

# SN tool ATCE results W41 RAM1 10.0 RAM2 0.01 PTDF0.02 ATC Extraction Results

Nordic RCC

April 23, 2024

# 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.

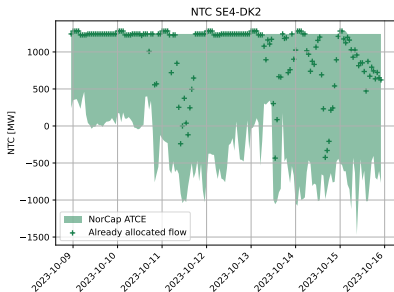
Bidding zone	#MTUs at max Export	#MTUs at max Import	#MTUs at lock-in
DK1	0	0	0
DK2	0	0	0
SE1	16	0	0
SE2	0	1	0
SE3	26	0	0
SE4	0	0	0
NO1	0	0	0
NO2	0	0	0
NO3	27	0	0
NO4	21	33	0
NO5	7	9	0
FI	0	0	0

# 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.

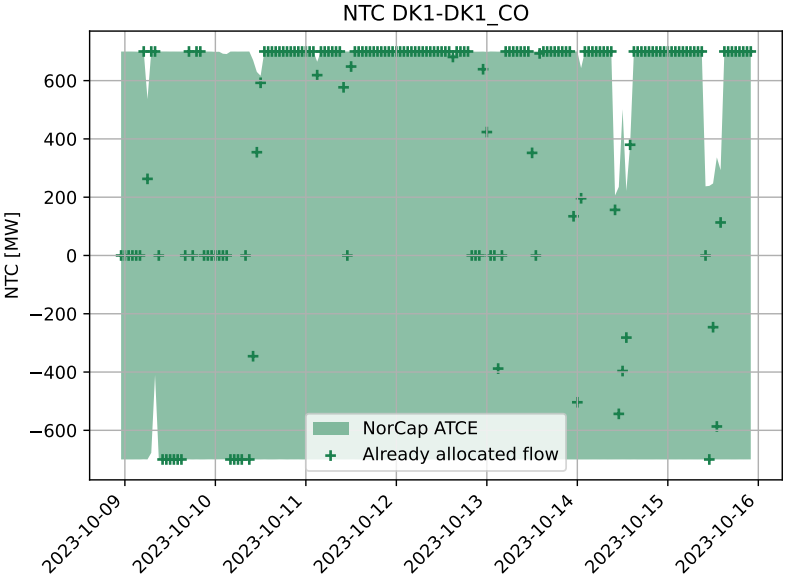
Border	#MTUs at lock-in
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# Border NTC plots - Reader's guide

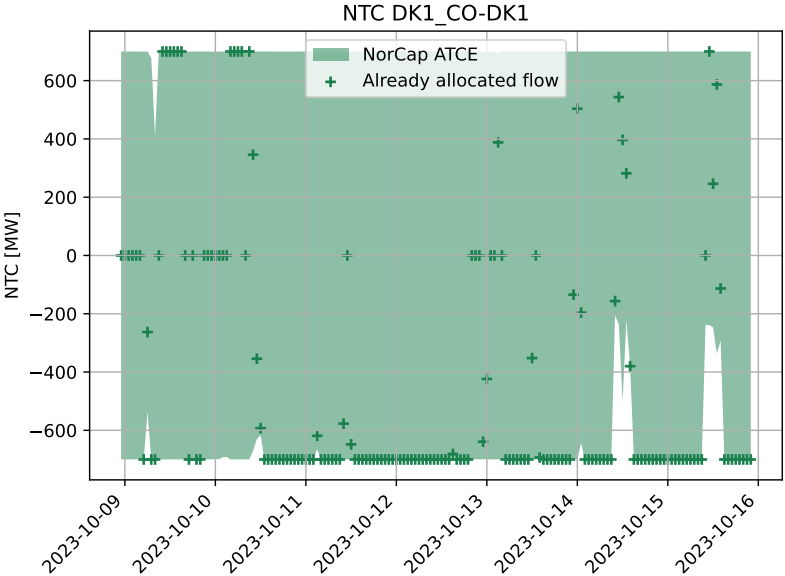


The colored area represents the possible exchange on this border and direction. The cross marks the simulated day ahead market coupling flows. Any colored area above the cross, means that intraday market will be able to increase exchange over the day ahead market coupling flows. Any colored area below the cross means that the intraday market will be able to trade against the day ahead market.

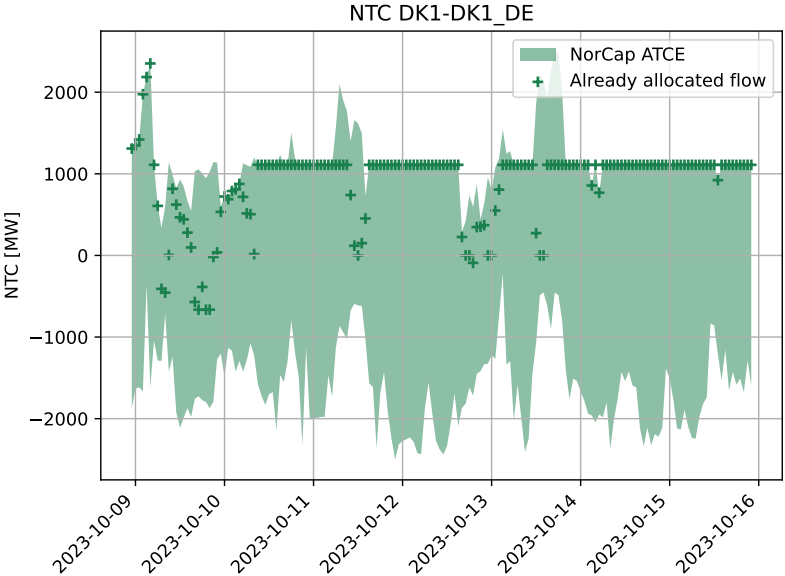
# DK1-DK1\_CO



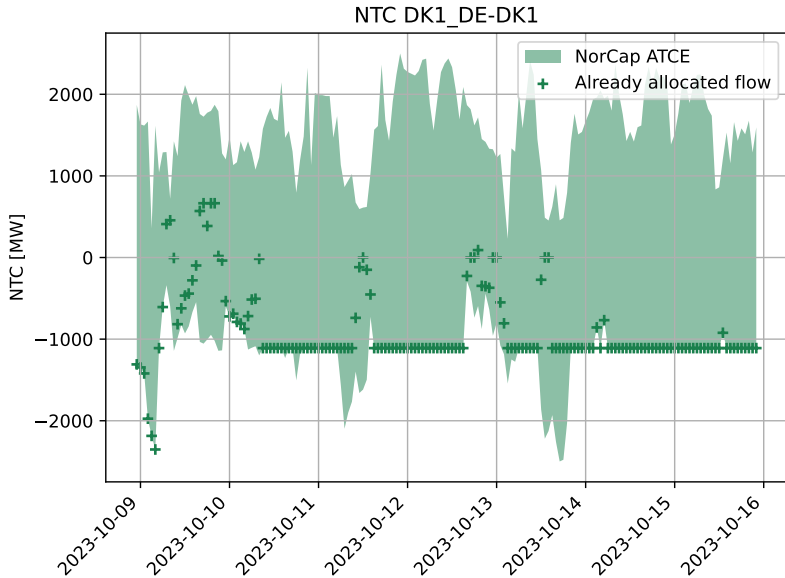
# DK1\_CO-DK1



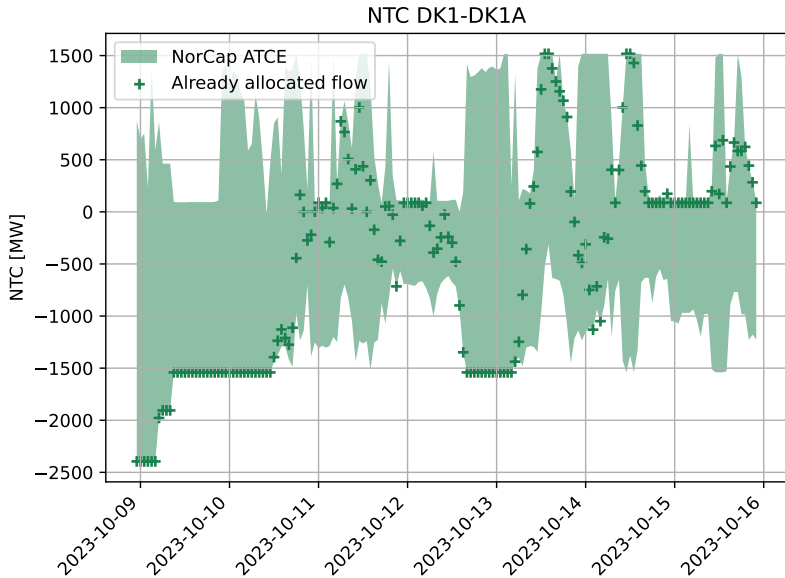
# DK1-DK1\_DE



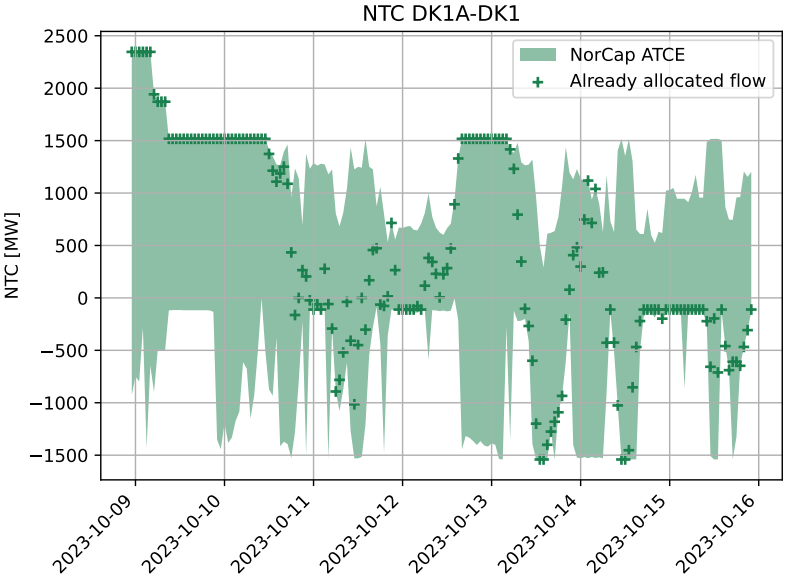
# DK1\_DE-DK1



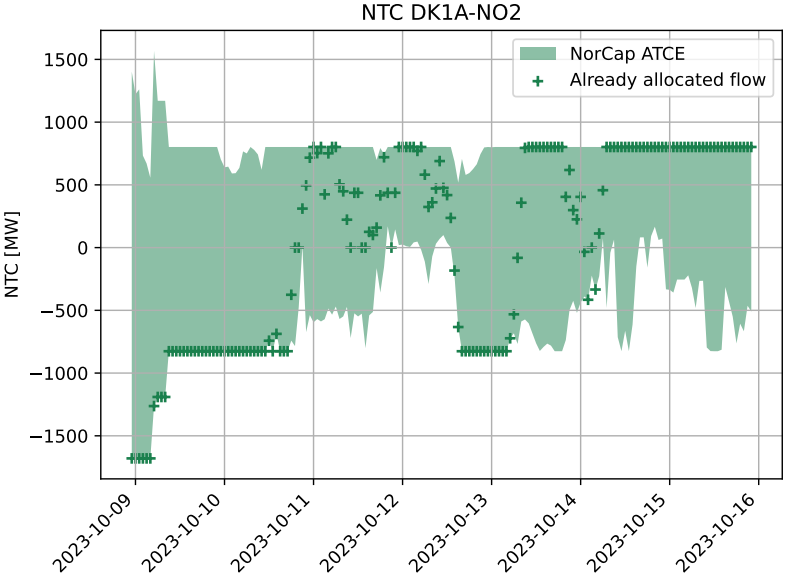
# DK1-DK1A



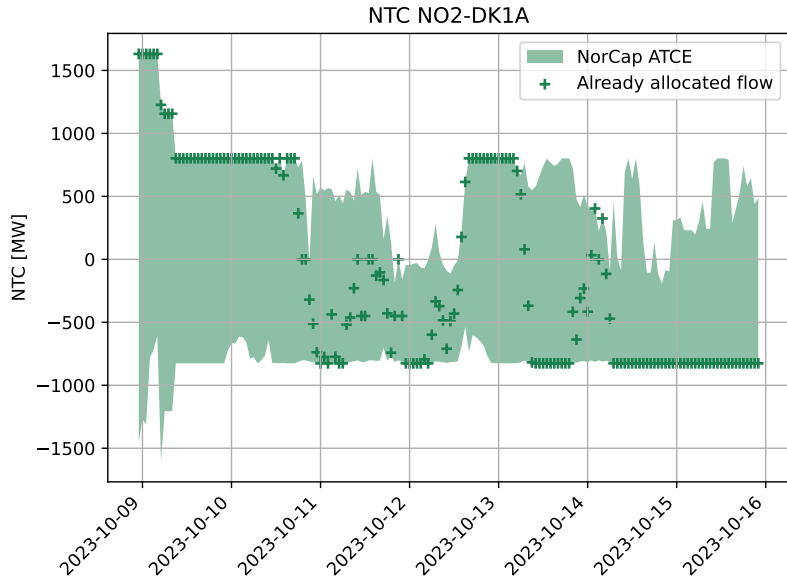
# DK1A-DK1



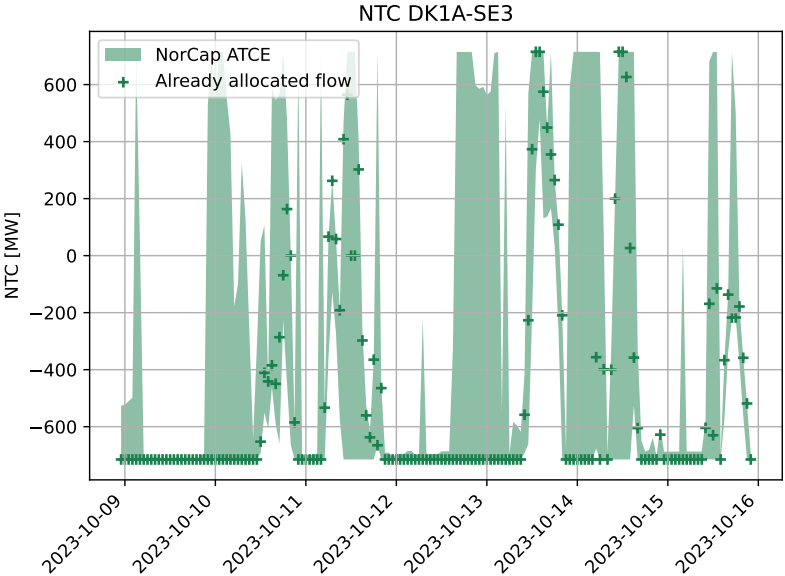
# DK1A-NO2



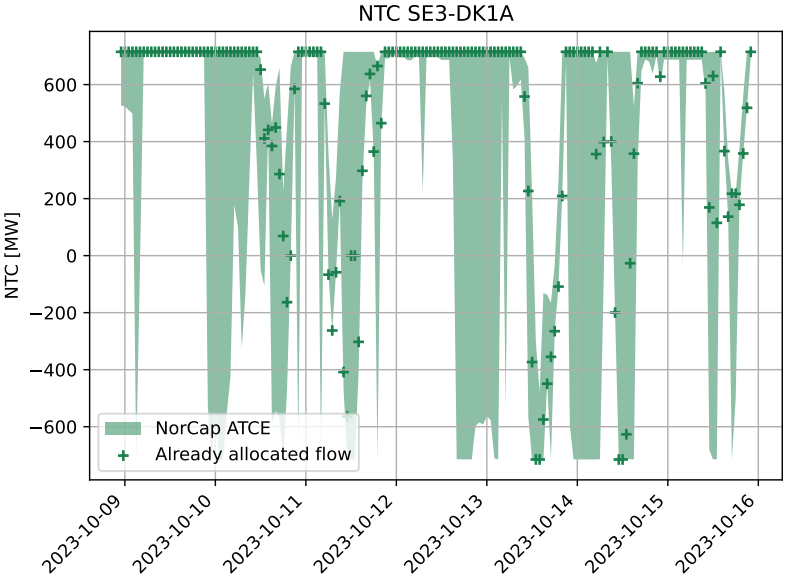
# NO2-DK1A



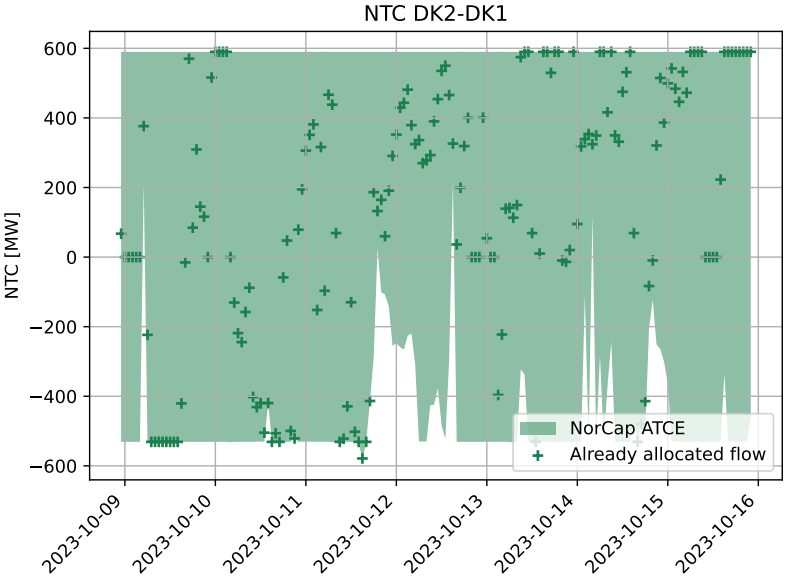
# DK1A-SE3



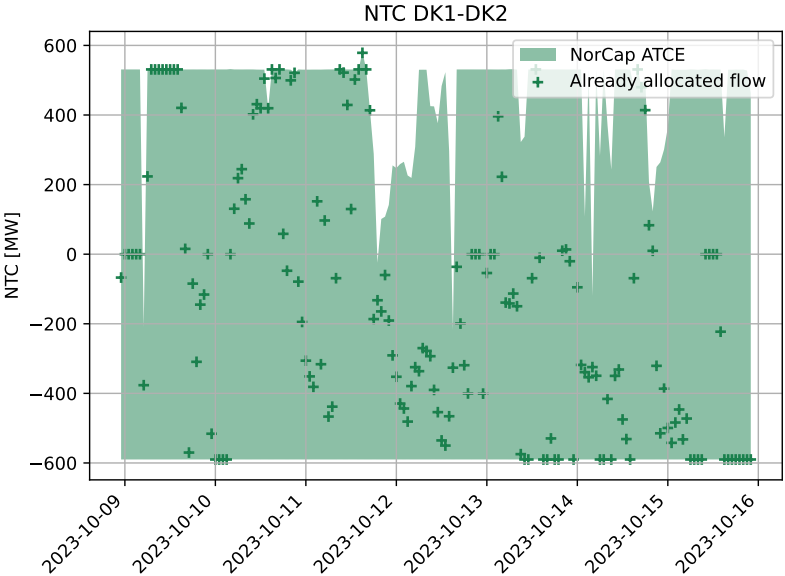
# SE3-DK1A



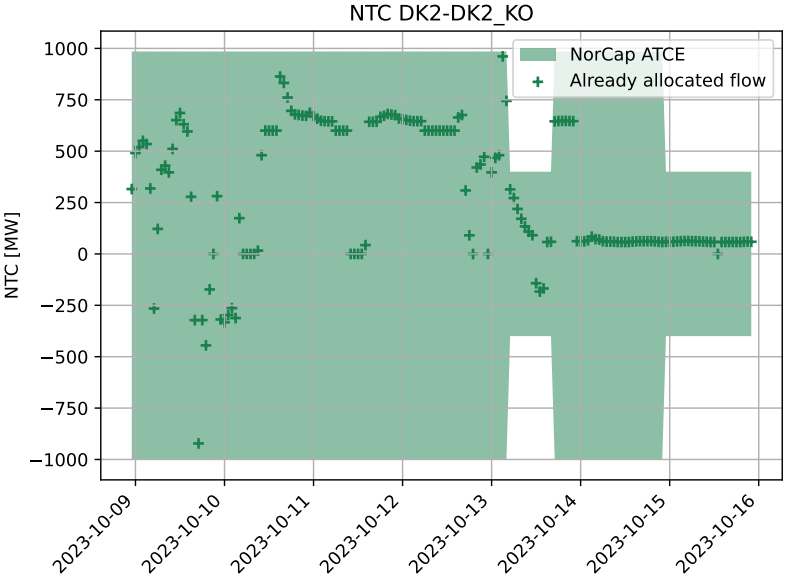
# DK2-DK1



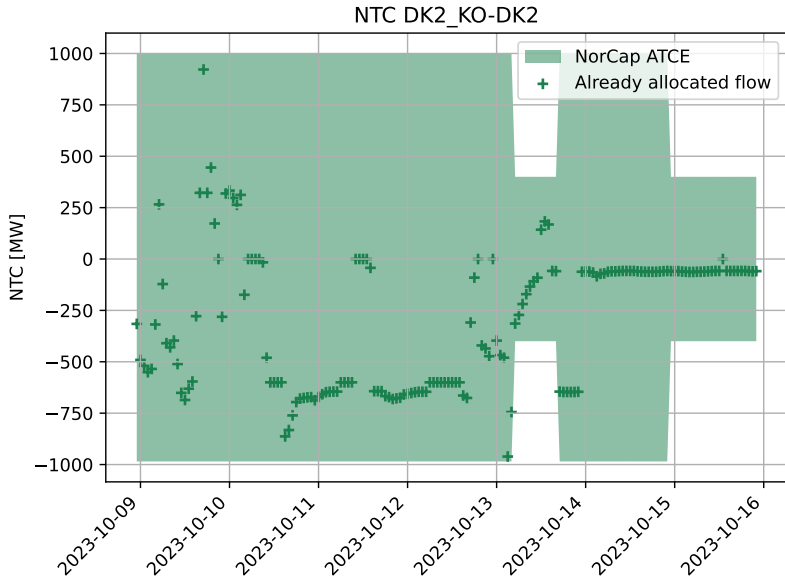
# DK1-DK2



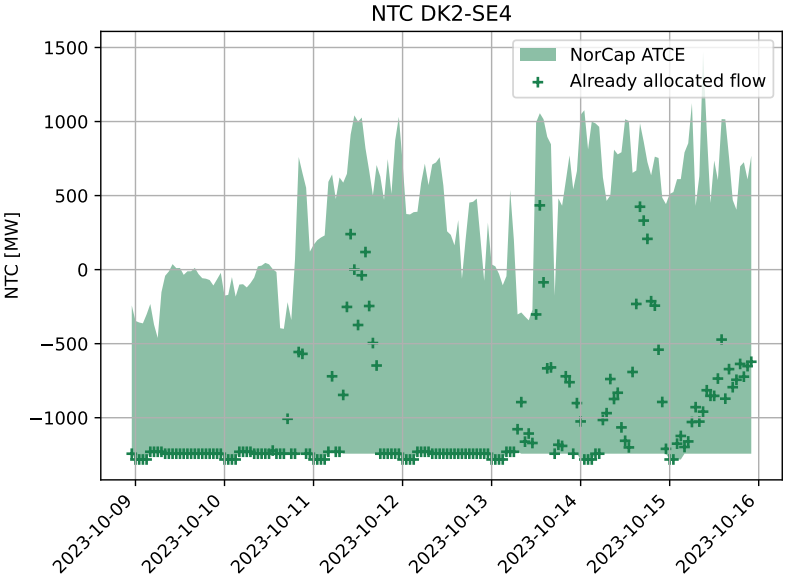
# DK2-DK2\_KO



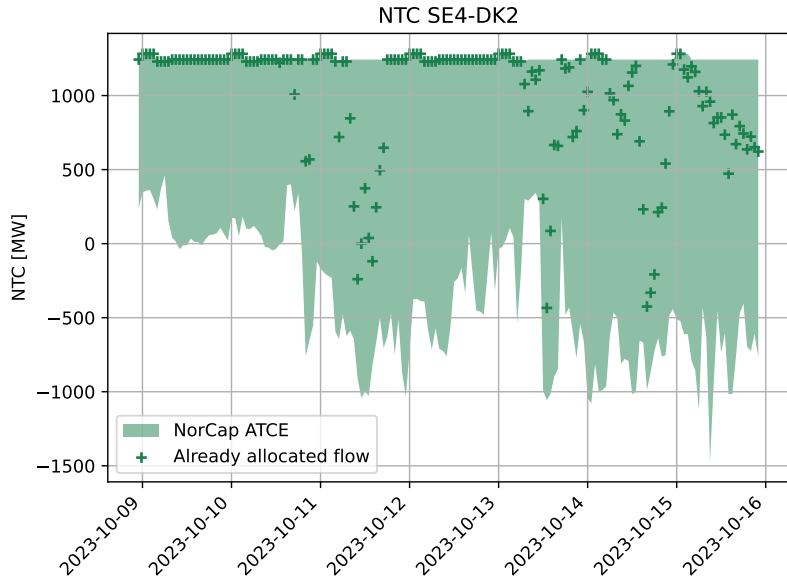
# DK2\_KO-DK2

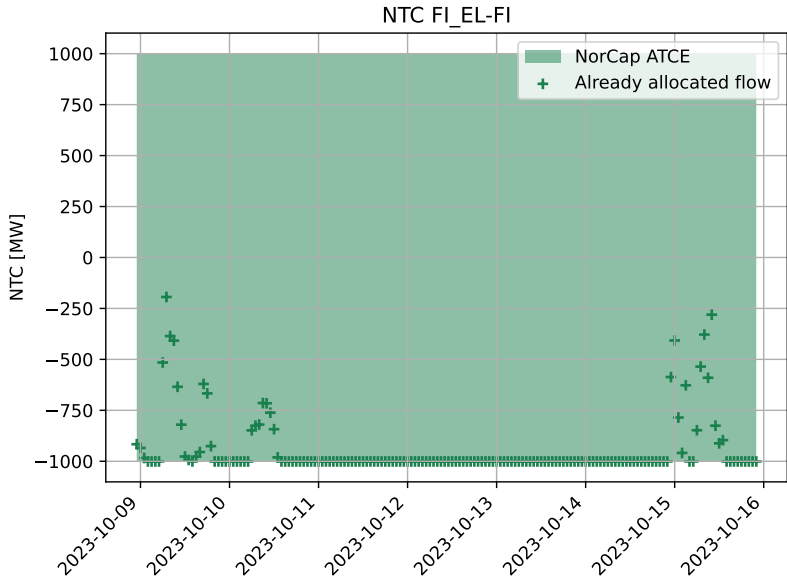


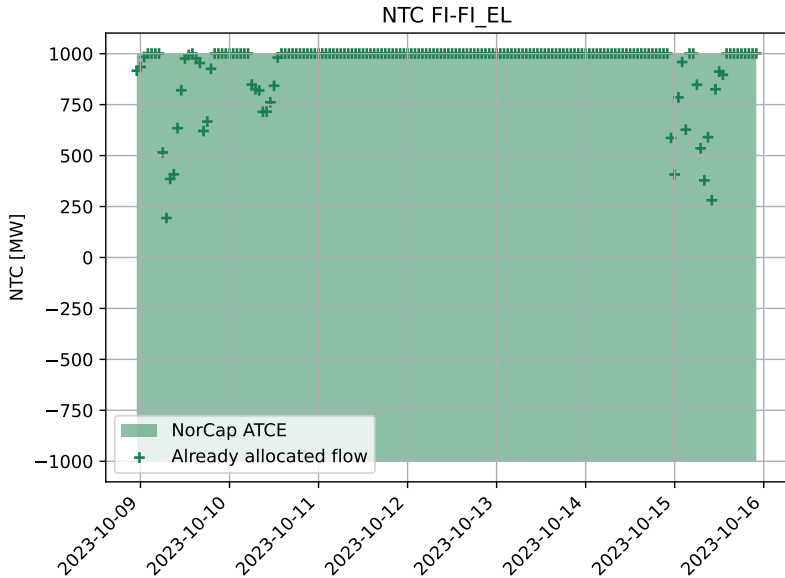
# DK2-SE4



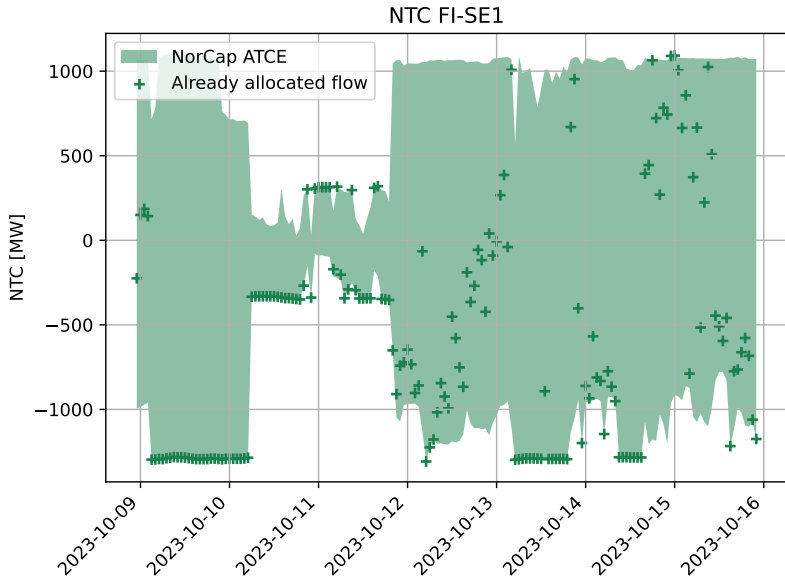
# SE4-DK2



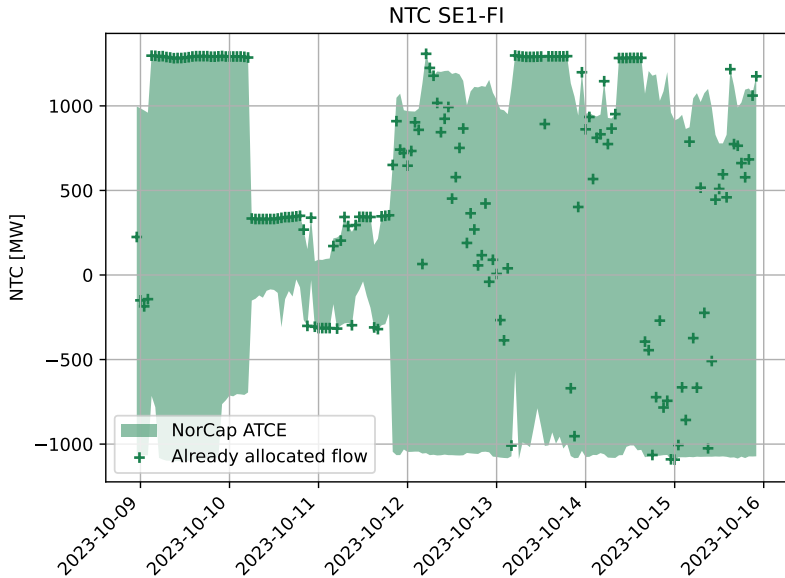


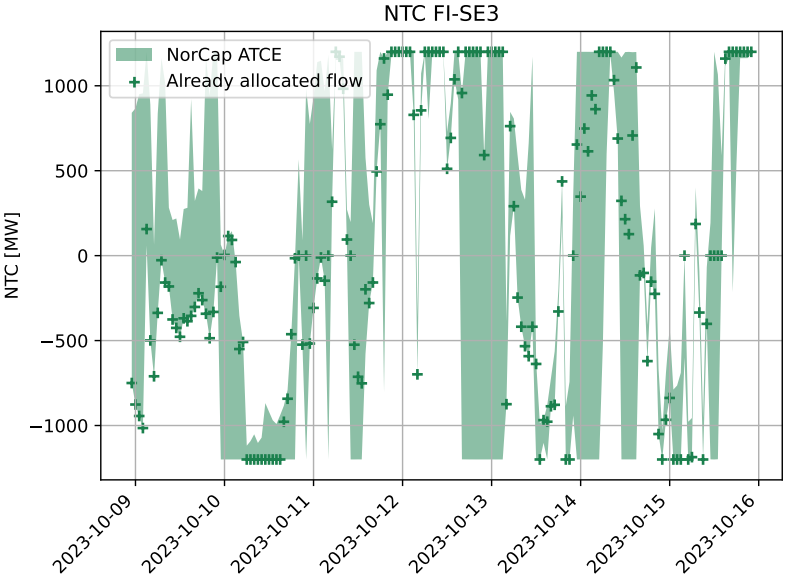


# FI-SE1

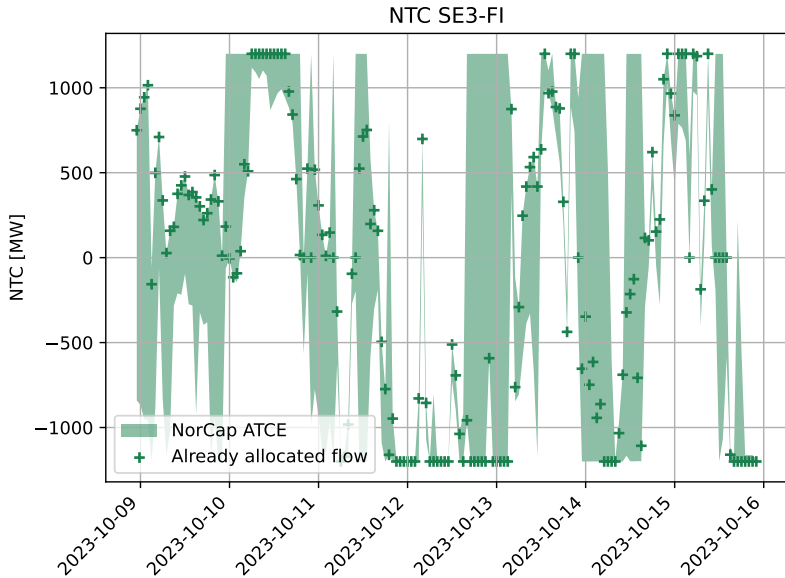


# SE1-FI

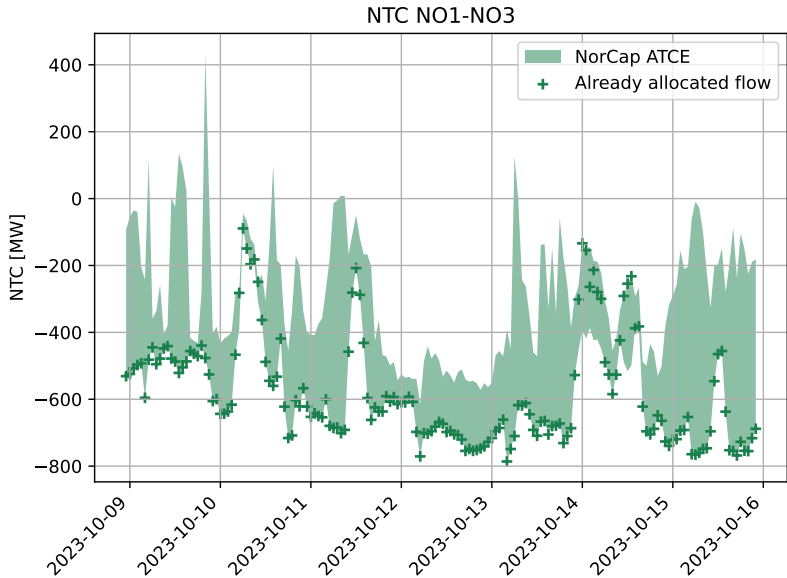




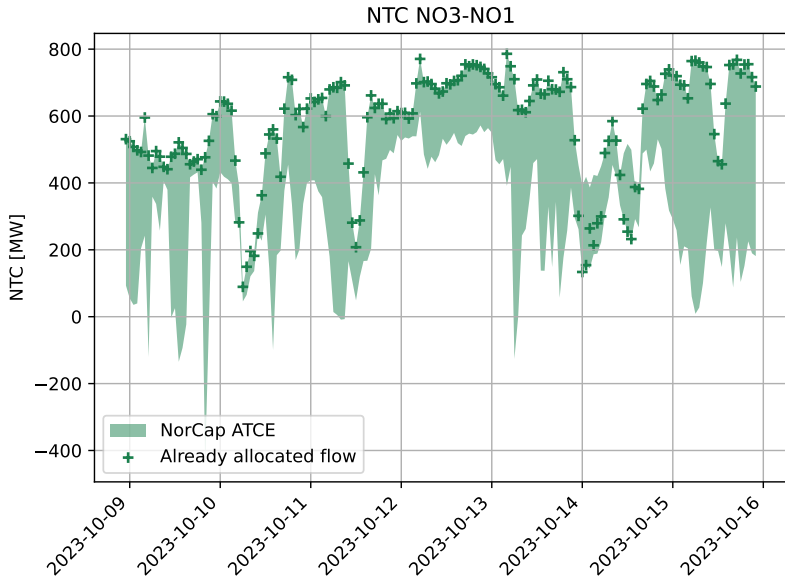
# SE3-FI



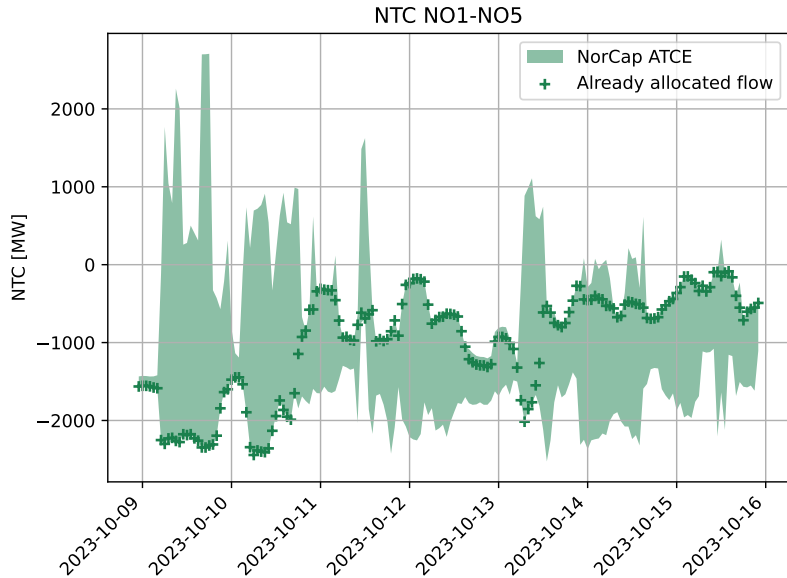
# NO1-NO3



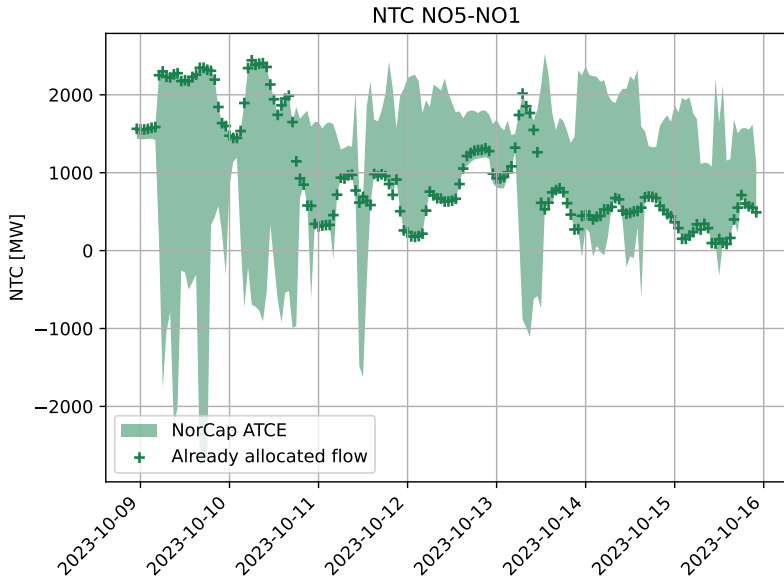
# NO3-NO1



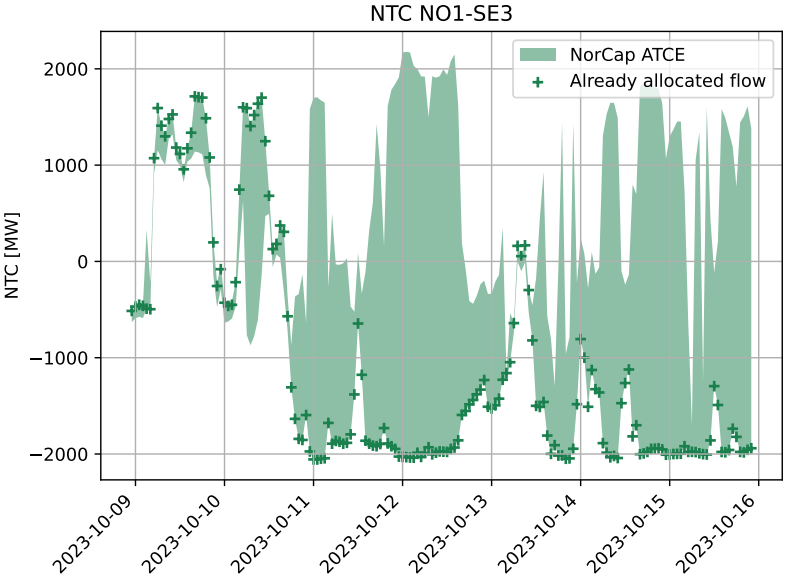
# NO1-NO5



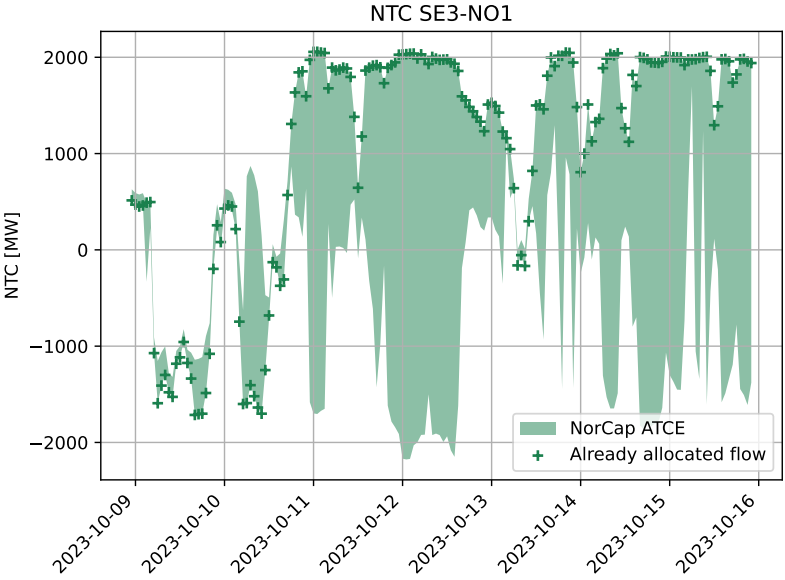
# NO5-NO1



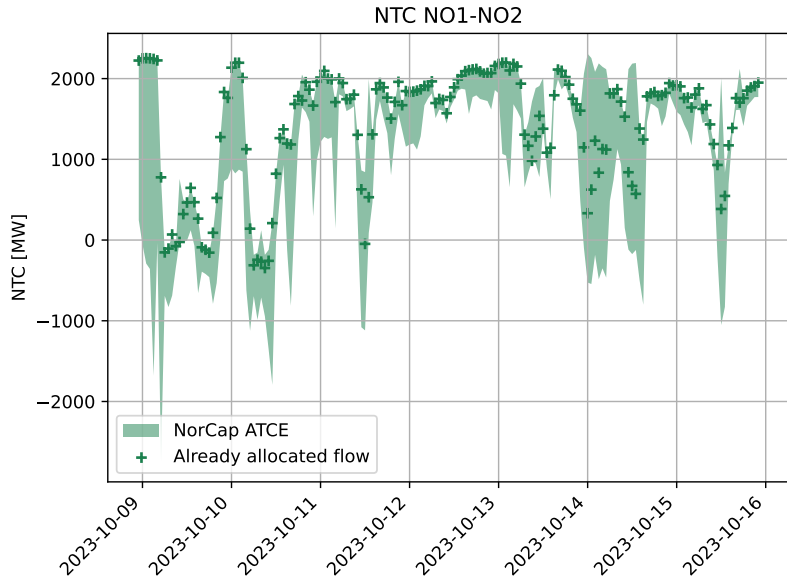
# NO1-SE3



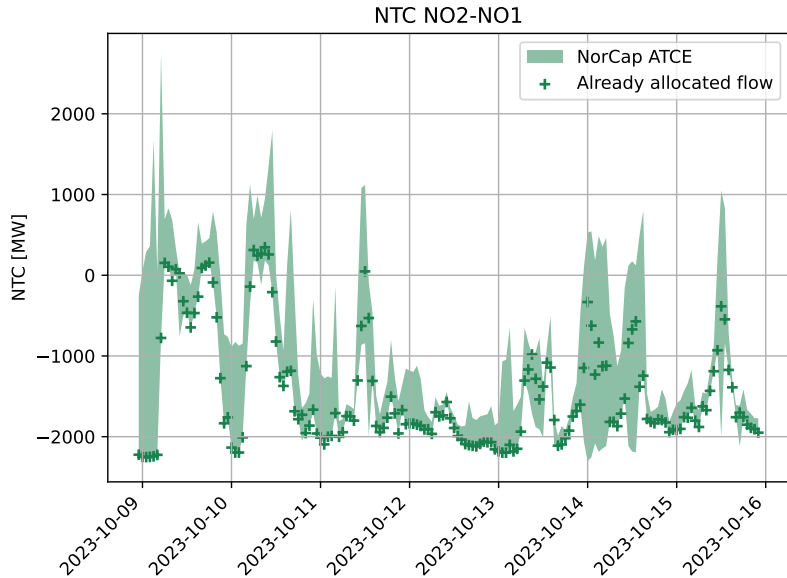
# SE3-NO1



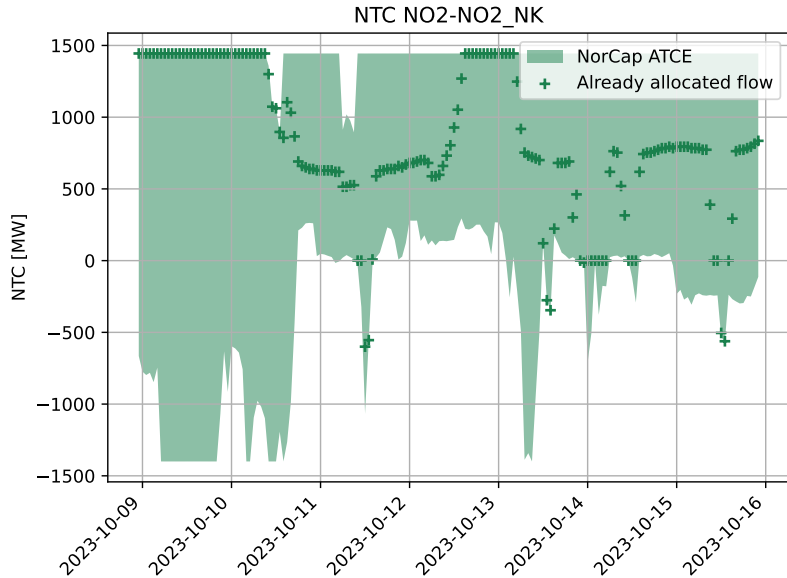
# NO1-NO2



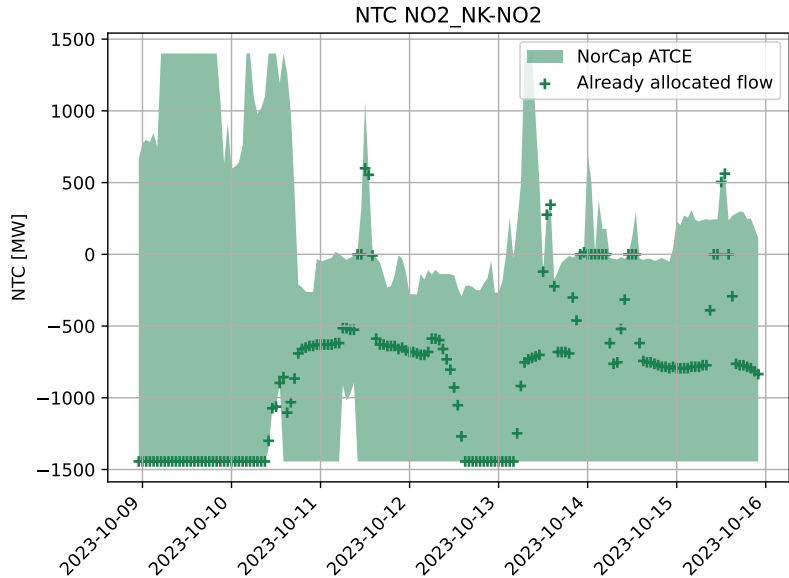
# NO2-NO1



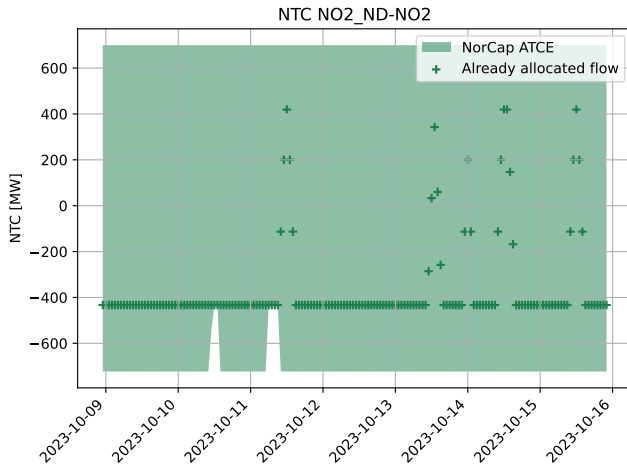
# NO2-NO2\_NK



# NO2\_NK-NO2

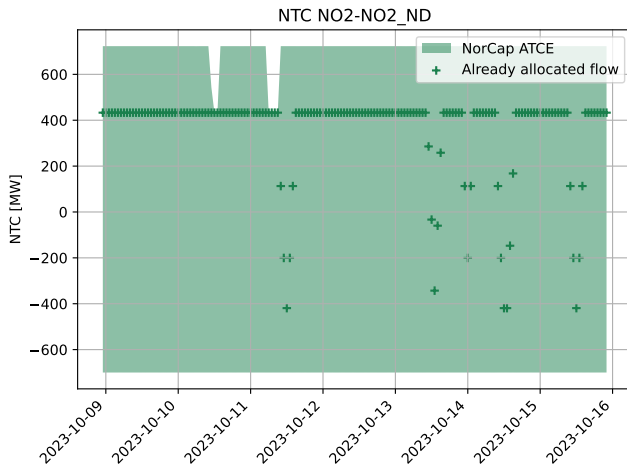


# NO2\_ND-NO2



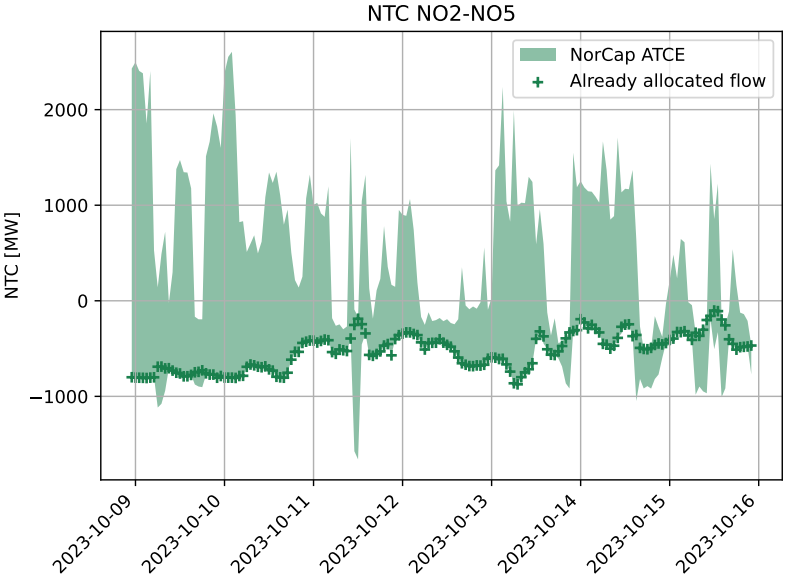
Note: NTC for NorNed includes 3.1% capacity reserved for losses. These will be subtracted in a future revision.

# NO2-NO2\_ND

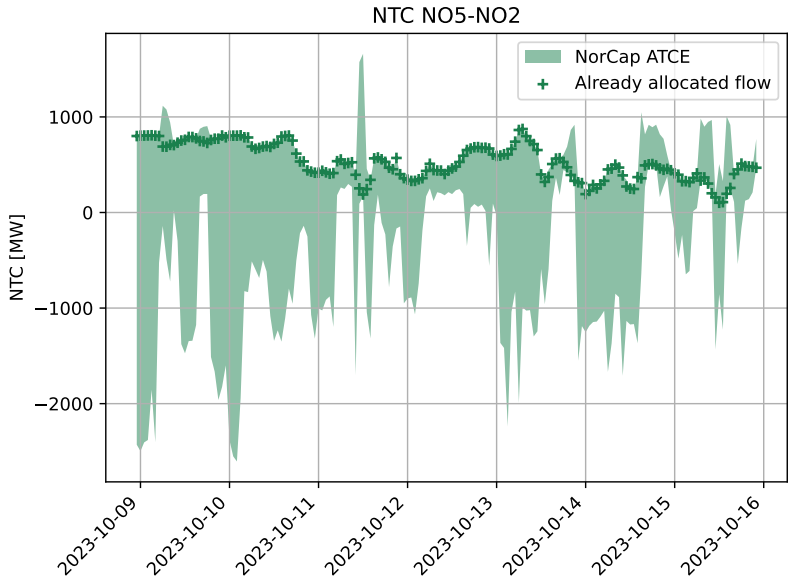


Note: NTC for NorNed includes 3.1% capacity reserved for losses. These will be subtracted in a future revision.

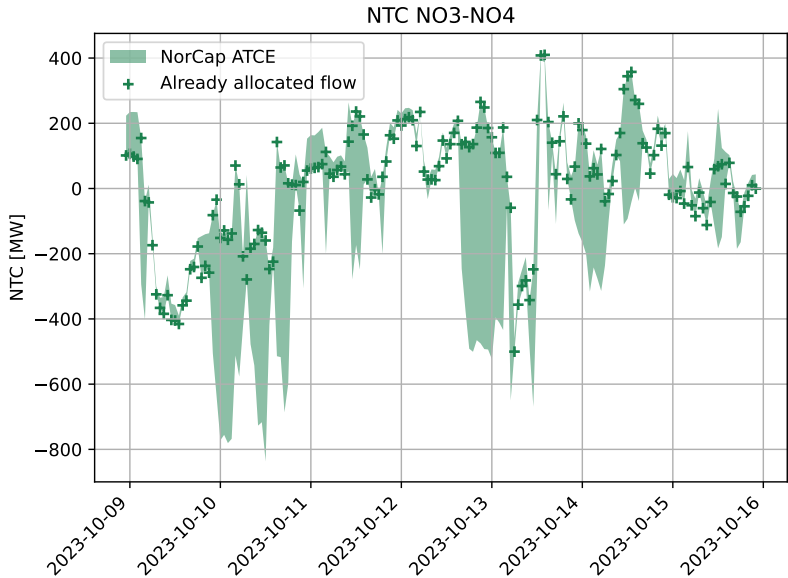
# NO2-NO5



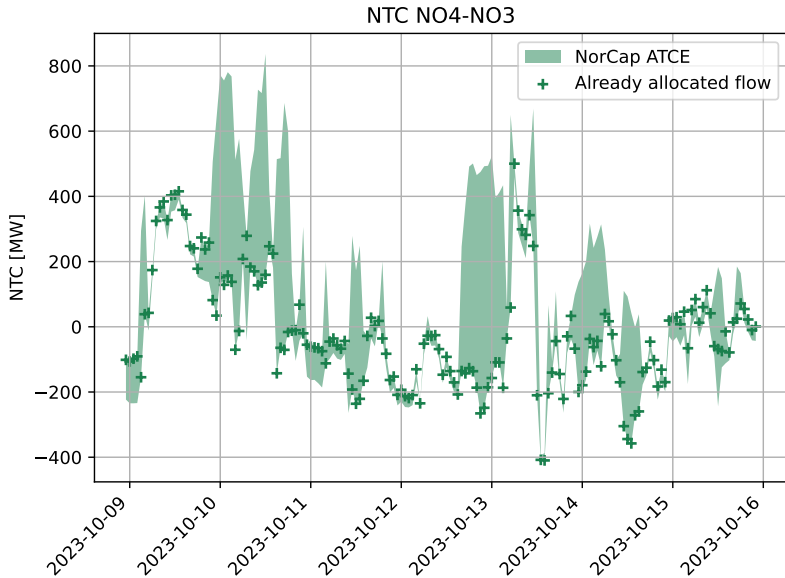
# NO5-NO2



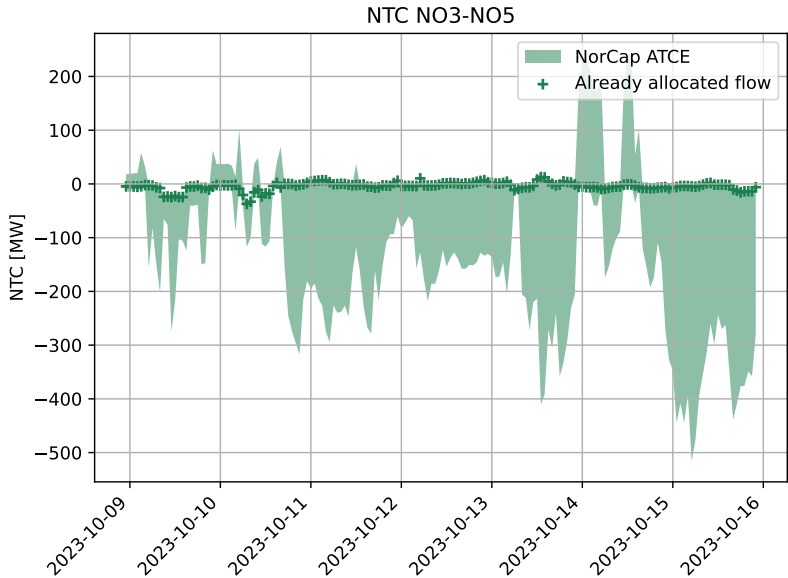
# NO3-NO4



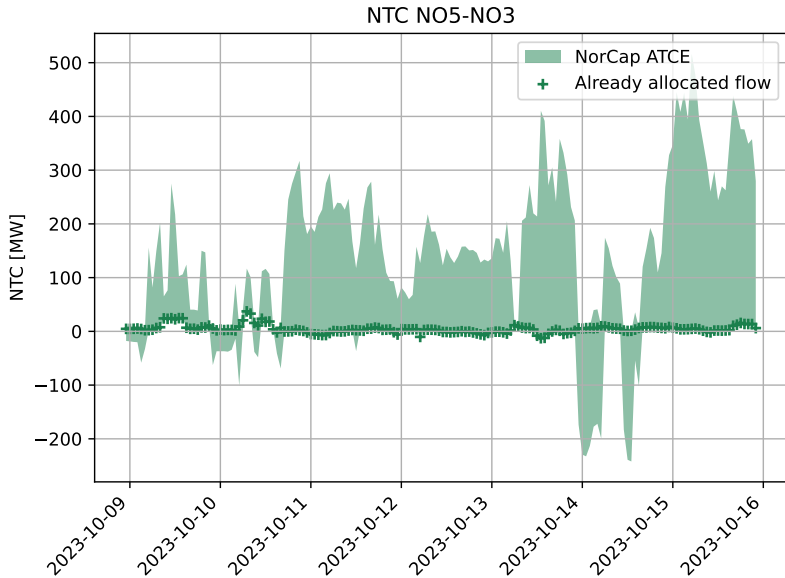
# NO4-NO3



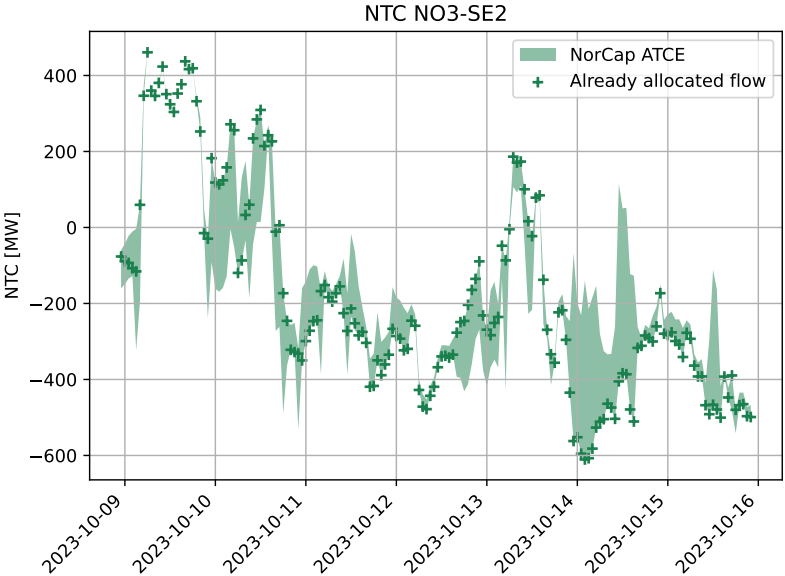
# NO3-NO5



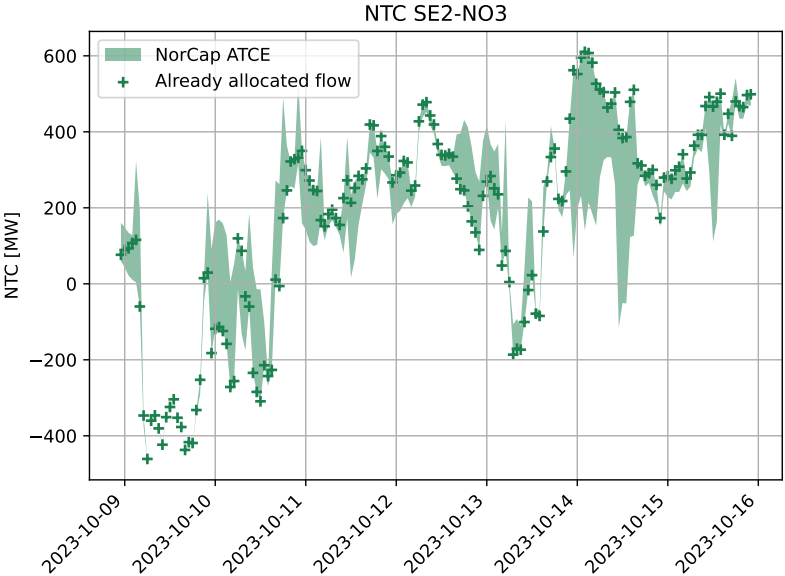
# NO5-NO3



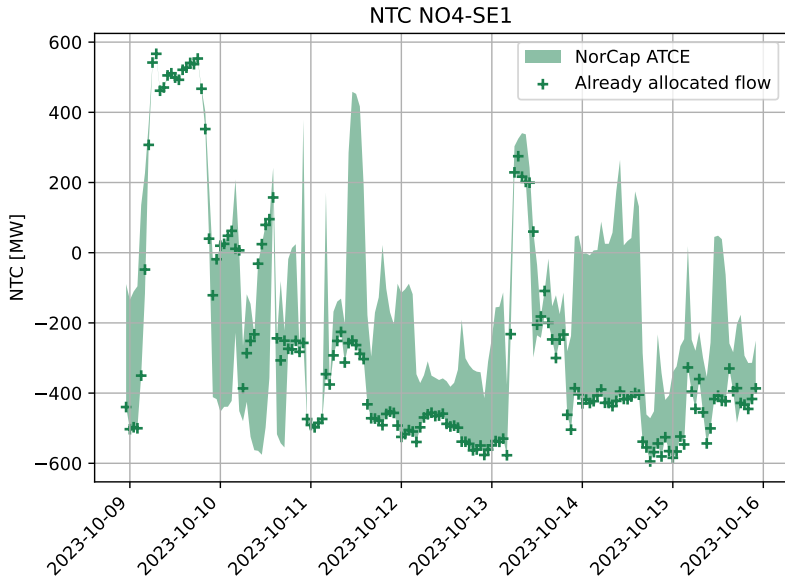
# NO3-SE2



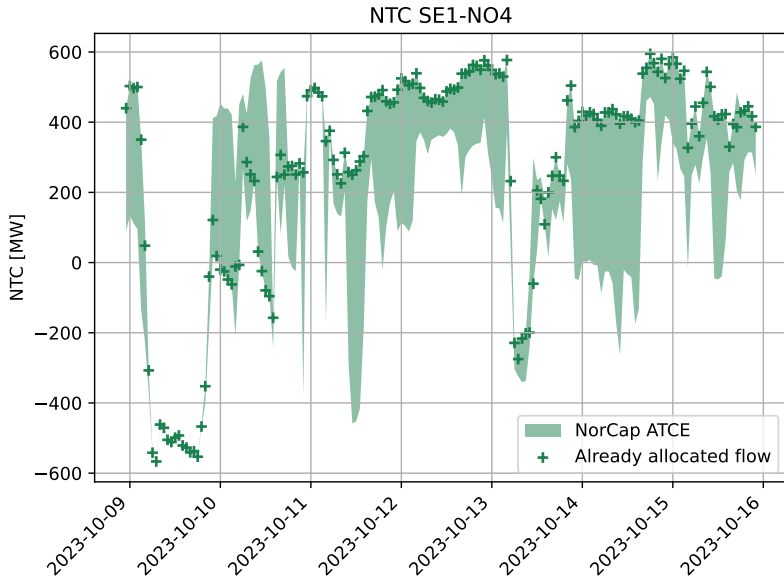
# SE2-NO3



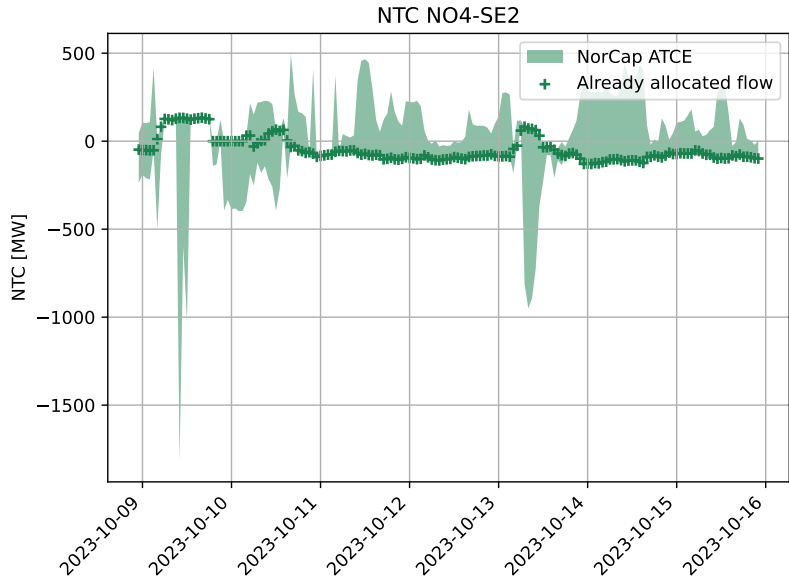
# NO4-SE1

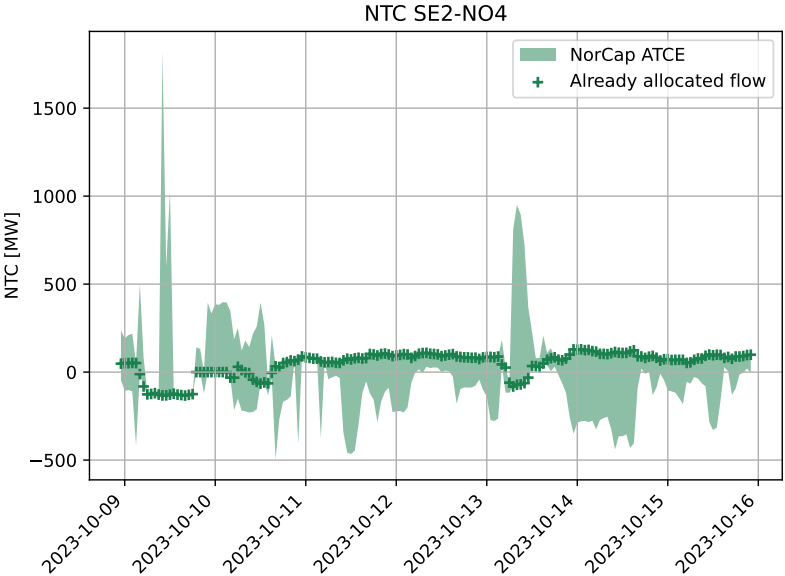


## SE1-NO4

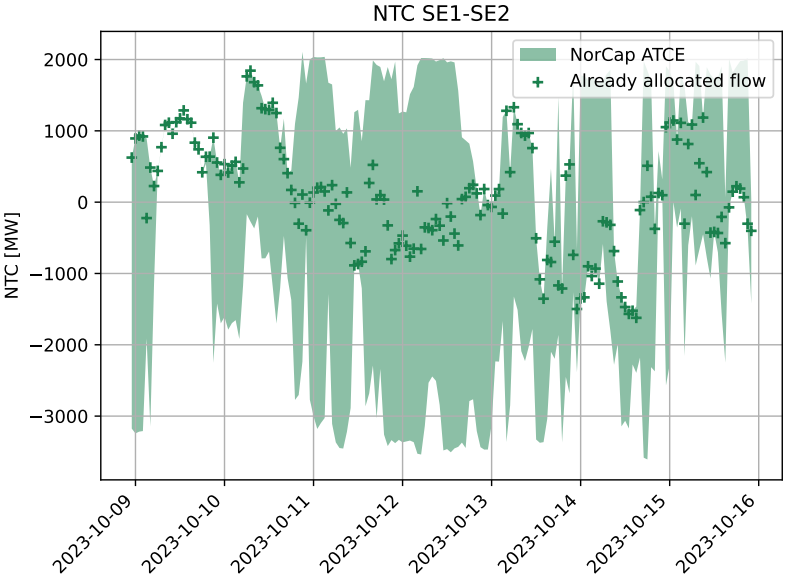


# NO4-SE2

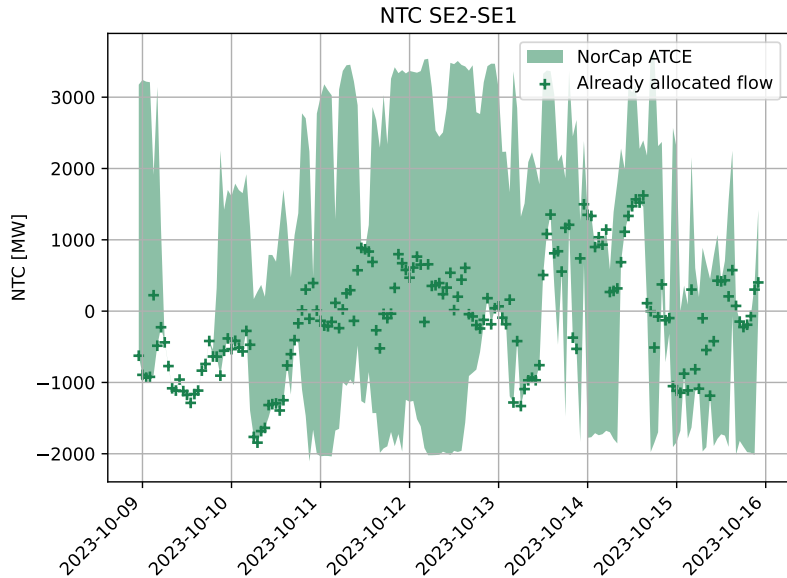




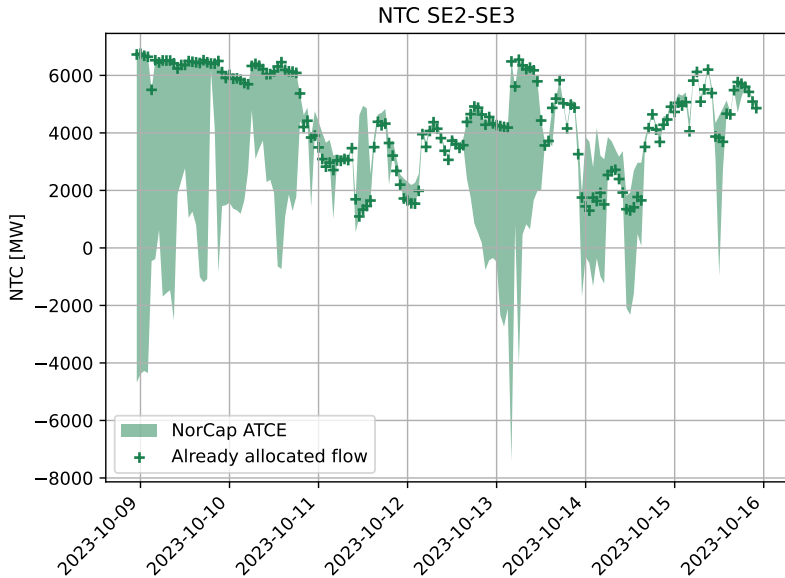
# SE1-SE2



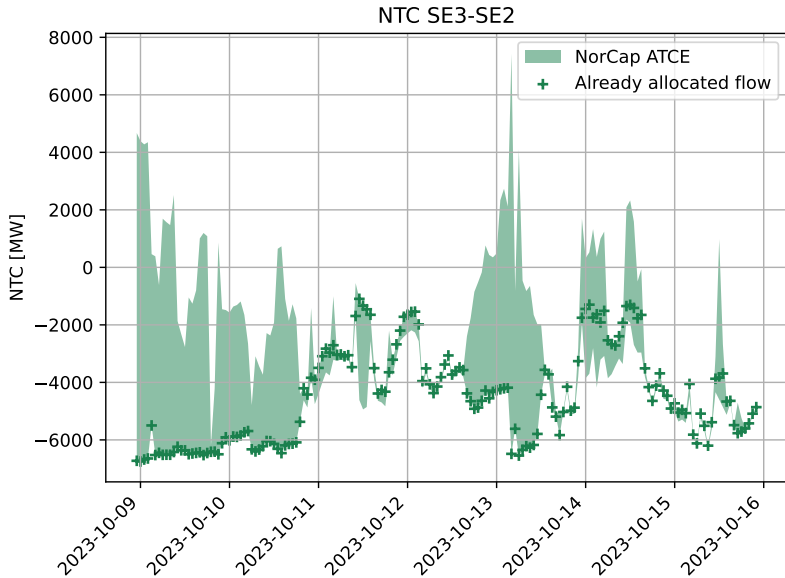
# SE2-SE1



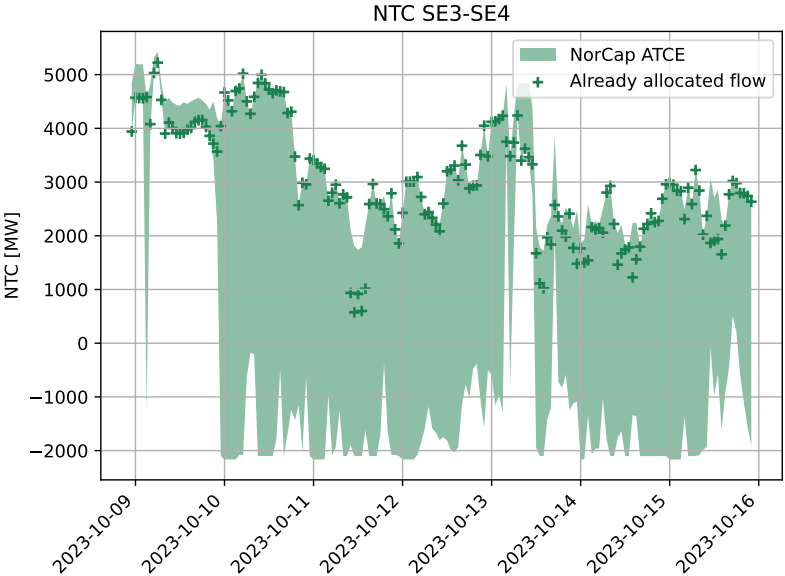
# SE2-SE3



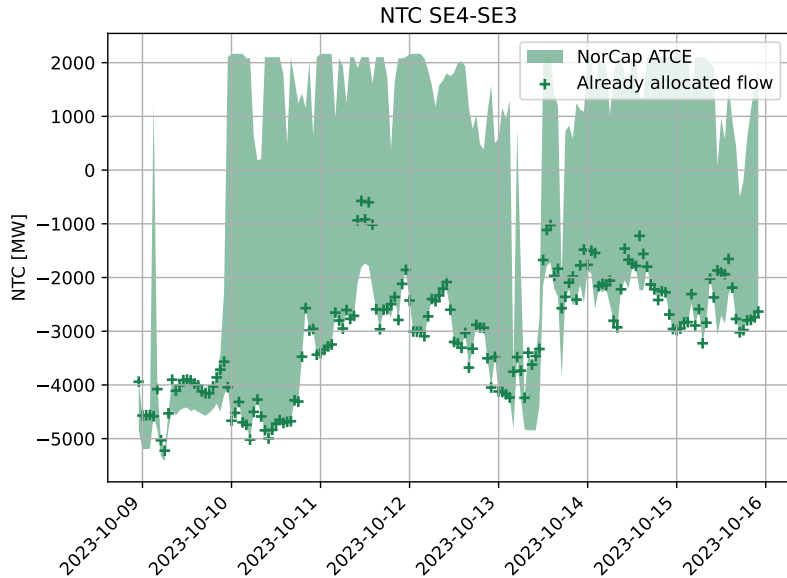
# SE3-SE2



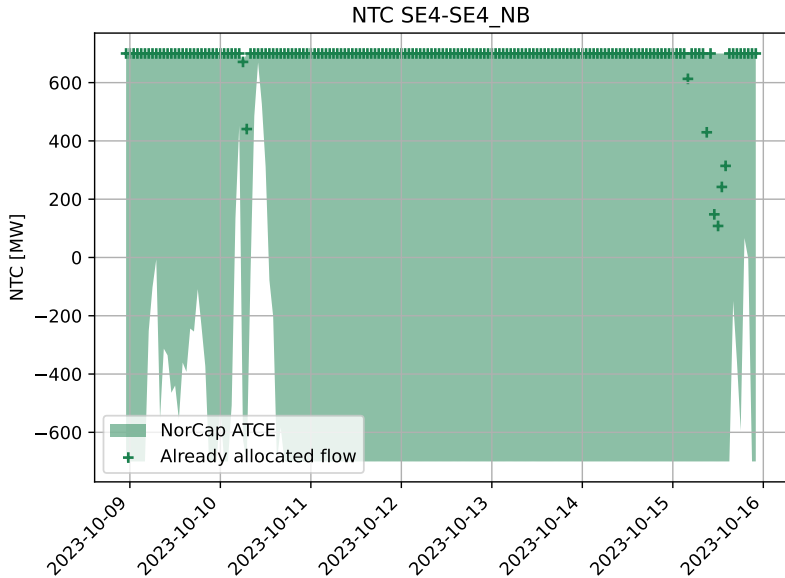
# SE3-SE4



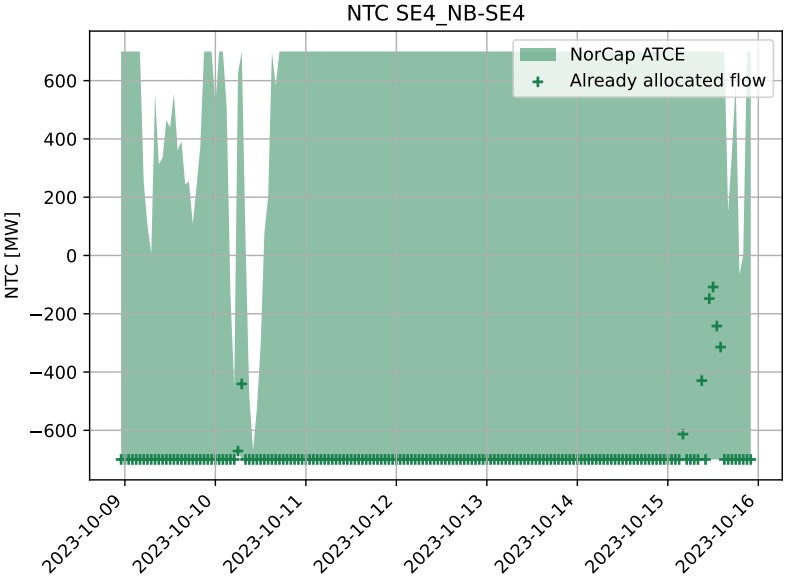
# SE4-SE3



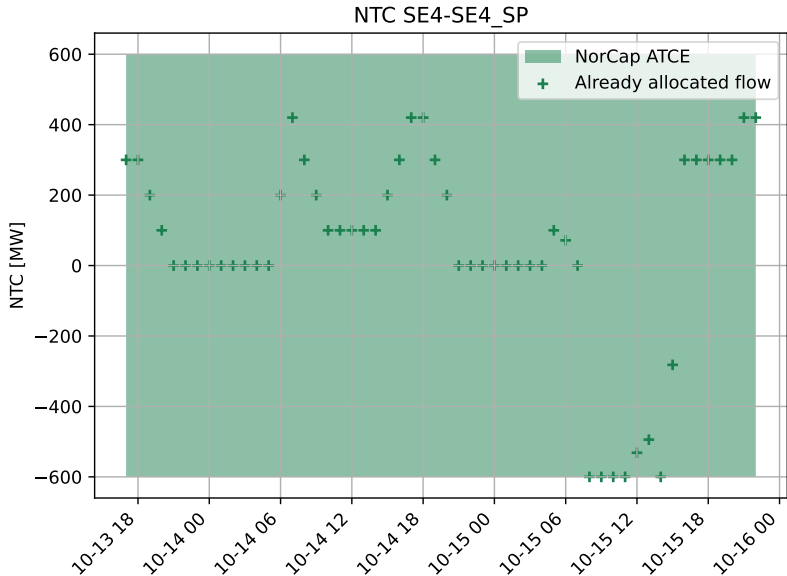
# SE4-SE4\_NB



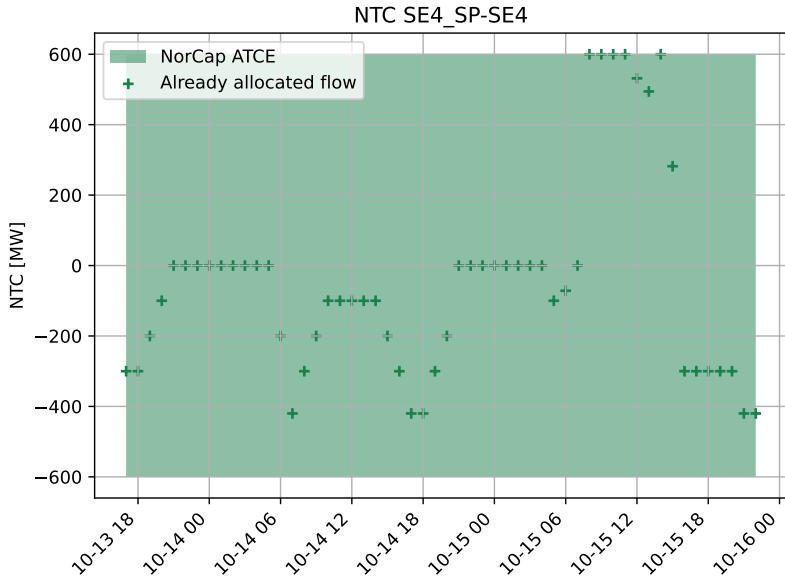
# SE4\_NB-SE4



# SE4-SE4\_SP



# SE4\_SP-SE4

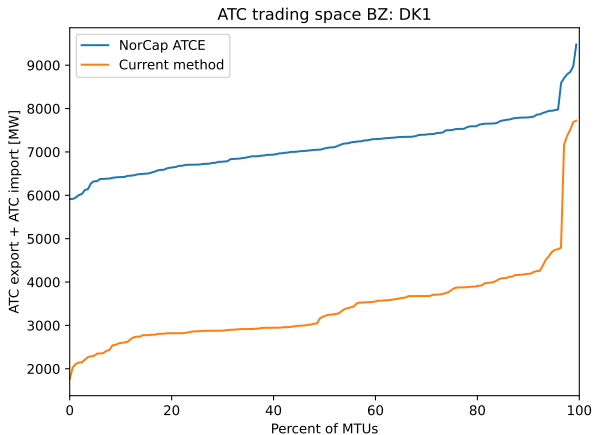


# Bidding zone trading space

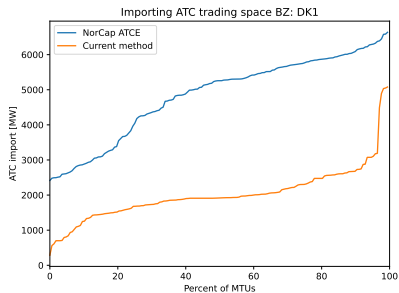
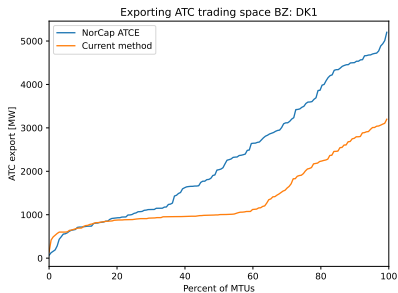
The total trading space of a bidding zone for a given MTU is the sum of export capacity and import capacity on all borders of that bidding zone for that MTU. The directional trading space is the sum of ATC on all borders of a bidding zone in either exporting or importing direction.

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 are harmonized capacities including limitations submitted by non-Nordic TSOs and ramping constraints for some HVDCs.

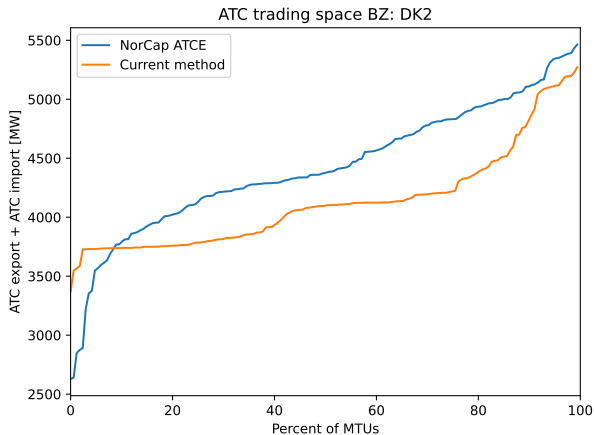
# DK1 - Total trading space



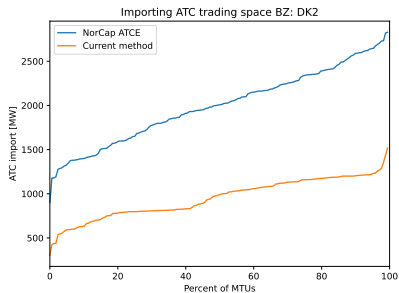
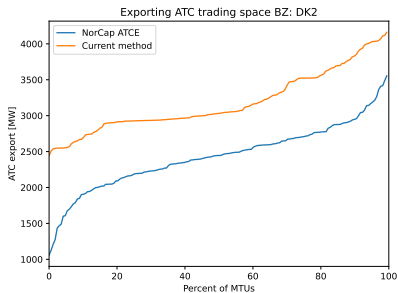
# DK1 - Directional trading space



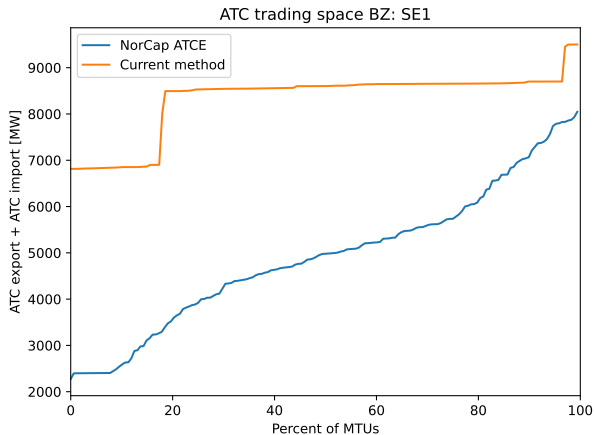
# DK2 - Total trading space



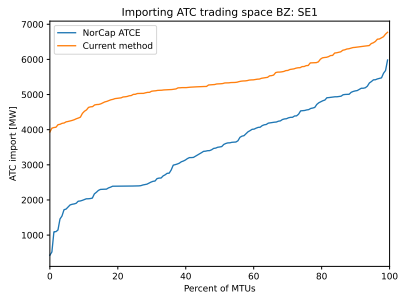
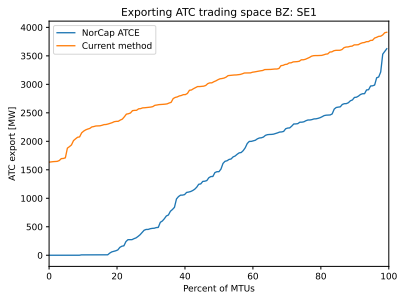
# DK2 - Directional trading space



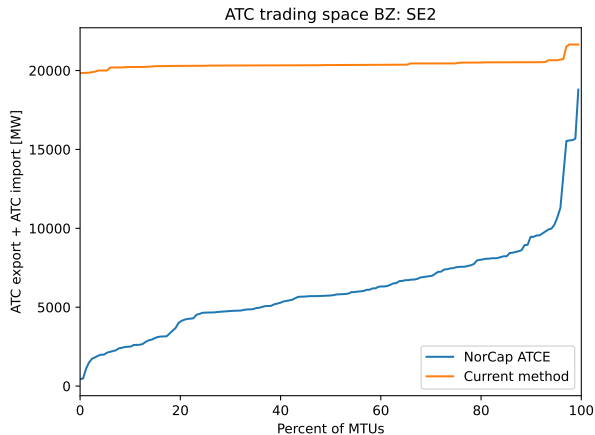
# SE1 - Total trading space



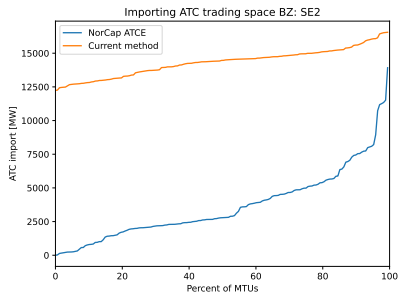
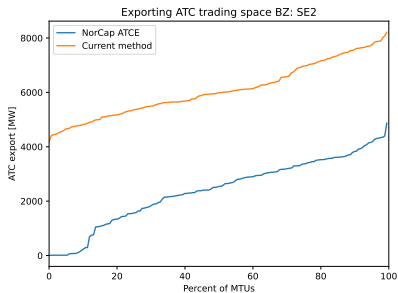
# SE1 - Directional trading space



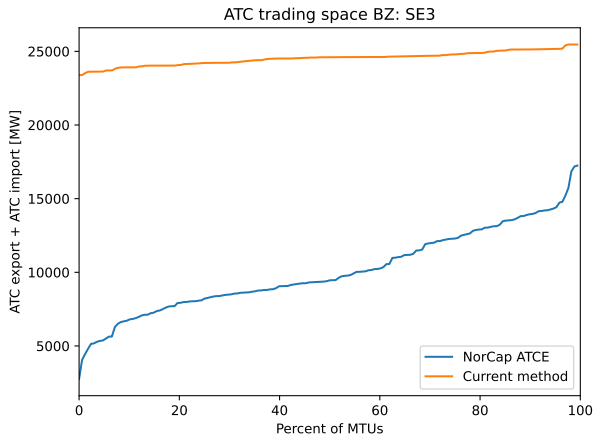
# SE2 - Total trading space



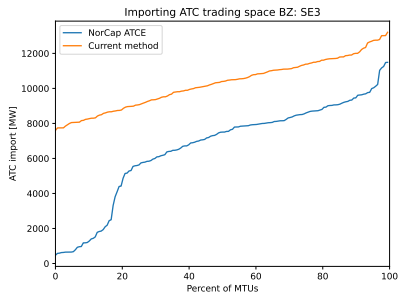
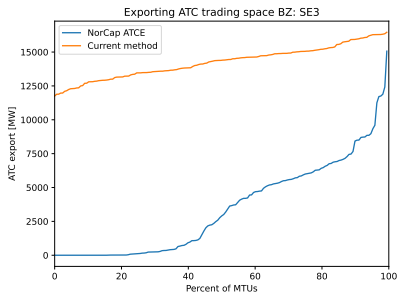
# SE2 - Directional trading space



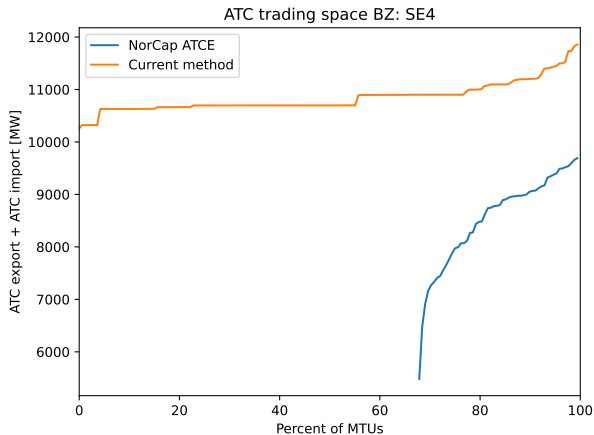
# SE3 - Total trading space



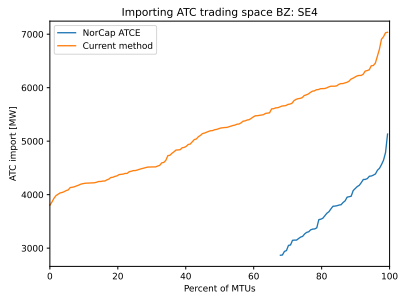
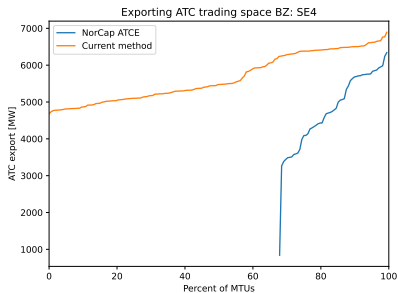
# SE3 - Directional trading space



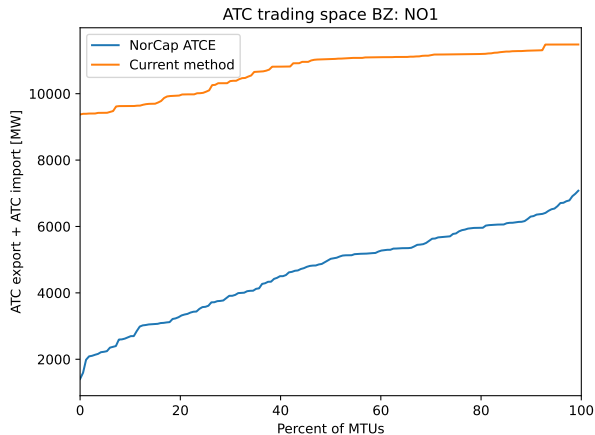
# SE4 - Total trading space



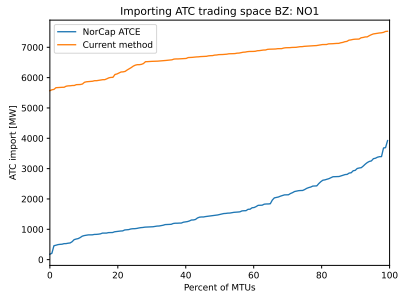
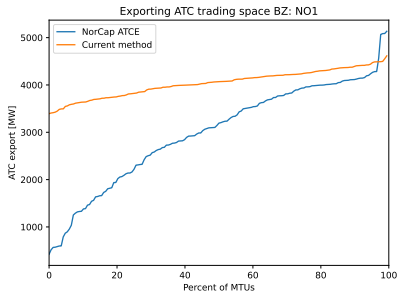
# SE4 - Directional trading space



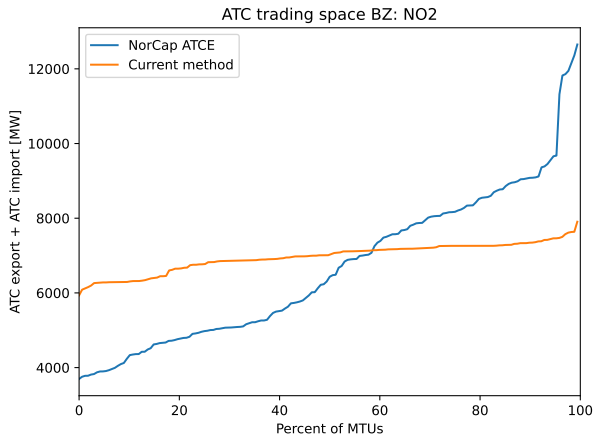
# NO1 - Total trading space



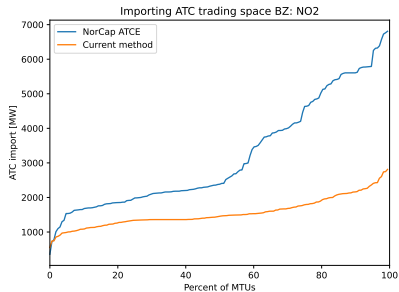
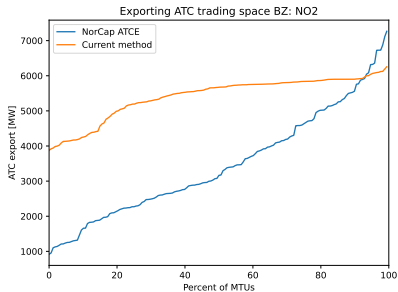
# NO1 - Directional trading space



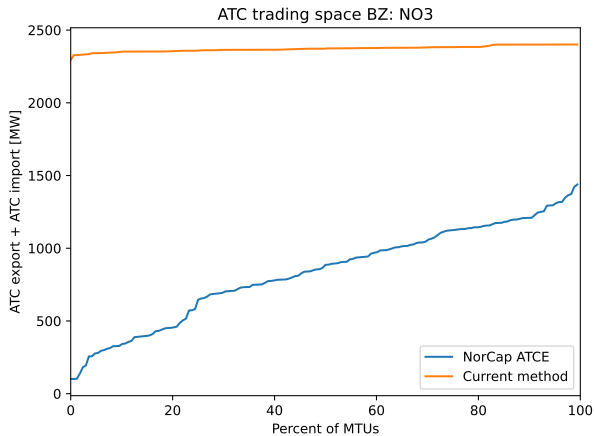
# NO2 - Total trading space



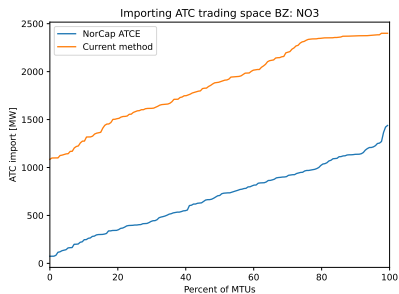
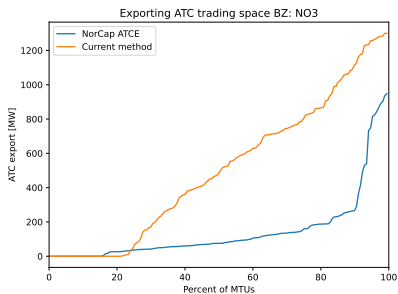
# NO2 - Directional trading space



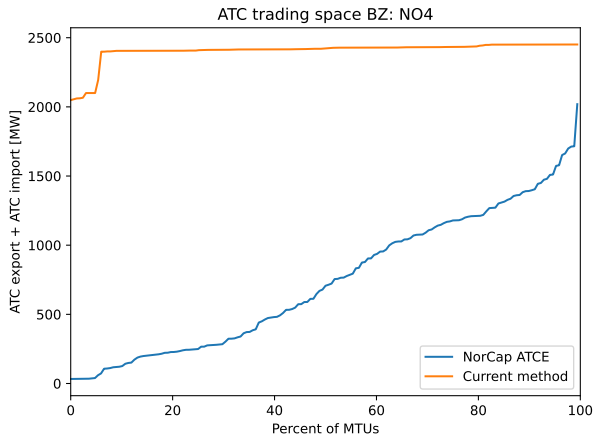
# NO3 - Total trading space



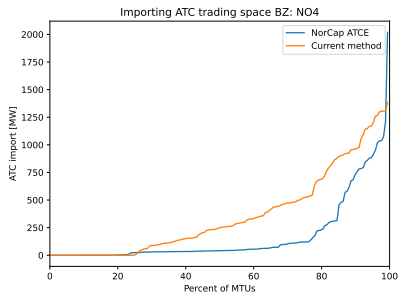
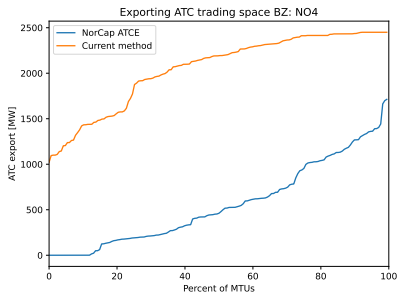
# NO3 - Directional trading space



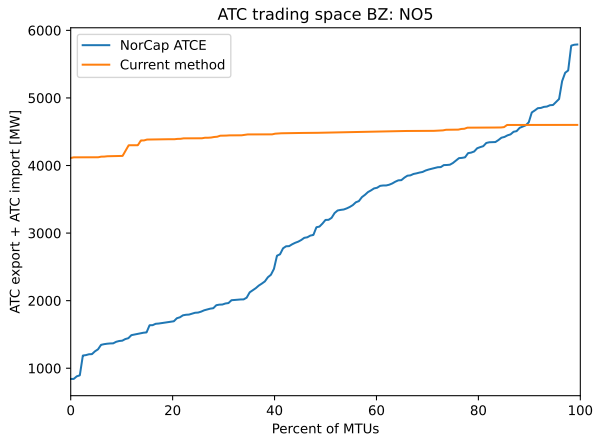
# NO4 - Total trading space



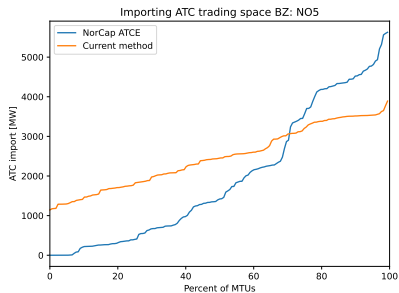
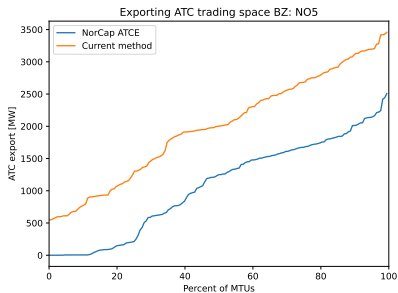
# NO4 - Directional trading space



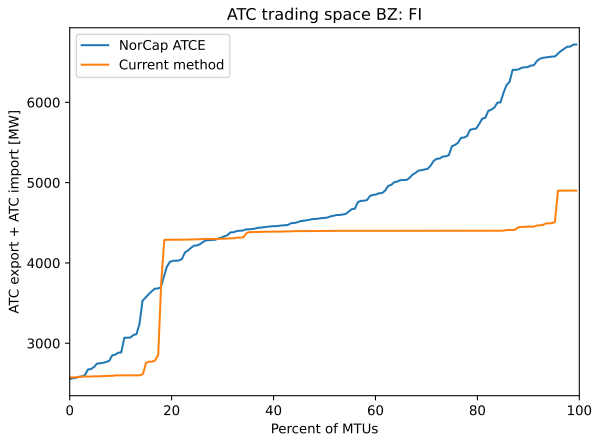
# NO5 - Total trading space



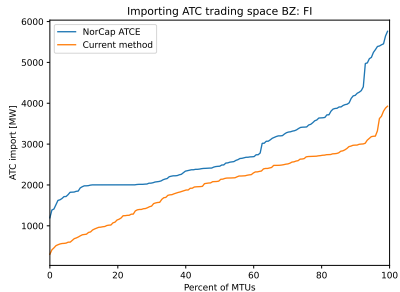
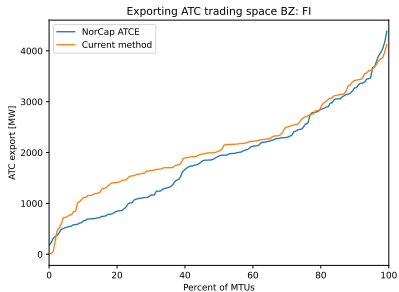
# NO5 - Directional trading space



# FI - Total trading space

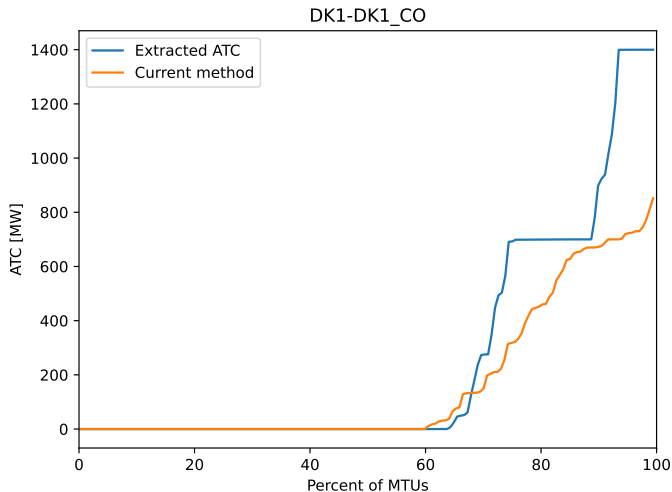


# FI - Directional trading space

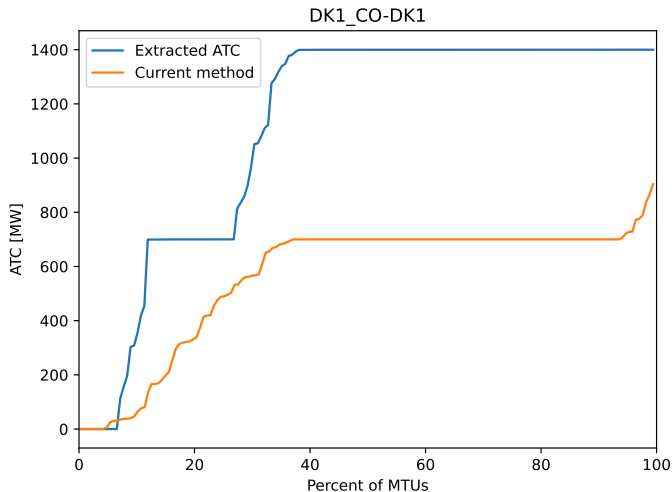


# Capacity duration curves

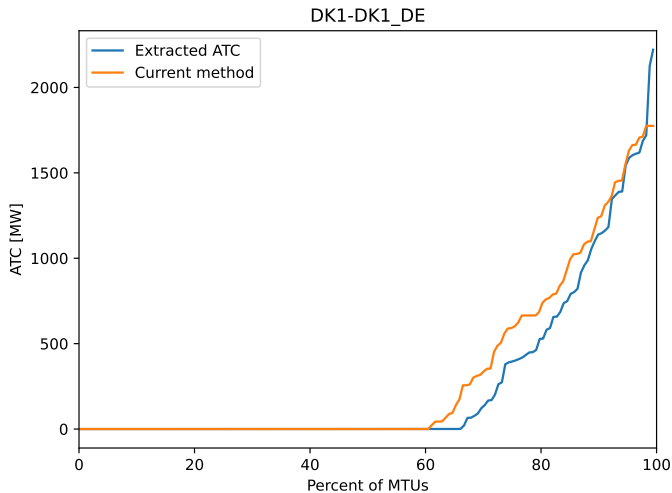
# DK1-DK1\_CO ATC duration curves



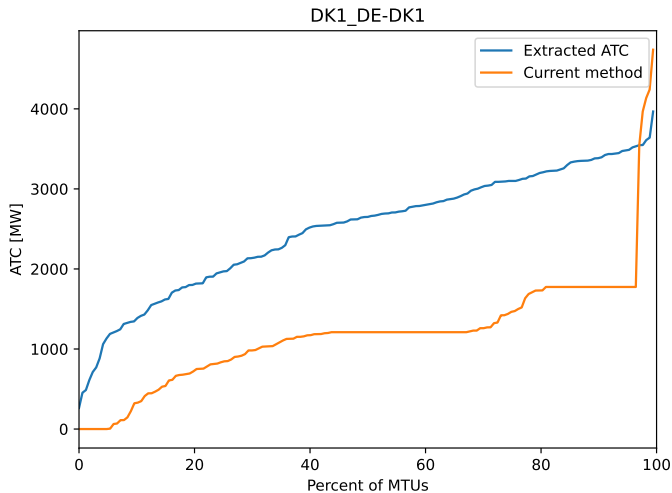
# DK1\_CO-DK1 ATC duration curves



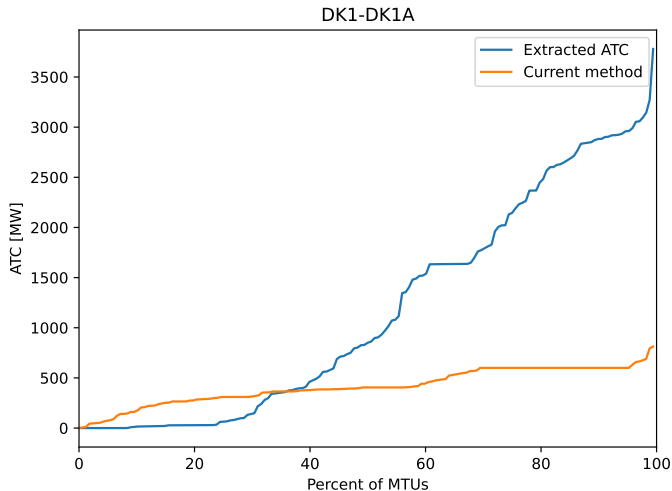
# DK1-DK1\_DE ATC duration curves



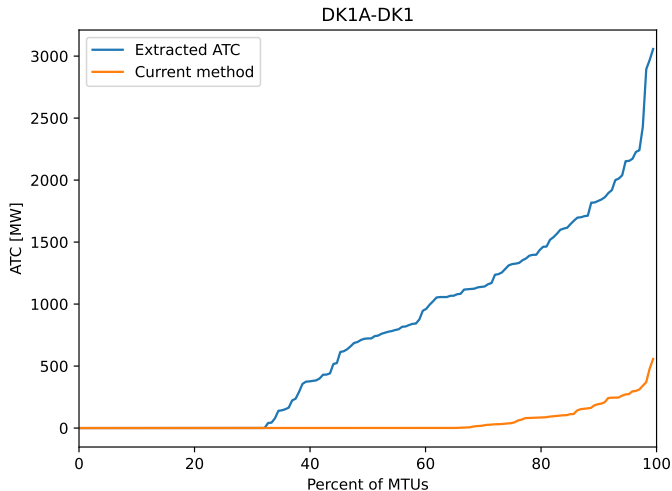
# DK1\_DE-DK1 ATC duration curves



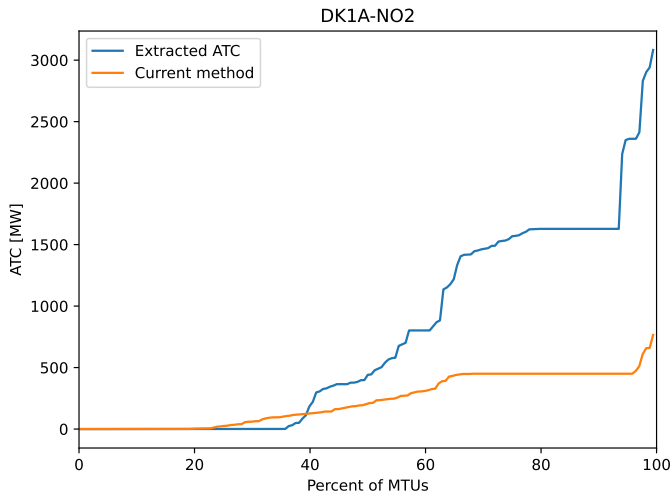
# DK1-DK1A ATC duration curves



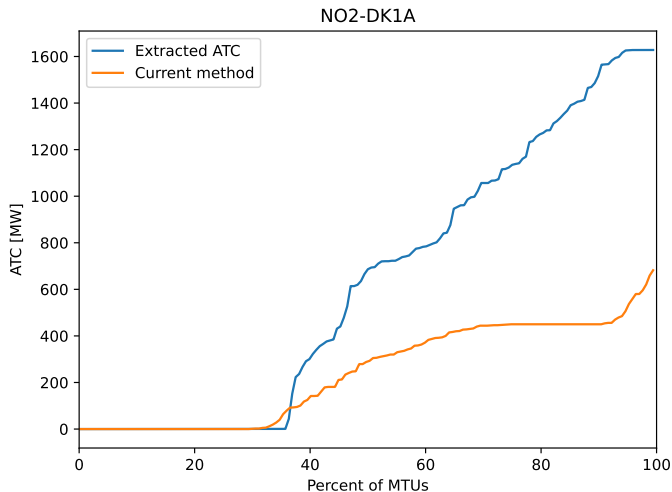
# DK1A-DK1 ATC duration curves



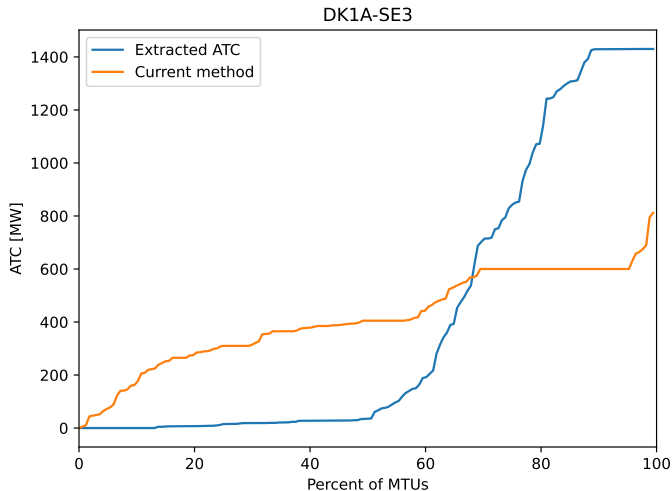
# DK1A-NO2 ATC duration curves



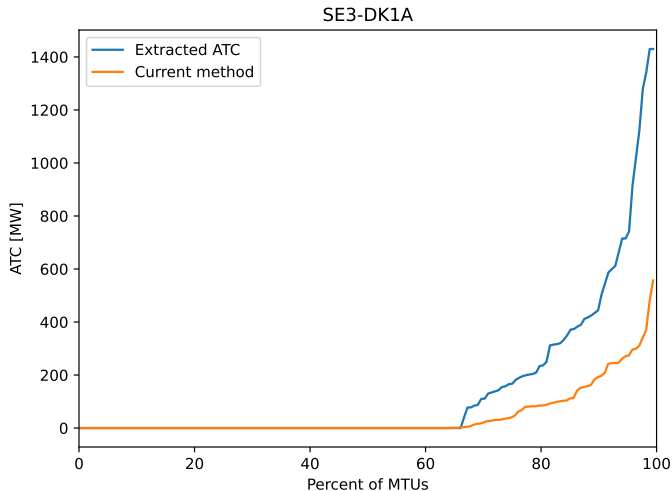
# NO2-DK1A ATC duration curves



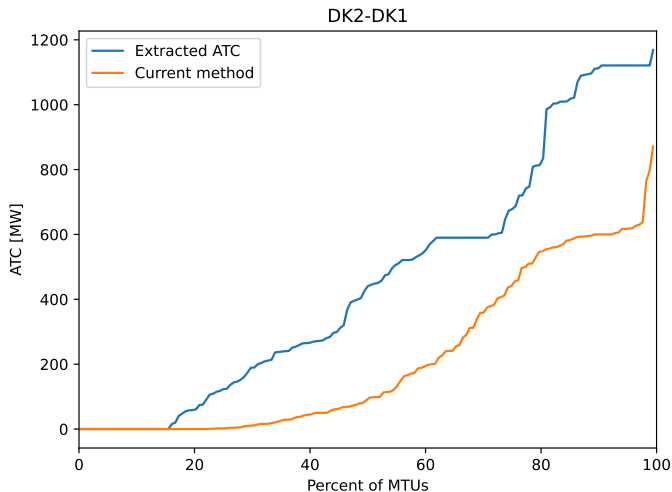
# DK1A-SE3 ATC duration curves



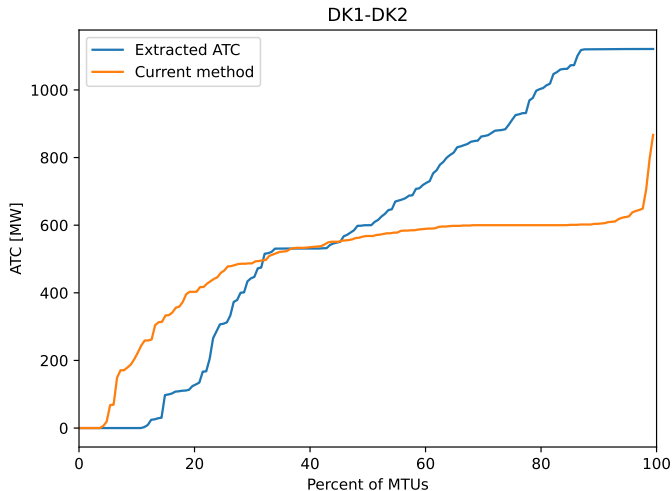
# SE3-DK1A ATC duration curves



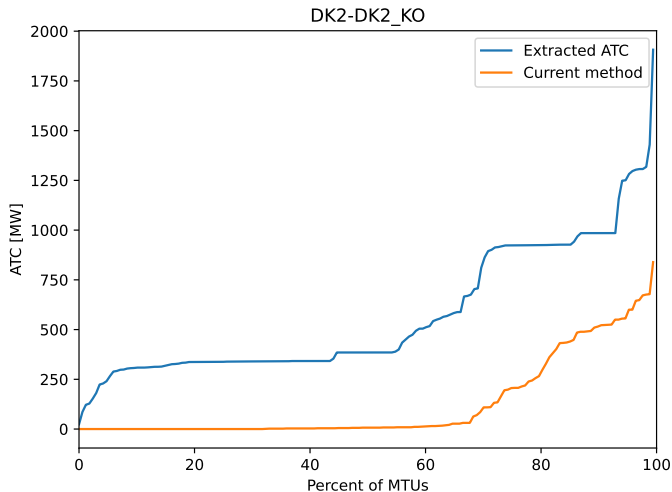
# DK2-DK1 ATC duration curves



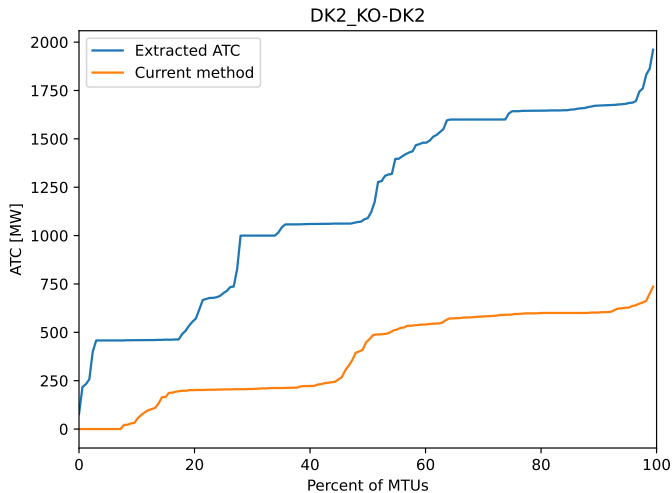
# DK1-DK2 ATC duration curves



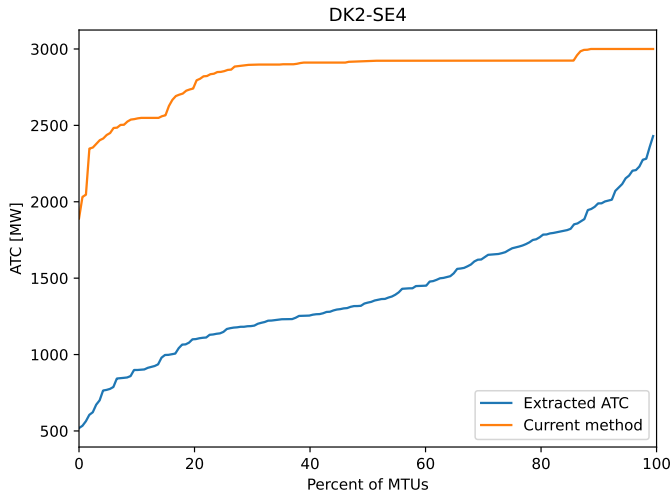
# DK2-DK2\_KO ATC duration curves



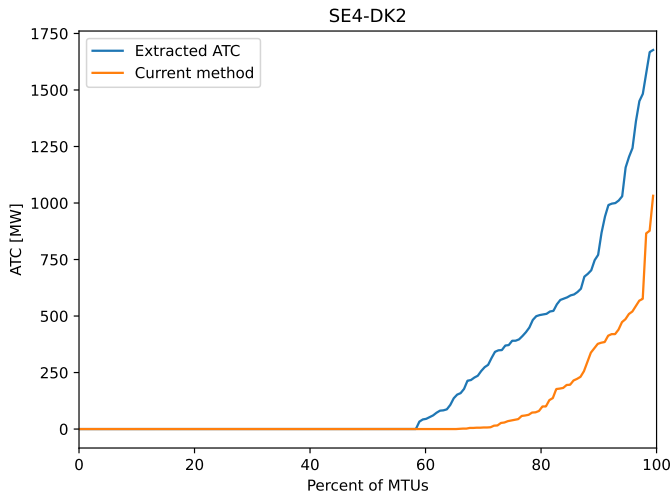
# DK2\_KO-DK2 ATC duration curves



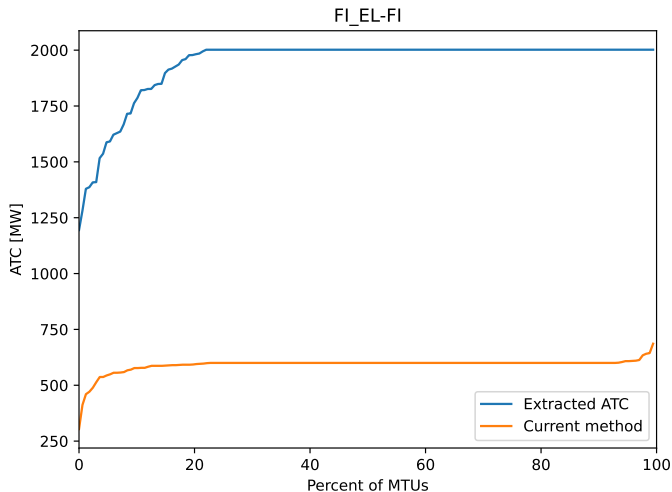
# DK2-SE4 ATC duration curves



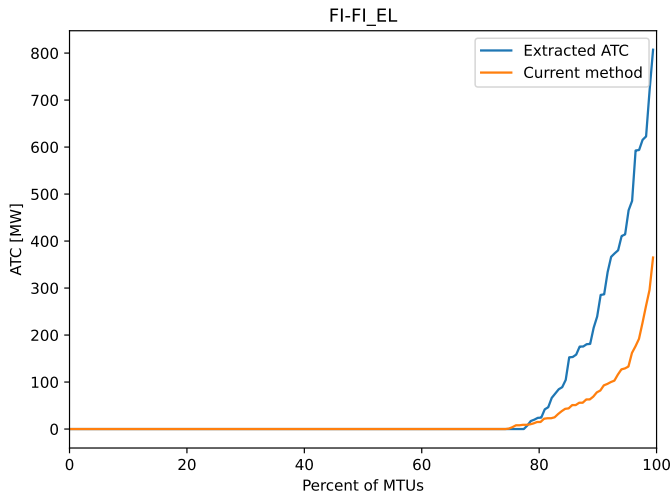
# SE4-DK2 ATC duration curves



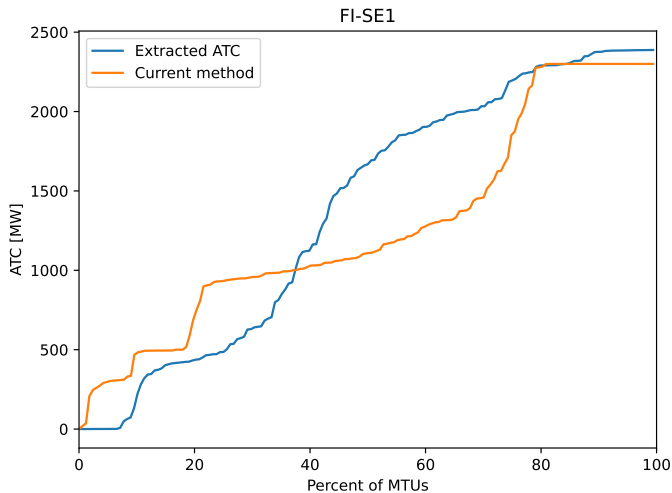
# FI\_EL-FI ATC duration curves



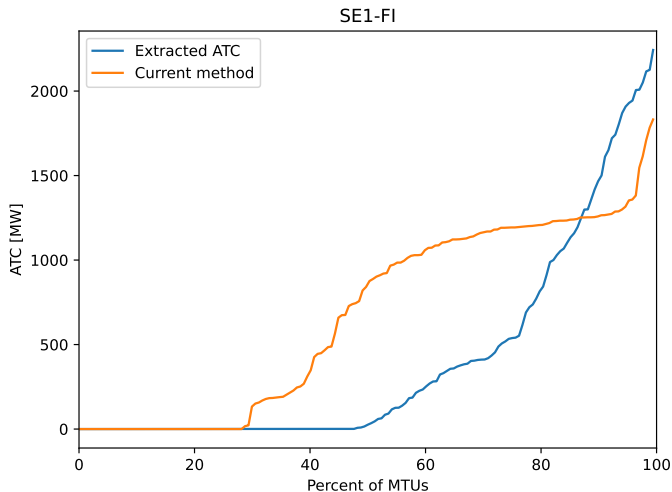
# FI-FI\_EL ATC duration curves



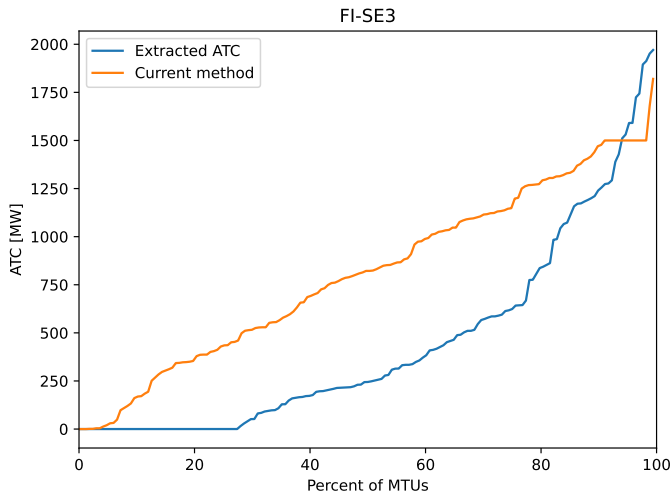
# FI-SE1 ATC duration curves



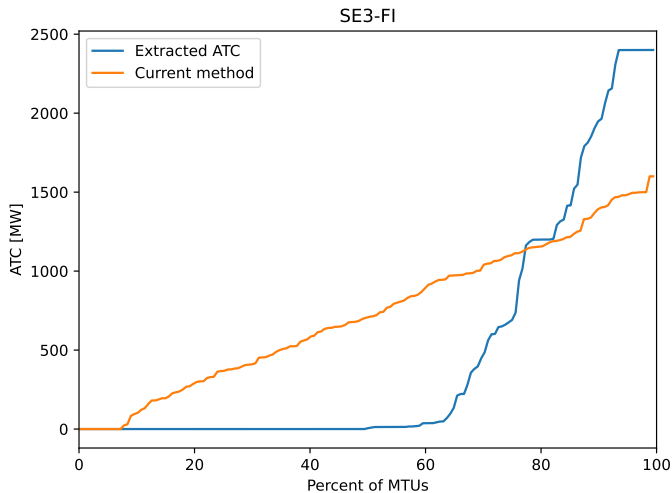
# SE1-FI ATC duration curves



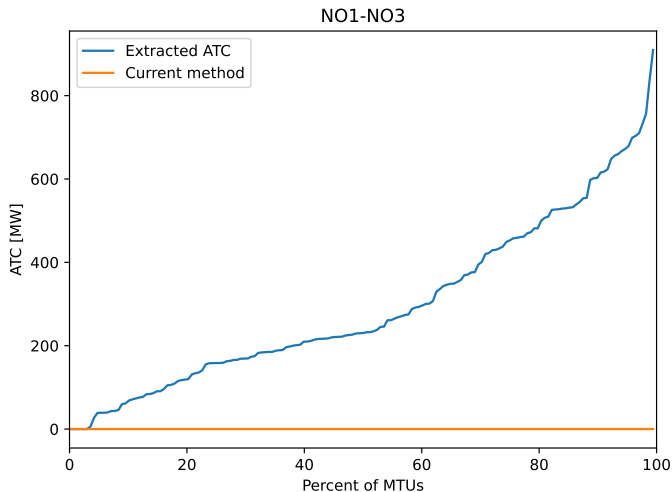
# FI-SE3 ATC duration curves



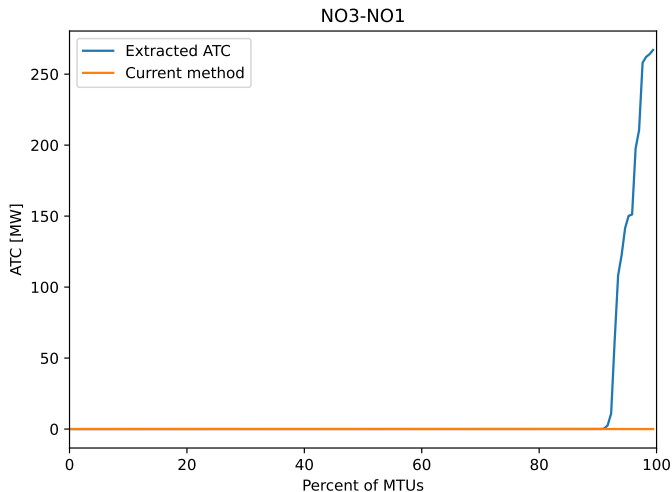
# SE3-FI ATC duration curves



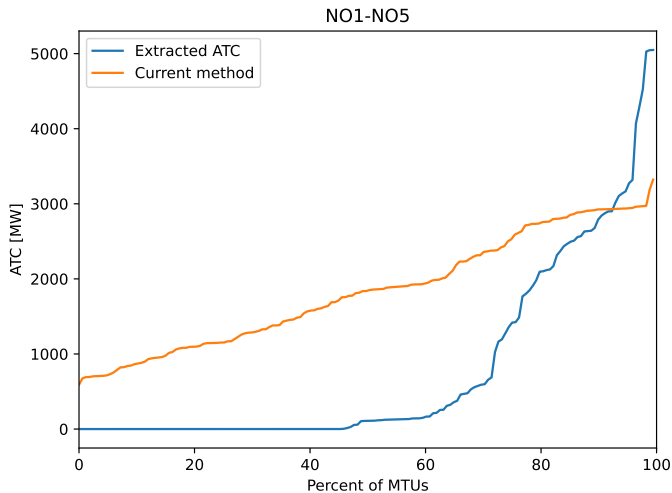
# NO1-NO3 ATC duration curves



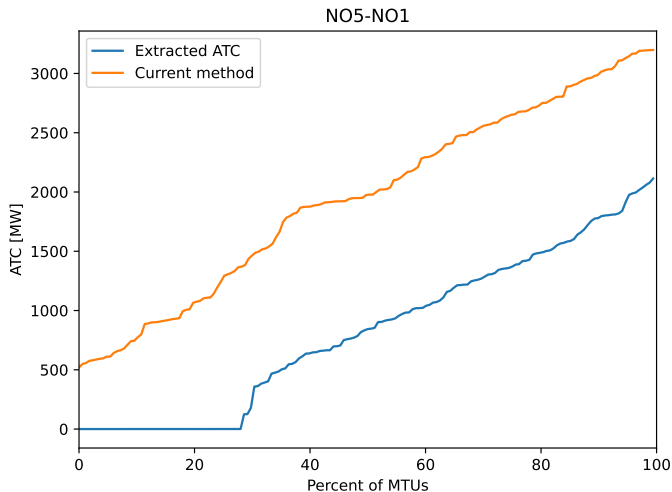
# NO3-NO1 ATC duration curves



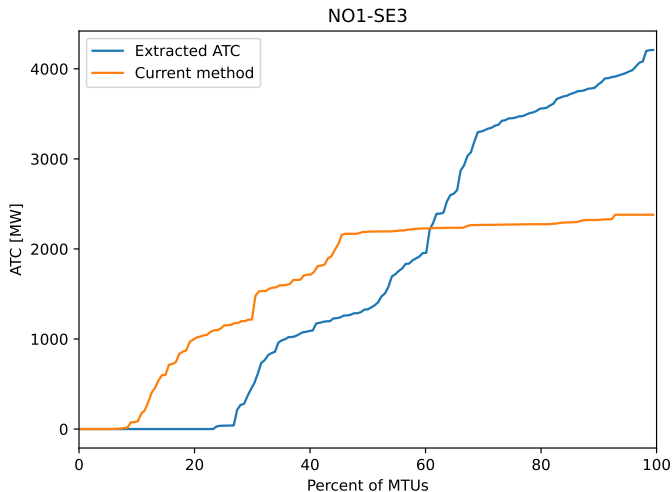
# NO1-NO5 ATC duration curves



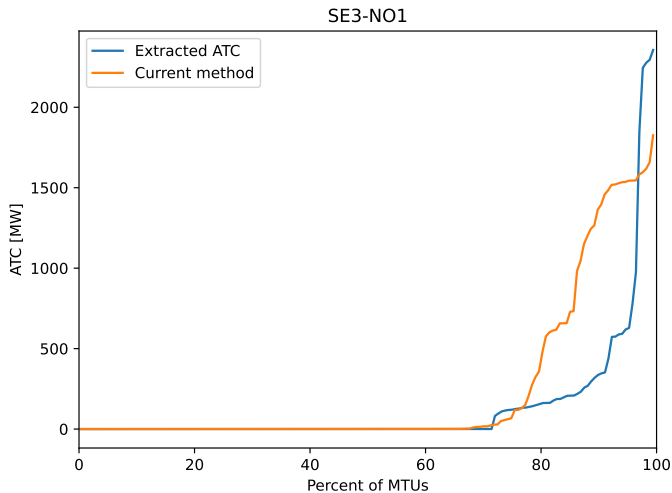
# NO5-NO1 ATC duration curves



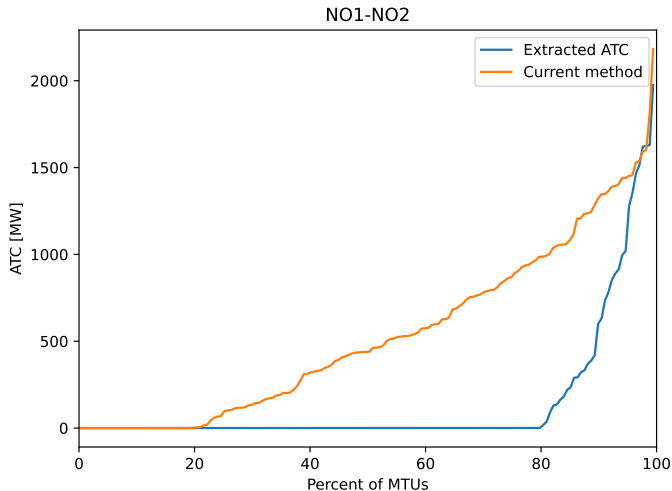
# NO1-SE3 ATC duration curves



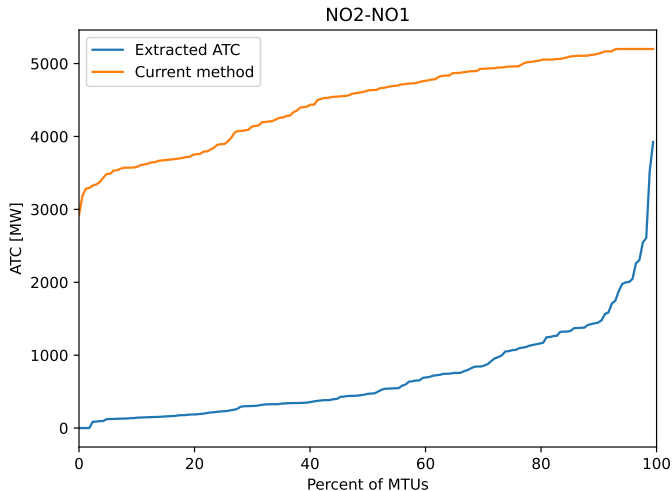
# SE3-NO1 ATC duration curves



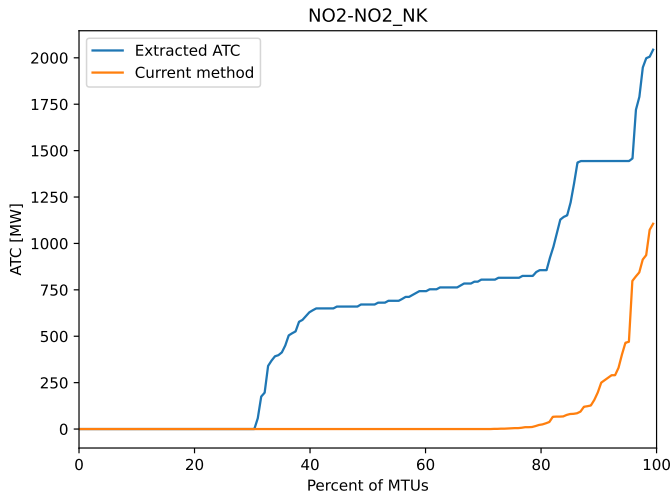
# NO1-NO2 ATC duration curves



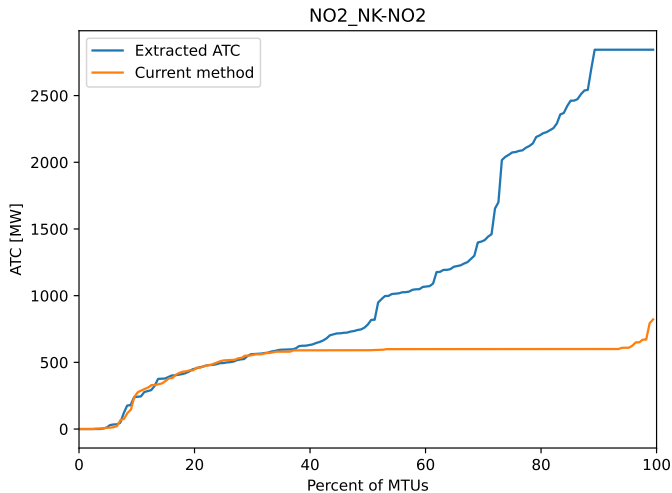
# NO2-NO1 ATC duration curves



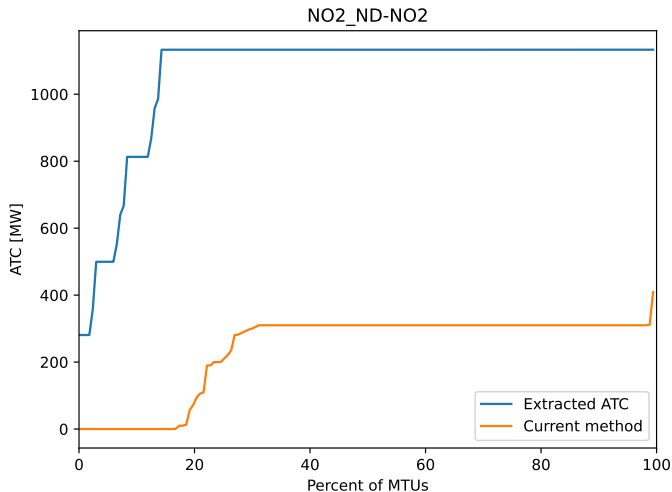
# NO2-NO2\_NK ATC duration curves



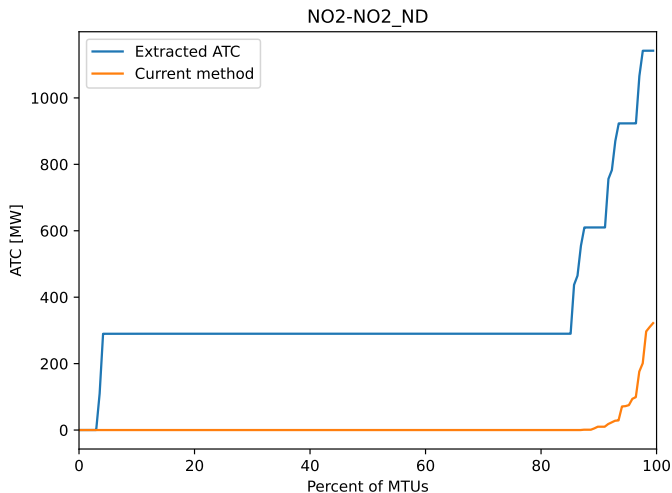
# NO2\_NK-NO2 ATC duration curves



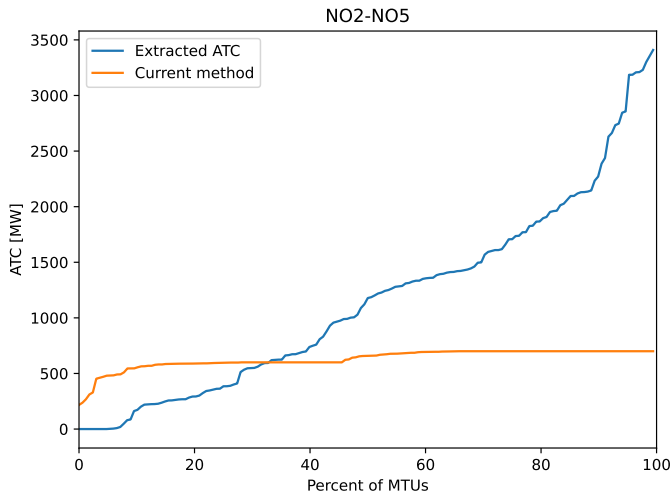
# NO2\_ND-NO2 ATC duration curves



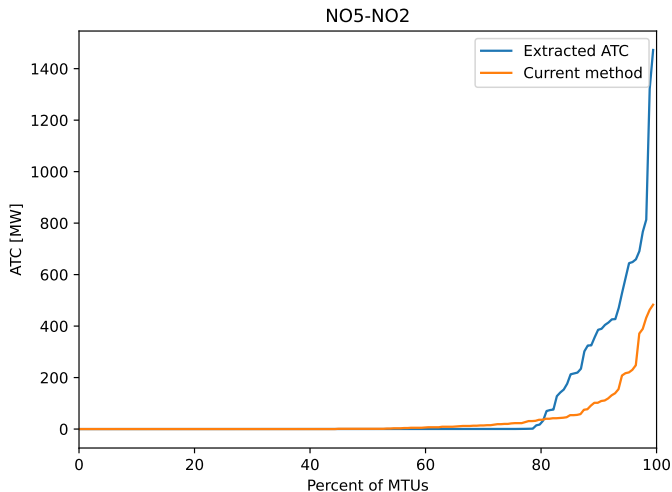
# NO2-NO2\_ND ATC duration curves



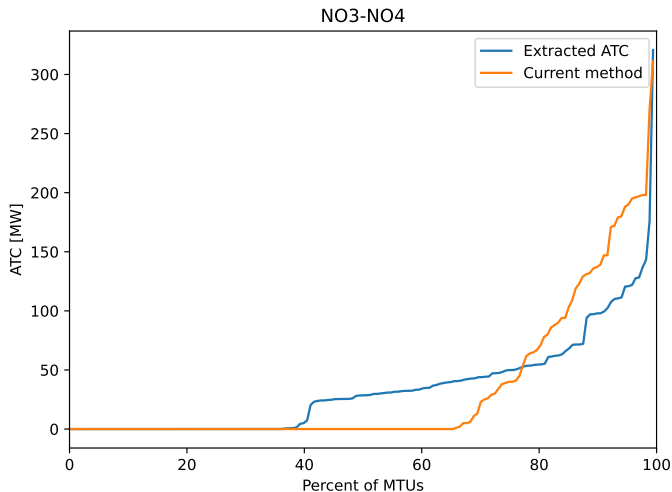
# NO2-NO5 ATC duration curves



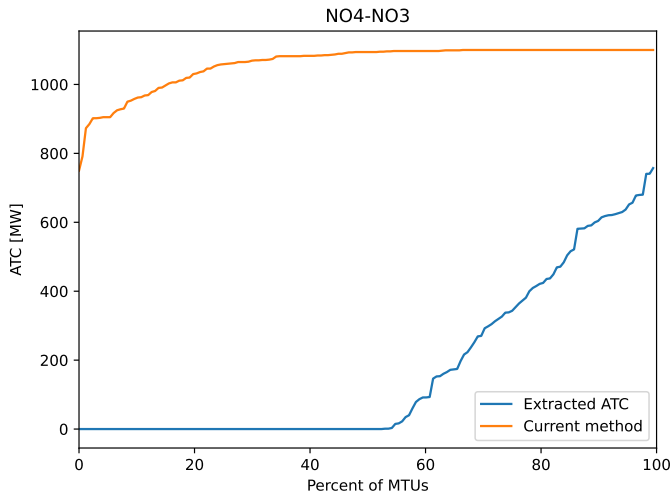
# NO5-NO2 ATC duration curves



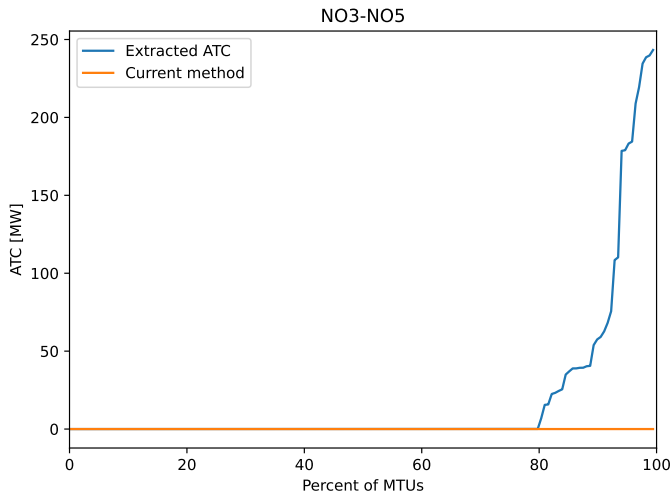
# NO3-NO4 ATC duration curves



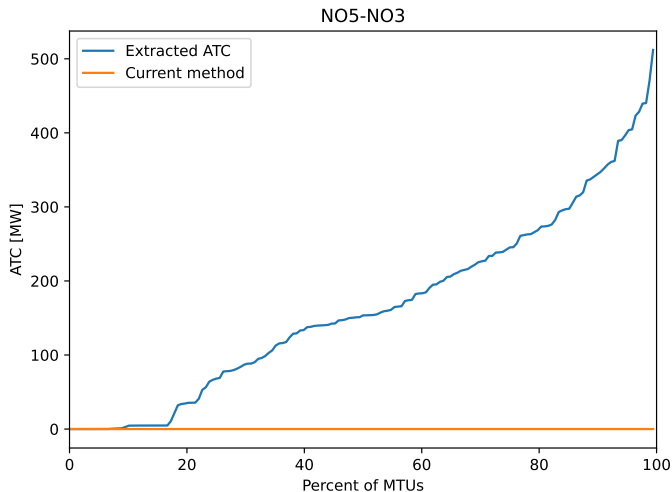
# NO4-NO3 ATC duration curves



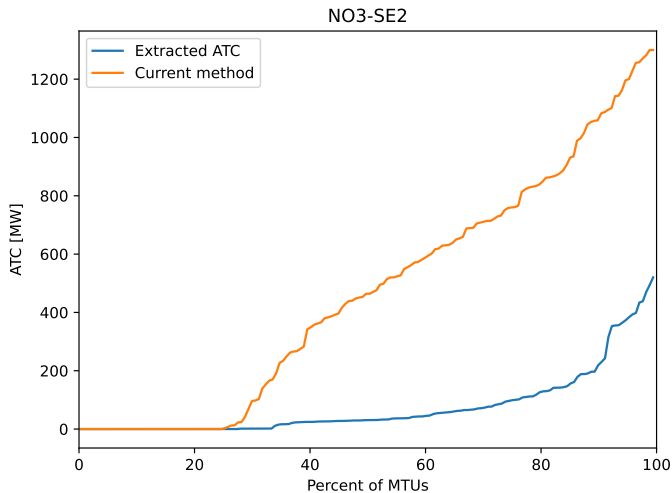
# NO3-NO5 ATC duration curves



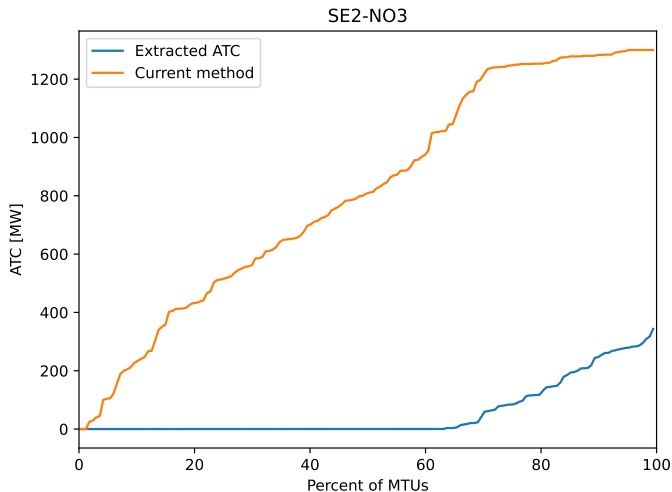
# NO5-NO3 ATC duration curves



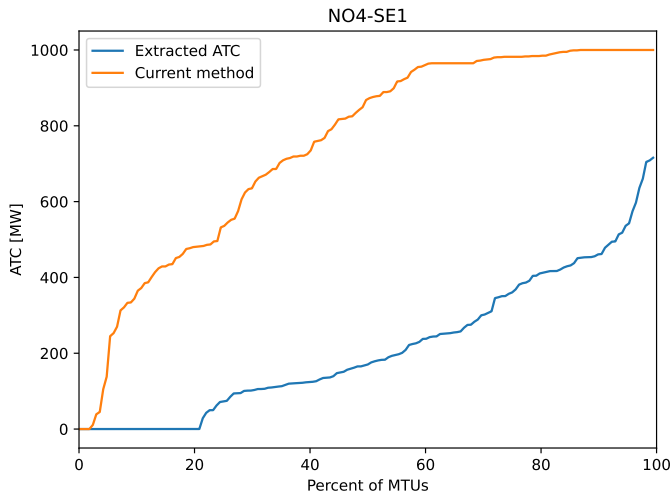
# NO3-SE2 ATC duration curves



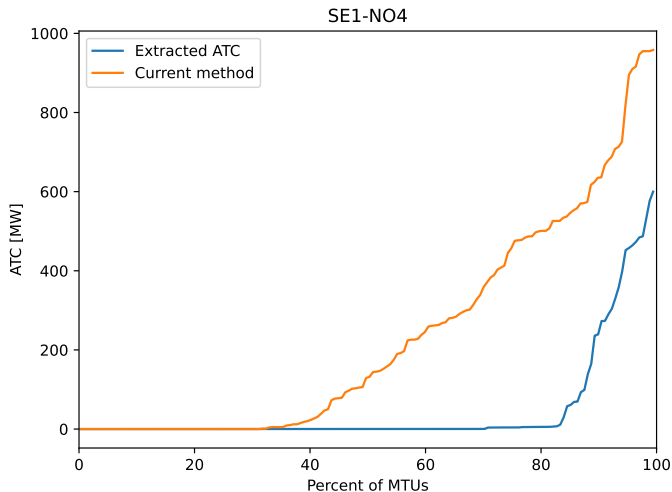
# SE2-NO3 ATC duration curves



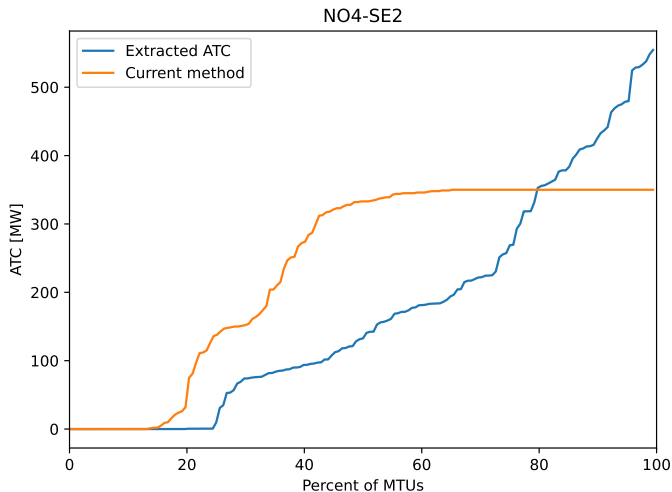
# NO4-SE1 ATC duration curves



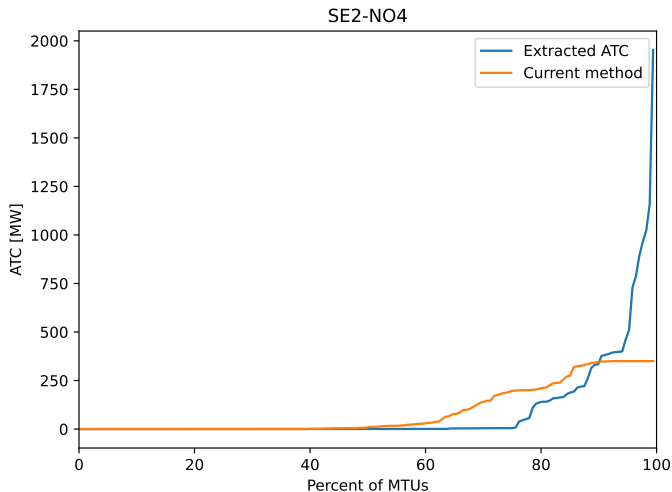
# SE1-NO4 ATC duration curves



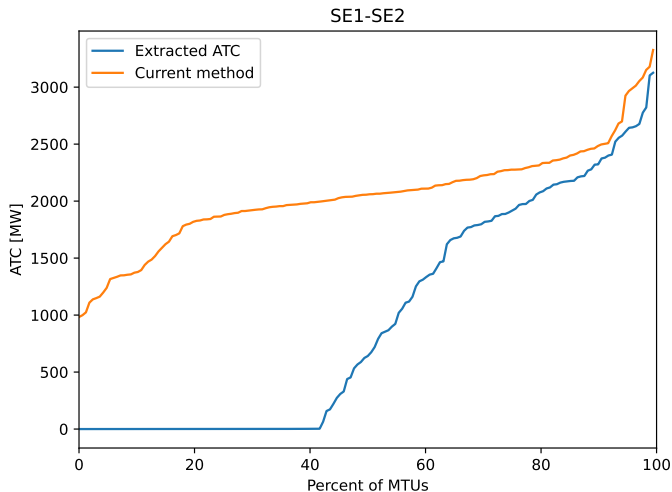
# NO4-SE2 ATC duration curves



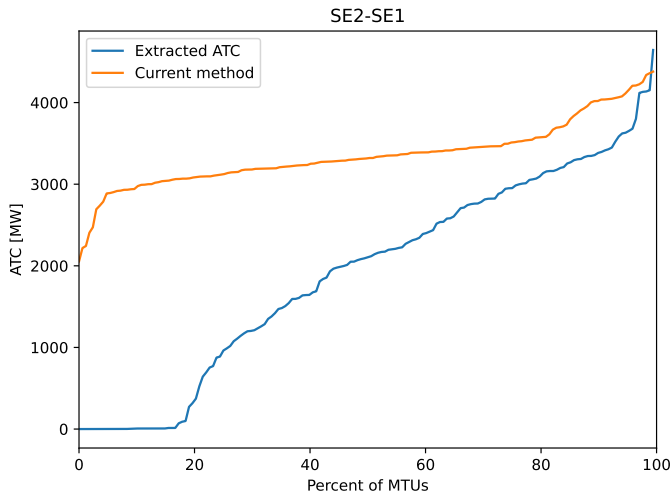
# SE2-NO4 ATC duration curves



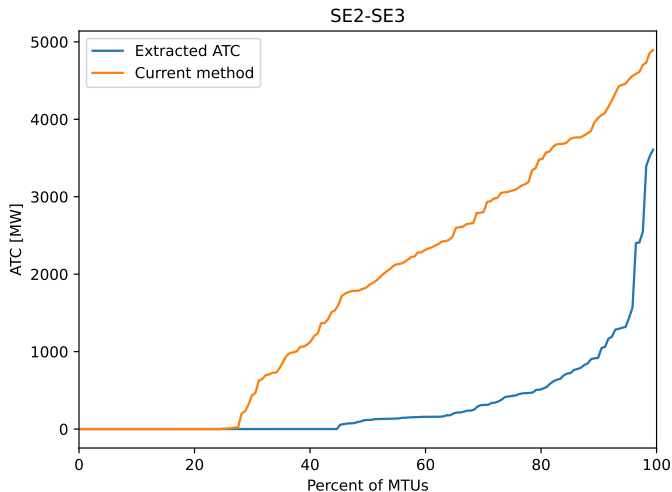
# SE1-SE2 ATC duration curves



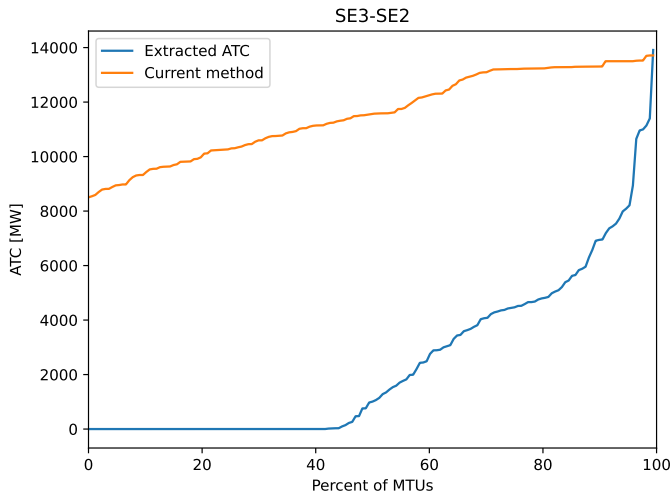
# SE2-SE1 ATC duration curves



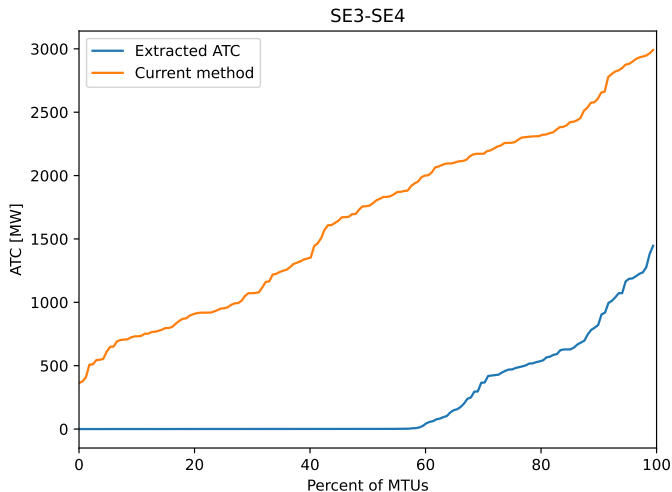
# SE2-SE3 ATC duration curves



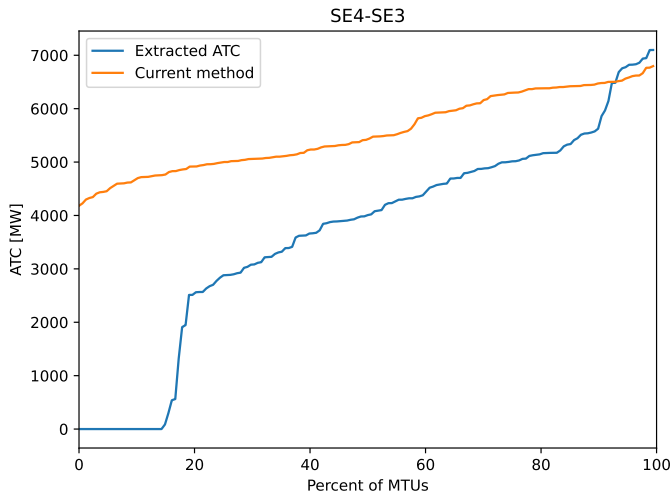
# SE3-SE2 ATC duration curves



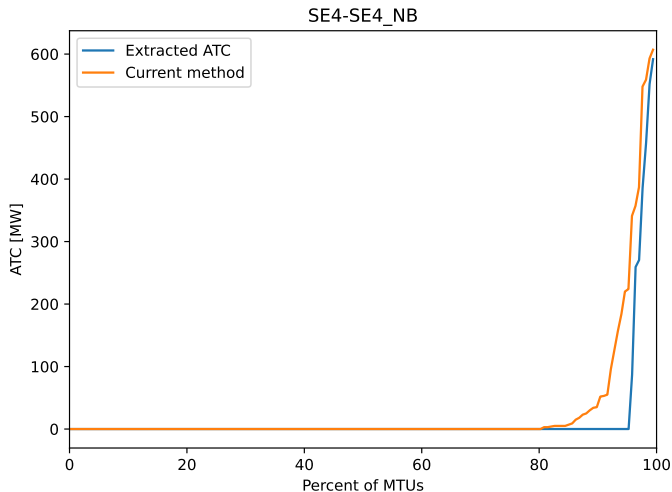
# SE3-SE4 ATC duration curves



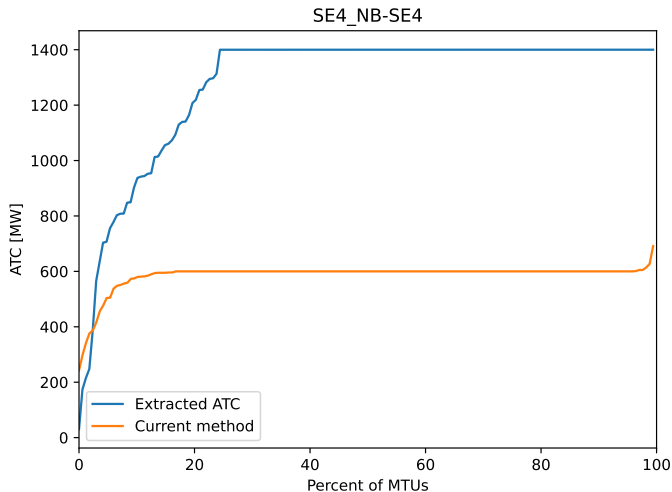
# SE4-SE3 ATC duration curves



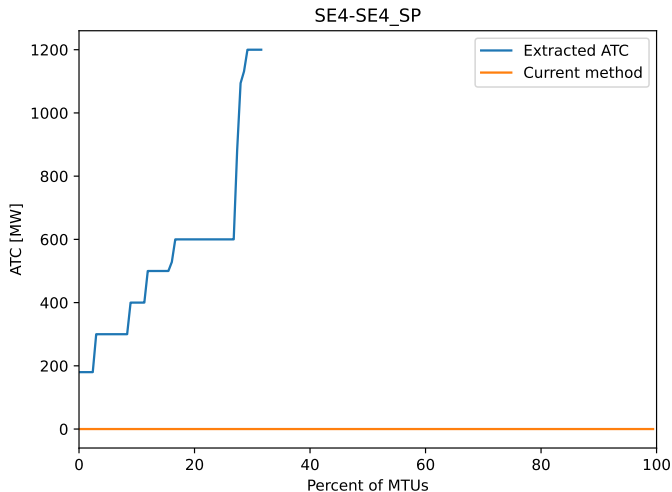
# SE4-SE4\_NB ATC duration curves



# SE4\_NB-SE4 ATC duration curves



# SE4-SE4\_SP ATC duration curves



# SE4\_SP-SE4 ATC duration curves

