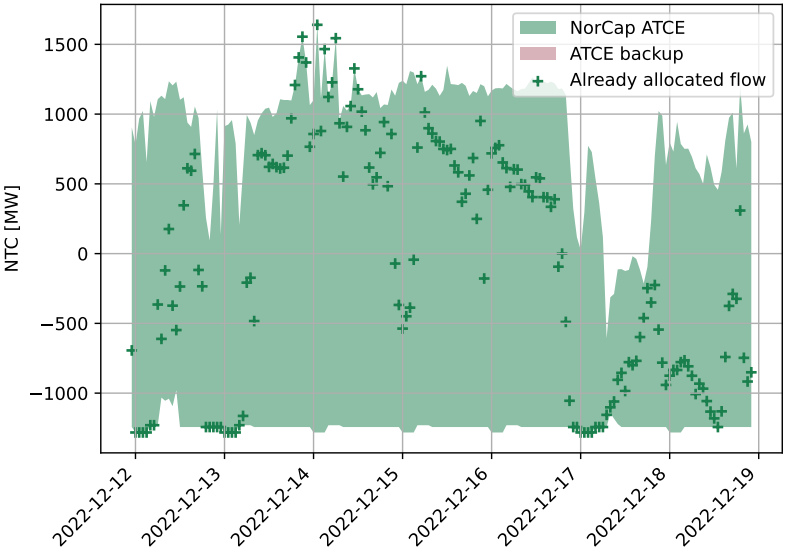
DK2-DK2_KO

NTC DK2-DK2_KO



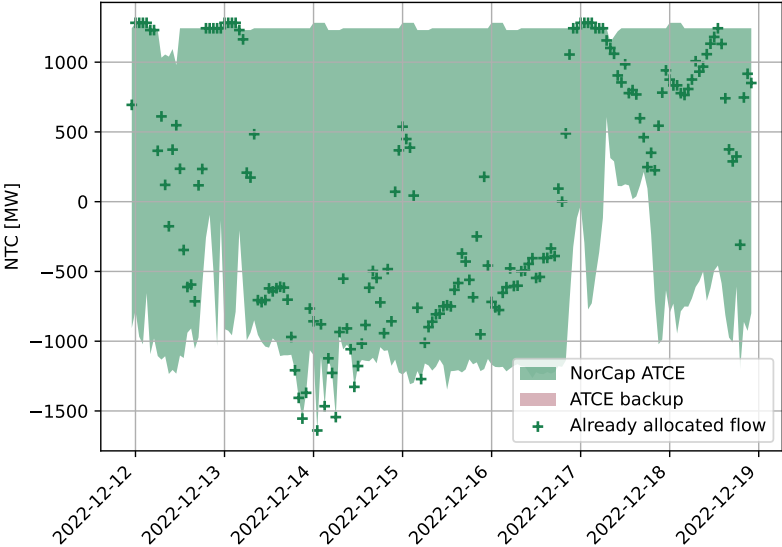
DK2-SE4

NTC DK2-SE4

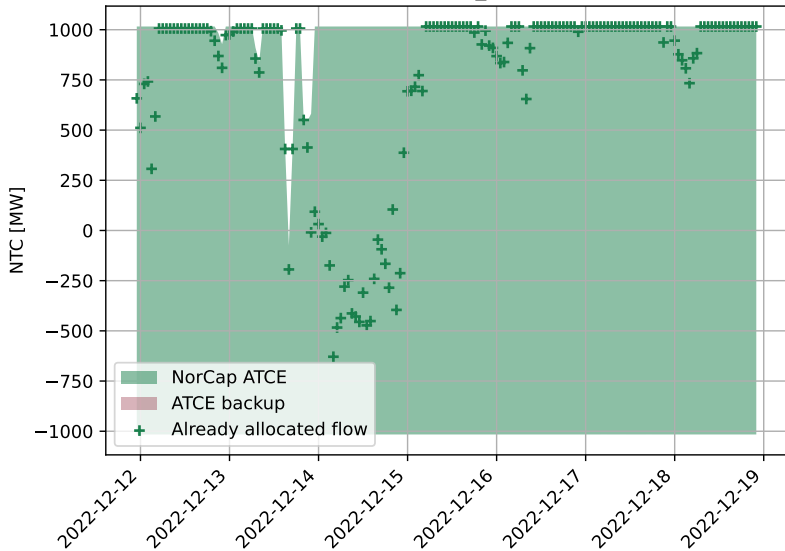


SE4-DK2

NTC SE4-DK2

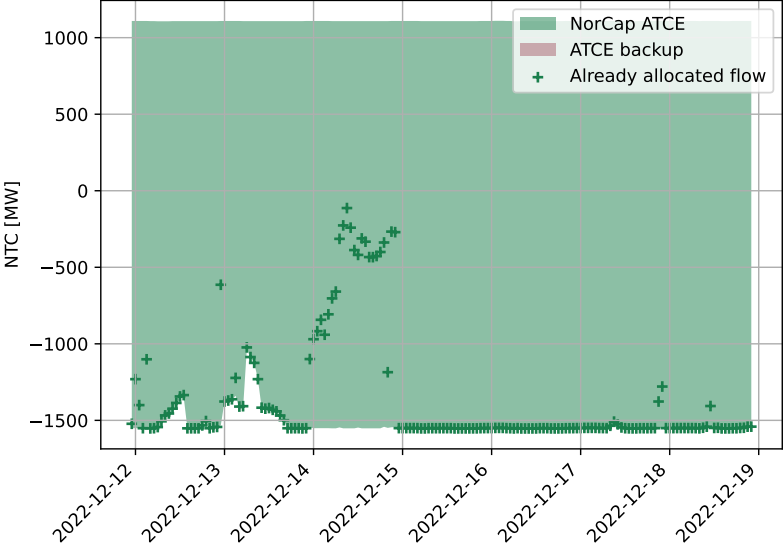


NTC FI-FI_EL

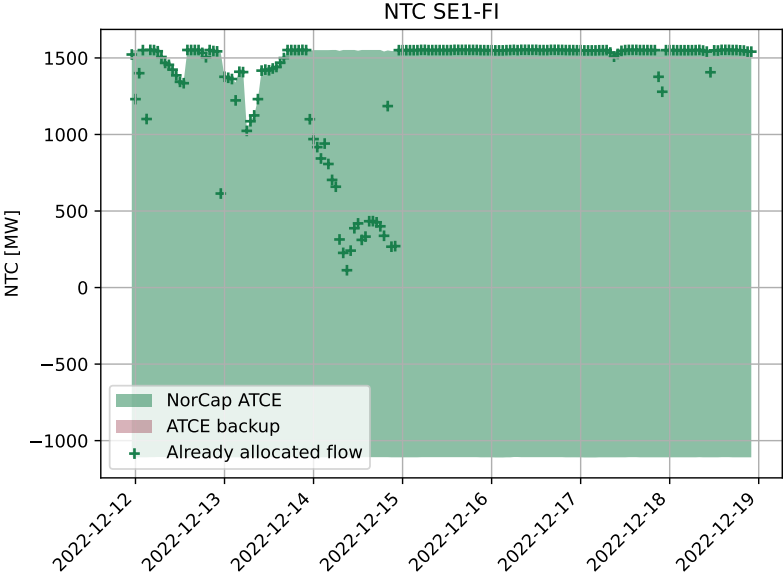


FI-SE1

NTC FI-SE1

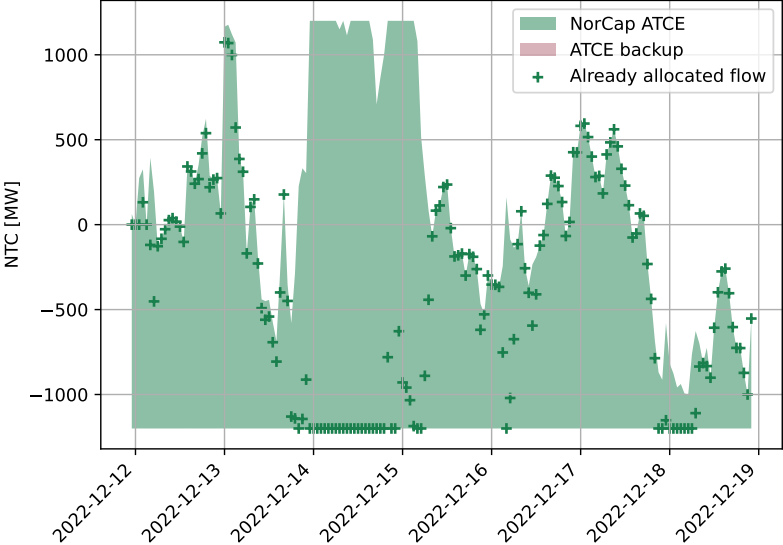


SE1-FI

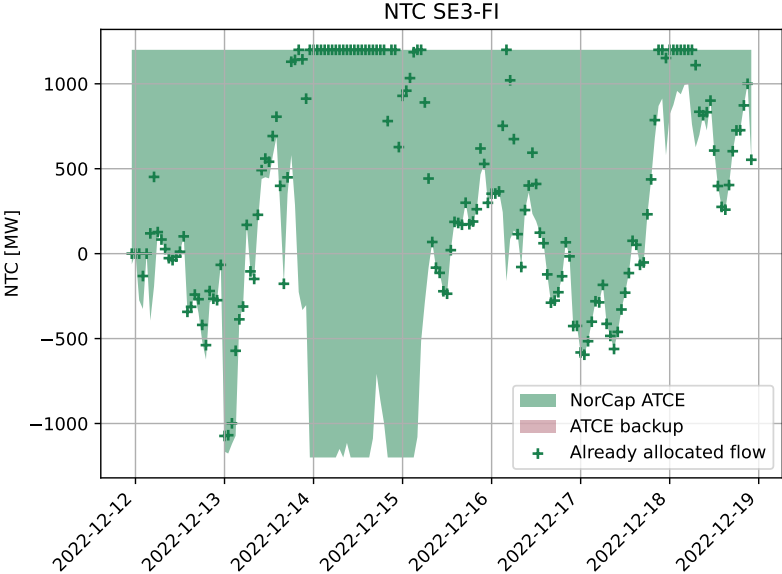


FI-SE3

NTC FI-SE3

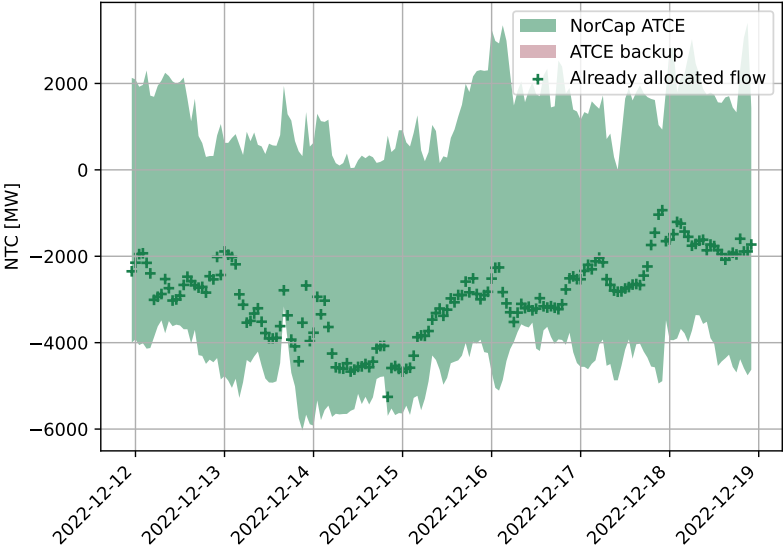


SE3-FI

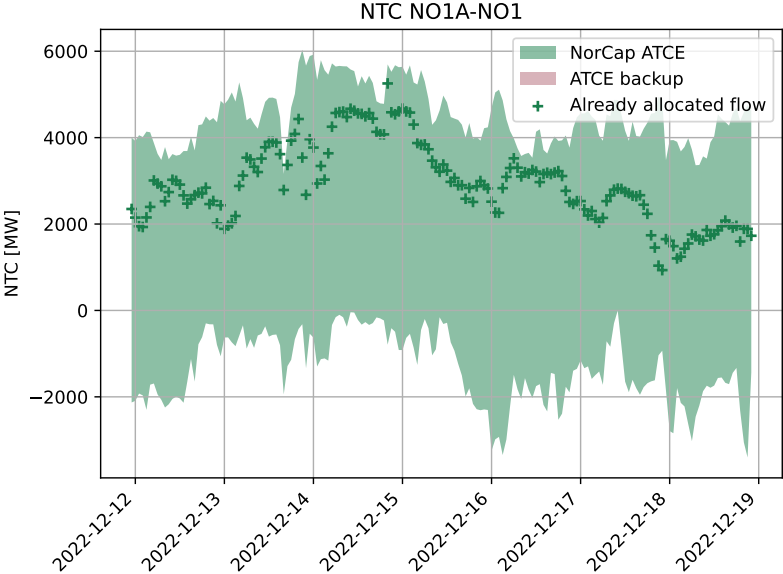


NO1-NO1A

NTC NO1-NO1A

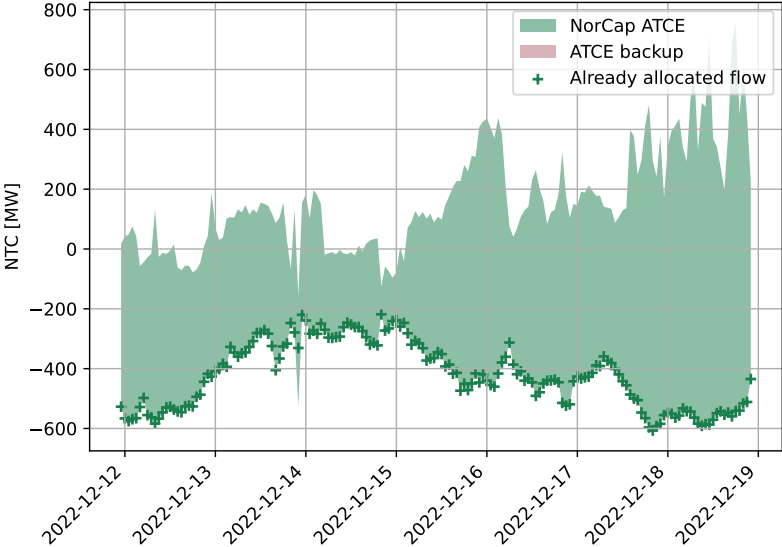


NO1A-NO1

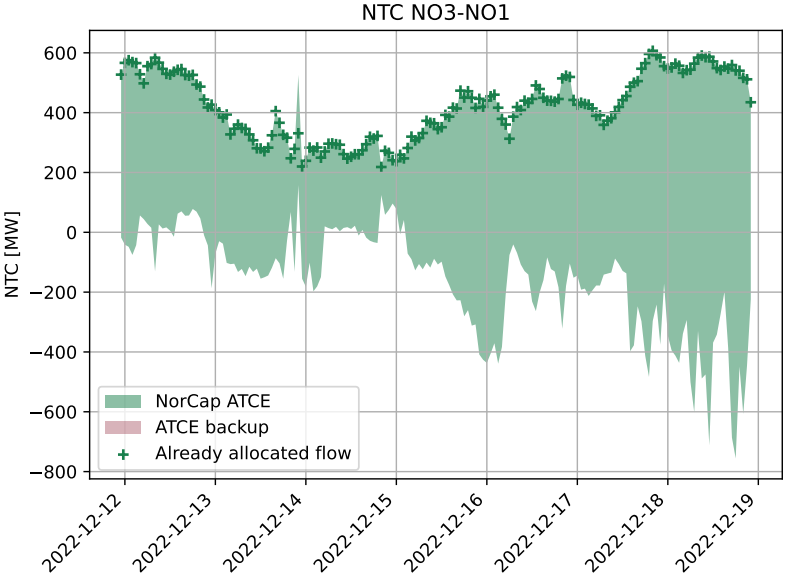


NO1-NO3

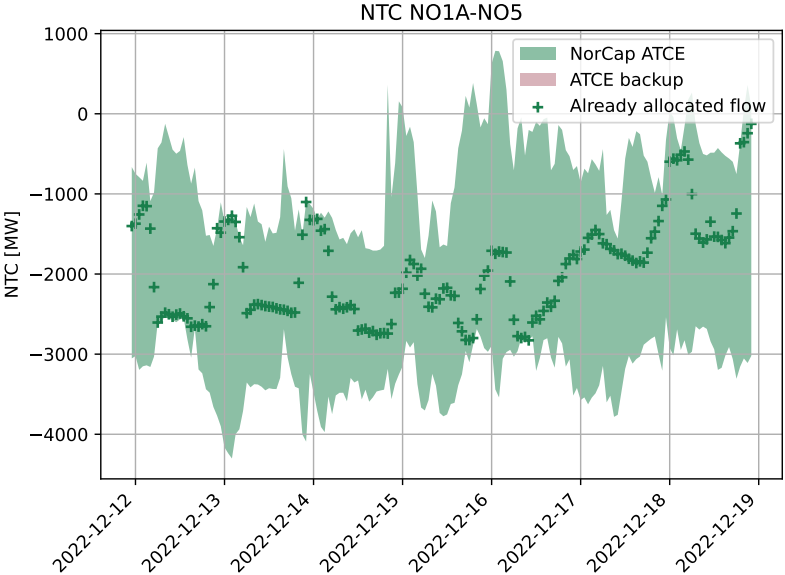
NTC NO1-NO3



NO3-NO1

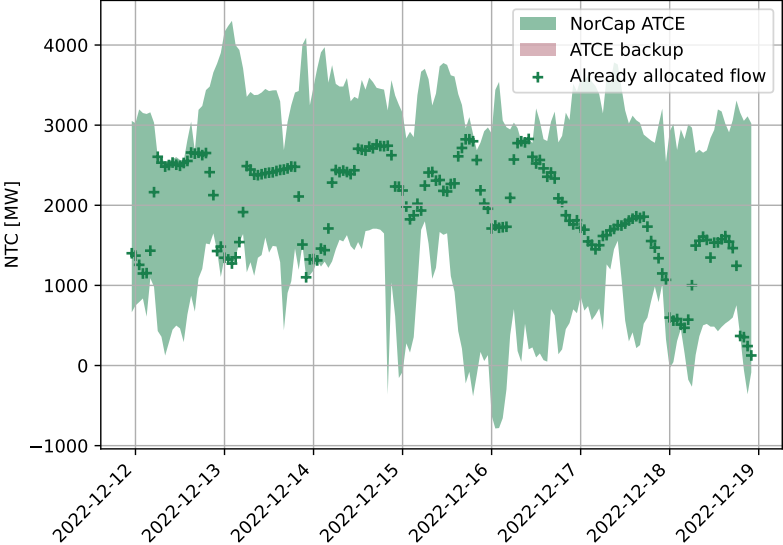


NO1A-NO5

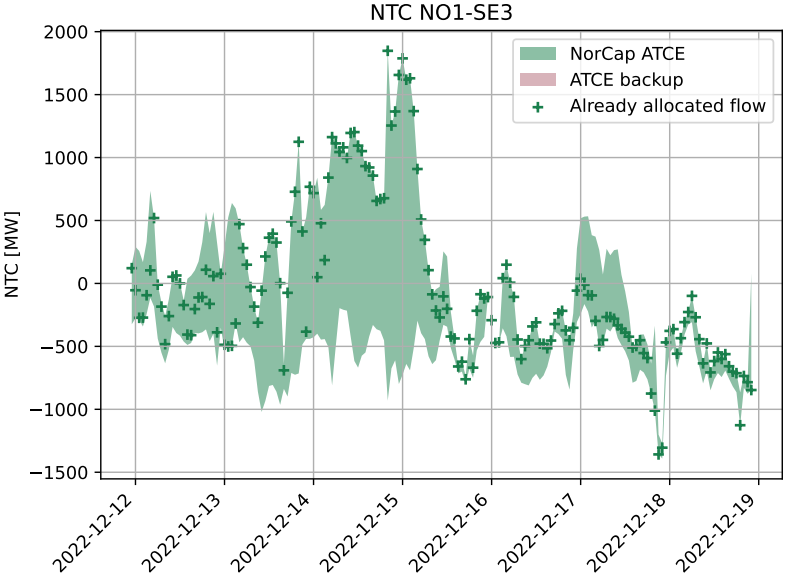


NO5-NO1A

NTC NO5-NO1A

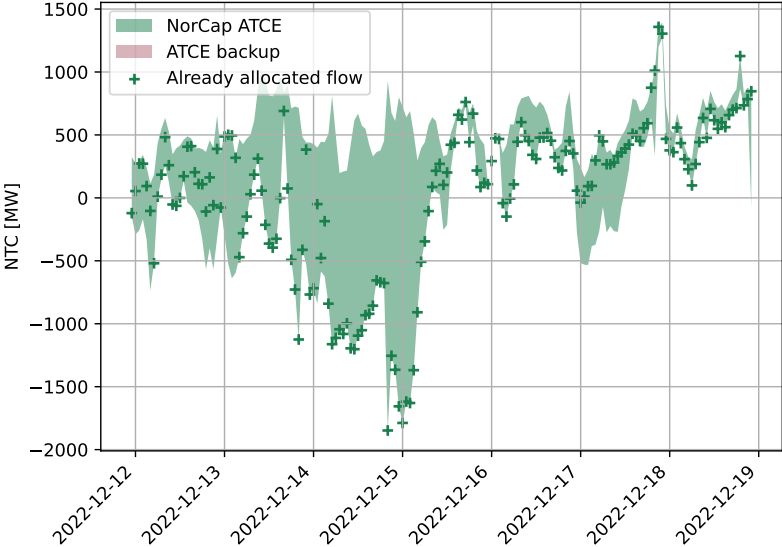


NO1-SE3



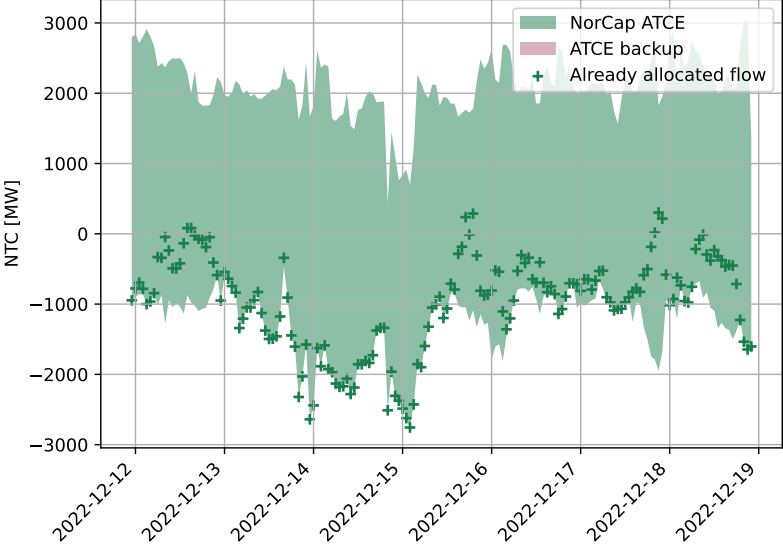
SE3-NO1

NTC SE3-NO1

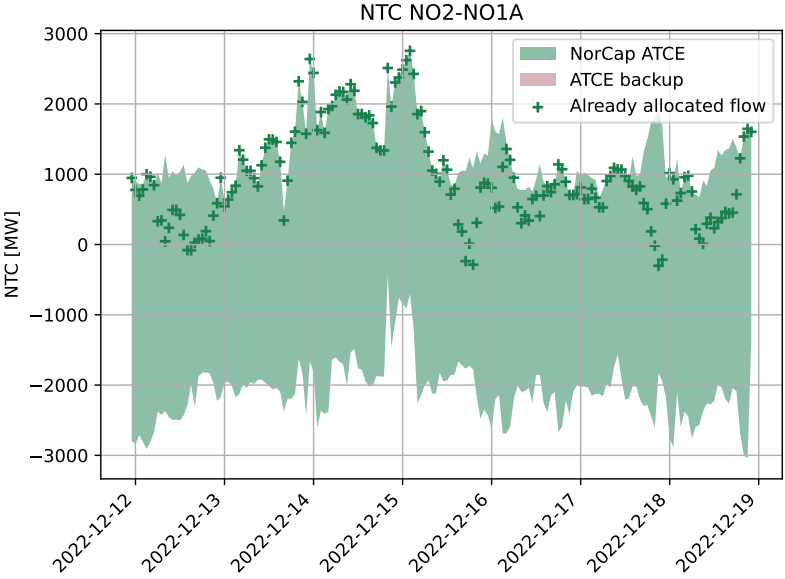


NO1A-NO2

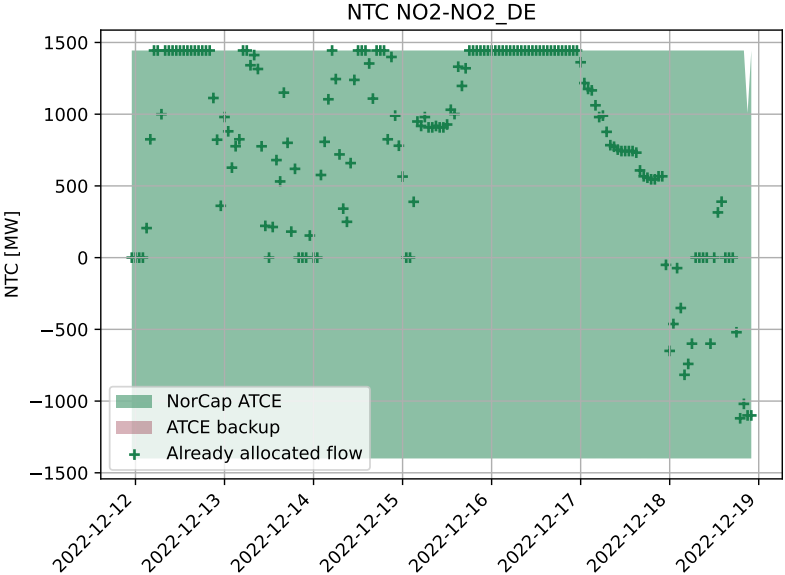
NTC NO1A-NO2



NO2-NO1A

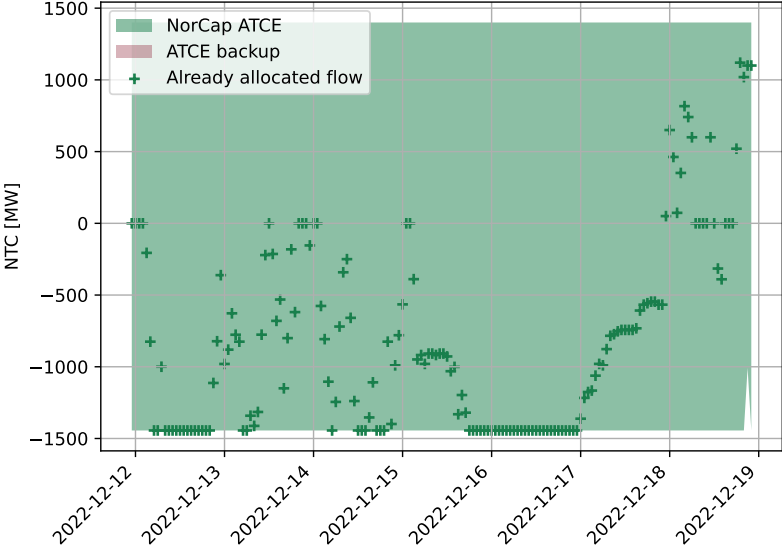


NO2-NO2_DE



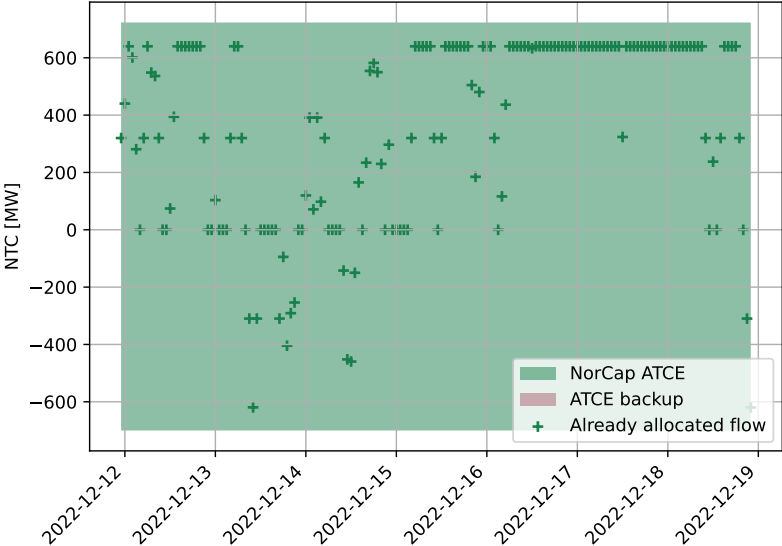
NO2_DE-NO2

NTC NO2_DE-NO2



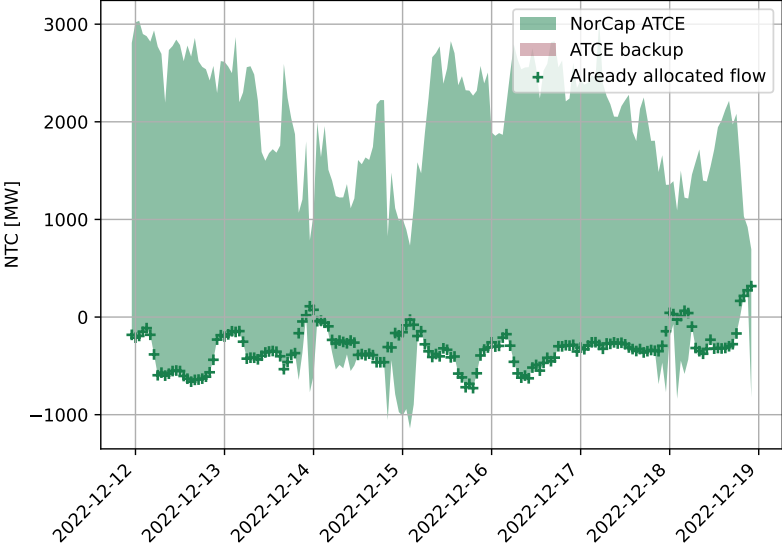
NO2-NO2_ND

NTC NO2-NO2_ND

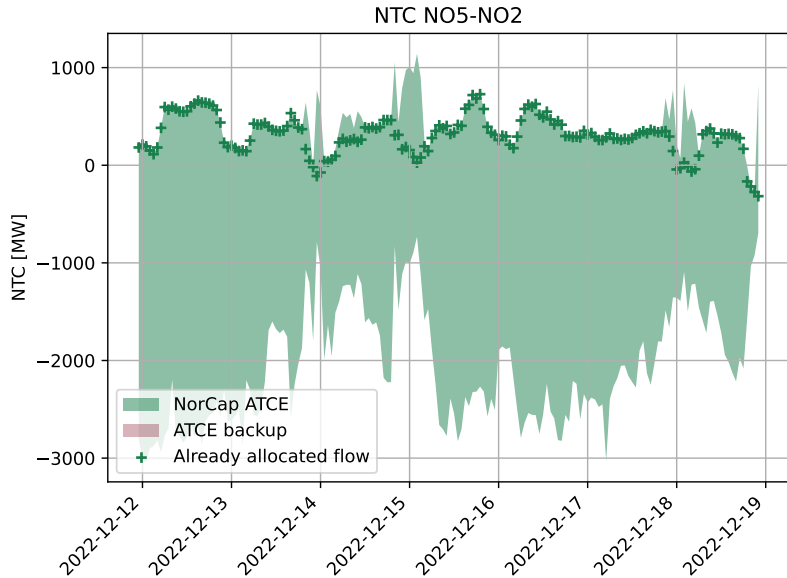


NO2-NO5

NTC NO2-NO5

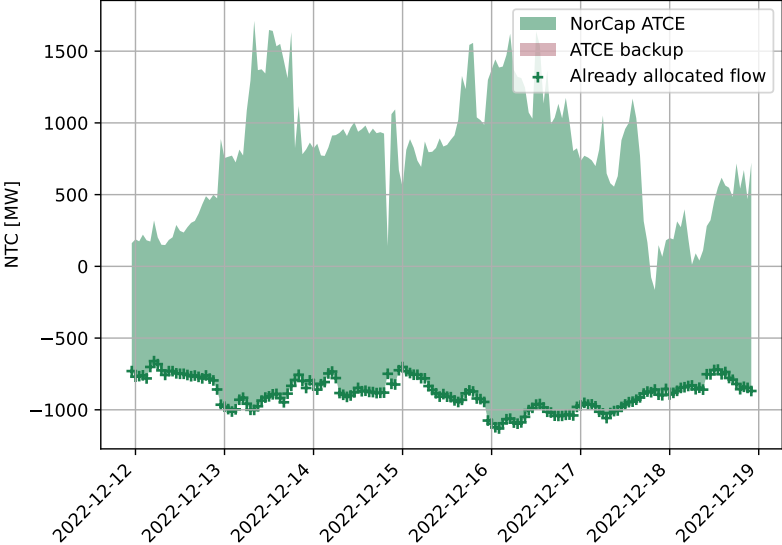


NO5-NO2



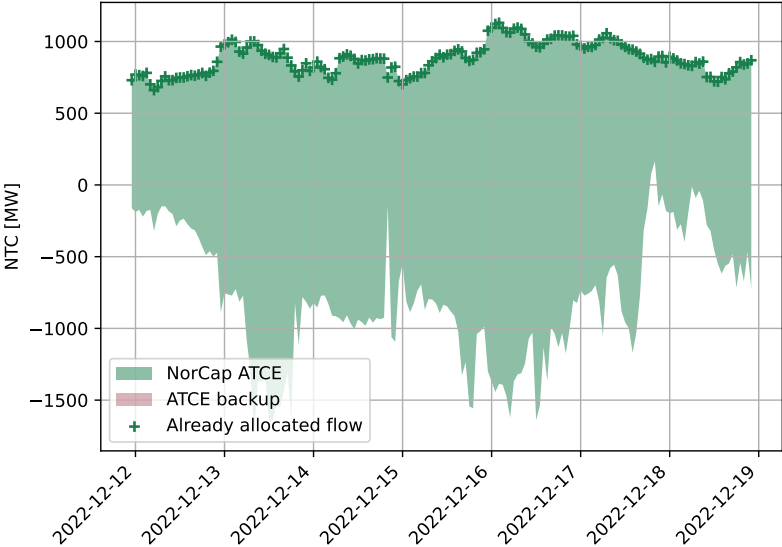
NO3-NO4

NTC NO3-NO4



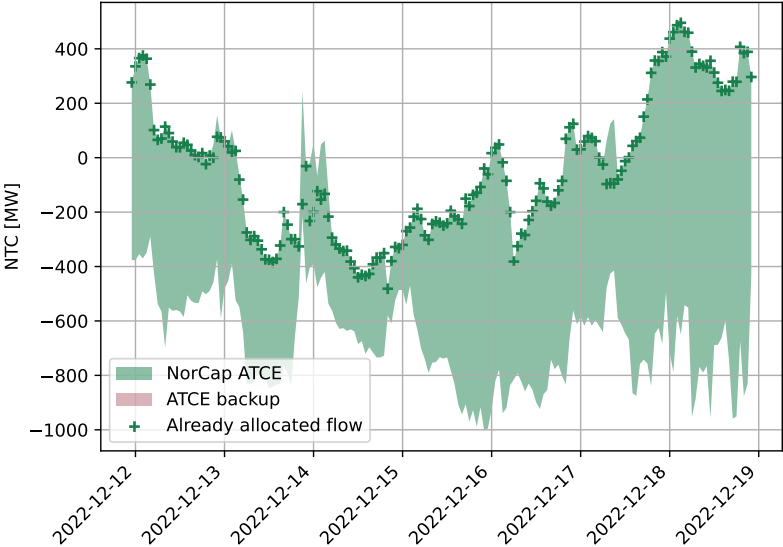
NO4-NO3

NTC NO4-NO3



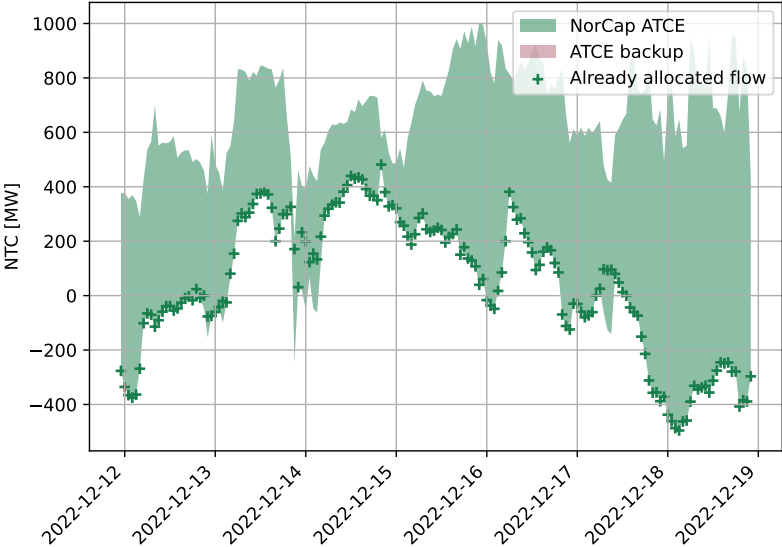
NO3-NO5

NTC NO3-NO5



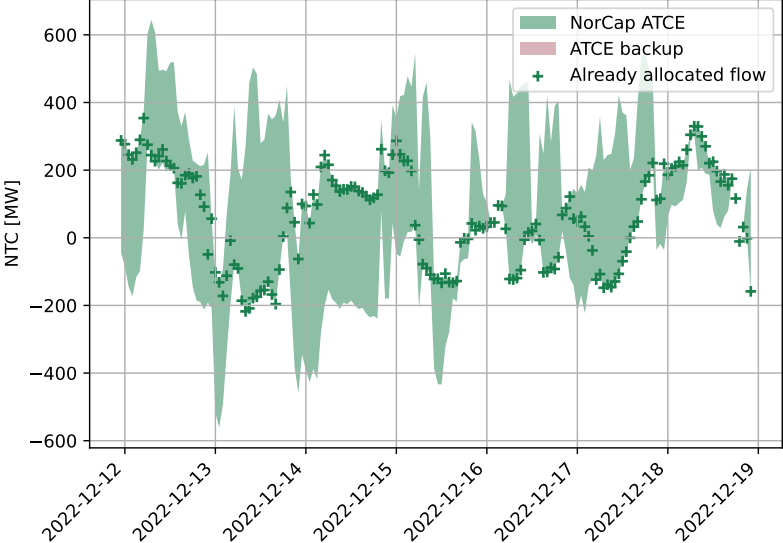
NO5-NO3

NTC NO5-NO3



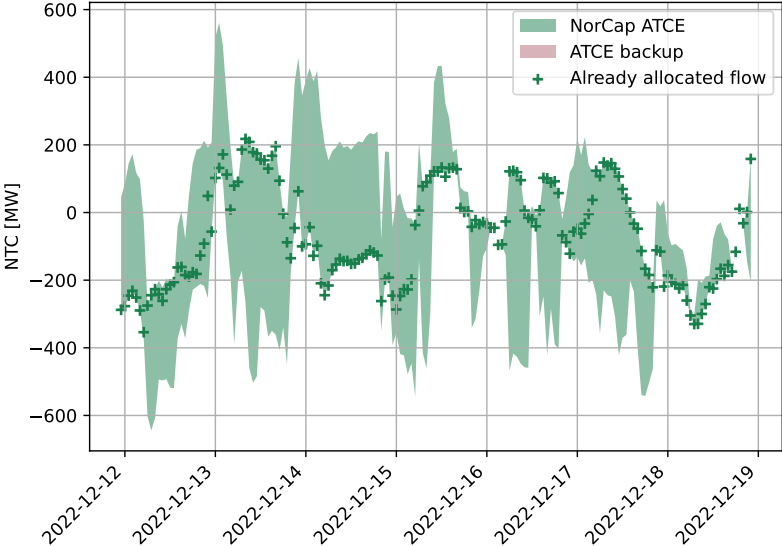
NO3-SE2

NTC NO3-SE2

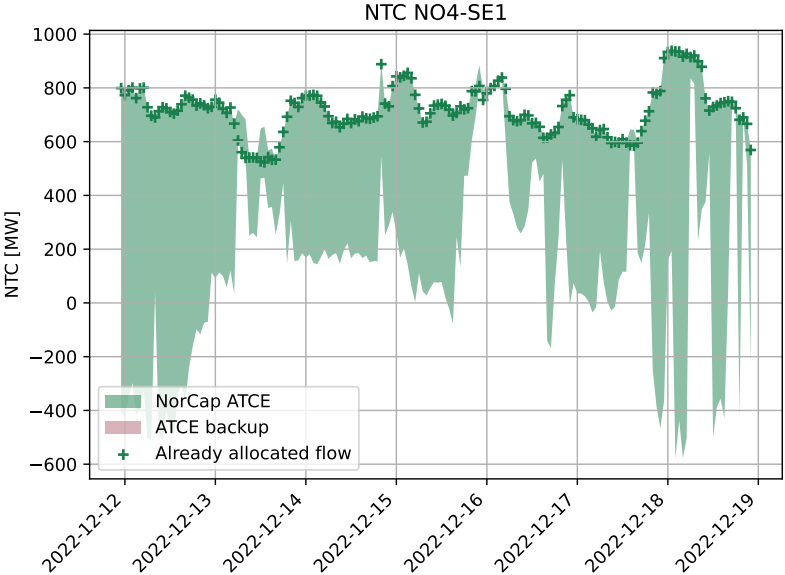


SE2-NO3

NTC SE2-NO3

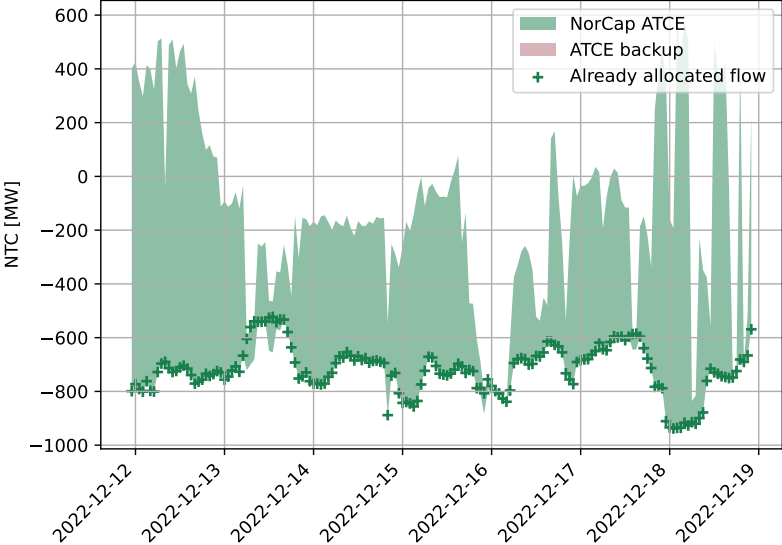


NO4-SE1



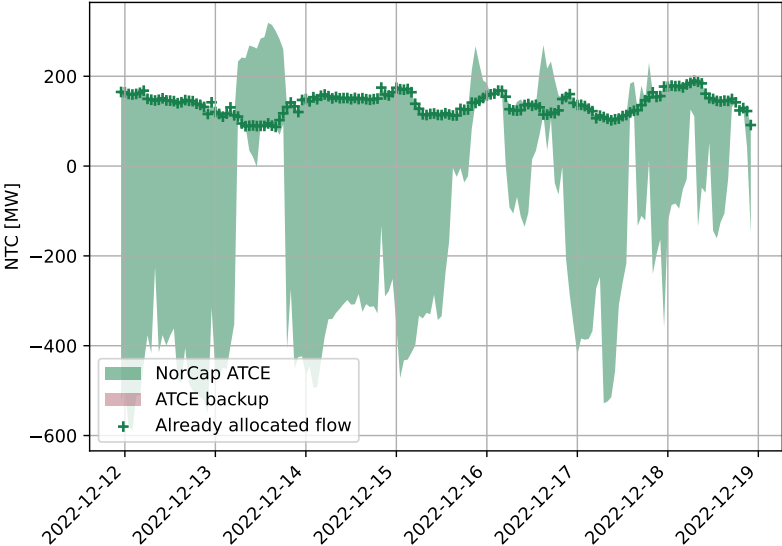
SE1-NO4

NTC SE1-NO4



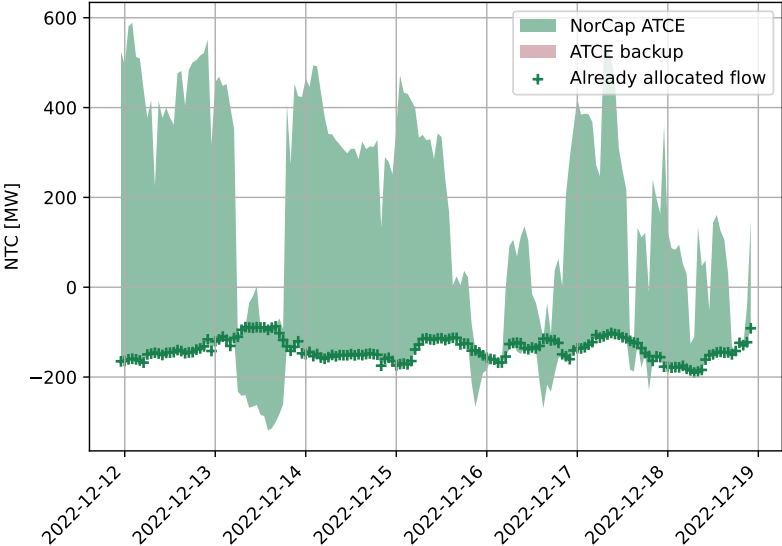
NO4-SE2

NTC NO4-SE2



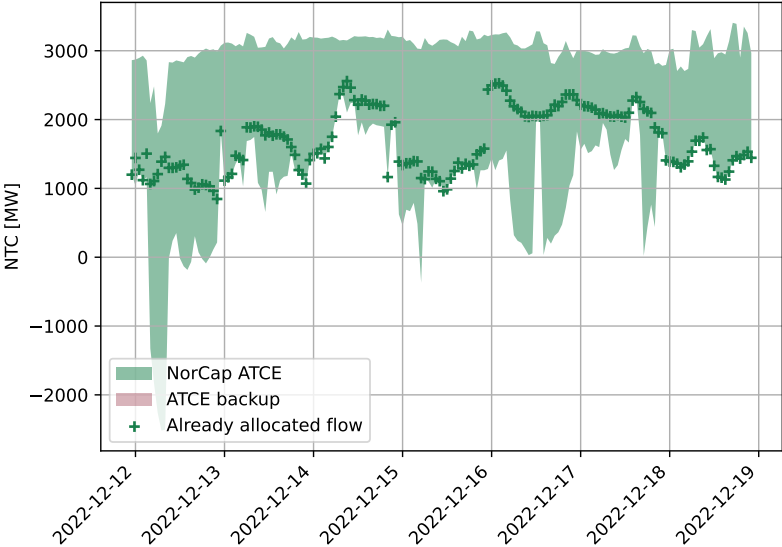
SE2-NO4

NTC SE2-NO4



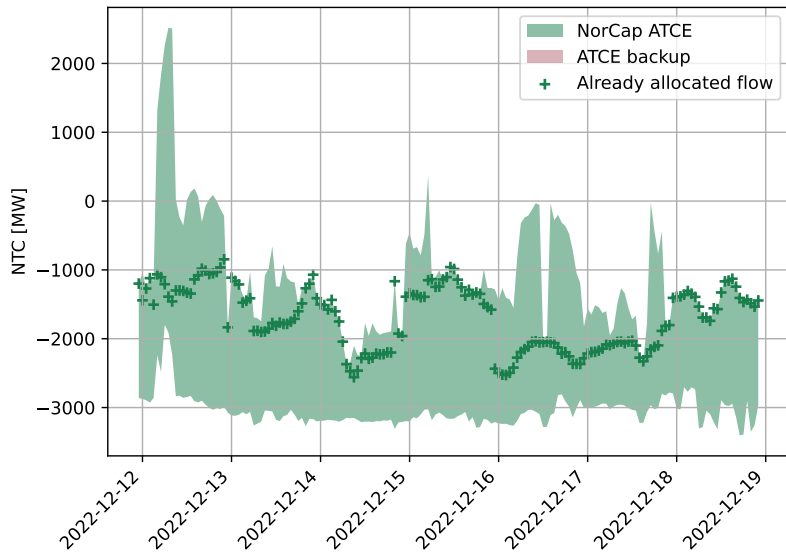
SE1-SE2

NTC SE1-SE2

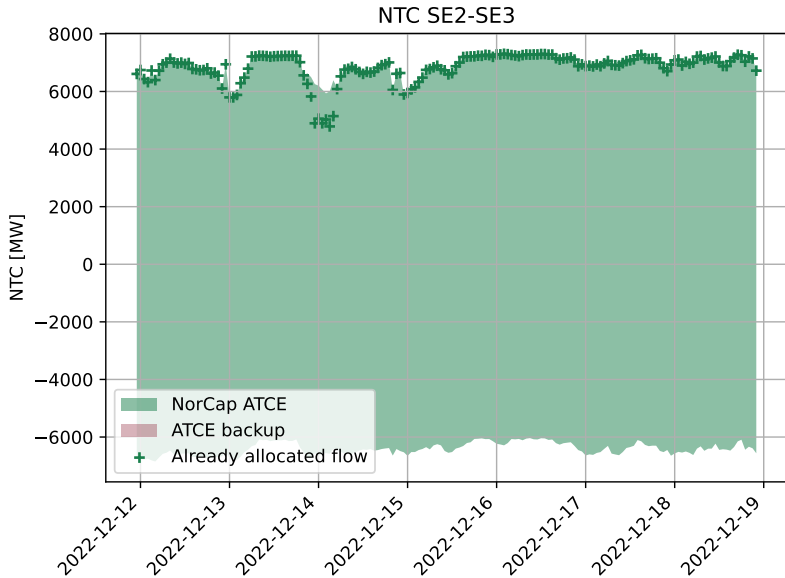


SE2-SE1

NTC SE2-SE1

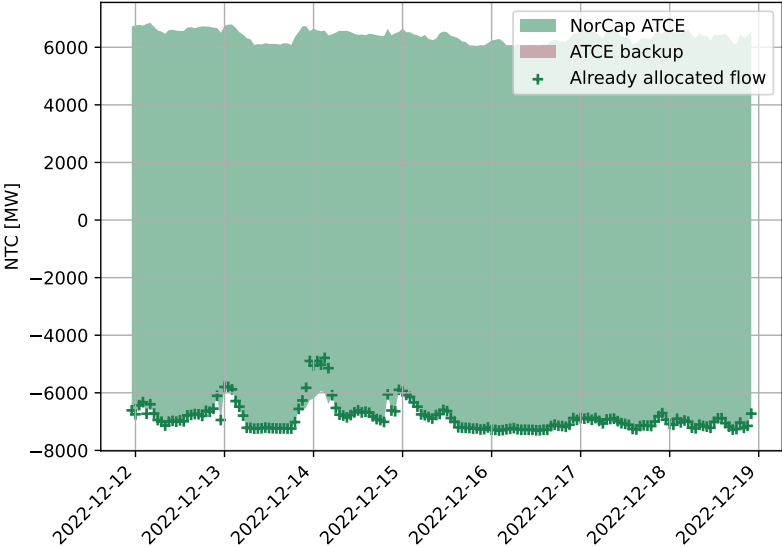


SE2-SE3



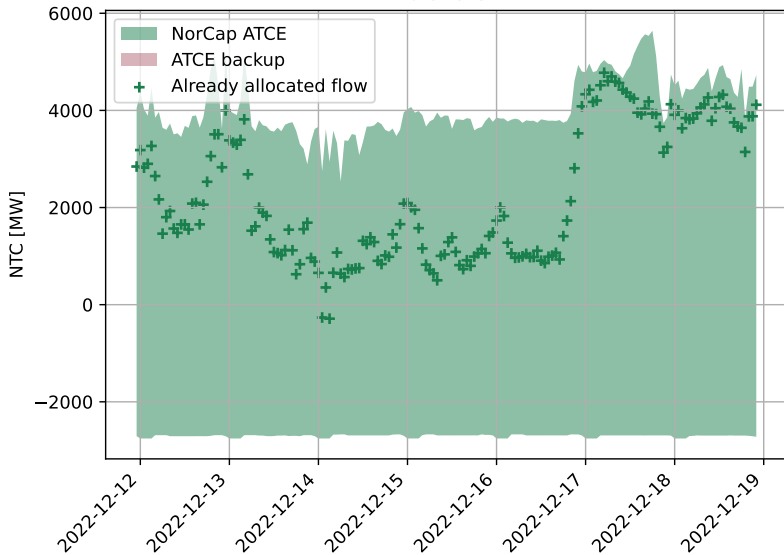
SE3-SE2

NTC SE3-SE2



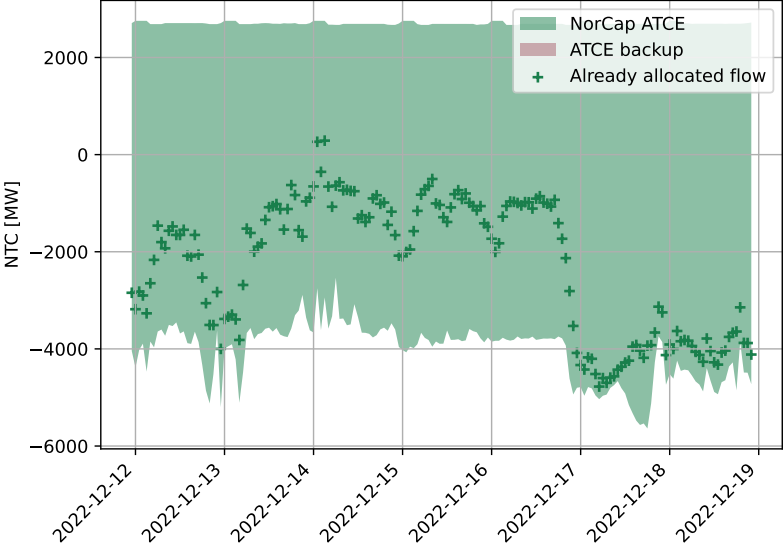
SE3-SE4

NTC SE3-SE4



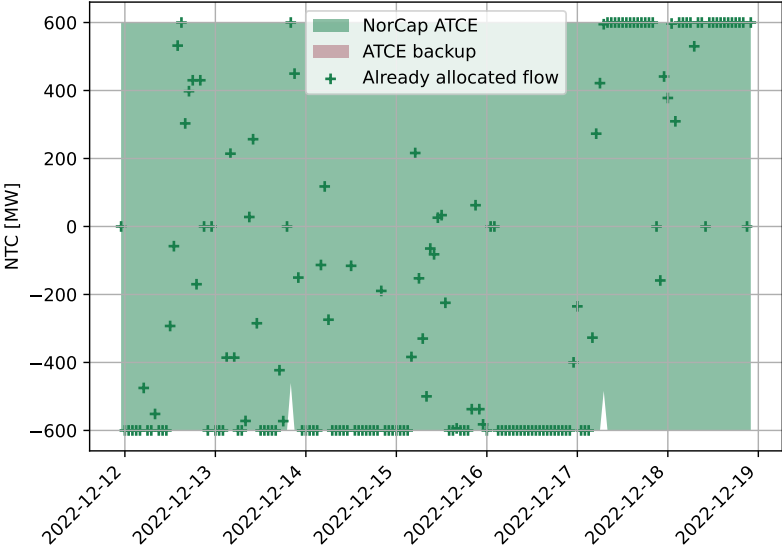
SE4-SE3

NTC SE4-SE3



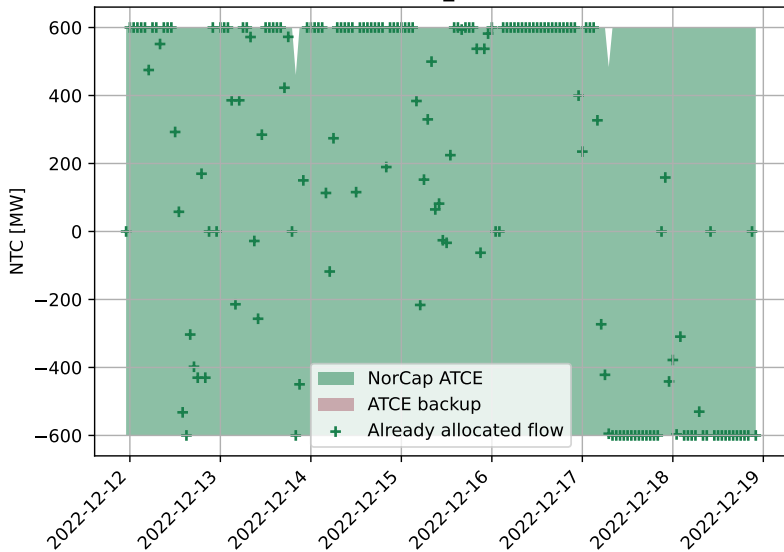
SE4-SE4_SP

NTC SE4-SE4_SP



SE4_SP-SE4

NTC SE4_SP-SE4

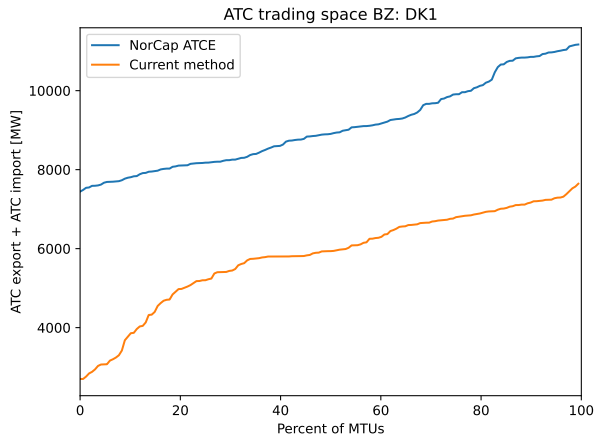


Bidding zone trading space

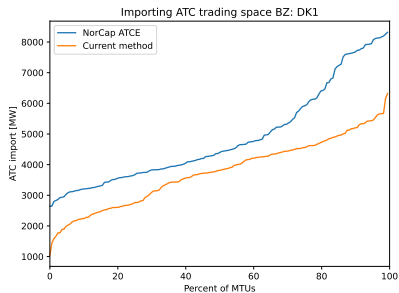
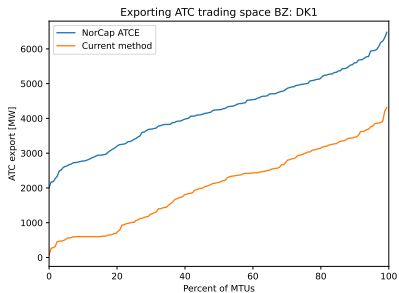
The total trading space of a bidding zone for a given MTU is the sum of export capacity and import capacity on all borders of that bidding zone for that MTU. The directional trading space is the sum of ATC on all borders of a bidding zone in either exporting or importing direction.

Disclaimer: Trading space computed by the reference method (i.e. the current method used in production) are calculated from intra-day offered ATCs collected from ENTSO-e transparency platform. It must be noted that the capacities collected at transparency platform include ramping constraints for some HVDCs connecting the Nordic and external CCRs.

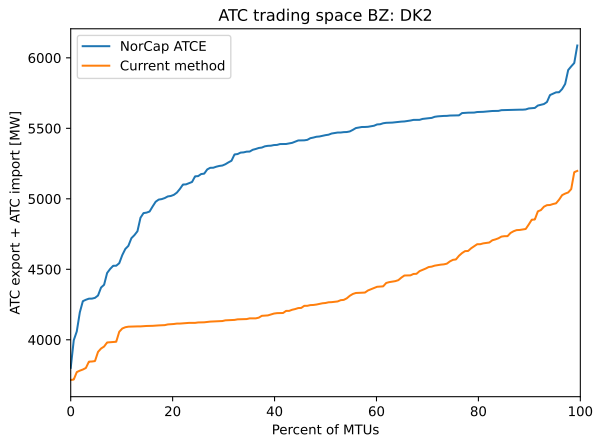
DK1 - Total trading space



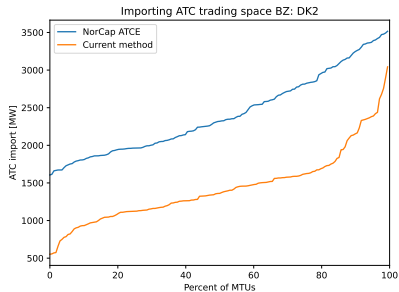
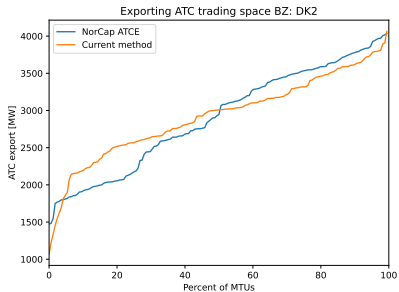
DK1 - Directional trading space



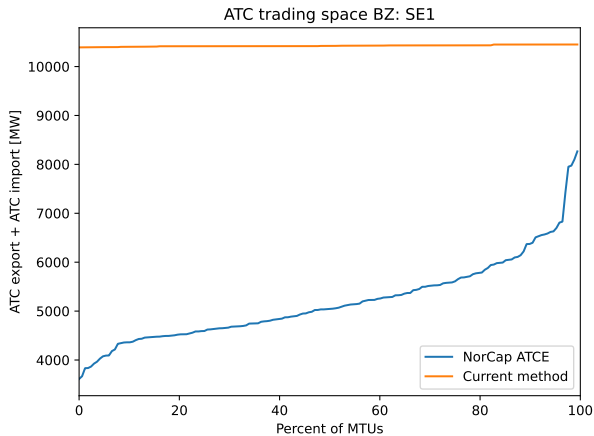
DK2 - Total trading space



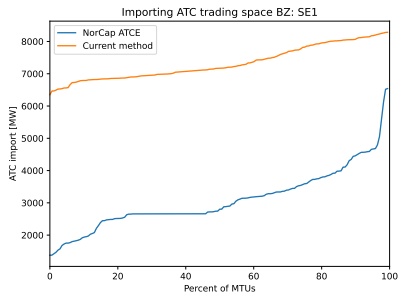
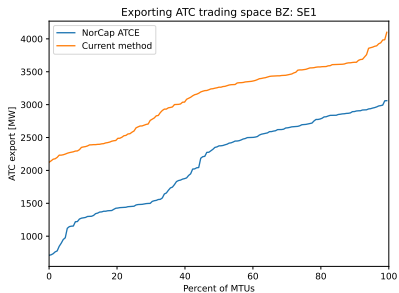
DK2 - Directional trading space



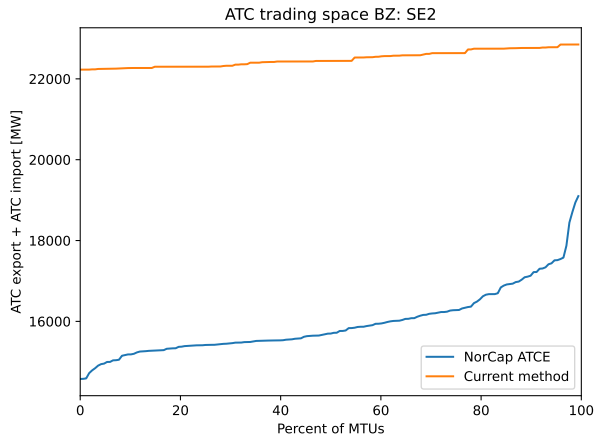
SE1 - Total trading space



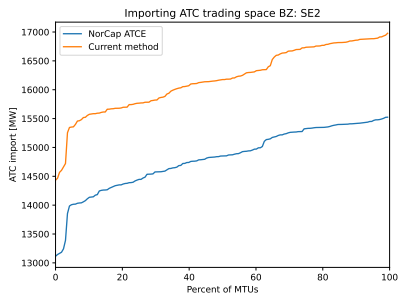
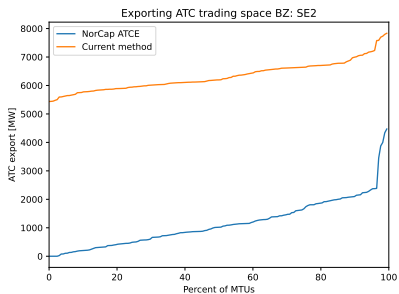
SE1 - Directional trading space



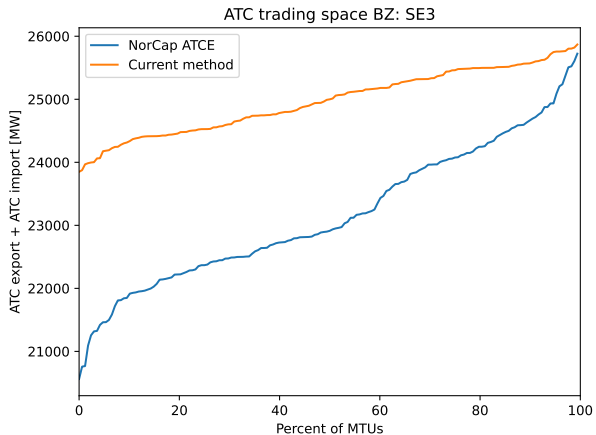
SE2 - Total trading space



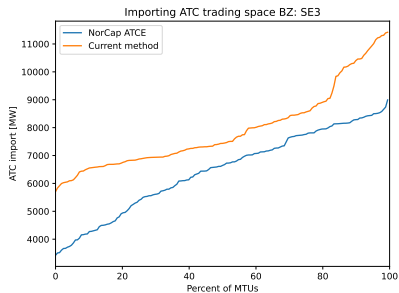
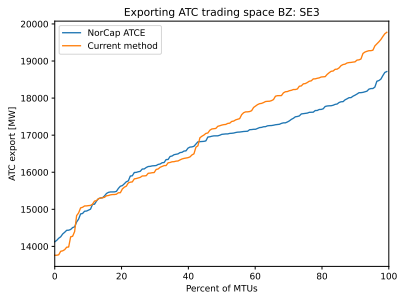
SE2 - Directional trading space



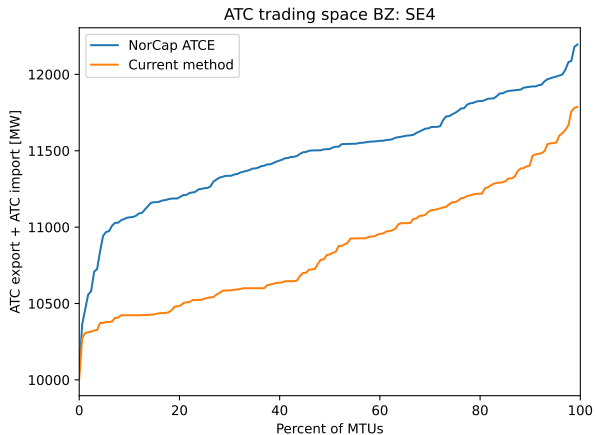
SE3 - Total trading space



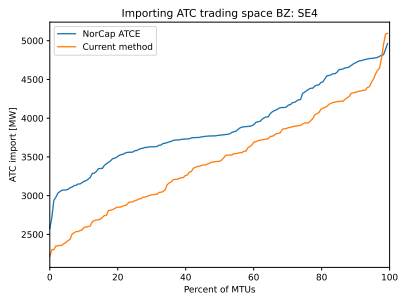
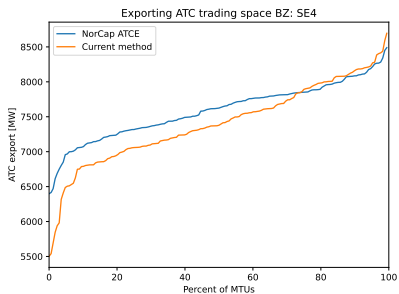
SE3 - Directional trading space



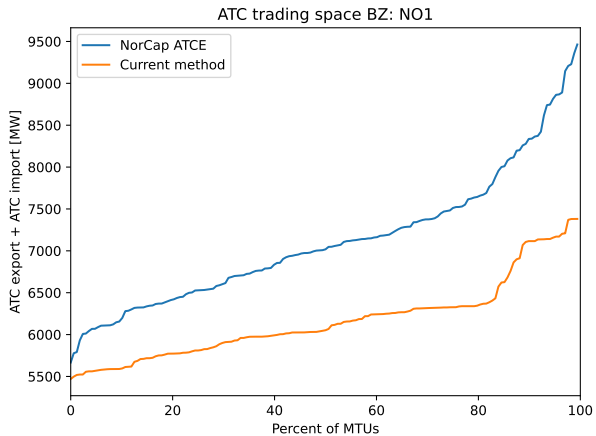
SE4 - Total trading space



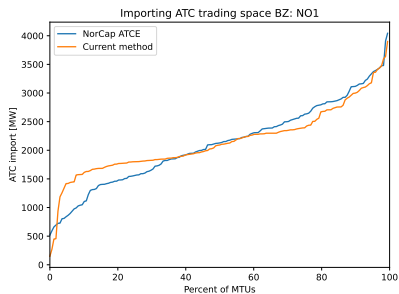
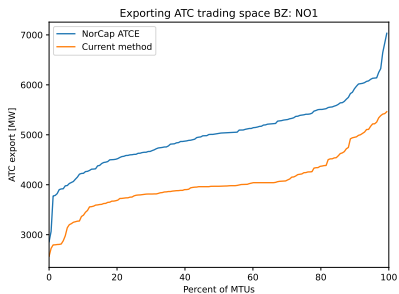
SE4 - Directional trading space



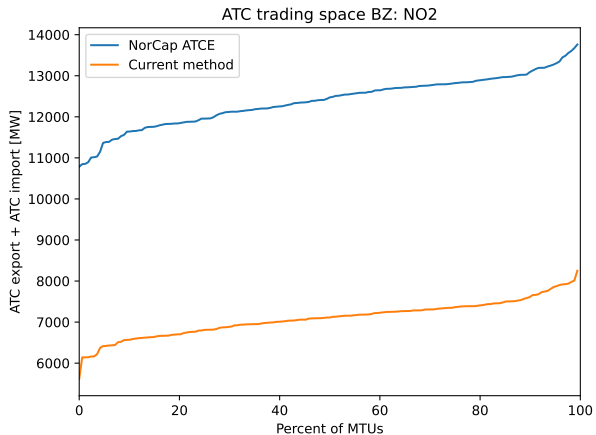
NO1 - Total trading space



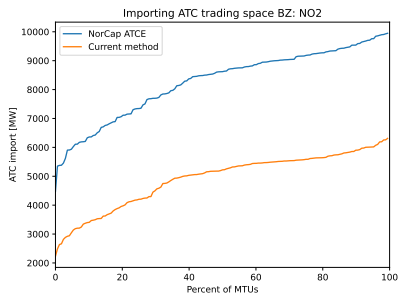
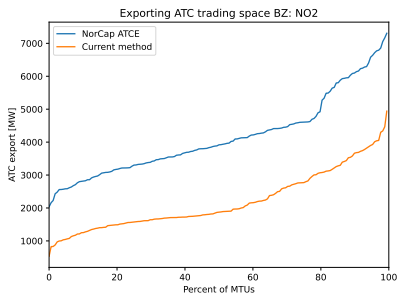
NO1 - Directional trading space



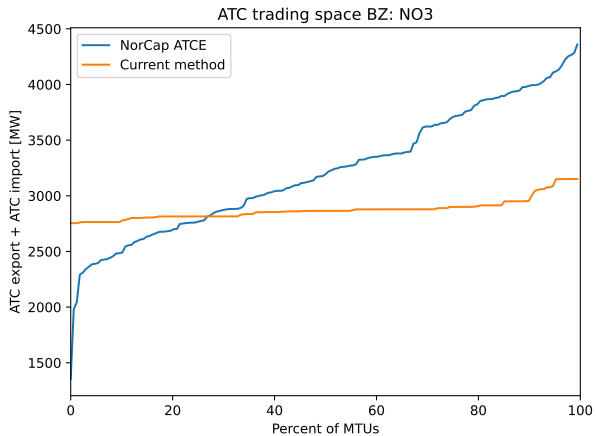
NO2 - Total trading space



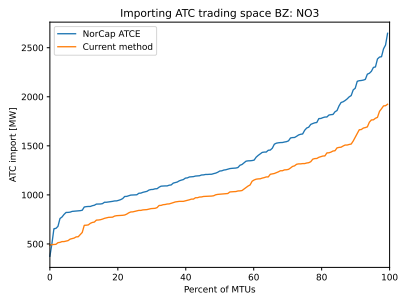
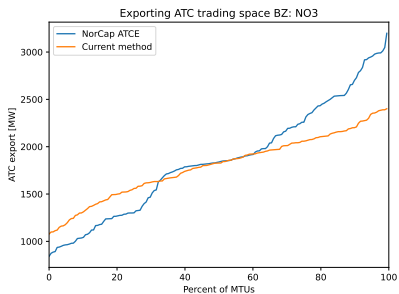
NO2 - Directional trading space



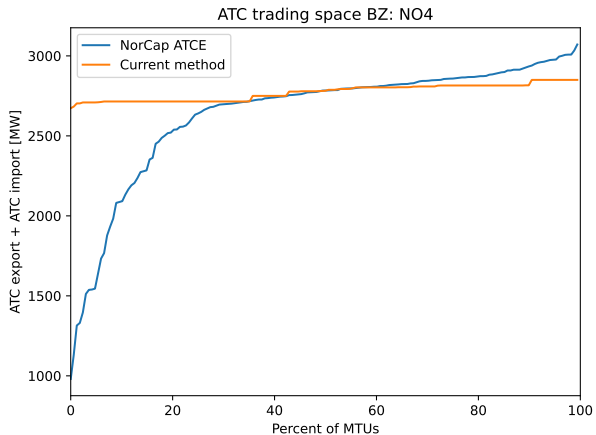
NO3 - Total trading space



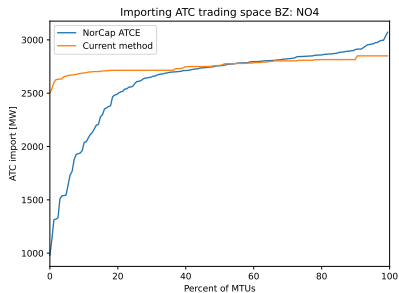
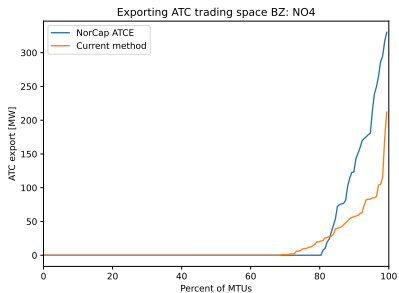
NO3 - Directional trading space



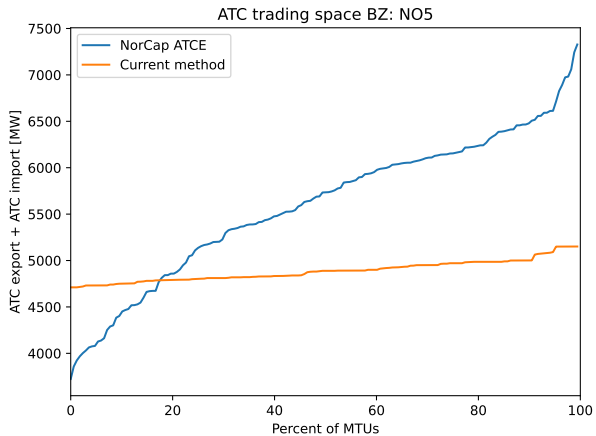
NO4 - Total trading space



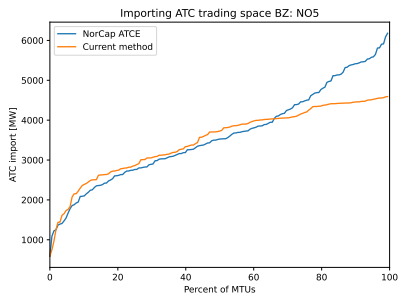
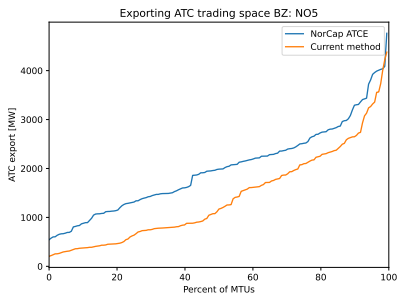
NO4 - Directional trading space



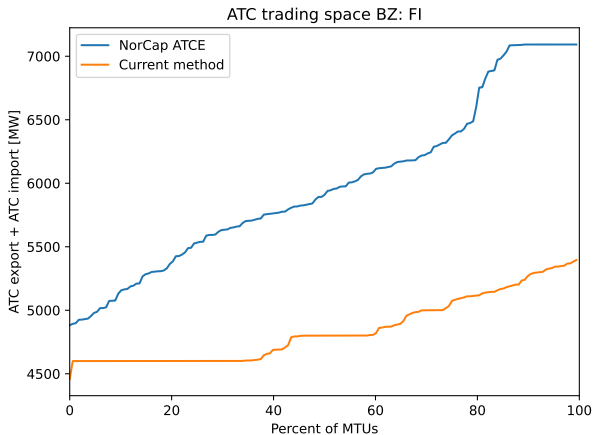
NO5 - Total trading space



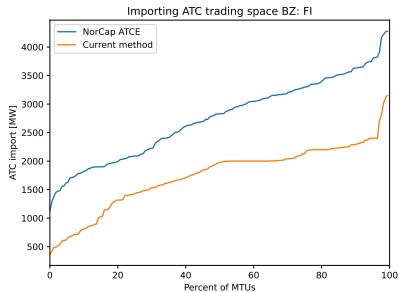
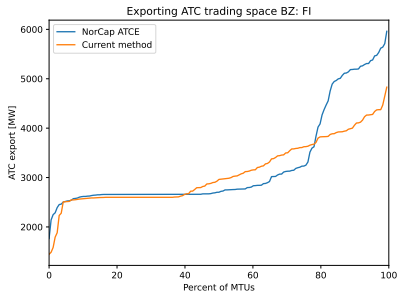
NO5 - Directional trading space



FI - Total trading space

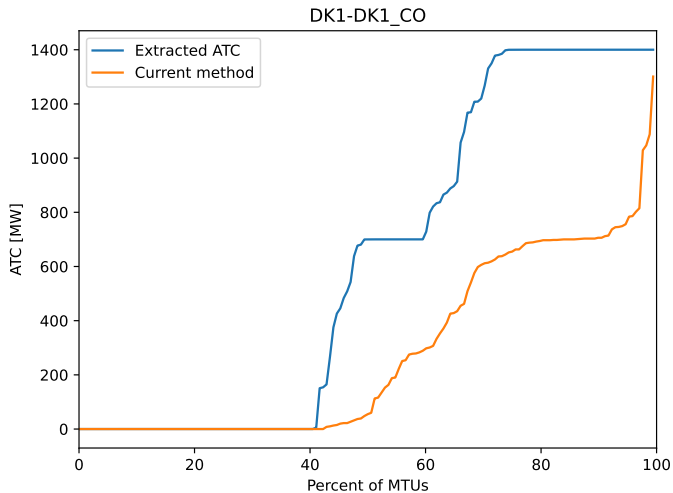


FI - Directional trading space

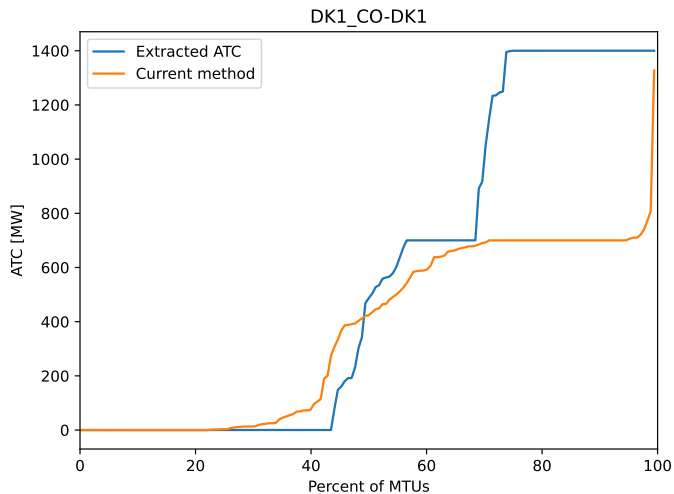


Capacity duration curves

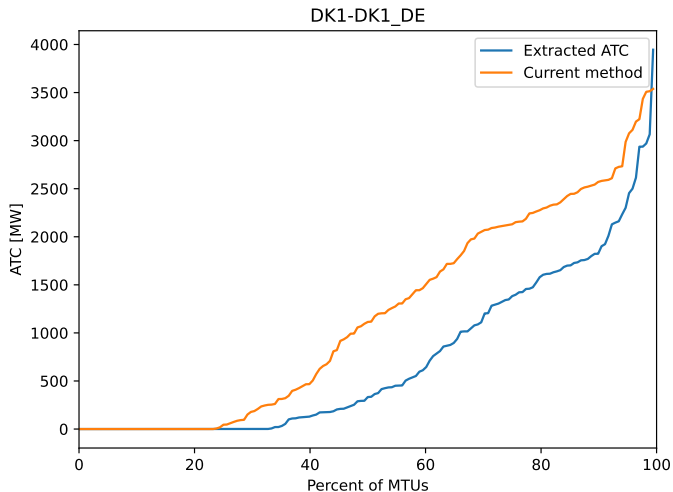
DK1-DK1_CO ATC duration curves



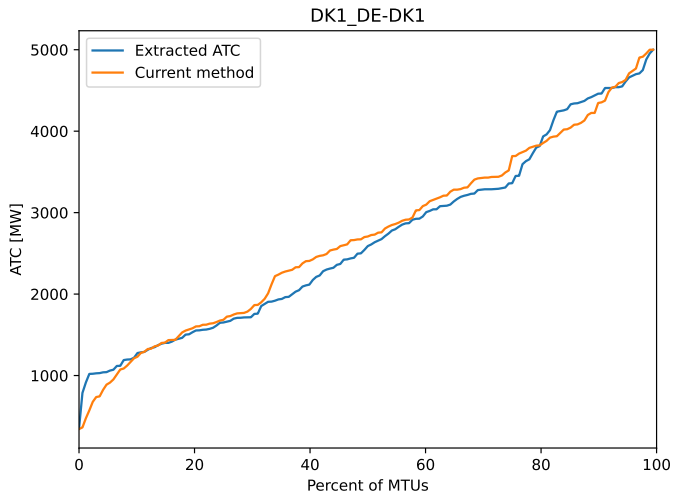
DK1_CO-DK1 ATC duration curves



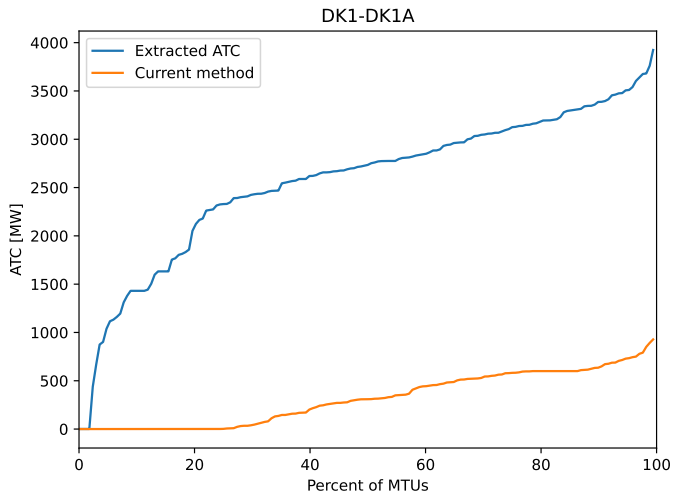
DK1-DK1_DE ATC duration curves



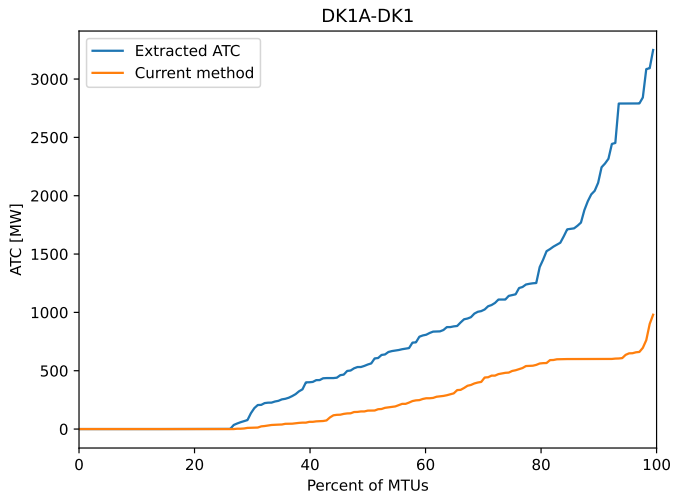
DK1_DE-DK1 ATC duration curves



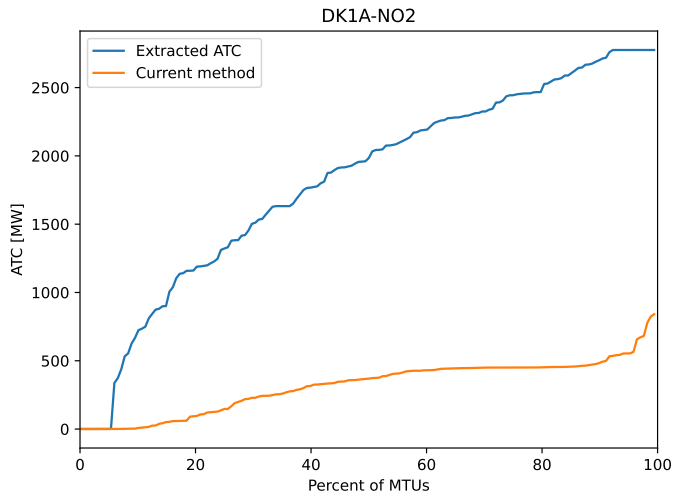
DK1-DK1A ATC duration curves



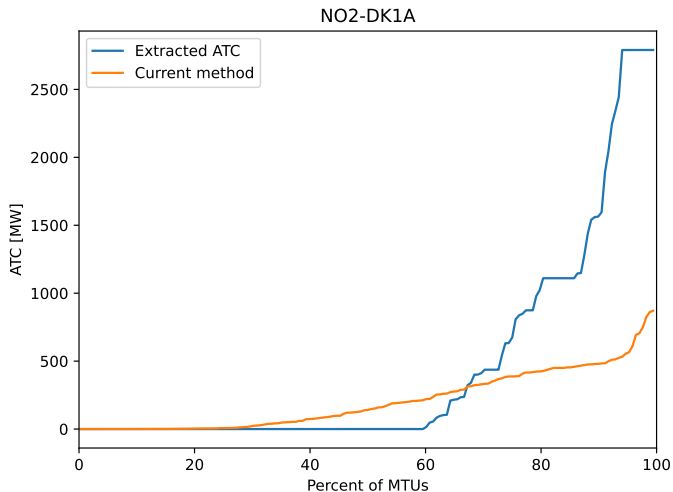
DK1A-DK1 ATC duration curves



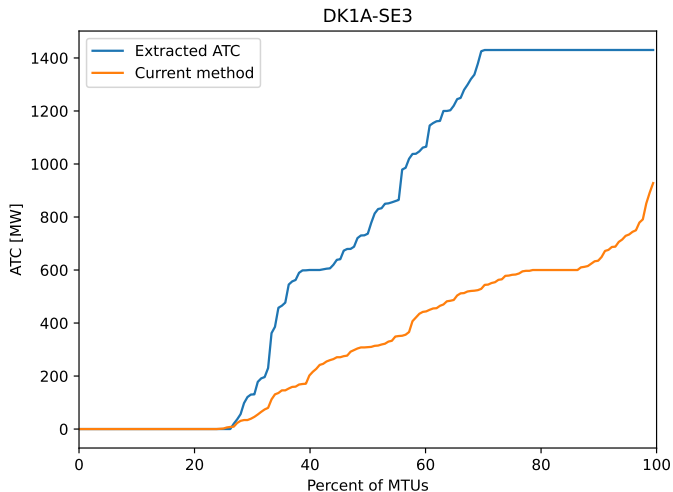
DK1A-NO2 ATC duration curves



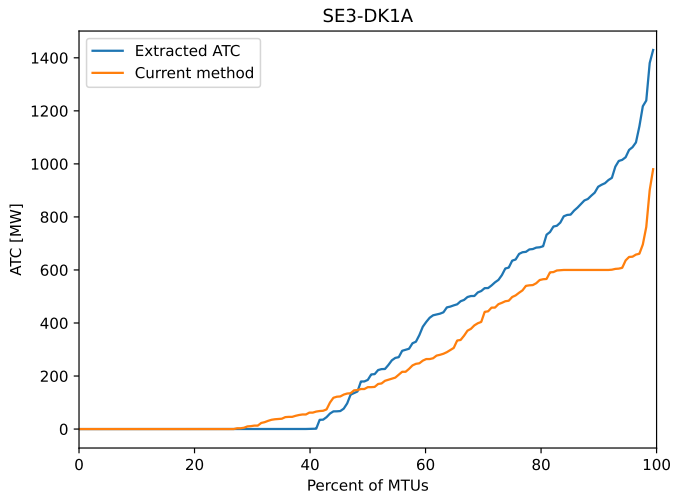
NO2-DK1A ATC duration curves



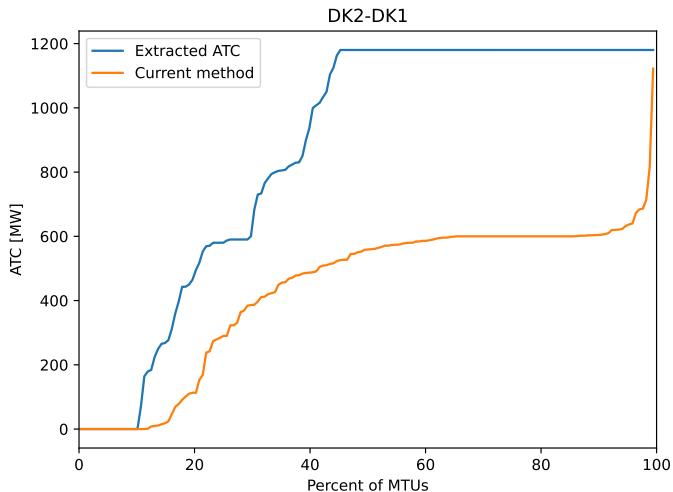
DK1A-SE3 ATC duration curves



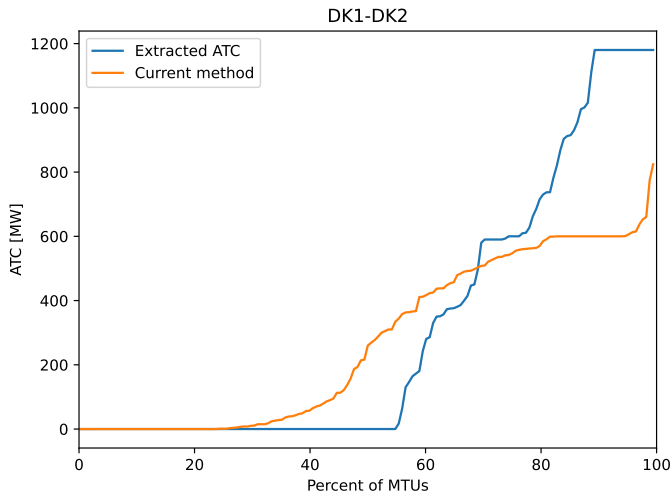
SE3-DK1A ATC duration curves



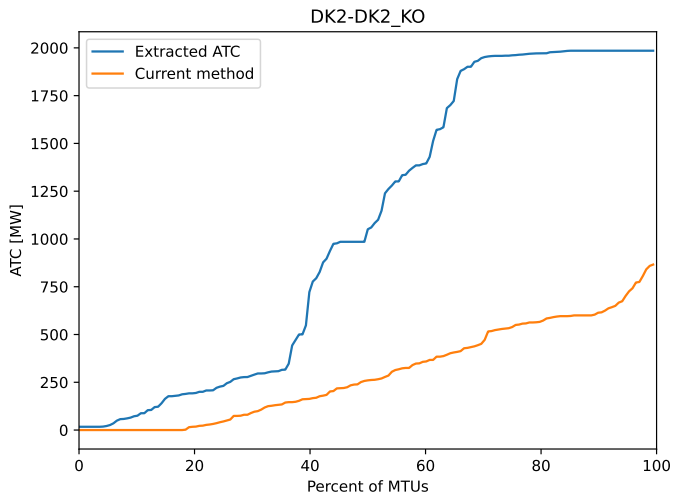
DK2-DK1 ATC duration curves



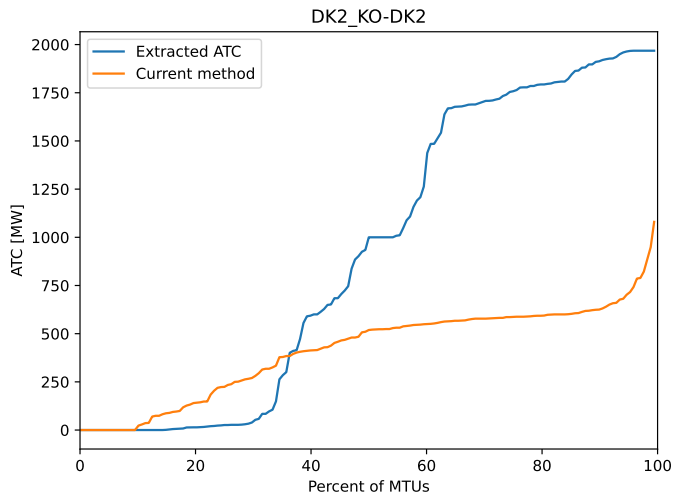
DK1-DK2 ATC duration curves



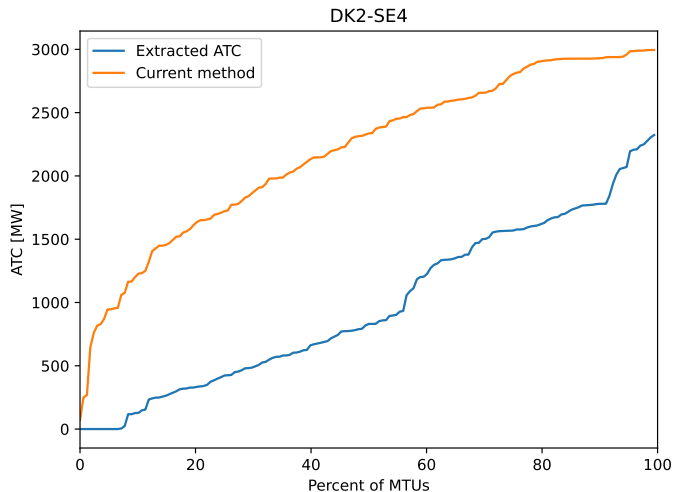
DK2-DK2_KO ATC duration curves



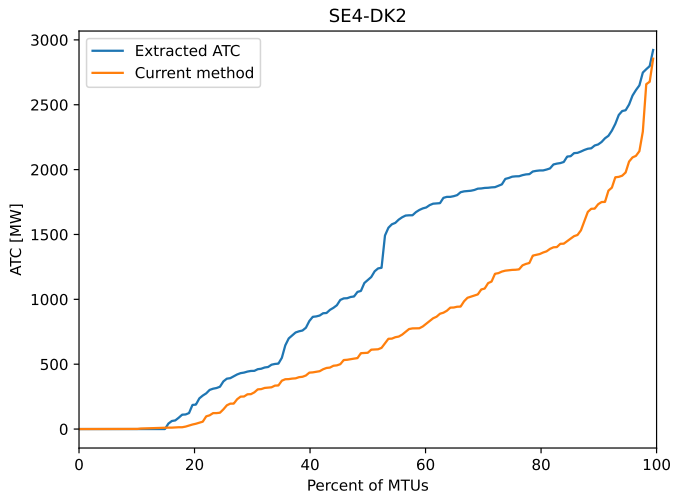
DK2_KO-DK2 ATC duration curves



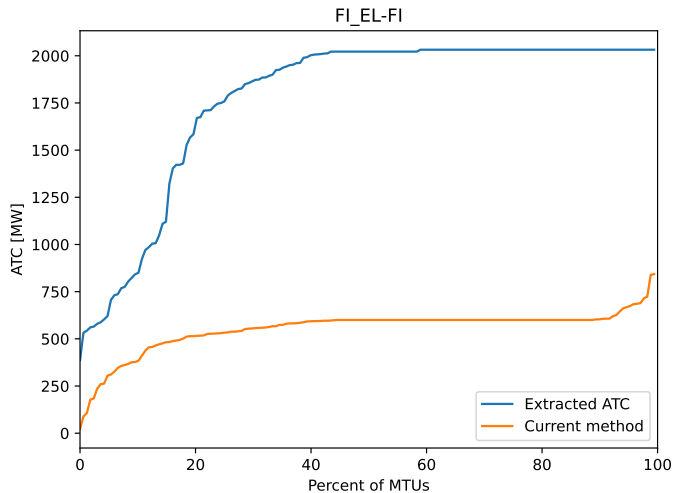
DK2-SE4 ATC duration curves



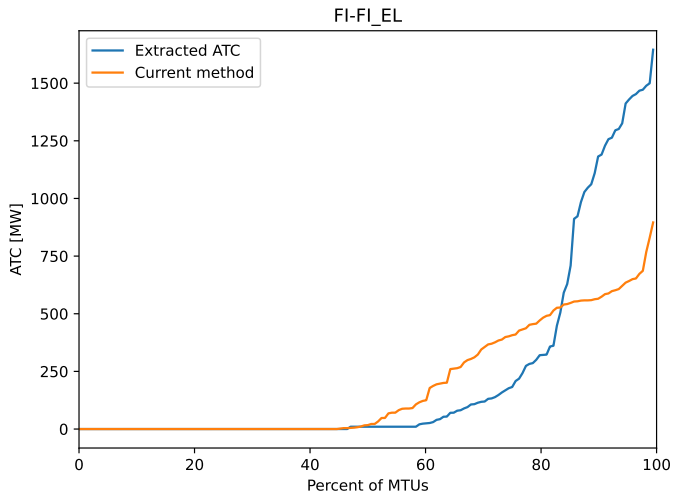
SE4-DK2 ATC duration curves



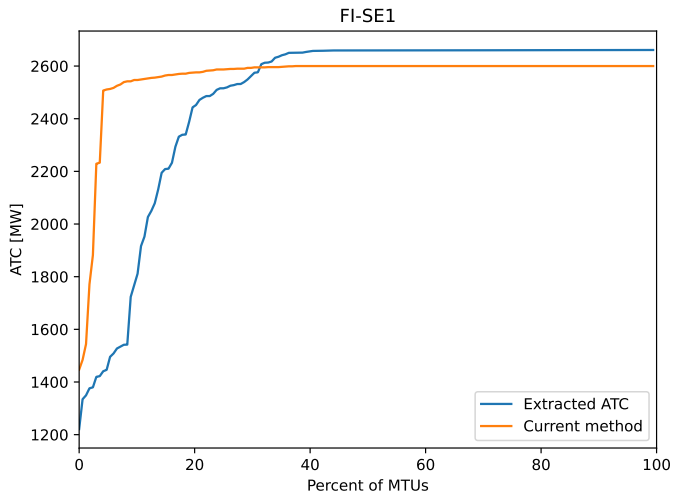
FI_EL-FI ATC duration curves



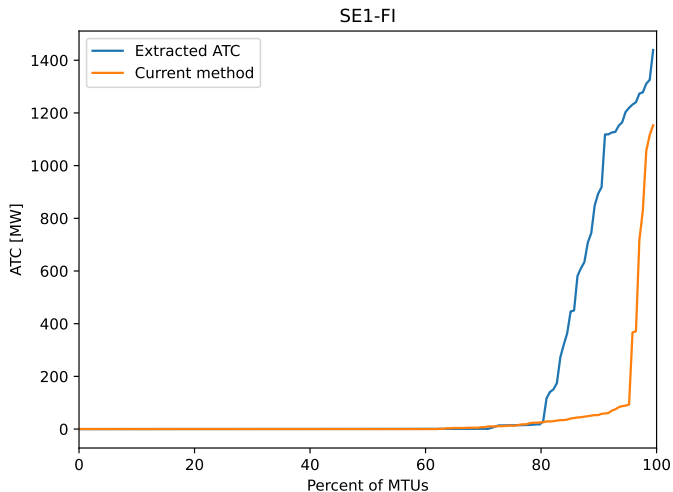
FI-FI_EL ATC duration curves



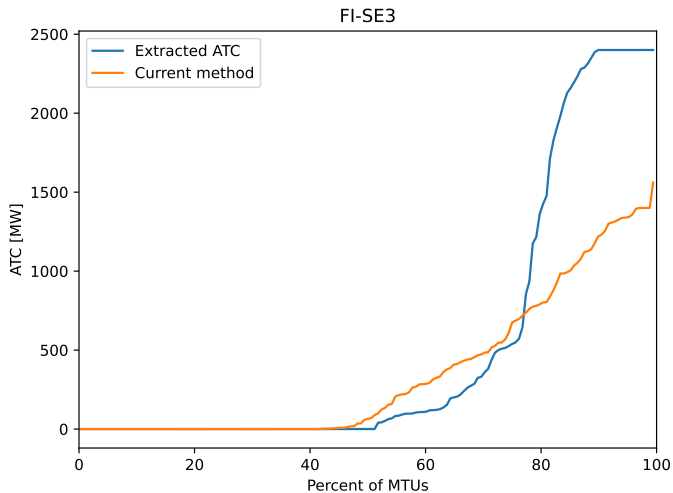
FI-SE1 ATC duration curves



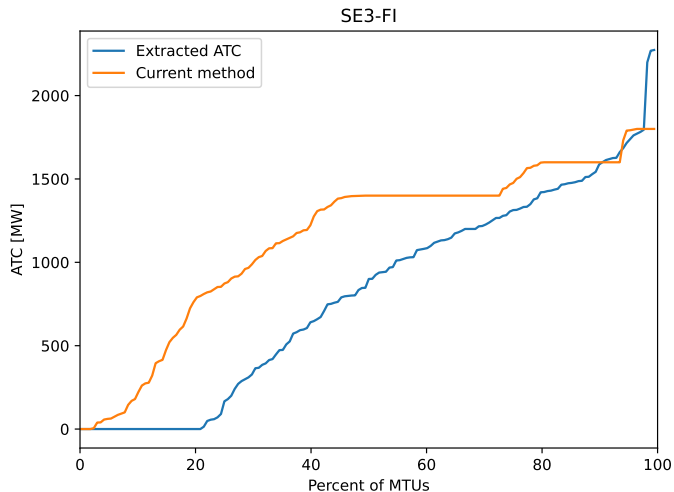
SE1-FI ATC duration curves



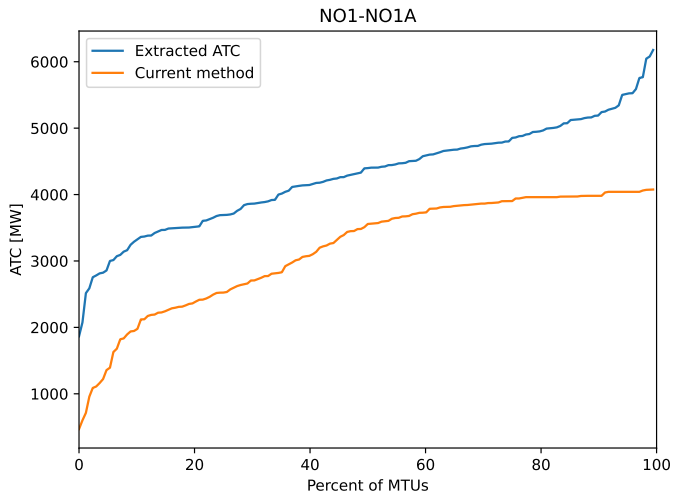
FI-SE3 ATC duration curves



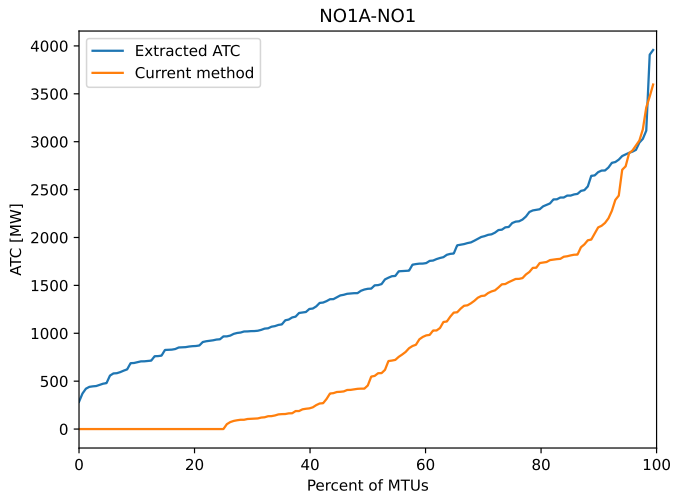
SE3-FI ATC duration curves



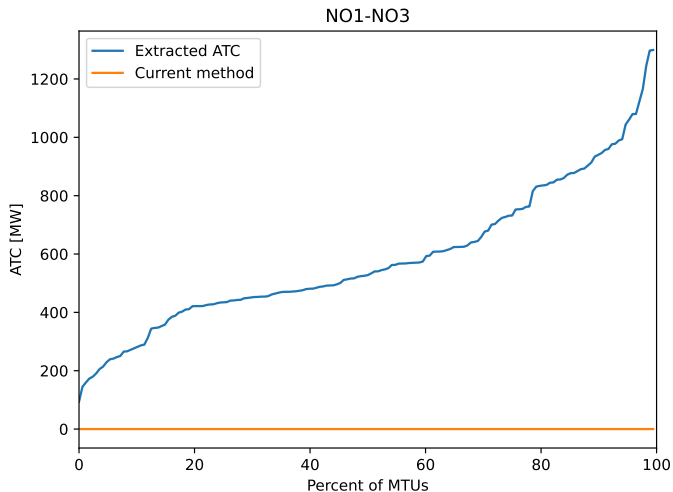
NO1-NO1A ATC duration curves



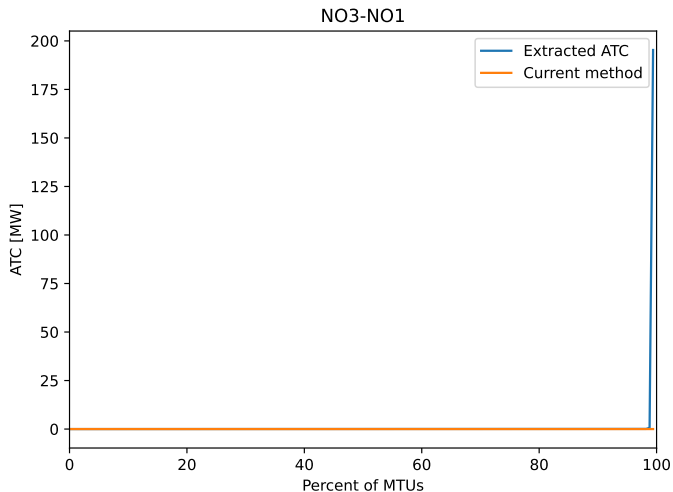
NO1A-NO1 ATC duration curves



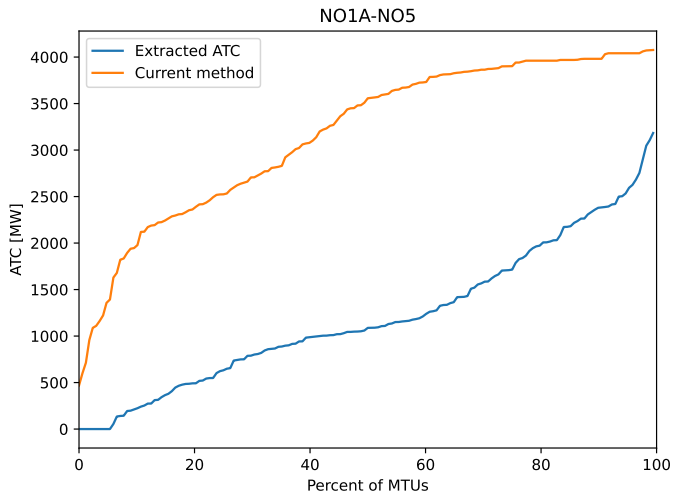
NO1-NO3 ATC duration curves



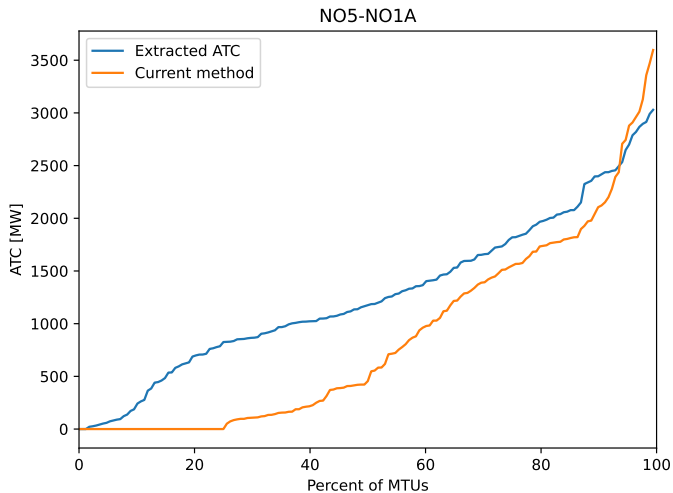
NO3-NO1 ATC duration curves



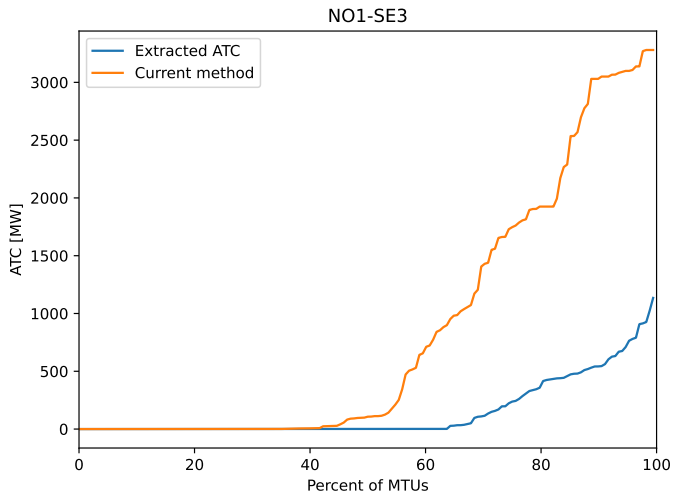
NO1A-NO5 ATC duration curves



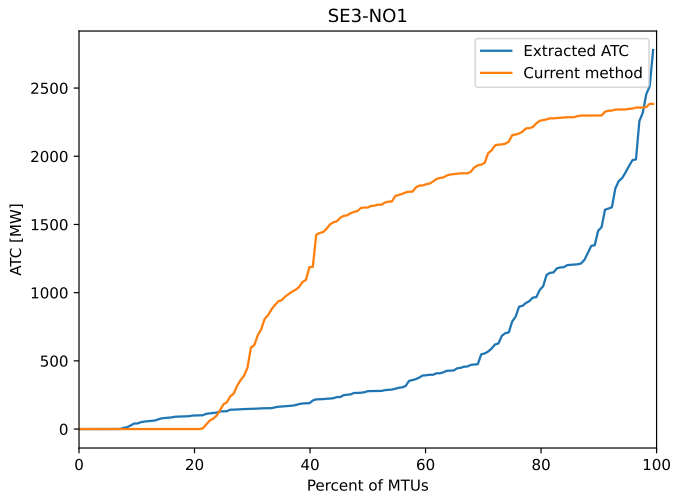
NO5-NO1A ATC duration curves



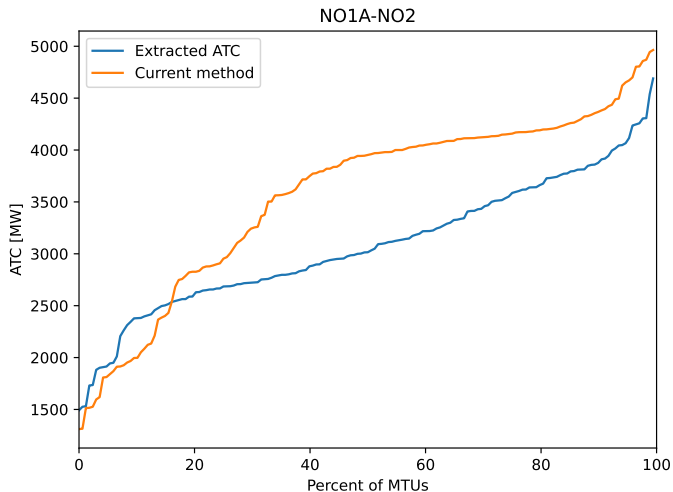
NO1-SE3 ATC duration curves



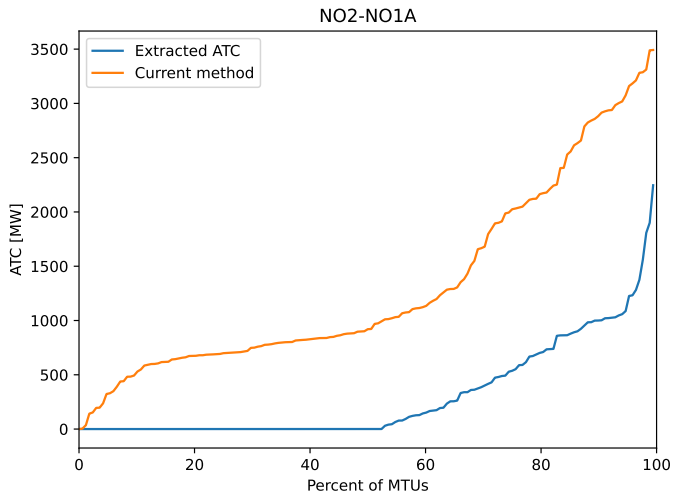
SE3-NO1 ATC duration curves



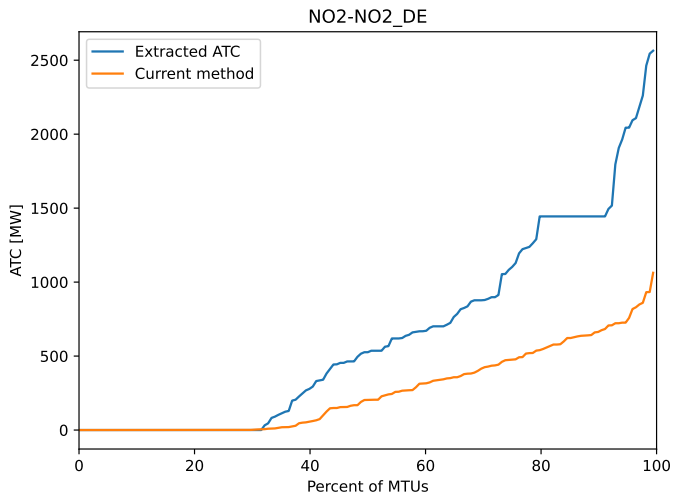
NO1A-NO2 ATC duration curves



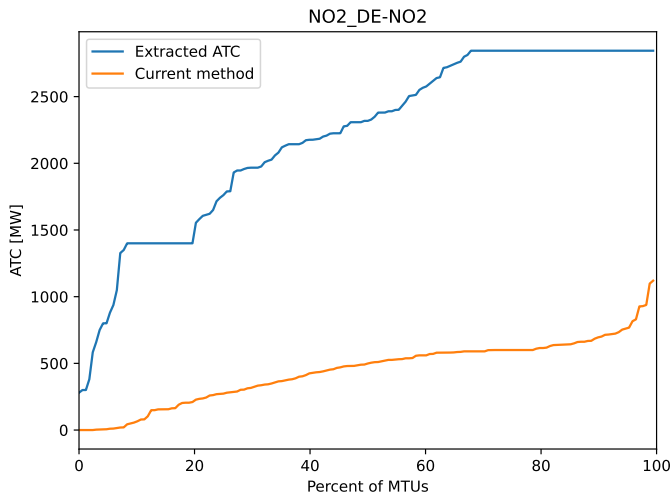
NO2-NO1A ATC duration curves



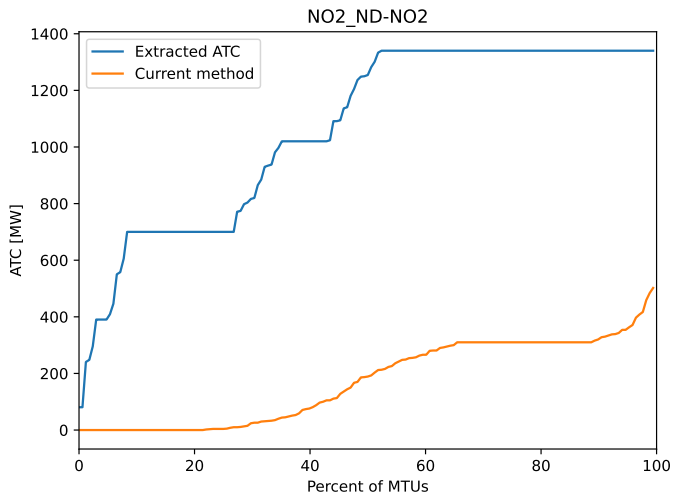
NO2-NO2_DE ATC duration curves



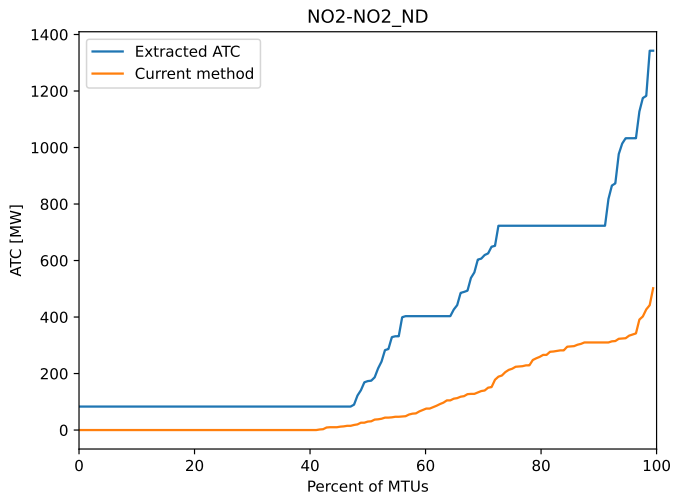
NO2_DE-NO2 ATC duration curves



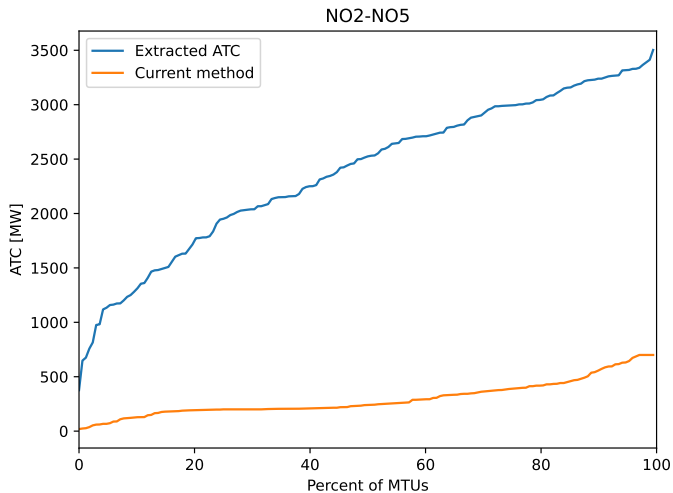
NO2_ND-NO2 ATC duration curves



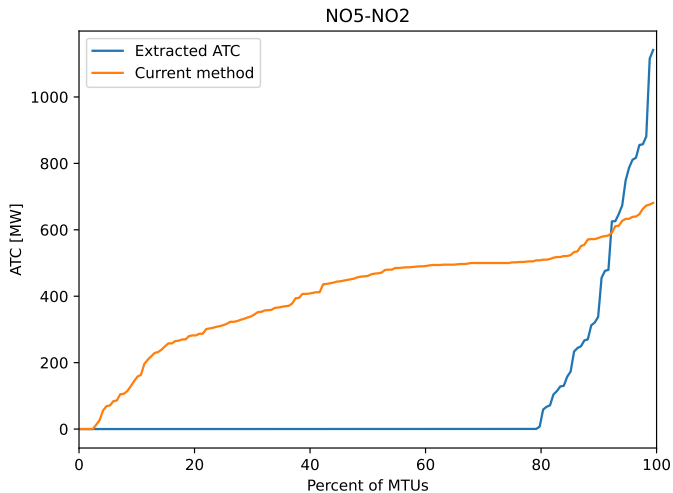
NO2-NO2_ND ATC duration curves



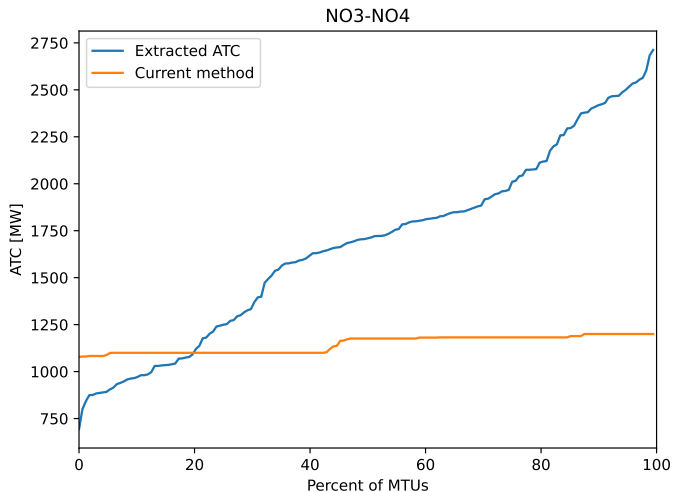
NO2-NO5 ATC duration curves



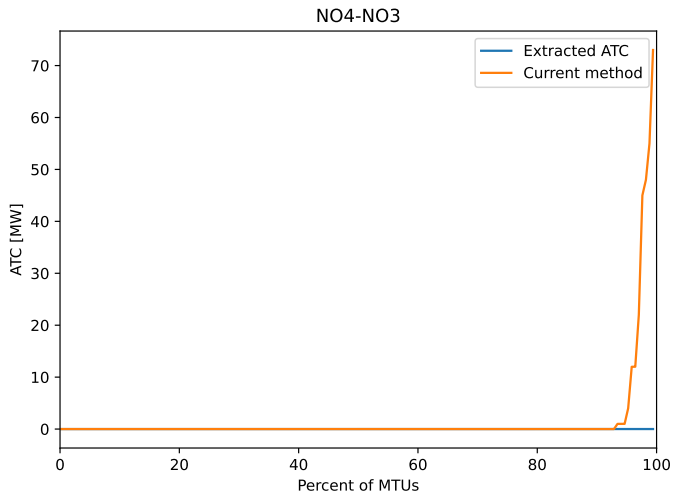
NO5-NO2 ATC duration curves



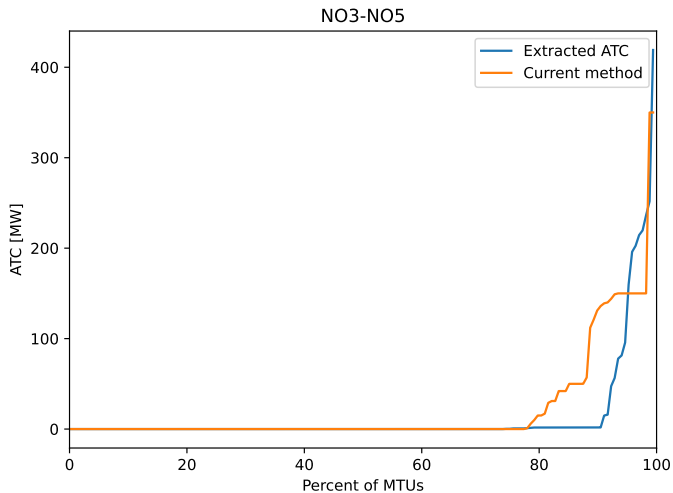
NO3-NO4 ATC duration curves



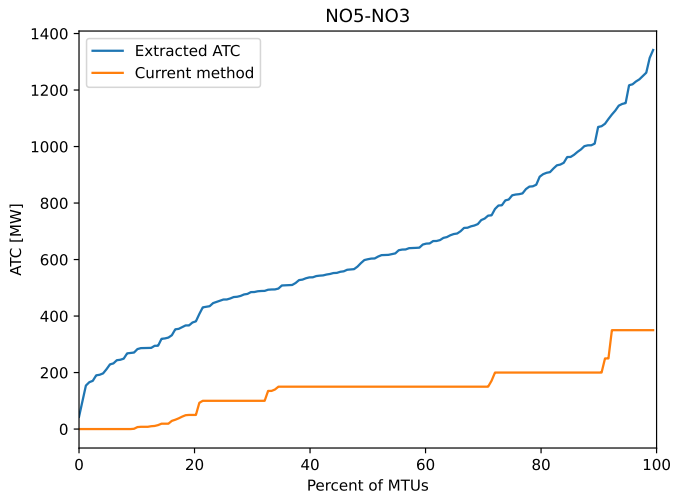
NO4-NO3 ATC duration curves



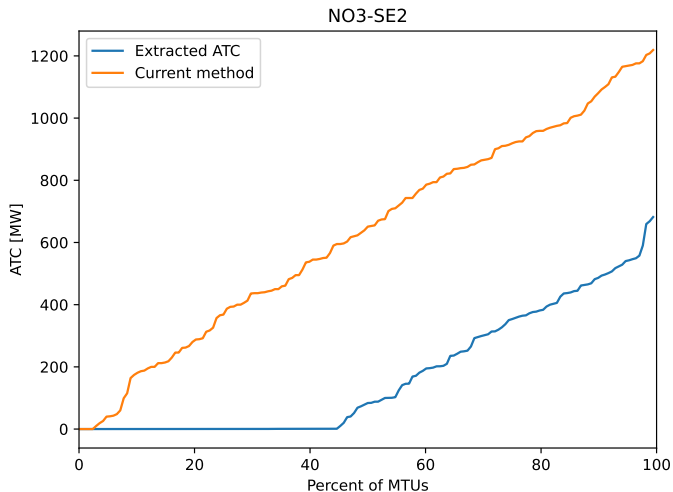
NO3-NO5 ATC duration curves



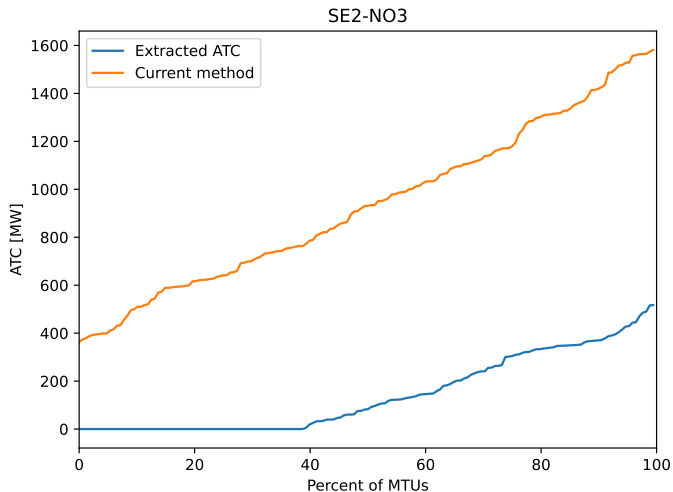
NO5-NO3 ATC duration curves



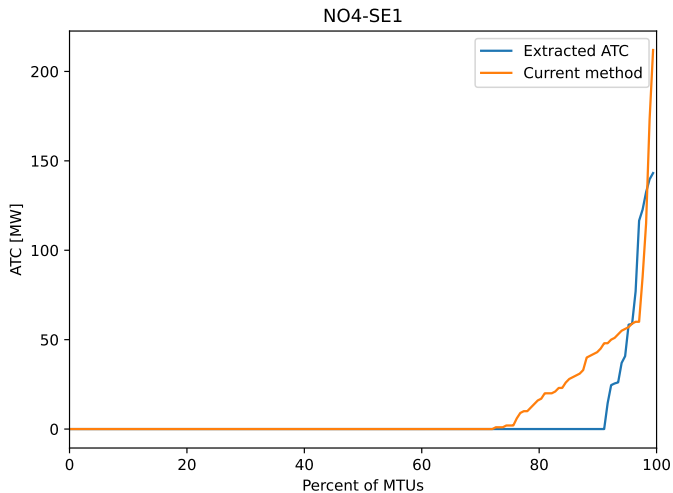
NO3-SE2 ATC duration curves



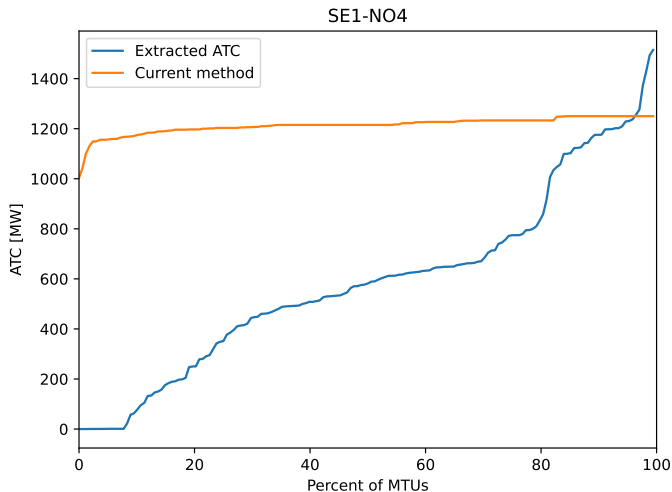
SE2-NO3 ATC duration curves



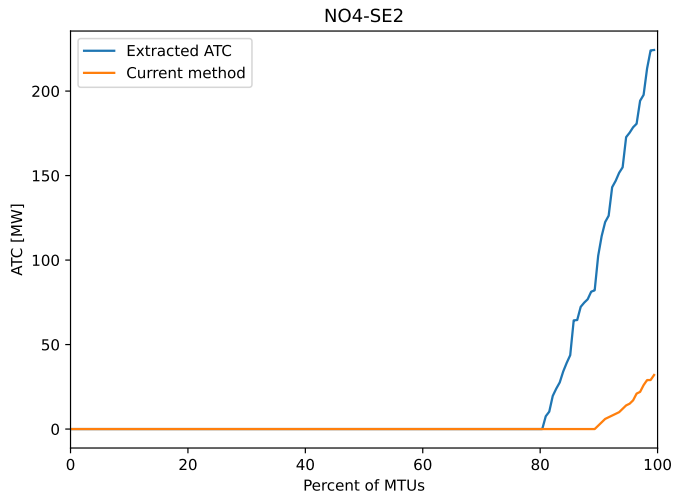
NO4-SE1 ATC duration curves



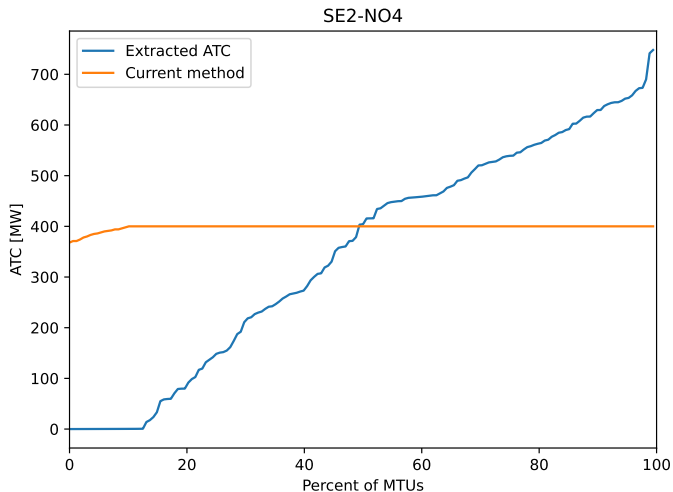
SE1-NO4 ATC duration curves



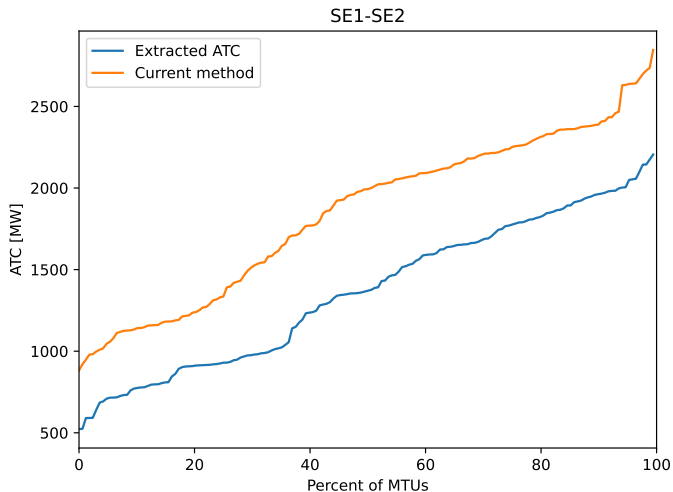
NO4-SE2 ATC duration curves



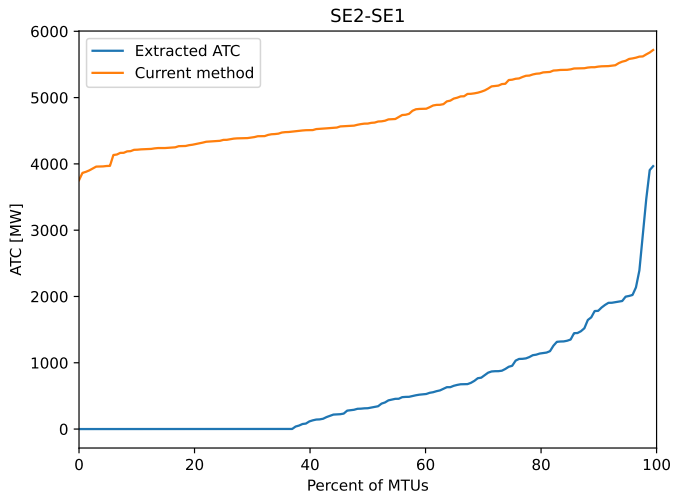
SE2-NO4 ATC duration curves



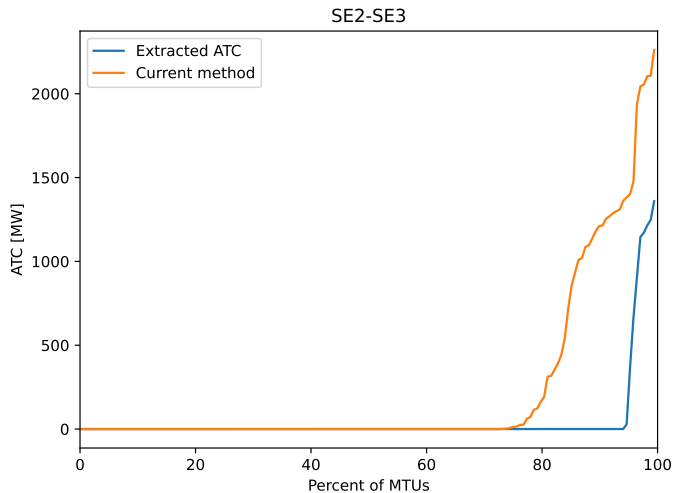
SE1-SE2 ATC duration curves



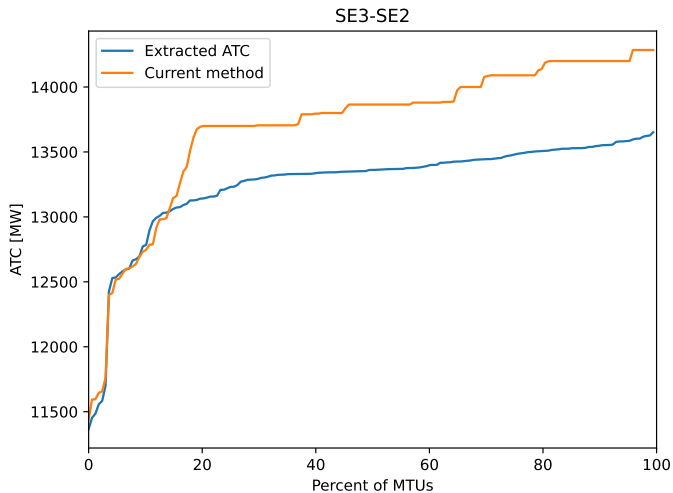
SE2-SE1 ATC duration curves



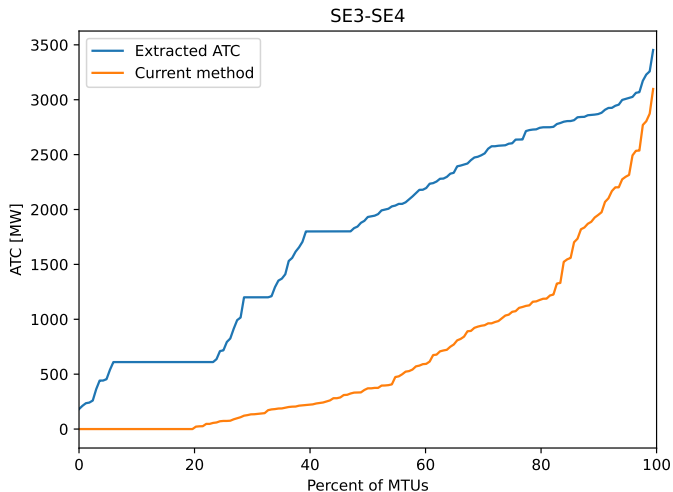
SE2-SE3 ATC duration curves



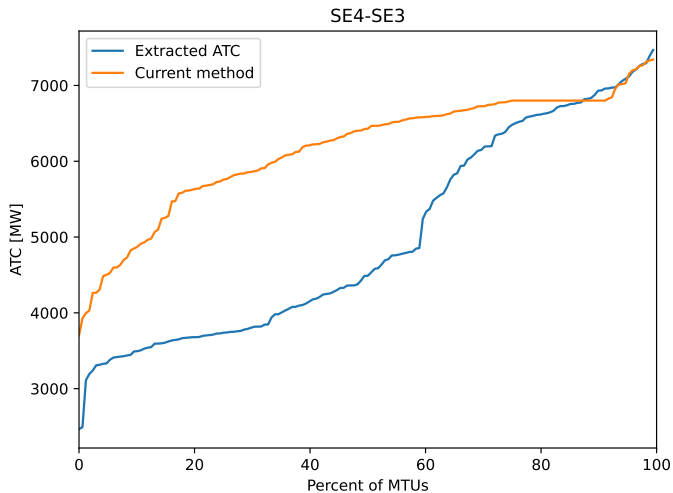
SE3-SE2 ATC duration curves



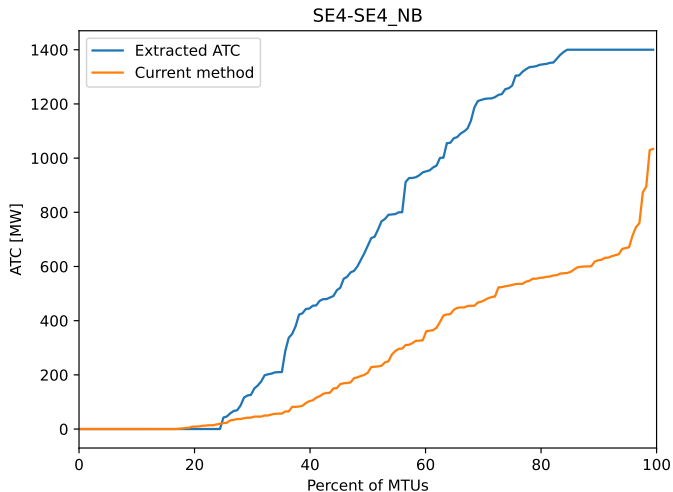
SE3-SE4 ATC duration curves



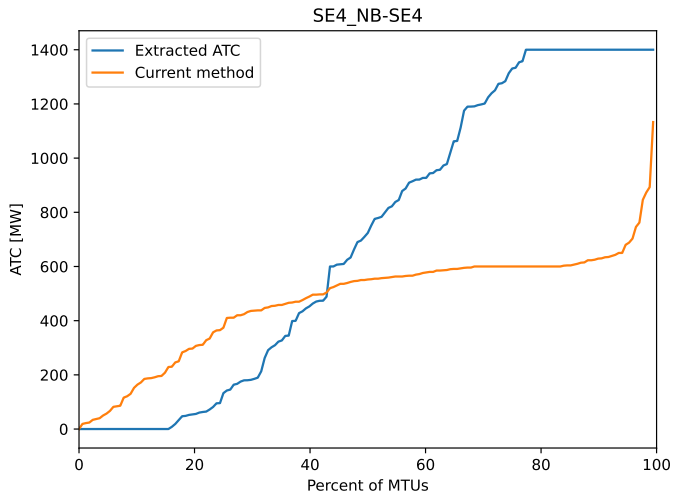
SE4-SE3 ATC duration curves



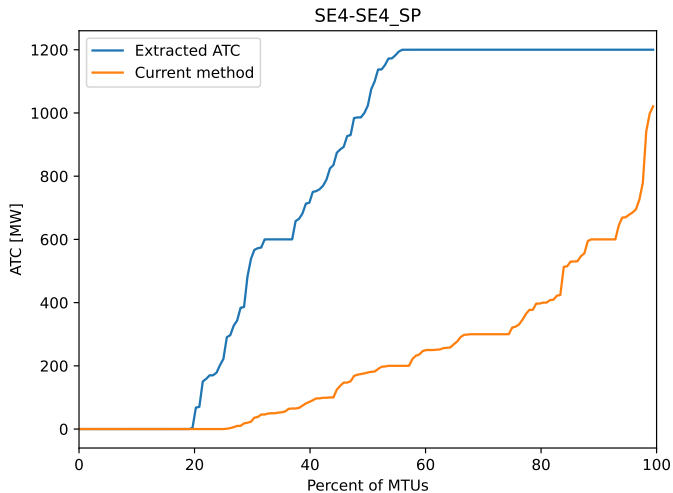
SE4-SE4_NB ATC duration curves



SE4_NB-SE4 ATC duration curves



SE4-SE4_SP ATC duration curves



SE4_SP-SE4 ATC duration curves

