

ATC Extraction Results

Nordic RCC

May 16, 2024

Notes

For some EDDs of week 16 ATCE returned non-zero capacity for the border NO4-SE1, although this border was out of service.

The ATCE methodology does allow non-zero capacity to be assigned to borders where all interconnectors are out of service. This can happen e.g. in cases where a trade can be realized by a flow that pushed to other borders in the meshed AC grid.

However, assigning non-zero capacity to such a border is counter intuitive and may be problematic for operators in case they need to provide manual adjustments to adapt to unplanned outages.

The incident will be addressed in a future addition to *EPR operational learning points*.

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.

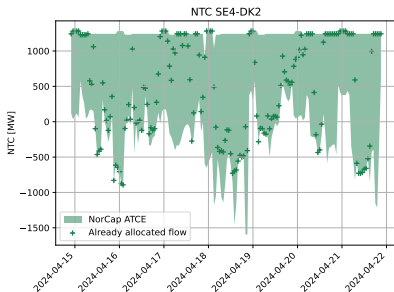
| Bidding zone | #MTUs at max Export | #MTUs at max Import | #MTUs at lock-in |
|--------------|---------------------|---------------------|------------------|
| DK1 | 0 | 0 | 0 |
| DK2 | 0 | 0 | 0 |
| FI | 4 | 0 | 0 |
| NO1 | 0 | 0 | 0 |
| NO2 | 0 | 1 | 0 |
| NO3 | 5 | 8 | 0 |
| NO4 | 46 | 0 | 0 |
| NO5 | 0 | 14 | 0 |
| SE1 | 5 | 0 | 0 |
| SE2 | 16 | 24 | 0 |
| SE3 | 0 | 0 | 0 |
| SE4 | 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 |
|---------|------------------|
| DK1-SE3 | 13 |
| SE3-DK1 | 13 |
| FI-SE3 | 4 |
| SE3-FI | 4 |
| NO3-SE2 | 2 |
| SE2-NO3 | 2 |
| NO4-SE2 | 2 |
| SE2-NO4 | 2 |
| SE2-SE3 | 1 |
| SE3-SE2 | 1 |

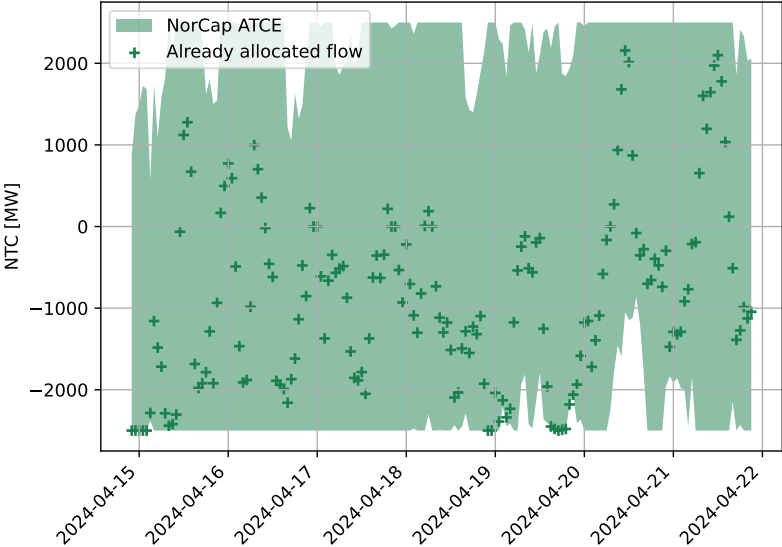
Border NTC plots - Reader's guide



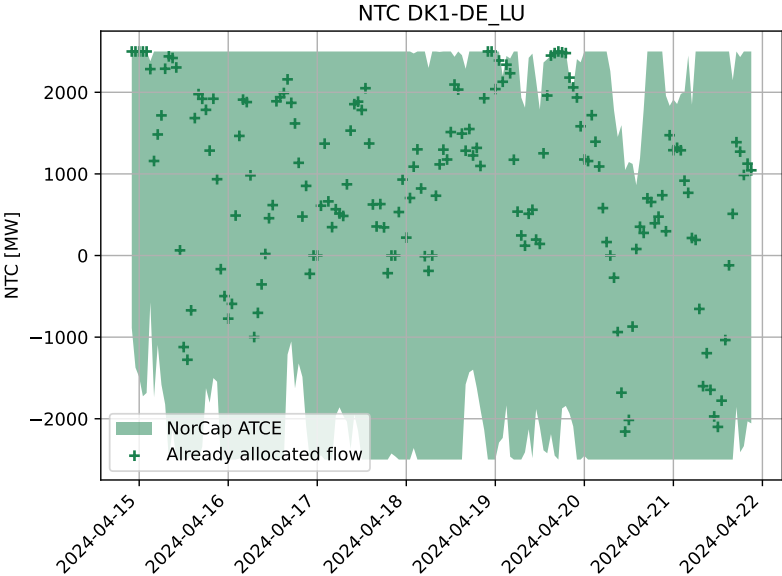
The colored area represents the possible exchange on this border and direction. The cross marks the simulated day ahead market coupling flows. Any colored area above the cross, means that intraday market will be able to increase exchange over the day ahead market coupling flows. Any colored area below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

DE_LU-DK1

NTC DE_LU-DK1

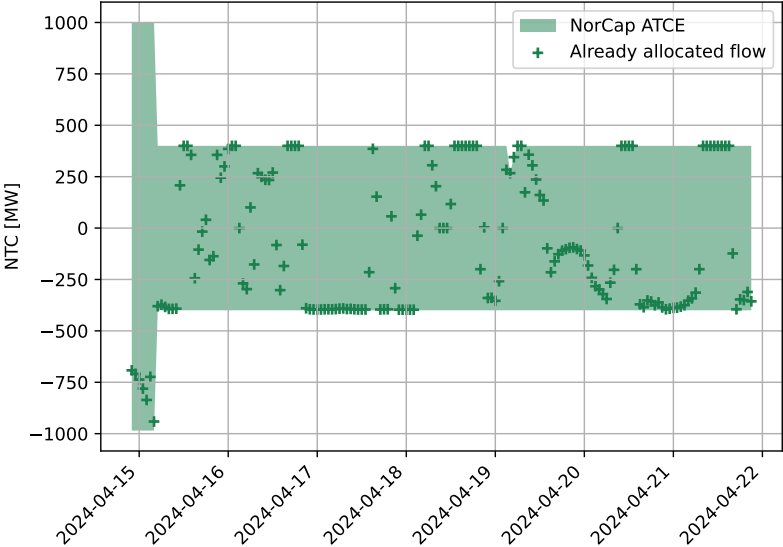


DK1-DE_LU



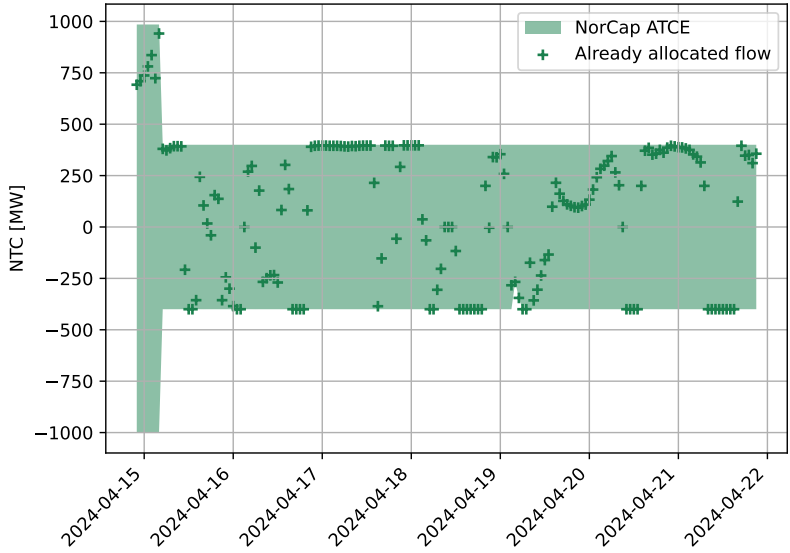
DE_LU-DK2

NTC DE_LU-DK2

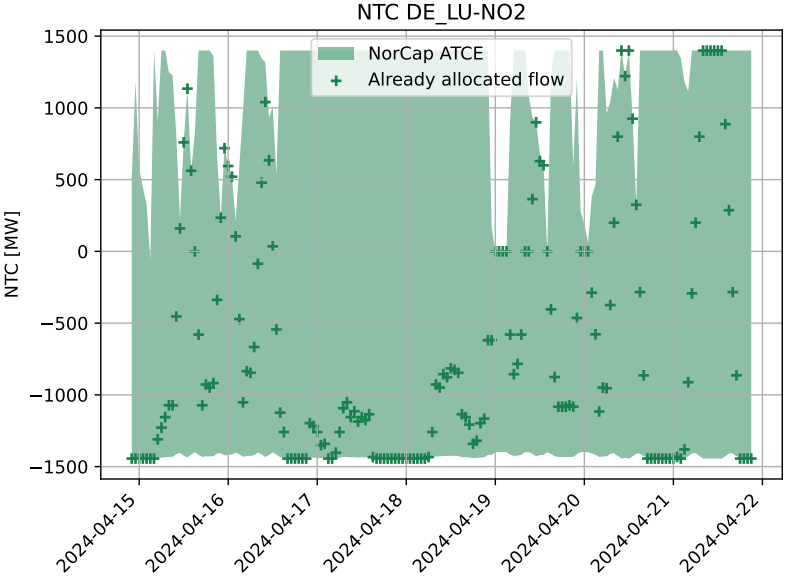


DK2-DE_LU

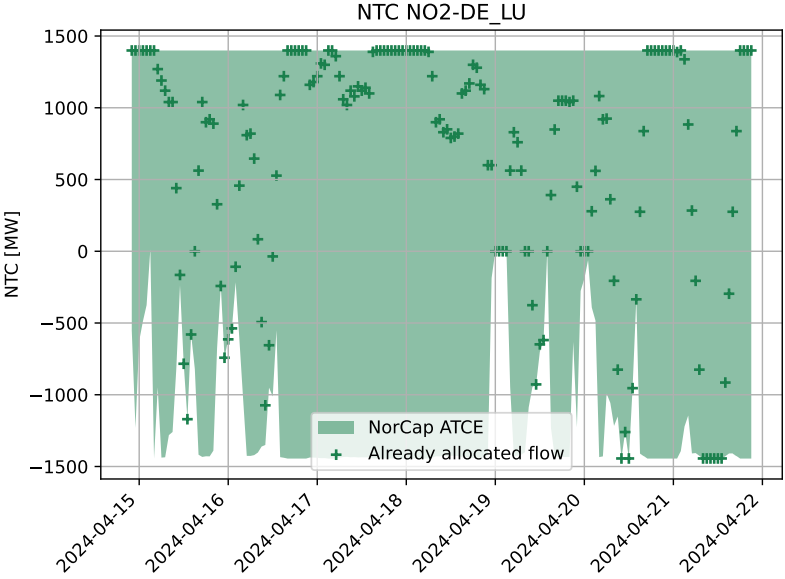
NTC DK2-DE_LU



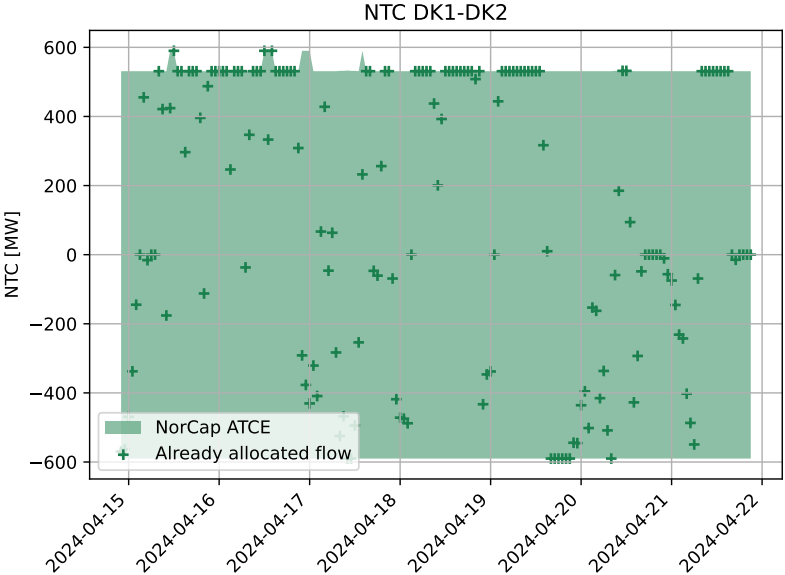
DE_LU-NO2



NO2-DE_LU

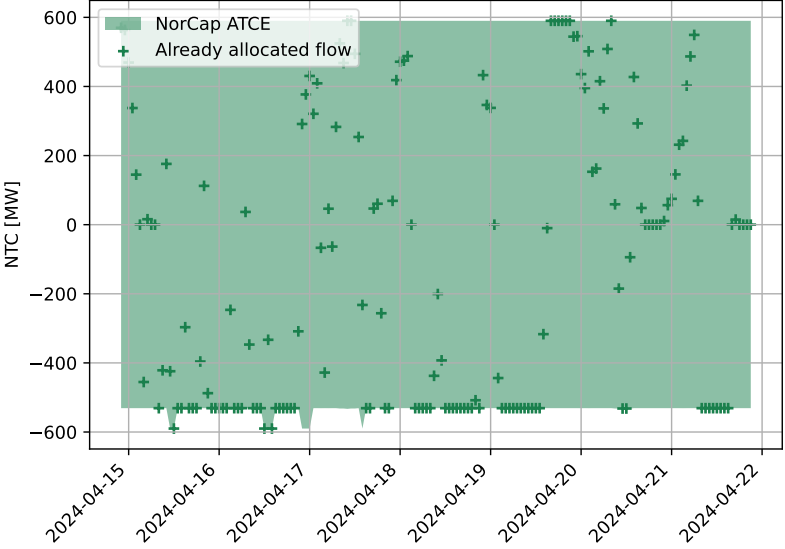


DK1-DK2



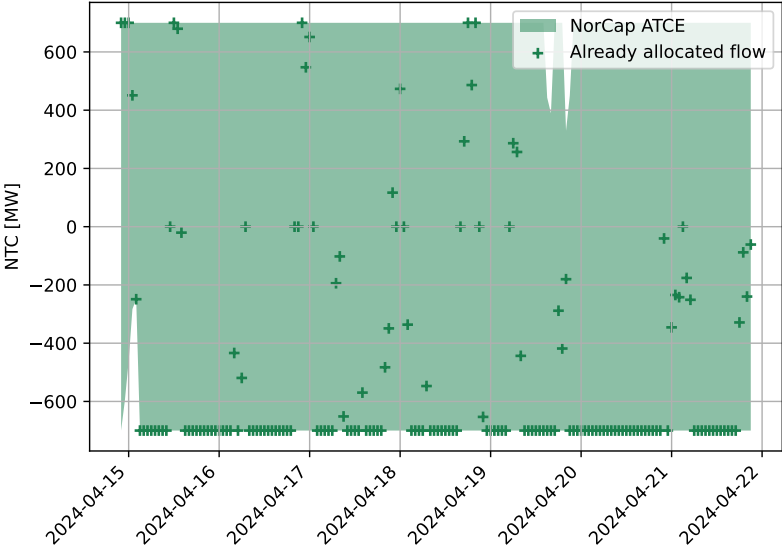
DK2-DK1

NTC DK2-DK1

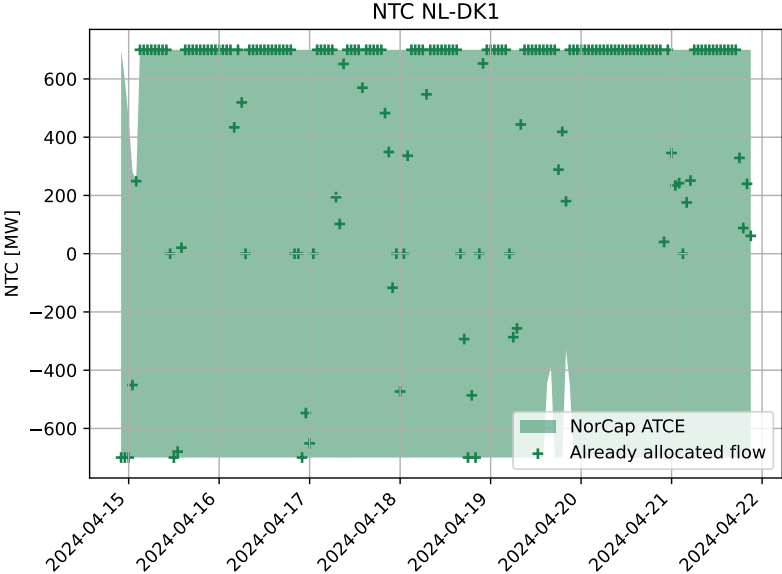


DK1-NL

NTC DK1-NL

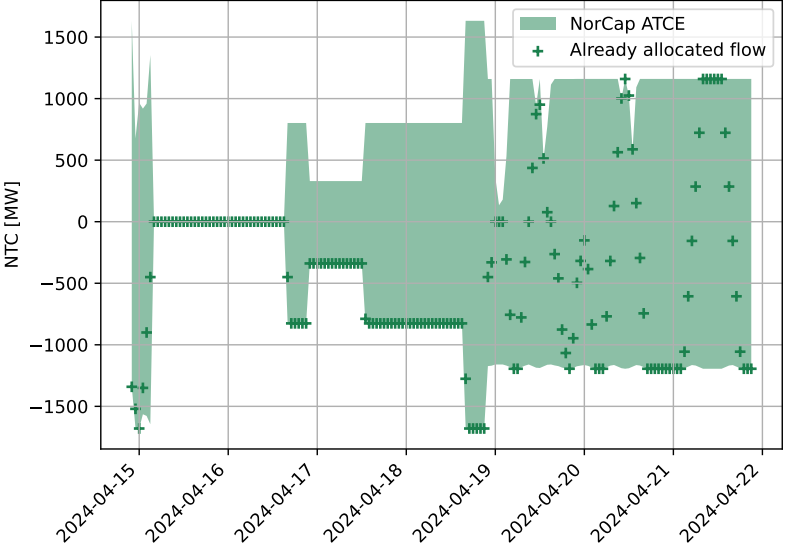


NL-DK1



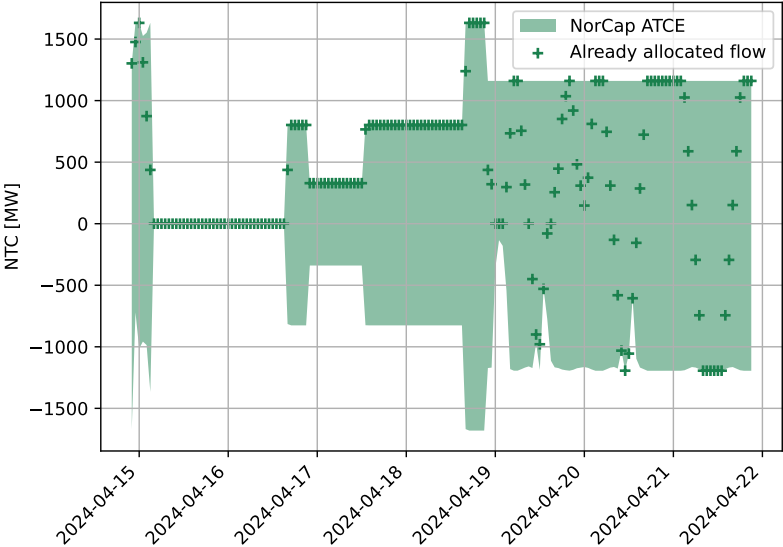
DK1-NO2

NTC DK1-NO2



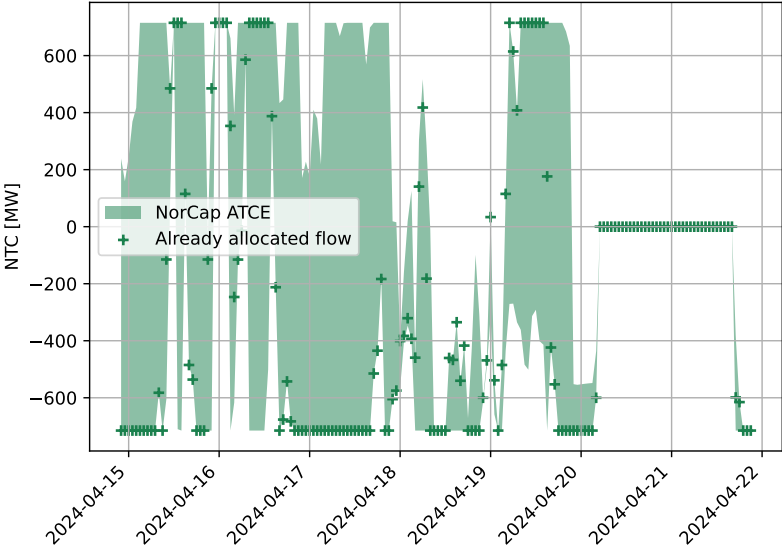
NO2-DK1

NTC NO2-DK1



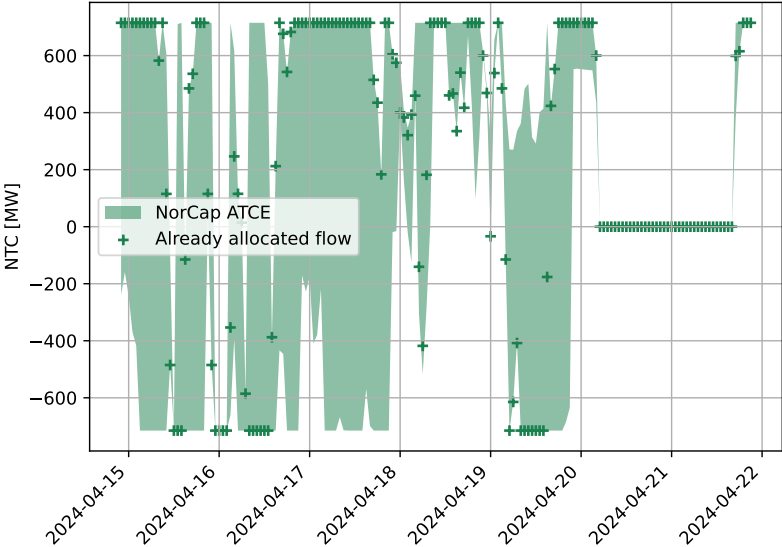
DK1-SE3

NTC DK1-SE3



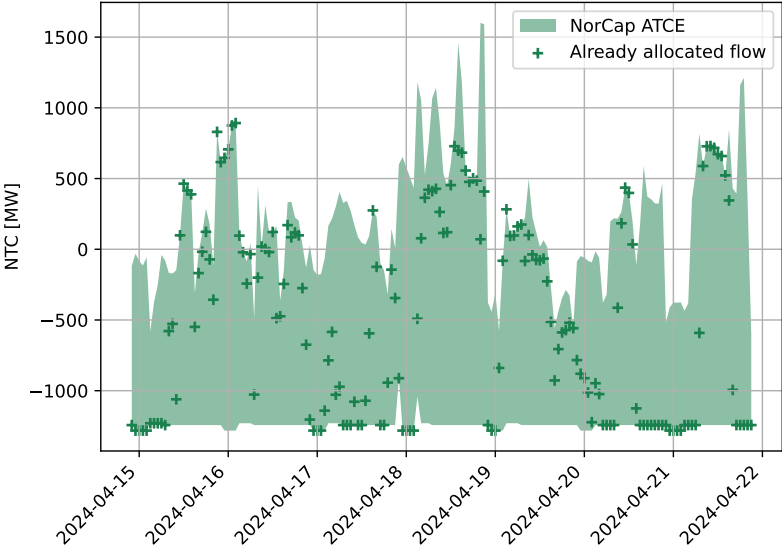
SE3-DK1

NTC SE3-DK1



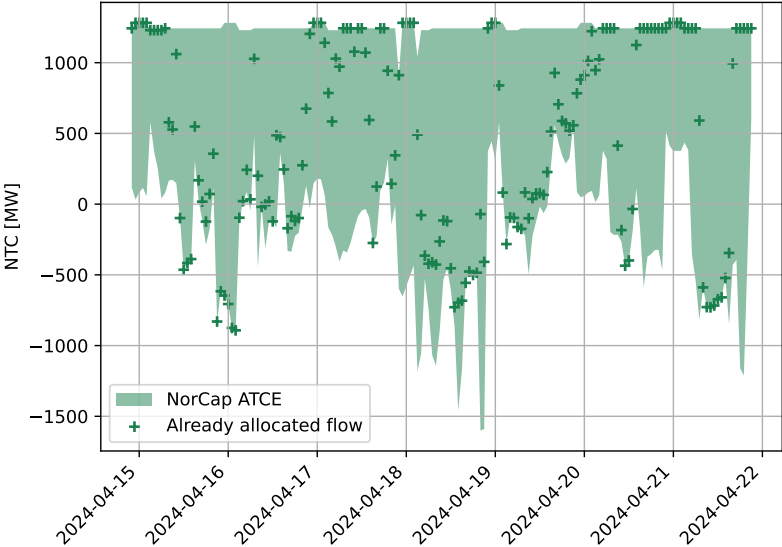
DK2-SE4

NTC DK2-SE4

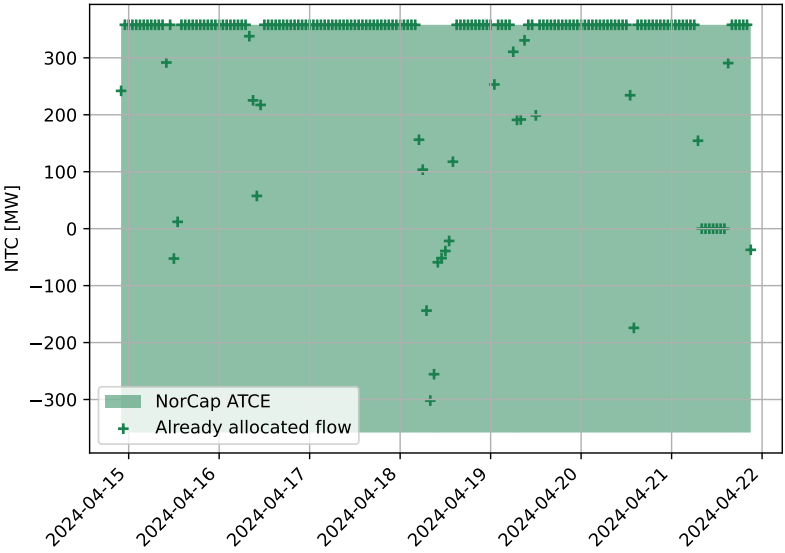


SE4-DK2

NTC SE4-DK2

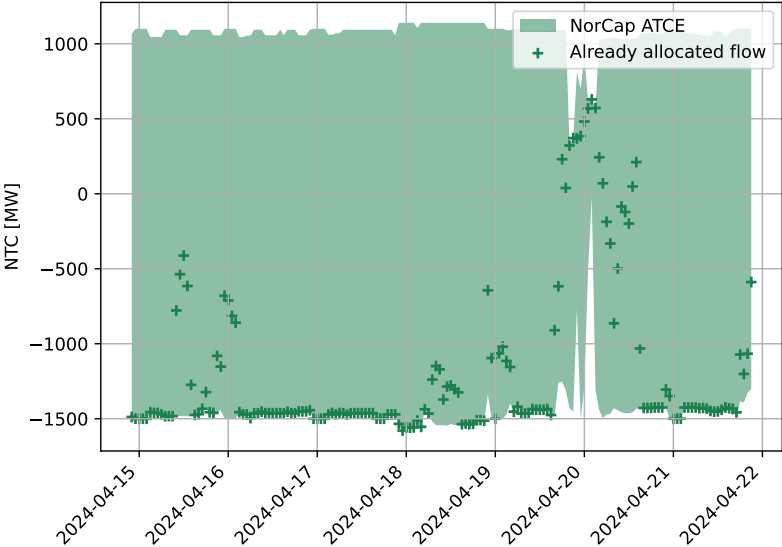


NTC FI-EE

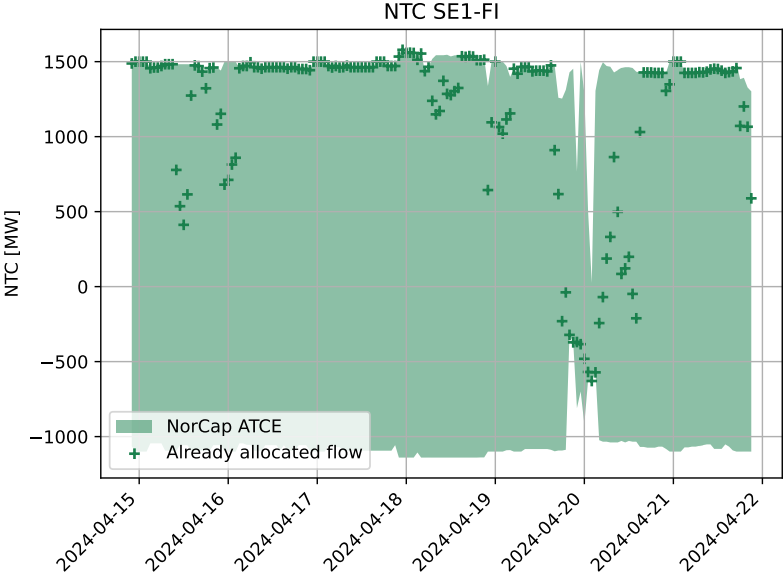


FI-SE1

NTC FI-SE1

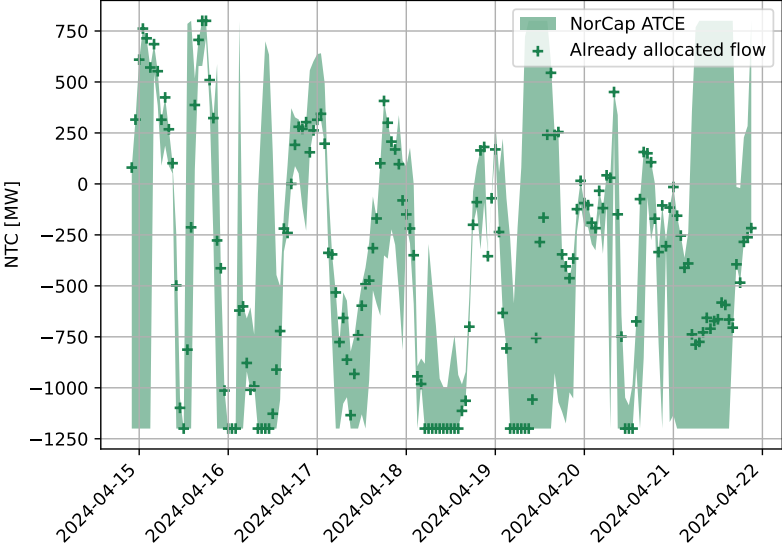


SE1-FI

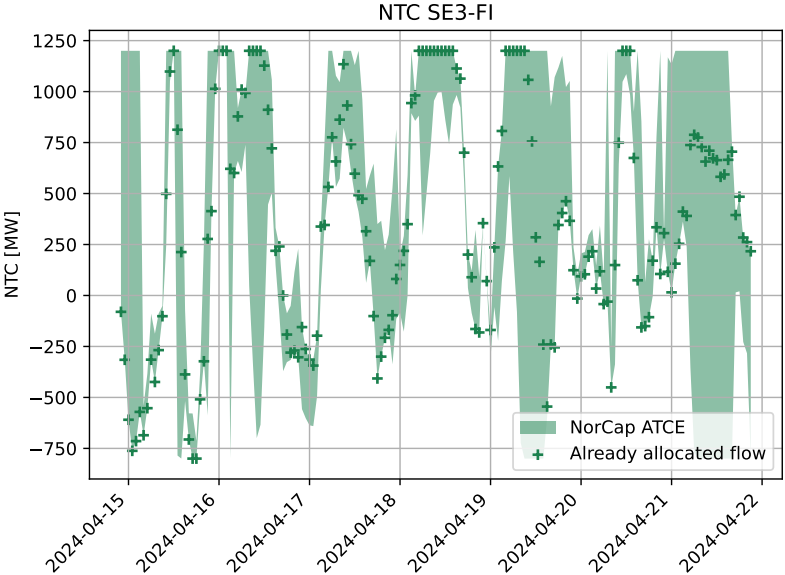


FI-SE3

NTC FI-SE3

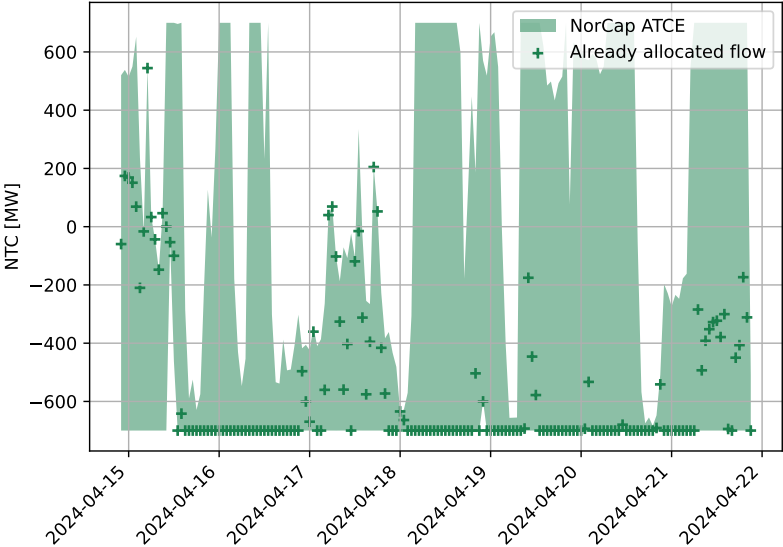


SE3-FI



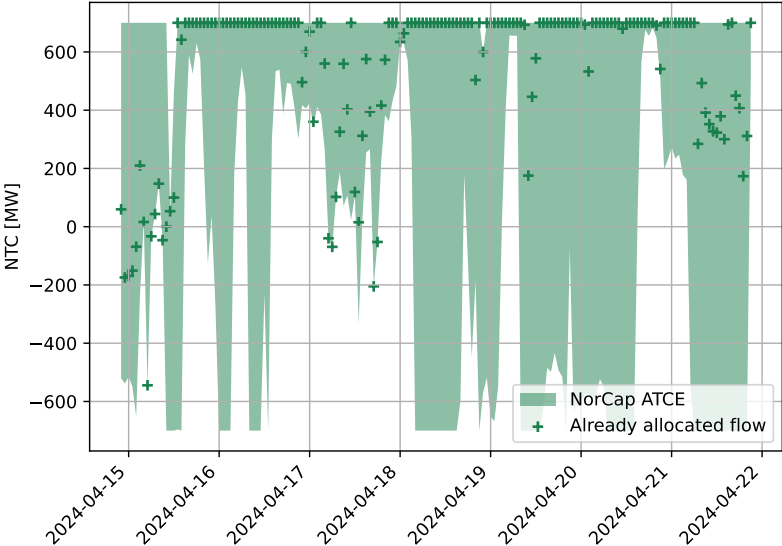
LT-SE4

NTC LT-SE4



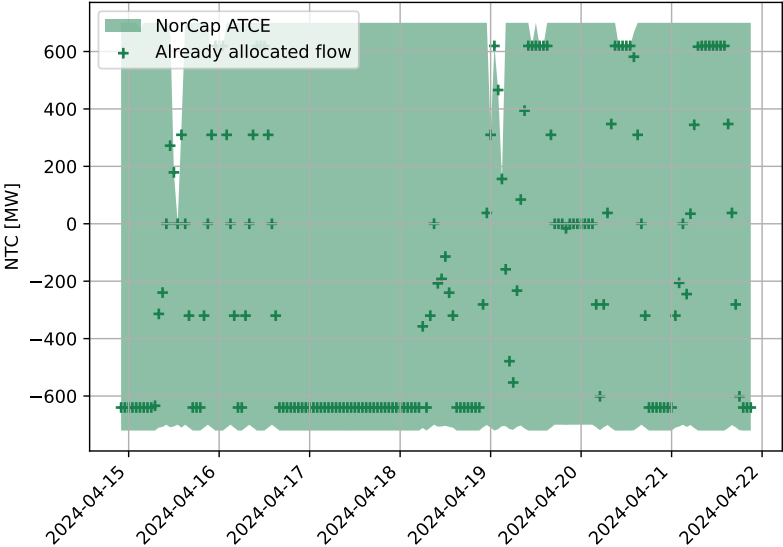
SE4-LT

NTC SE4-LT



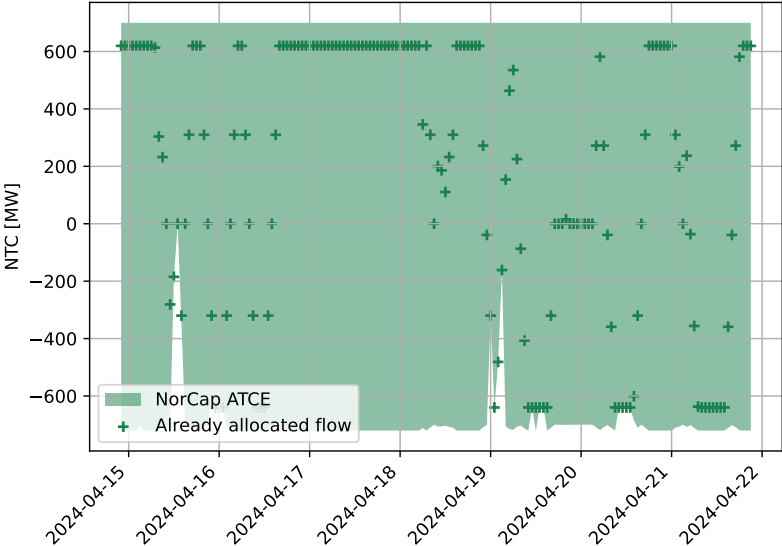
NL-NO2

NTC NL-NO2



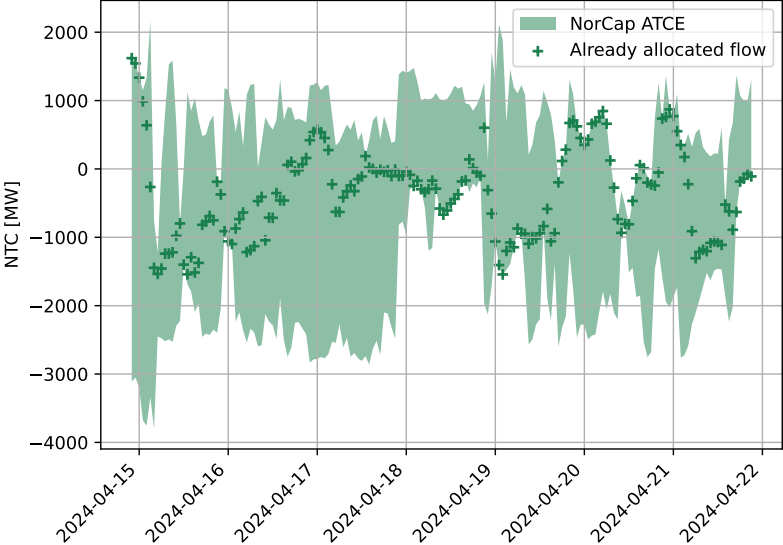
NO2-NL

NTC NO2-NL



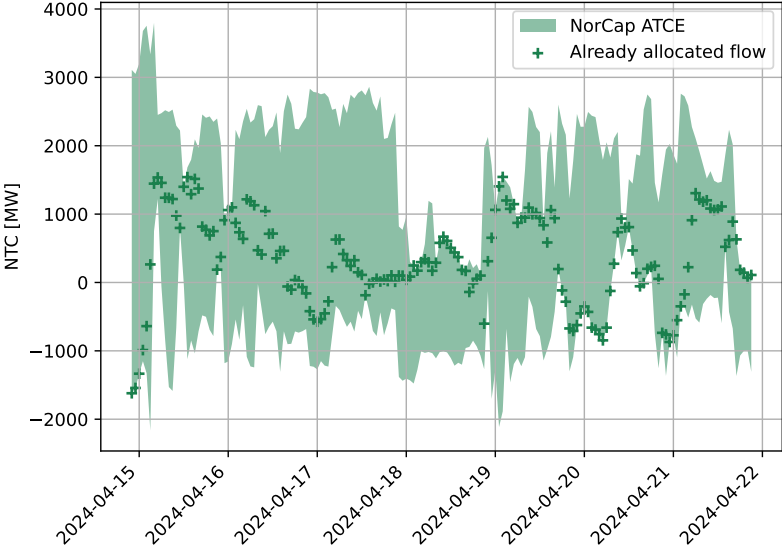
NO1-NO2

NTC NO1-NO2



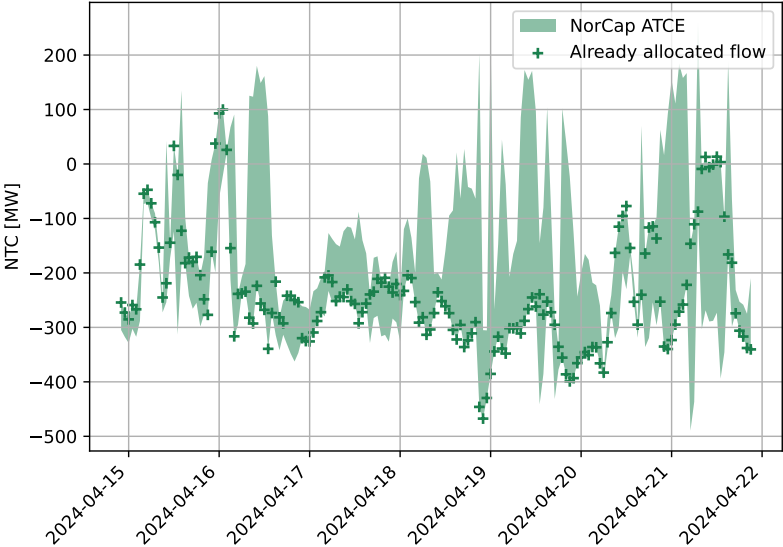
NO2-NO1

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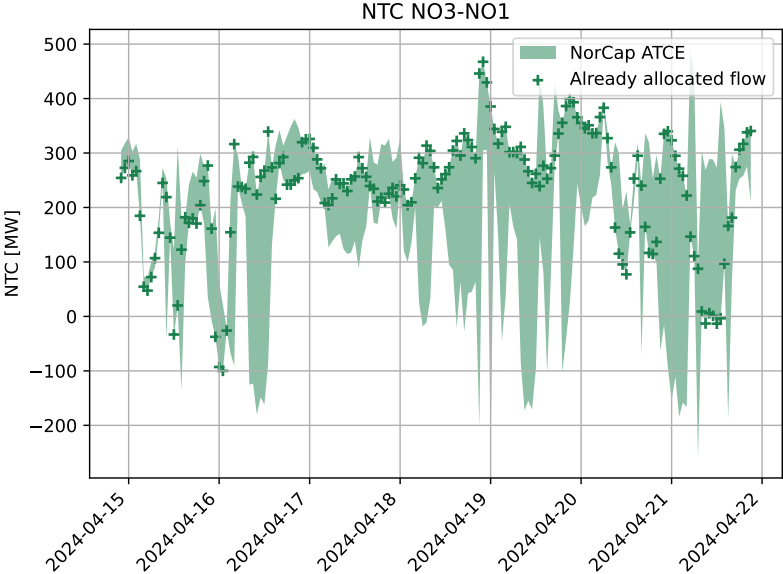


NO1-NO3

NTC NO1-NO3

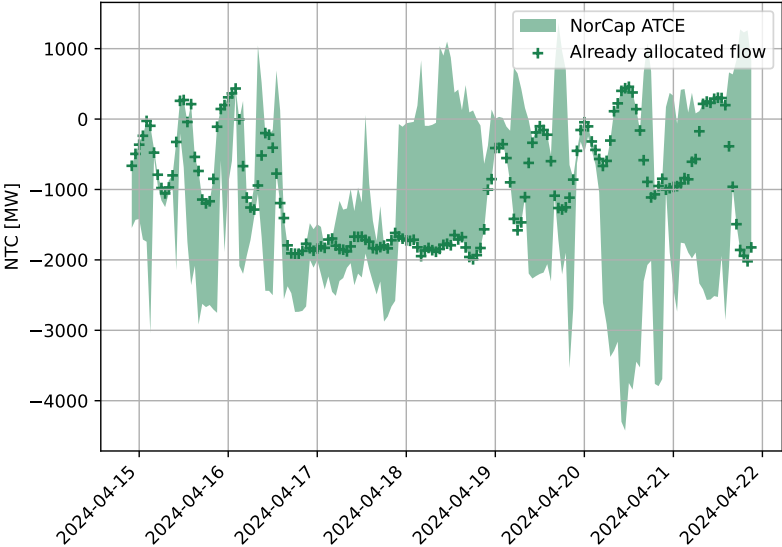


NO3-NO1



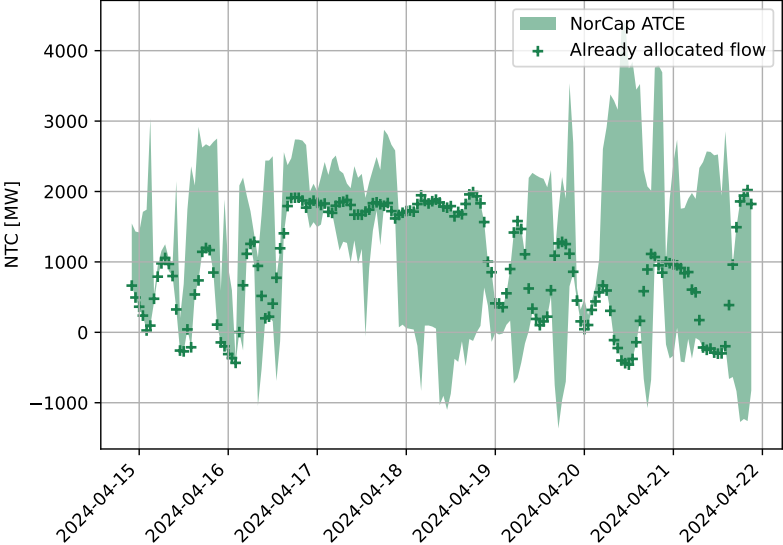
NO1-NO5

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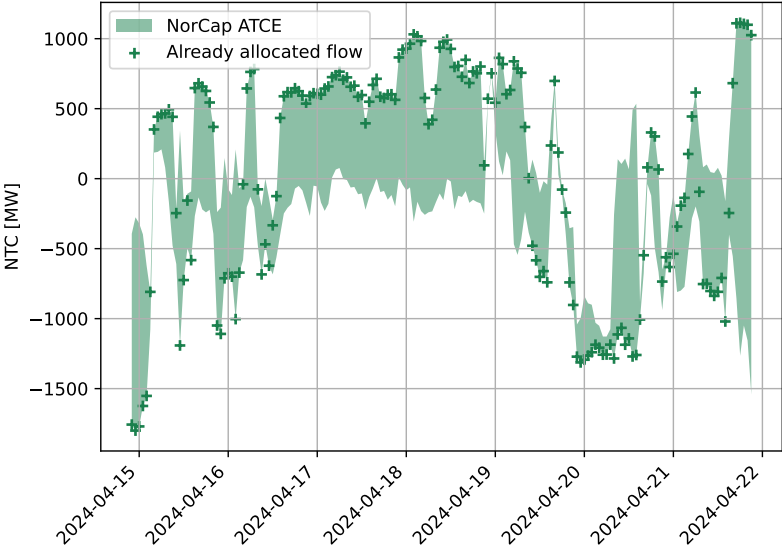
NO5-NO1

NTC NO5-NO1



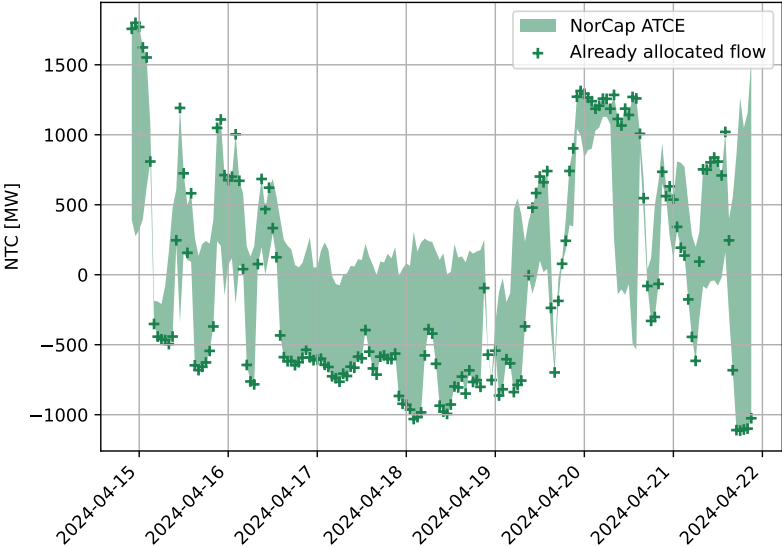
NO1-SE3

NTC NO1-SE3



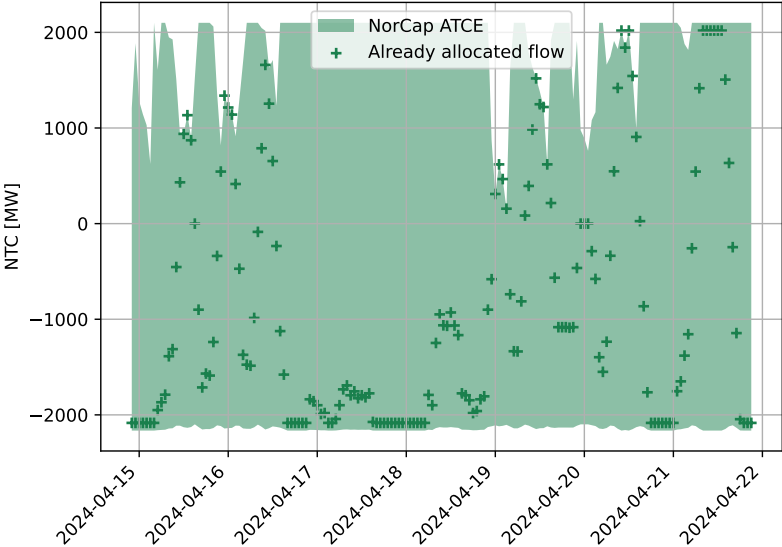
SE3-NO1

NTC SE3-NO1



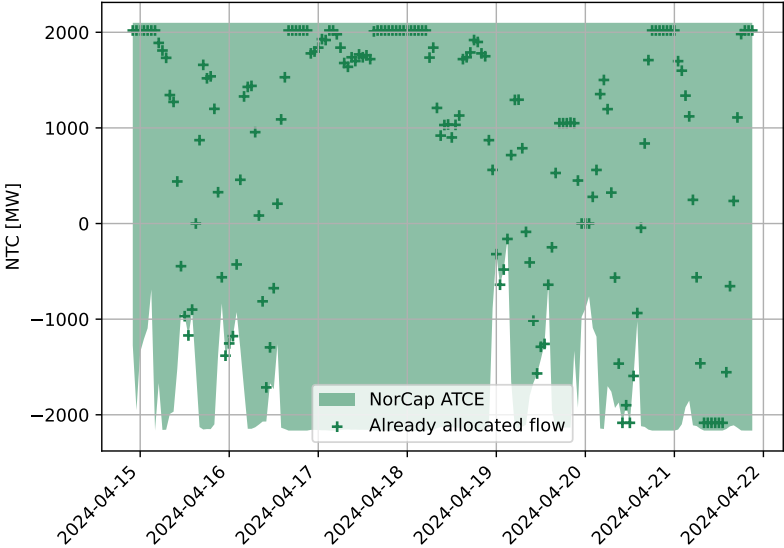
NO2A-NO2

NTC NO2A-NO2



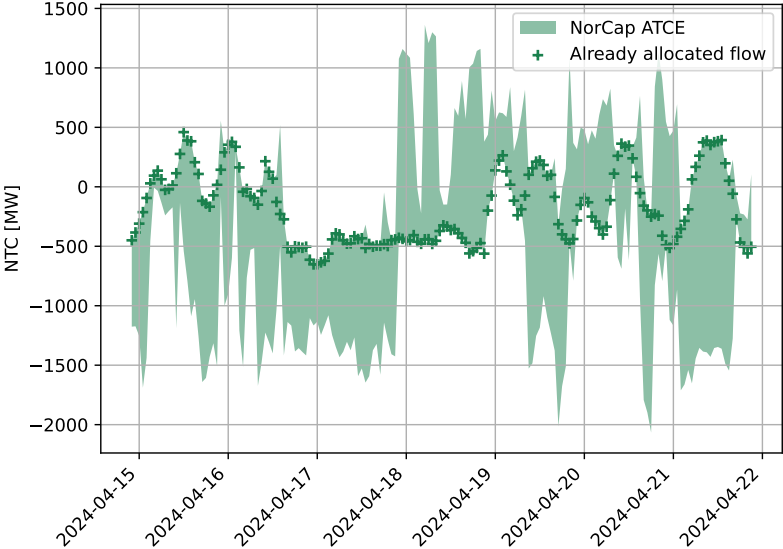
NO2-NO2A

NTC NO2-NO2A



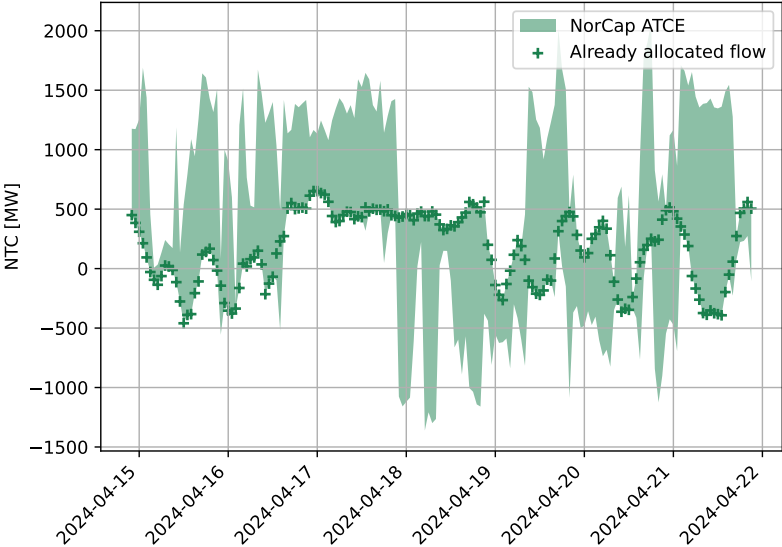
NO2-NO5

NTC NO2-NO5



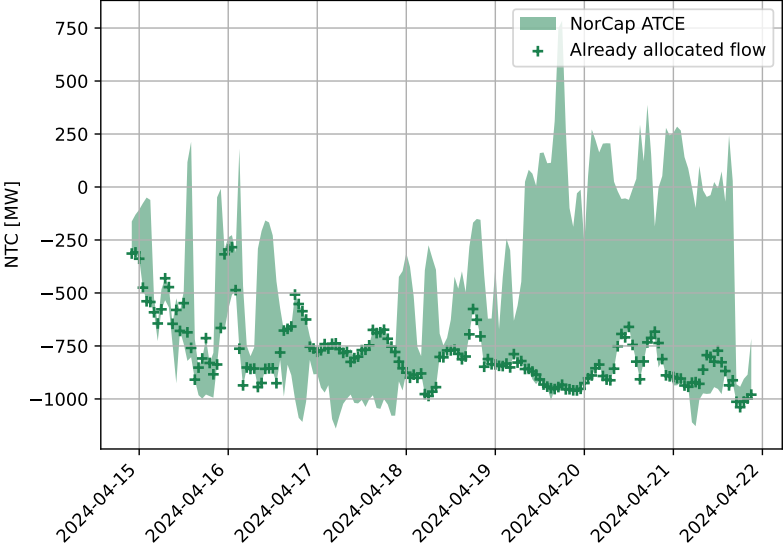
NO5-NO2

NTC NO5-NO2



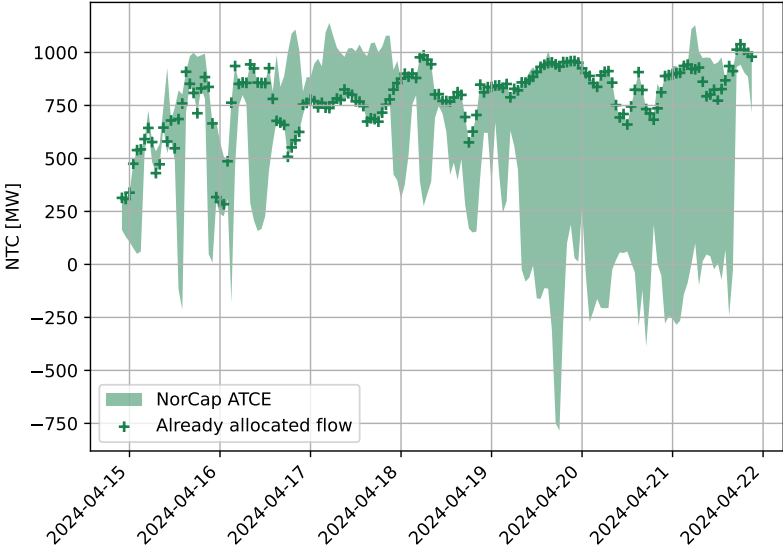
NO3-NO4

NTC NO3-NO4

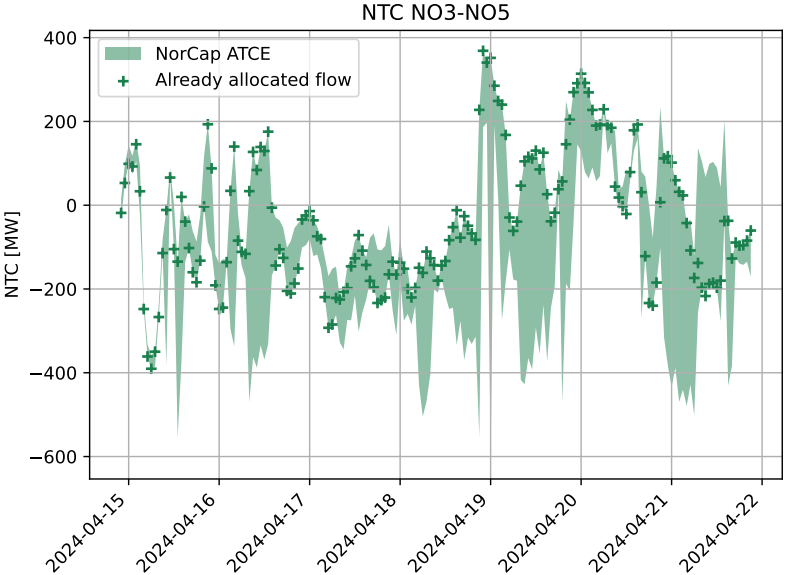


NO4-NO3

NTC NO4-NO3

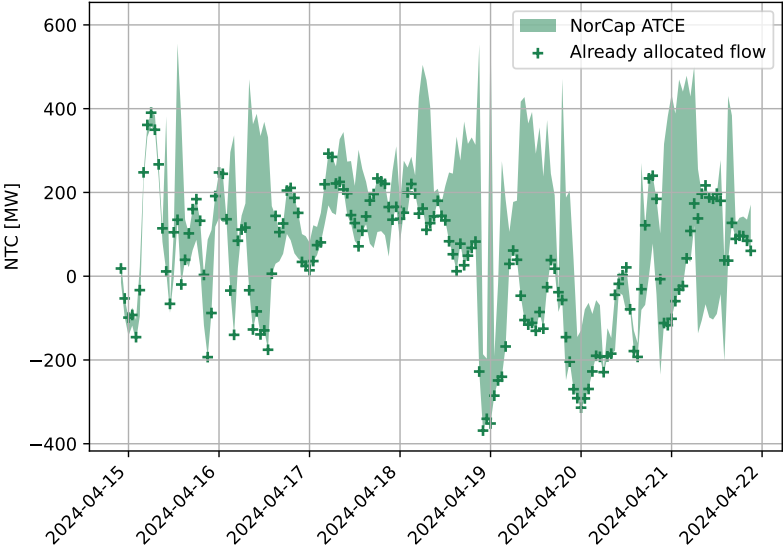


NO3-NO5



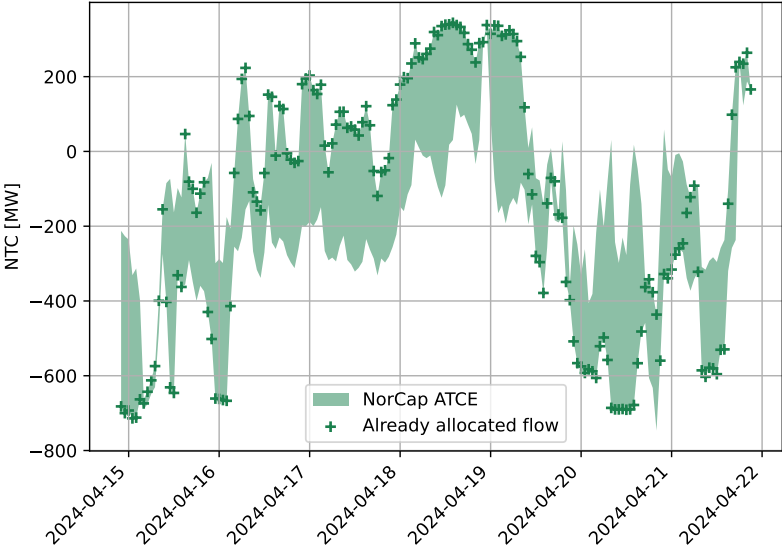
NO5-NO3

NTC NO5-NO3

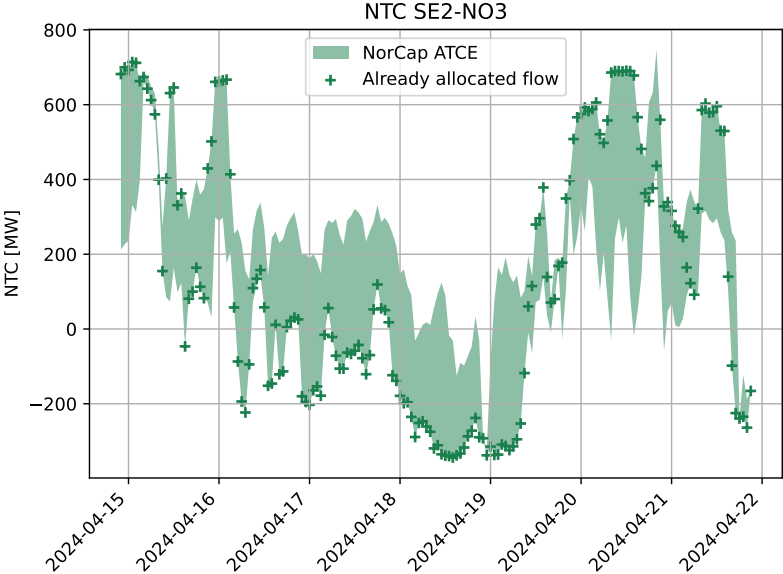


NO3-SE2

NTC NO3-SE2

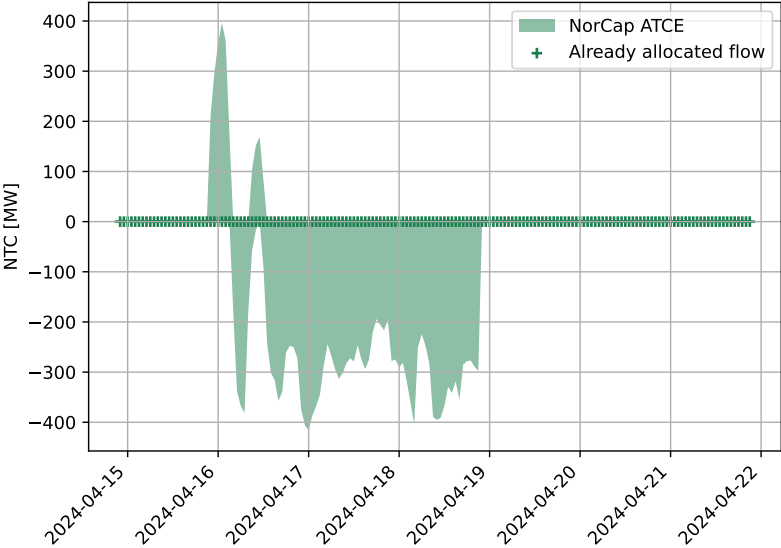


SE2-NO3



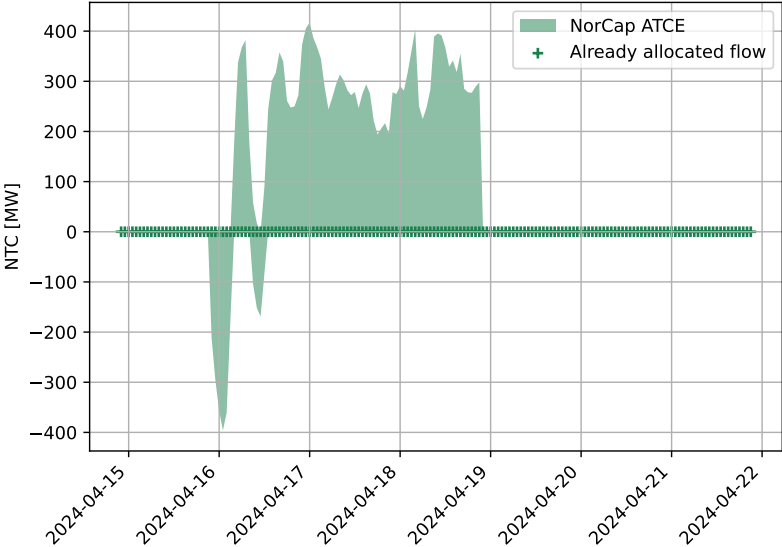
NO4-SE1

NTC NO4-SE1



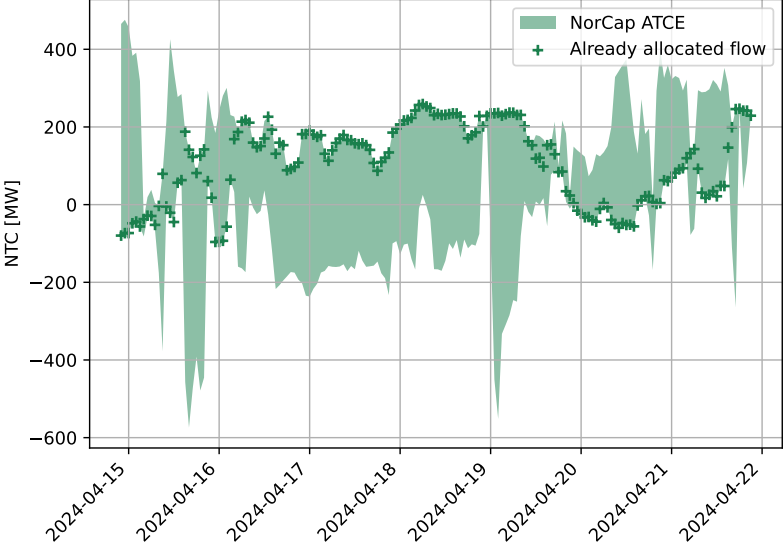
SE1-NO4

NTC SE1-NO4



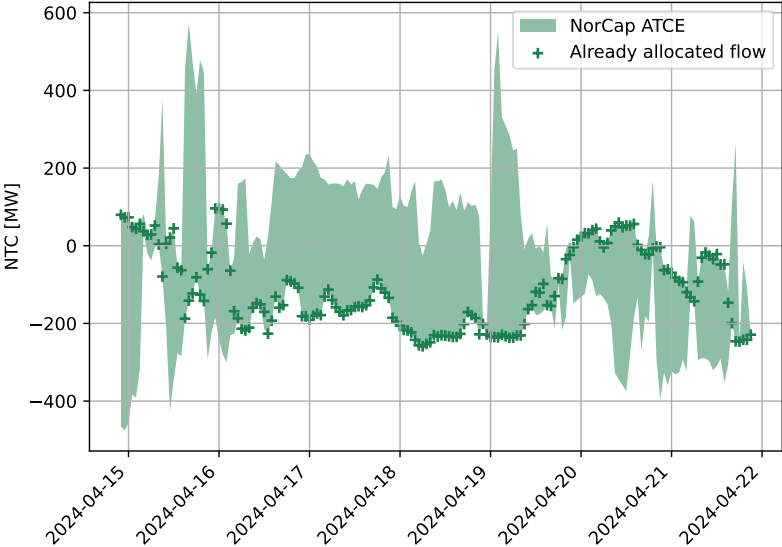
NO4-SE2

NTC NO4-SE2



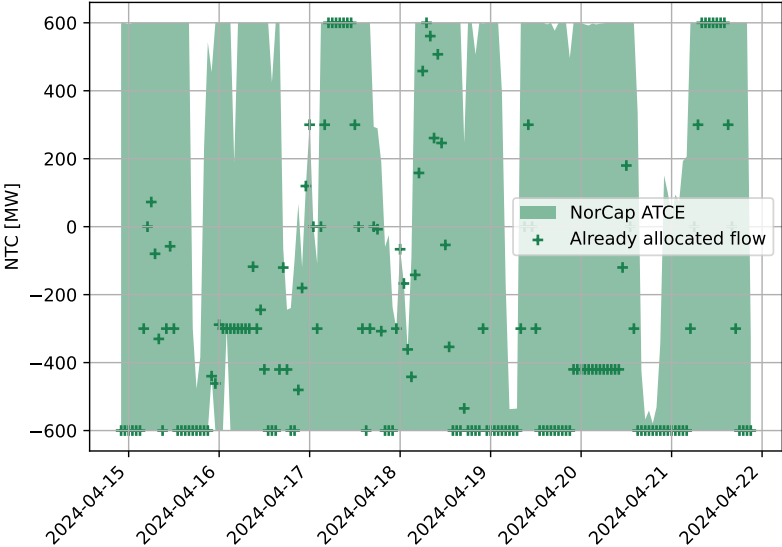
SE2-NO4

NTC SE2-NO4



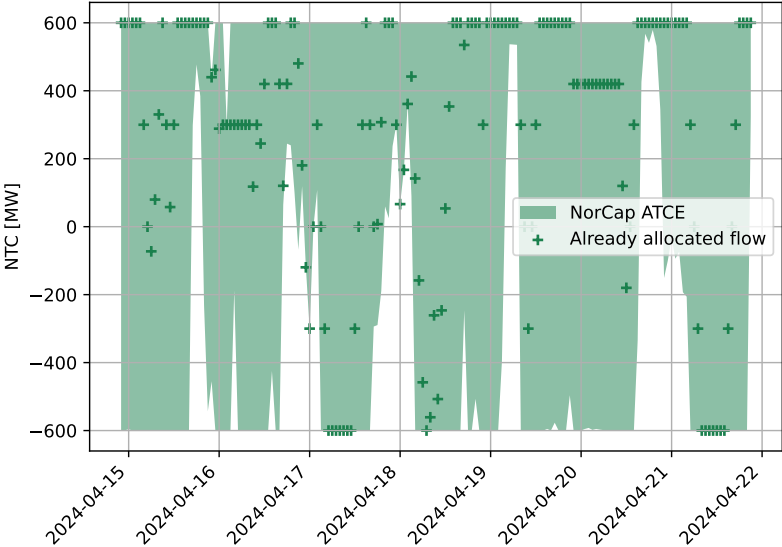
PL-SE4

NTC PL-SE4



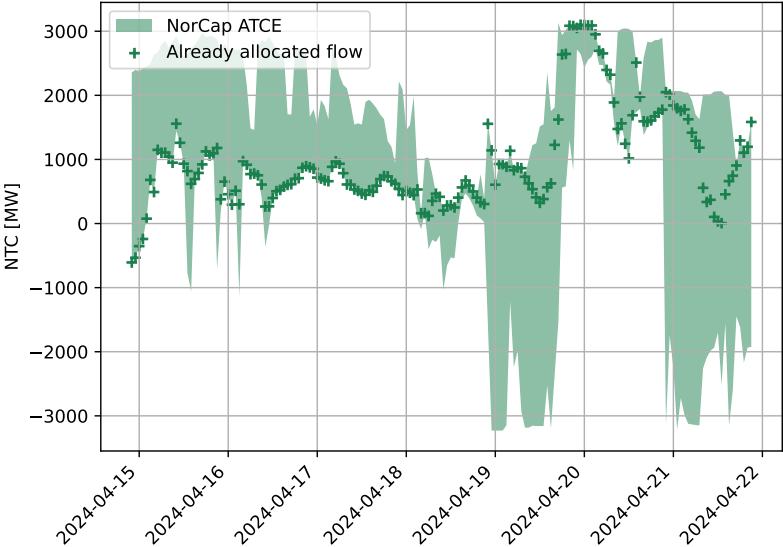
SE4-PL

NTC SE4-PL



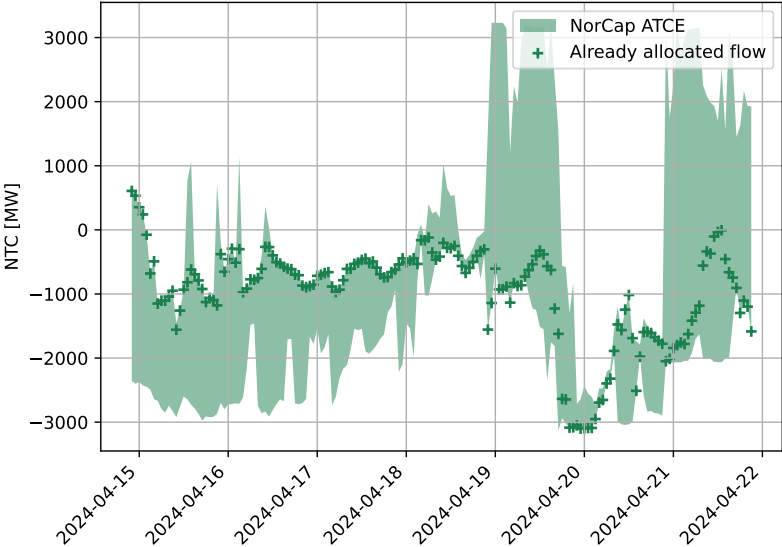
SE1-SE2

NTC SE1-SE2



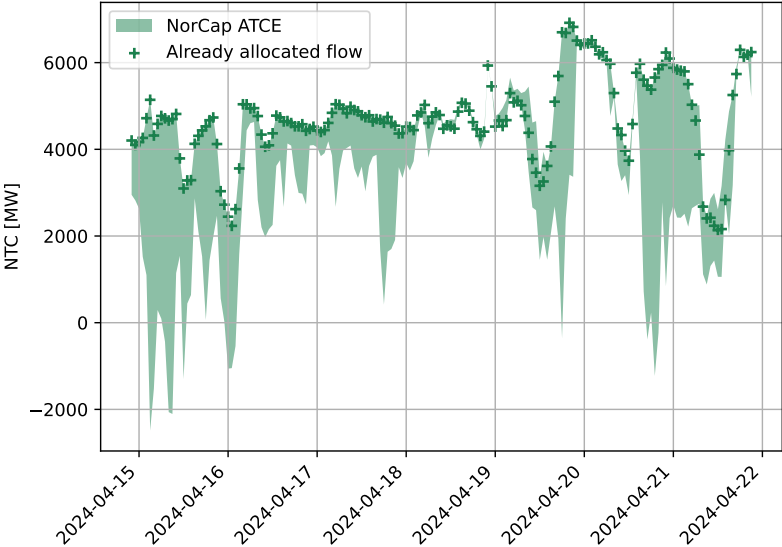
SE2-SE1

NTC SE2-SE1



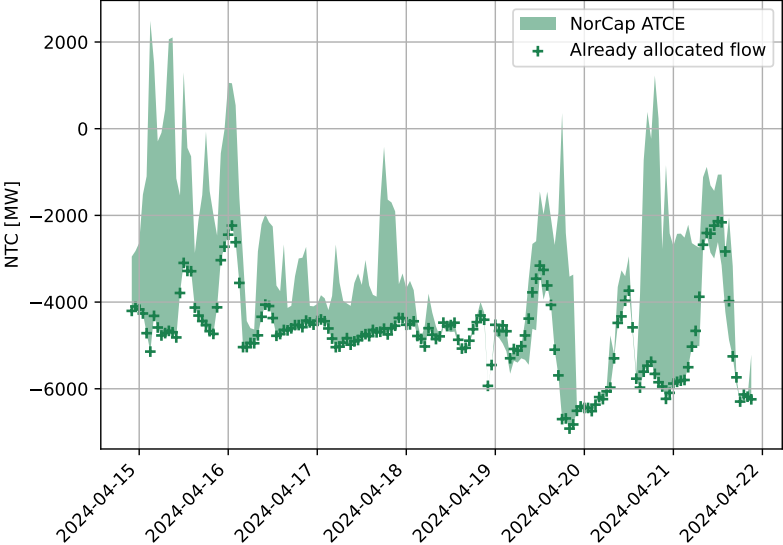
SE2-SE3

NTC SE2-SE3



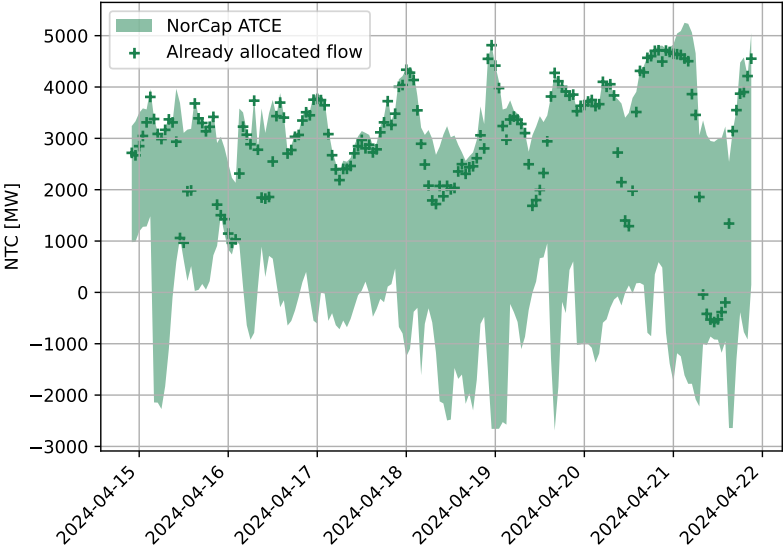
SE3-SE2

NTC SE3-SE2



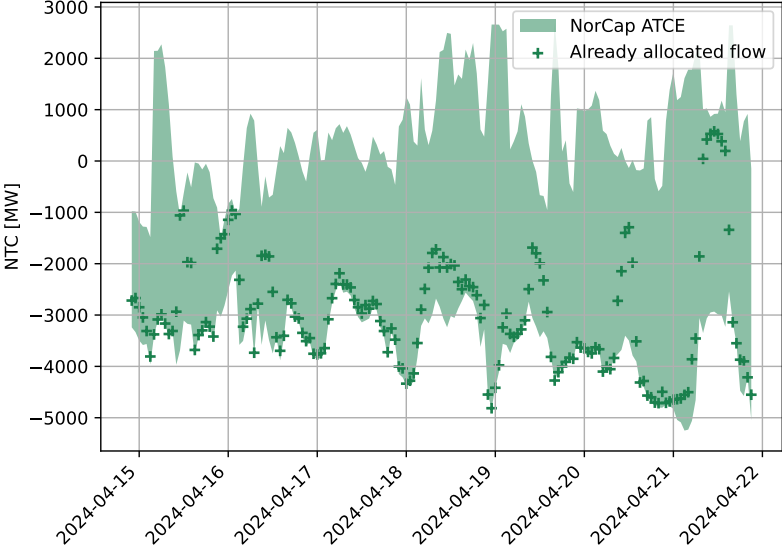
SE3-SE4

NTC SE3-SE4

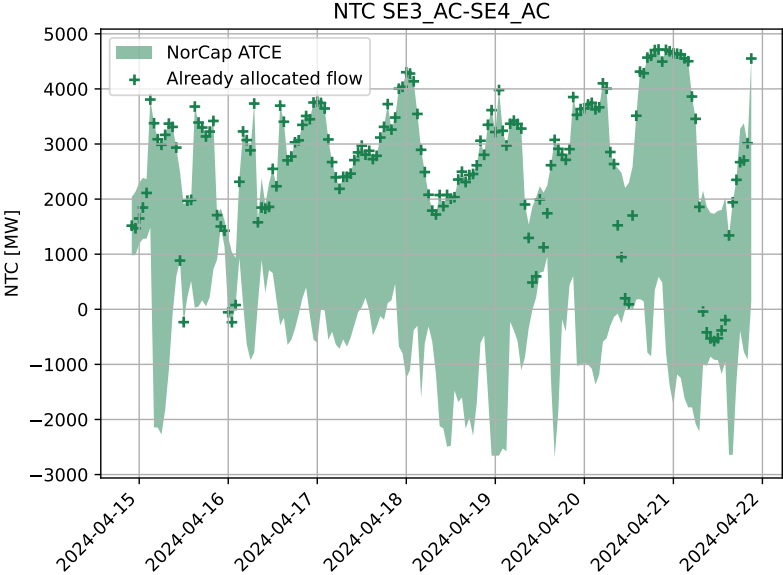


SE4-SE3

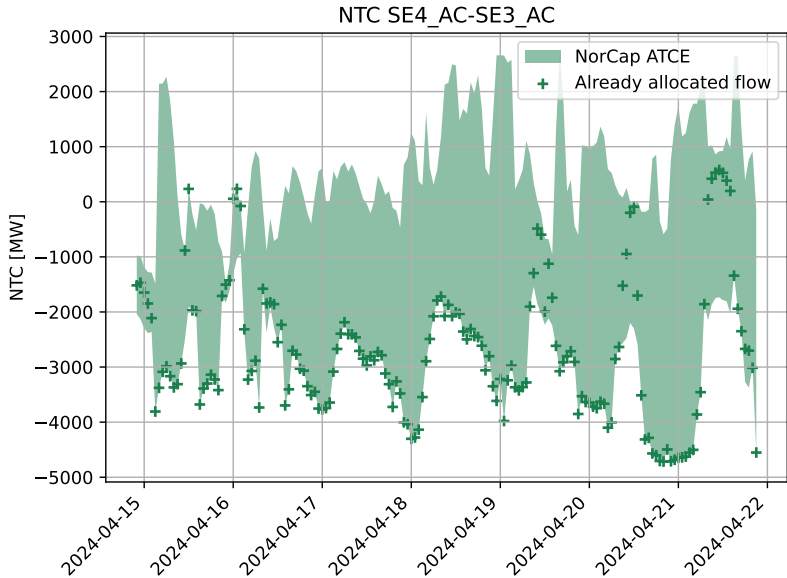
NTC SE4-SE3



SE3_AC-SE4_AC

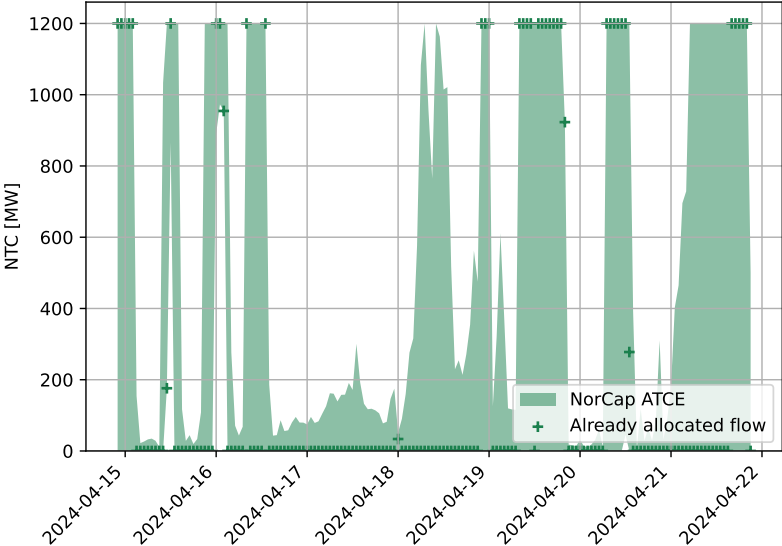


SE4_AC-SE3_AC

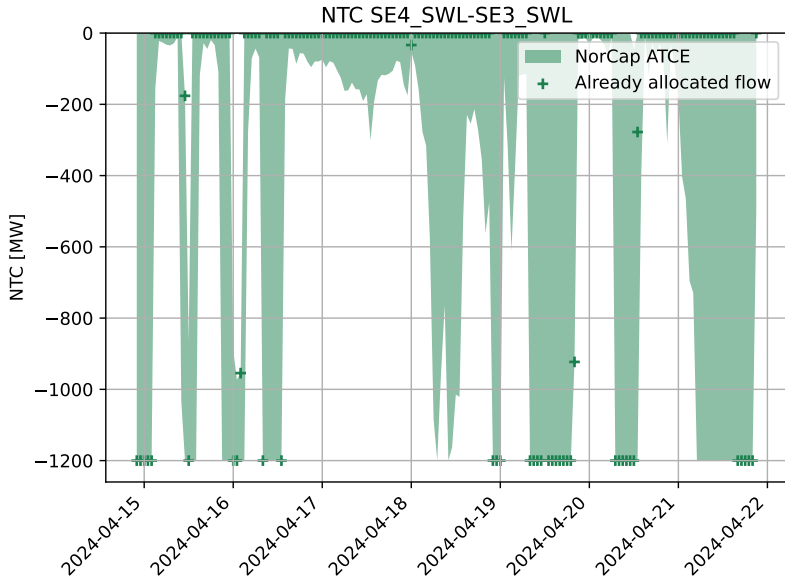


SE3_SWL-SE4_SWL

NTC SE3_SWL-SE4_SWL

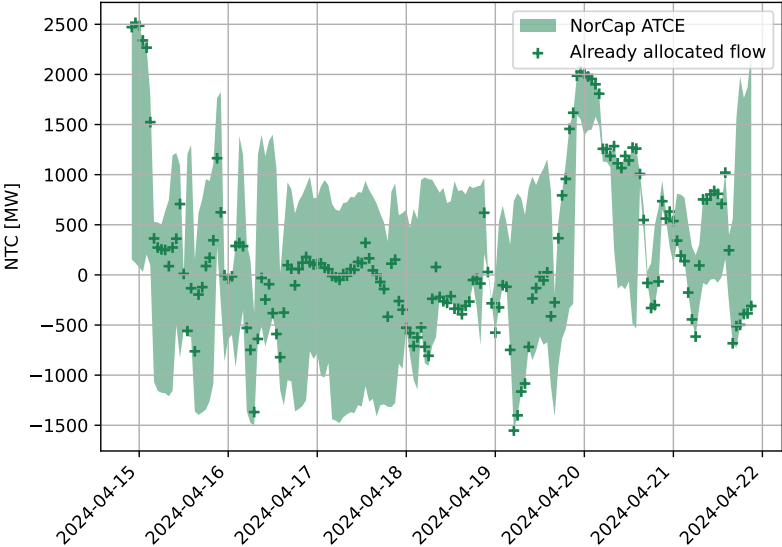


SE4_SWL-SE3_SWL



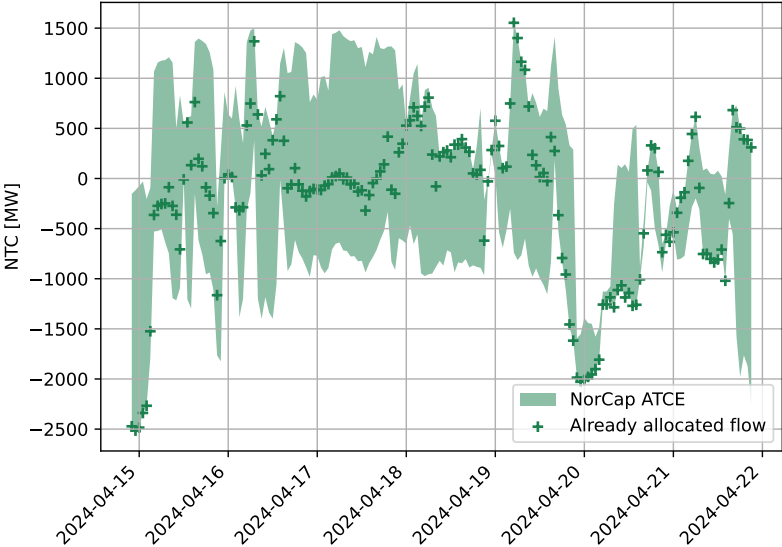
SE3A-SE3

NTC SE3A-SE3



SE3-SE3A

NTC SE3-SE3A

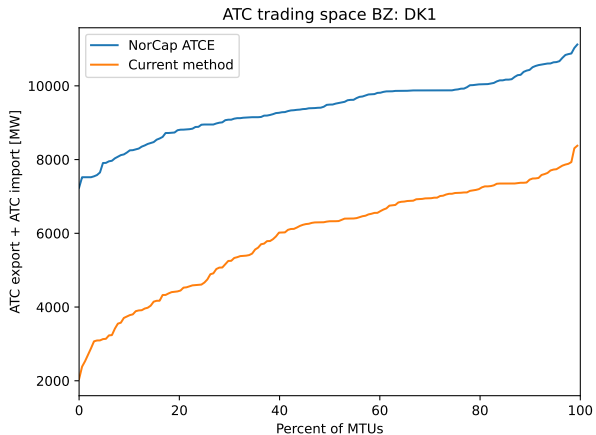


Bidding zone trading space

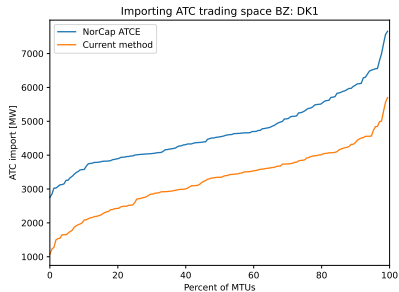
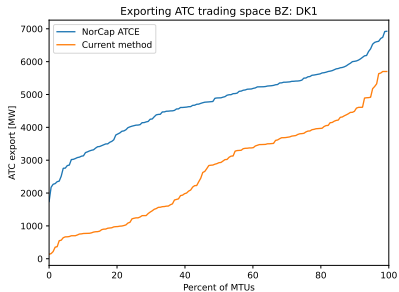
The total trading space of a bidding zone for a given MTU is the sum of export capacity and import capacity on all borders of that bidding zone for that MTU. The directional trading space is the sum of ATC on all borders of a bidding zone in either exporting or importing direction.

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.

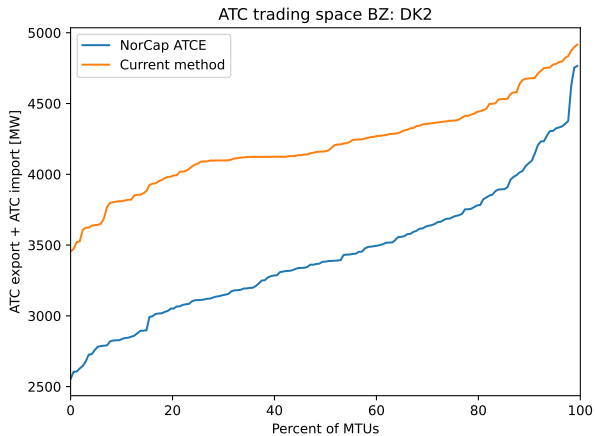
DK1 - Total trading space



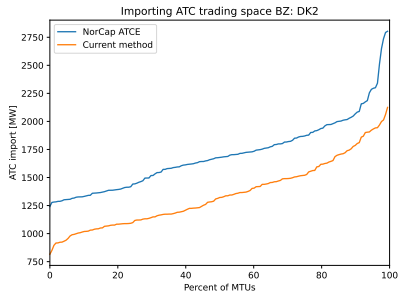
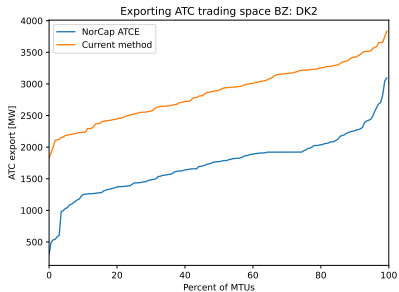
DK1 - Directional trading space



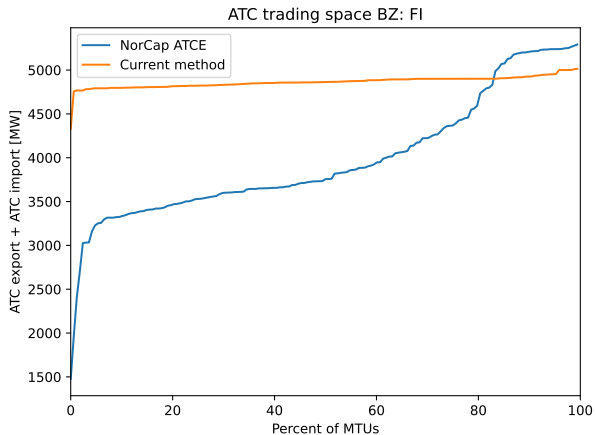
DK2 - Total trading space



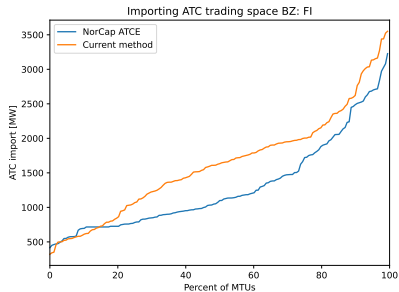
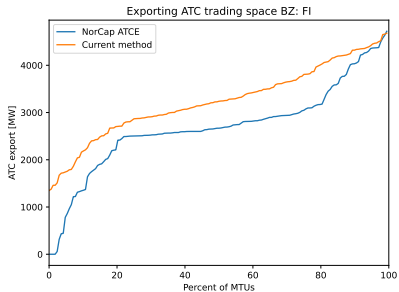
DK2 - Directional trading space



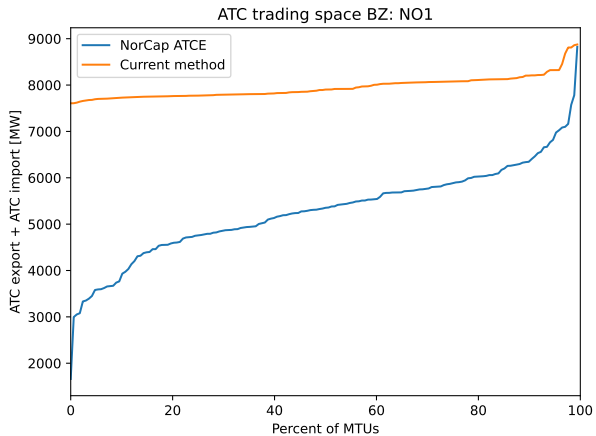
FI - Total trading space



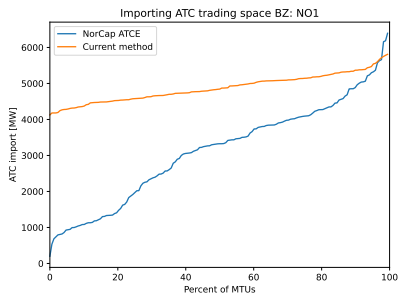
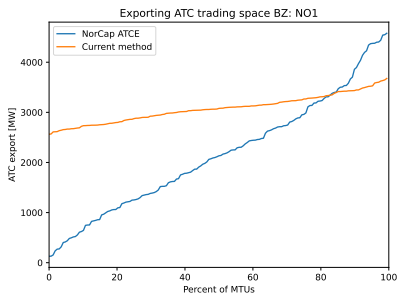
FI - Directional trading space



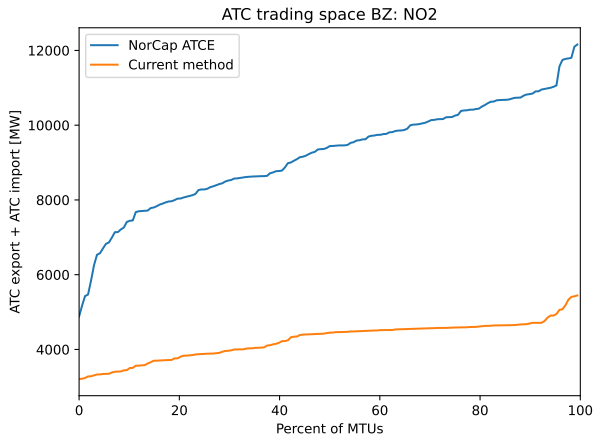
NO1 - Total trading space



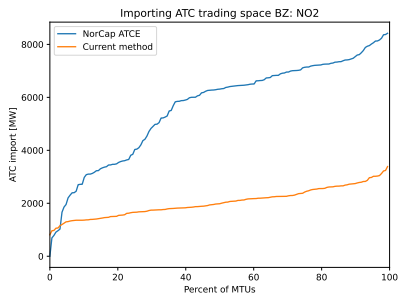
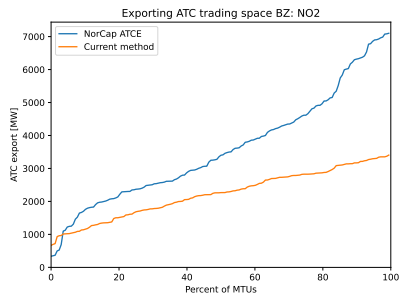
NO1 - Directional trading space



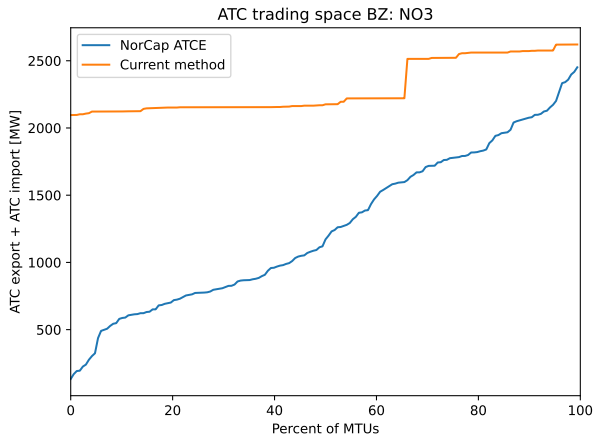
NO2 - Total trading space



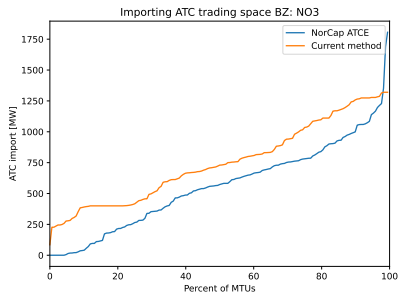
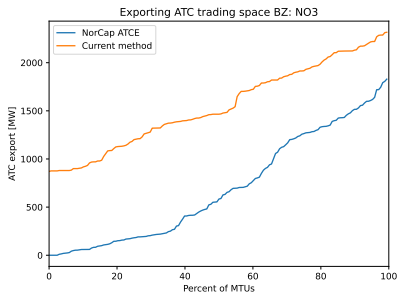
NO2 - Directional trading space



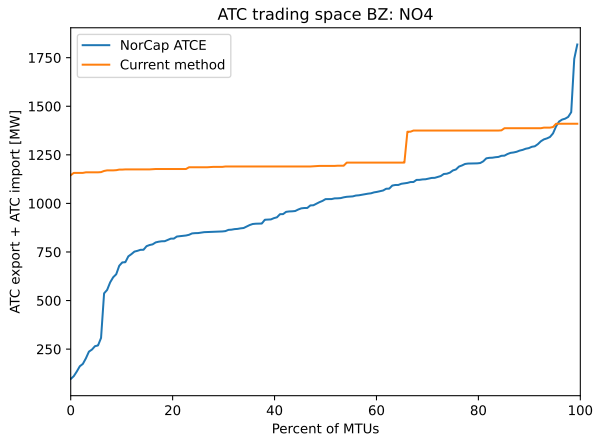
NO3 - Total trading space



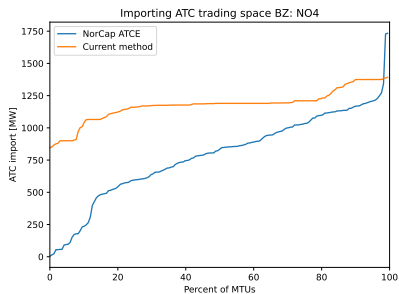
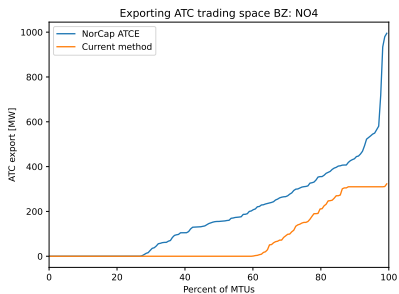
NO3 - Directional trading space



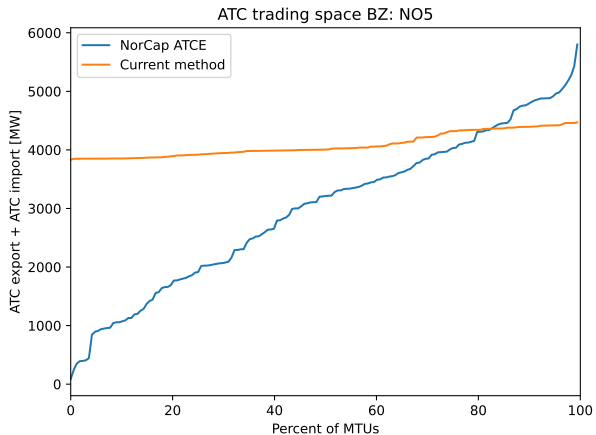
NO4 - Total trading space



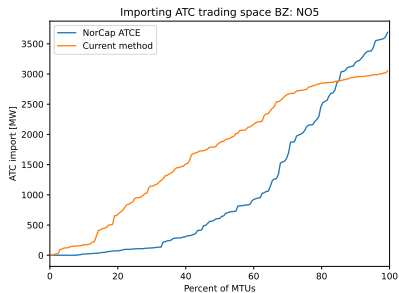
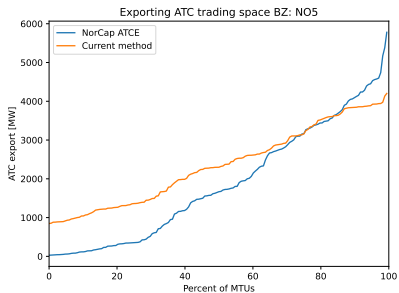
NO4 - Directional trading space



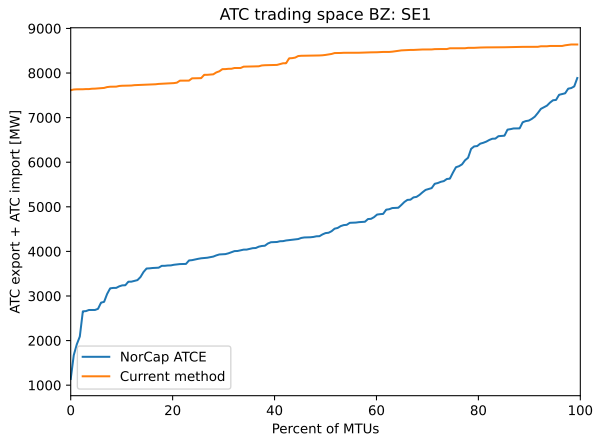
NO5 - Total trading space



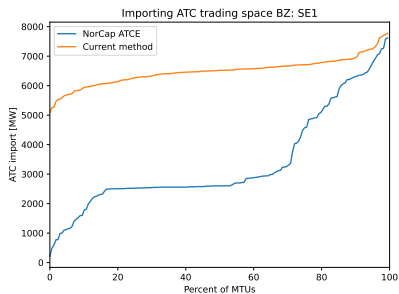
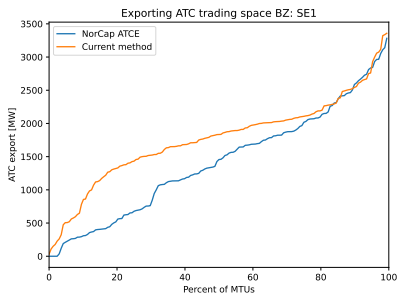
NO5 - Directional trading space



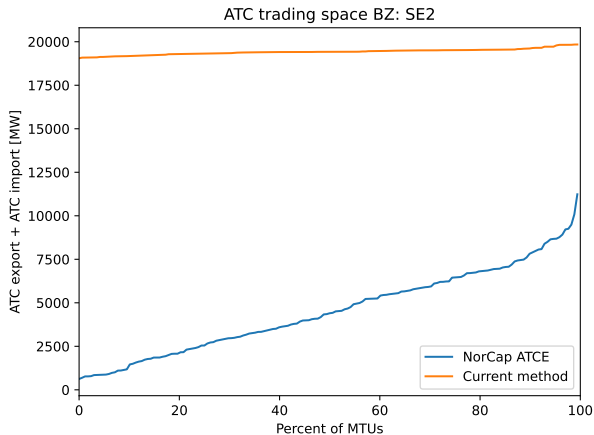
SE1 - Total trading space



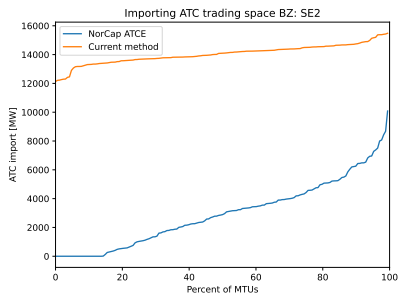
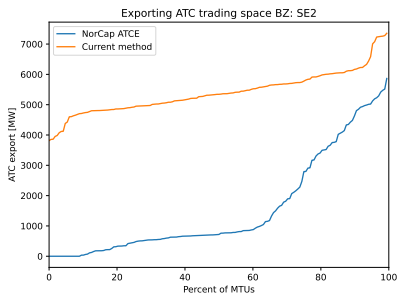
SE1 - Directional trading space



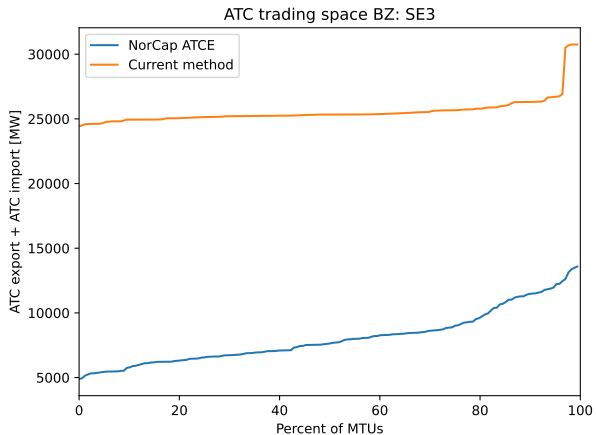
SE2 - Total trading space



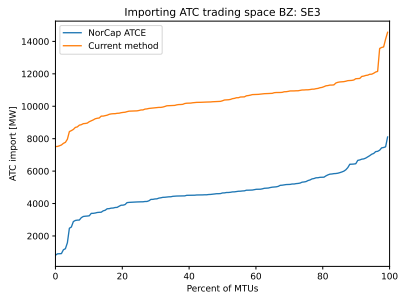
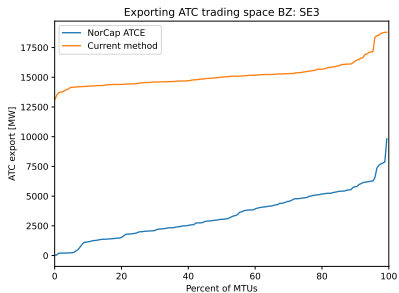
SE2 - Directional trading space



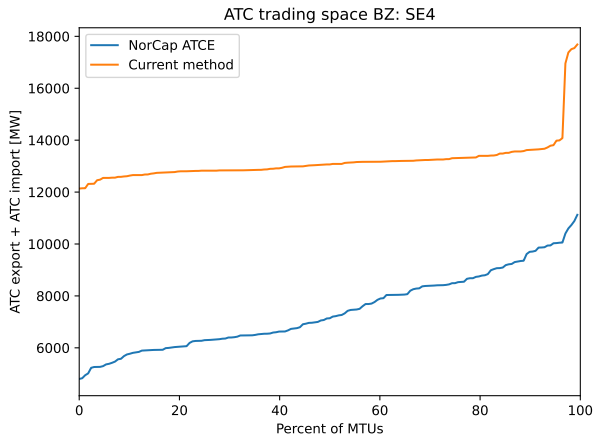
SE3 - Total trading space



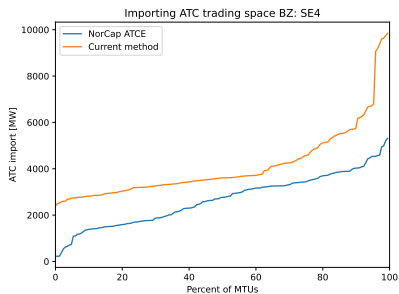
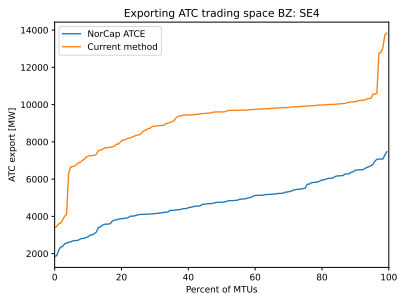
SE3 - Directional trading space



SE4 - Total trading space

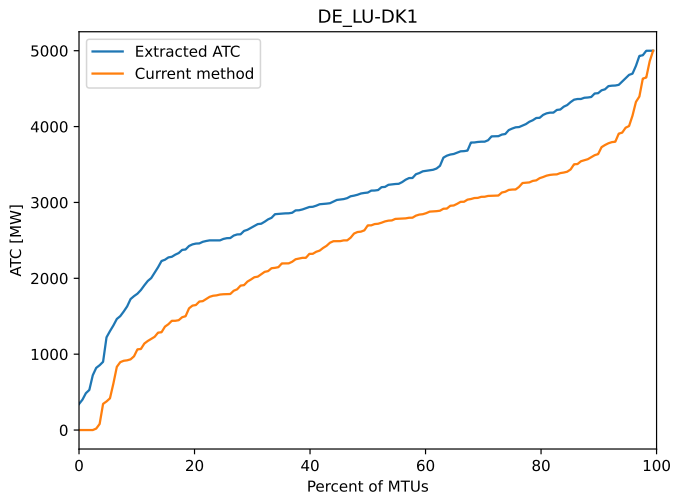


SE4 - Directional trading space

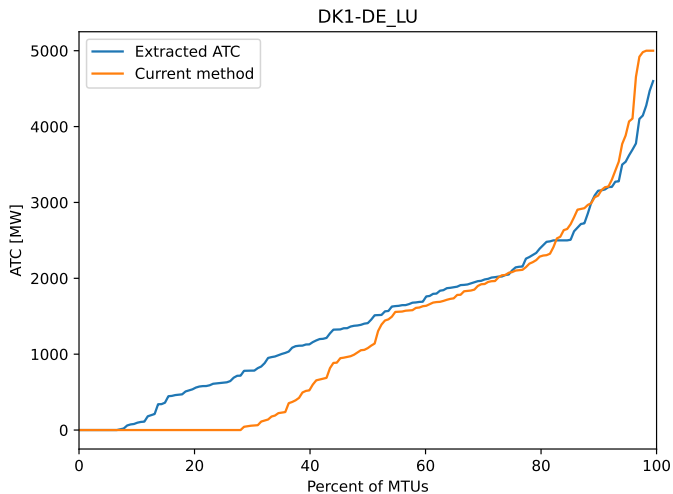


Capacity duration curves

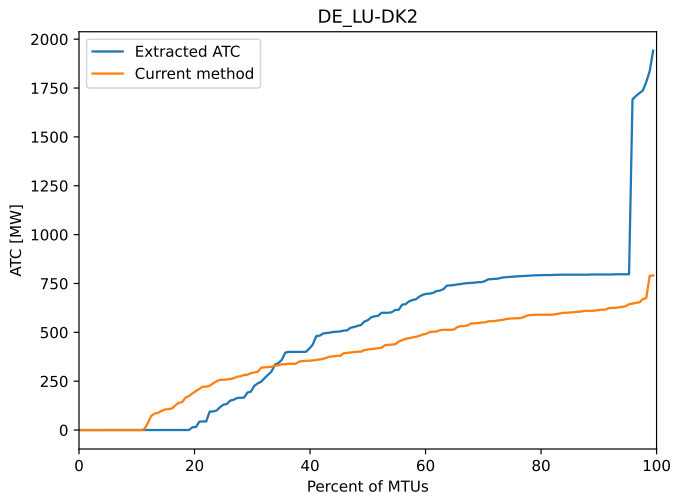
DE_LU-DK1 ATC duration curves



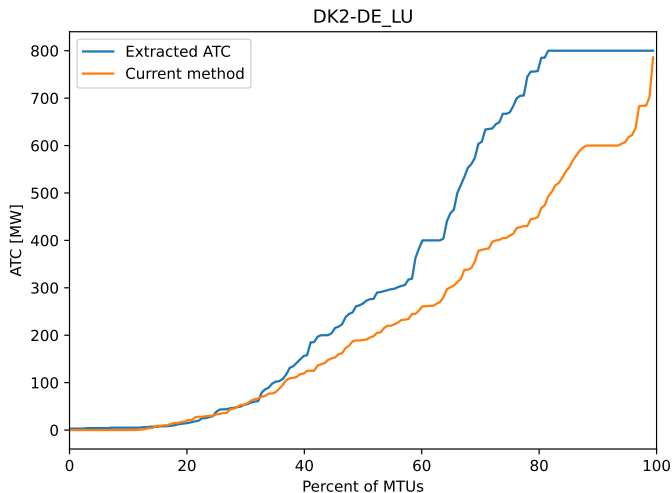
DK1-DE_LU ATC duration curves



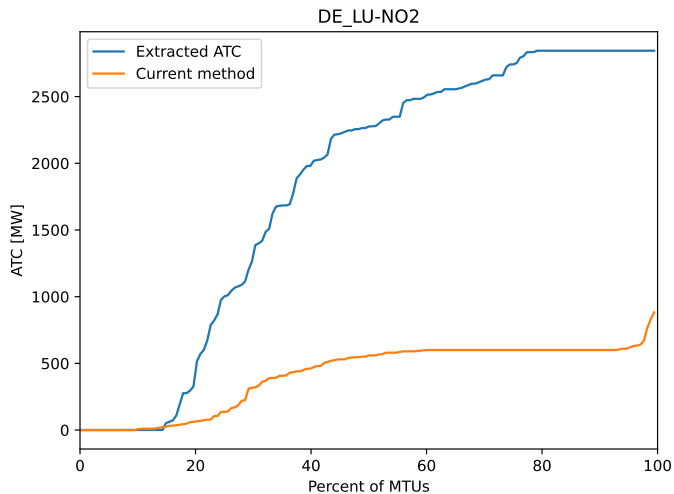
DE_LU-DK2 ATC duration curves



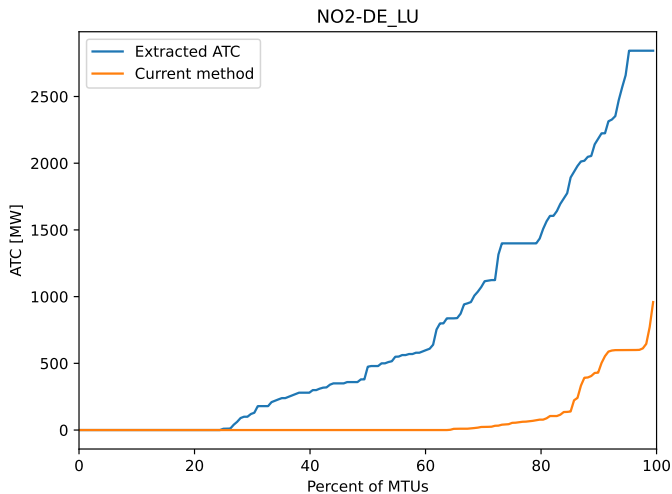
DK2-DE_LU ATC duration curves



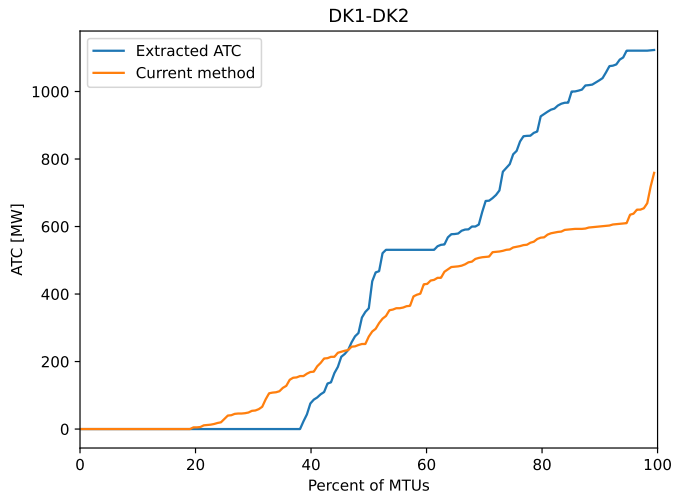
DE_LU-NO2 ATC duration curves



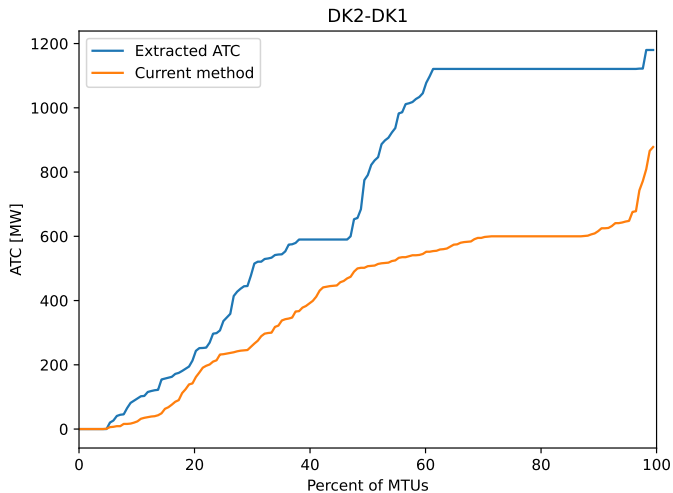
NO2-DE_LU ATC duration curves



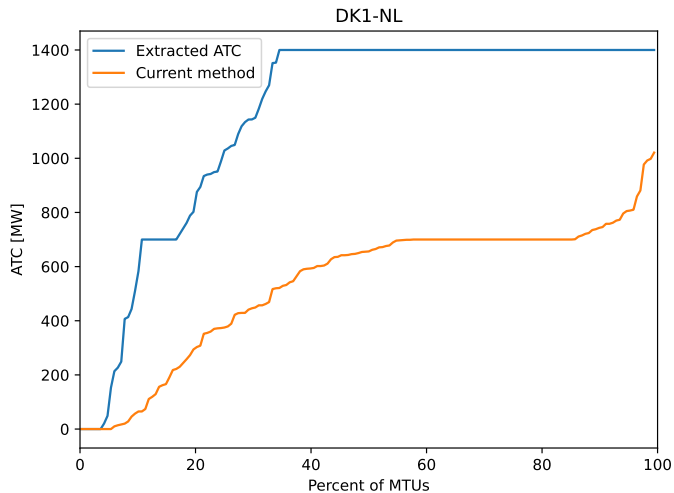
DK1-DK2 ATC duration curves



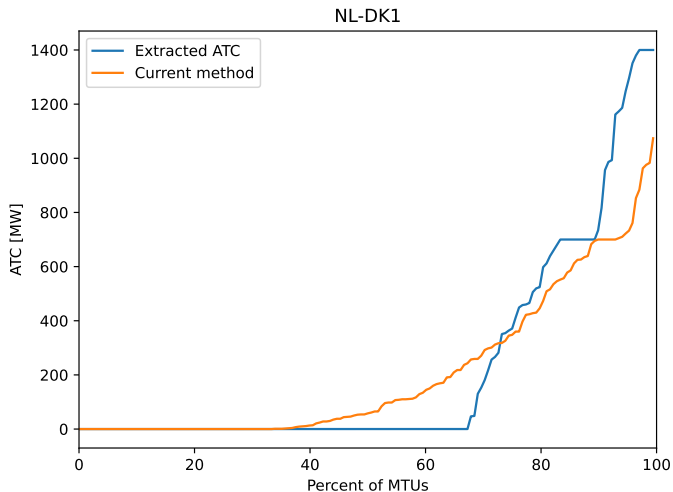
DK2-DK1 ATC duration curves



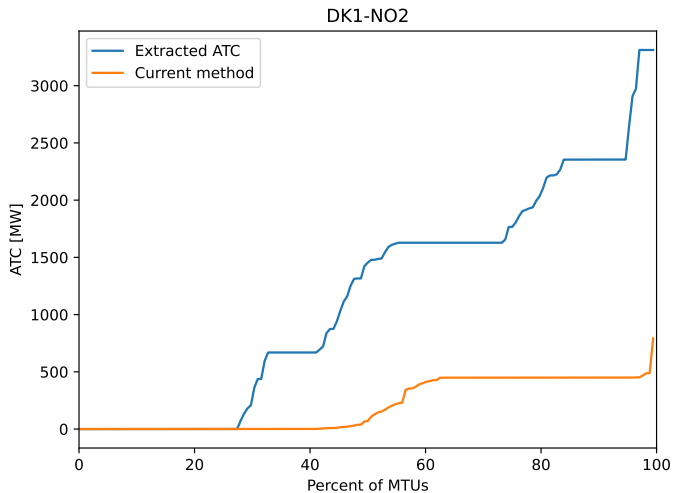
DK1-NL ATC duration curves



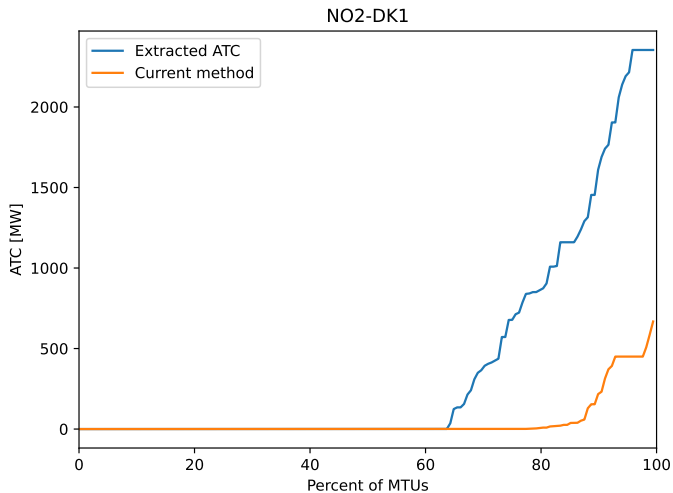
NL-DK1 ATC duration curves



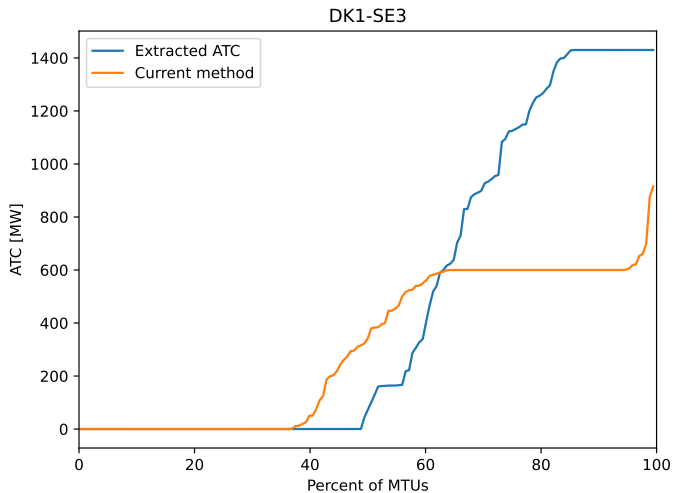
DK1-NO2 ATC duration curves



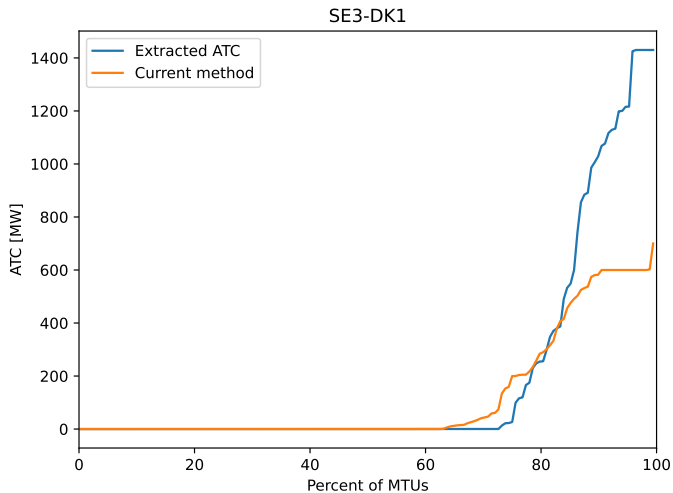
NO2-DK1 ATC duration curves



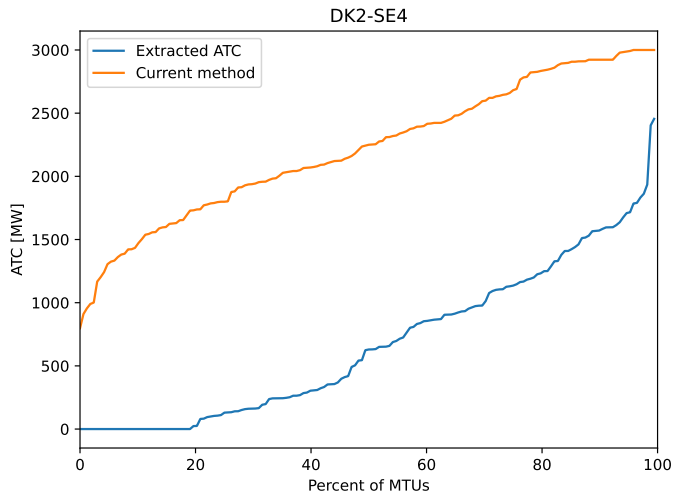
DK1-SE3 ATC duration curves



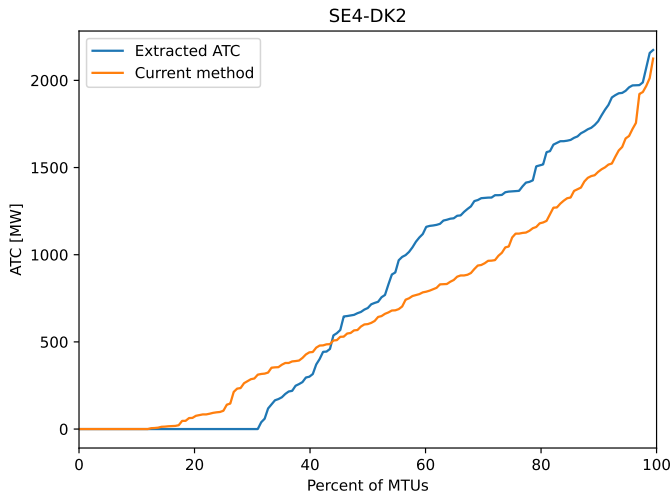
SE3-DK1 ATC duration curves



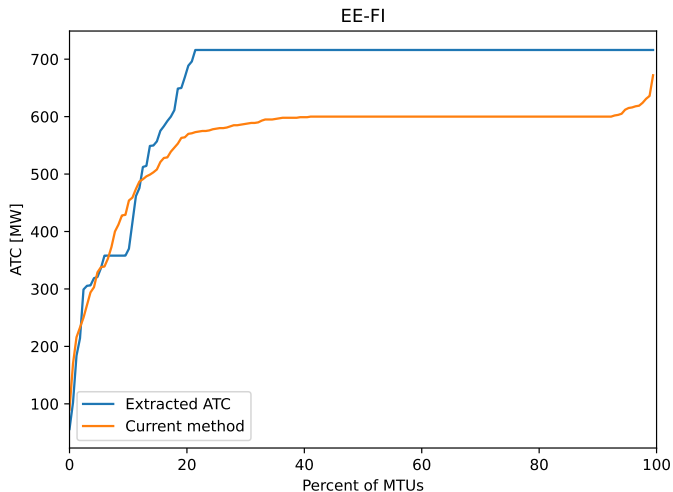
DK2-SE4 ATC duration curves



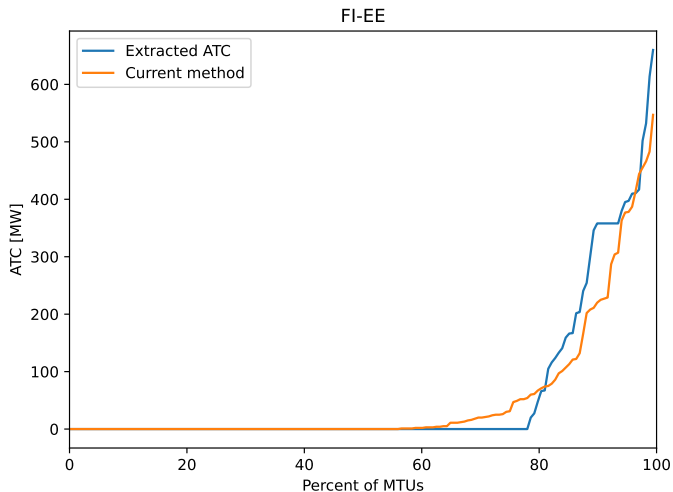
SE4-DK2 ATC duration curves



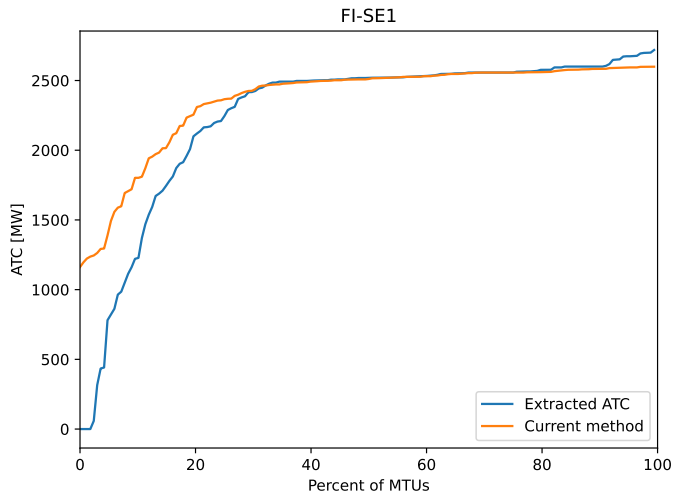
EE-FI ATC duration curves



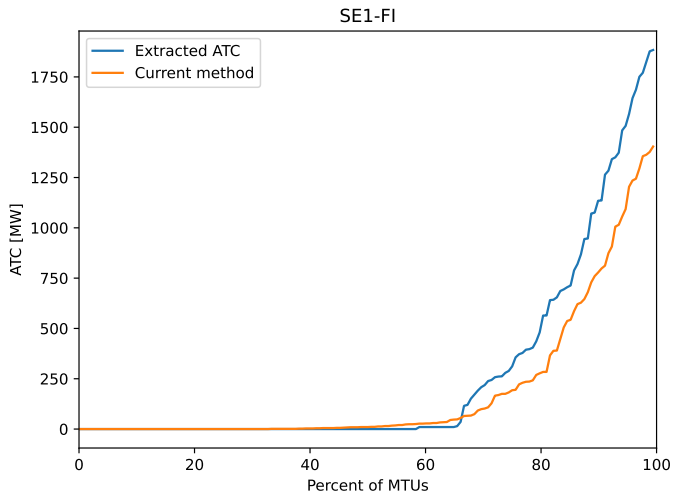
FI-EE ATC duration curves



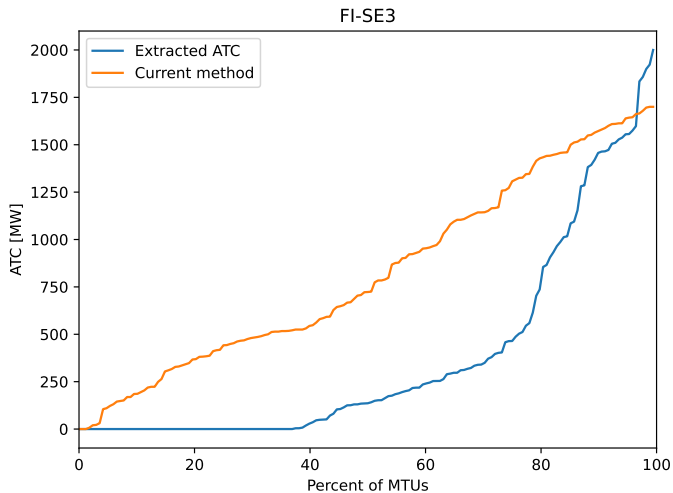
FI-SE1 ATC duration curves



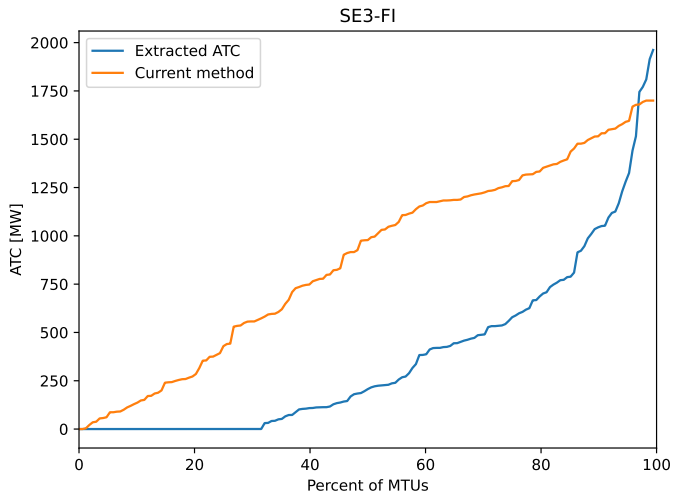
SE1-FI ATC duration curves



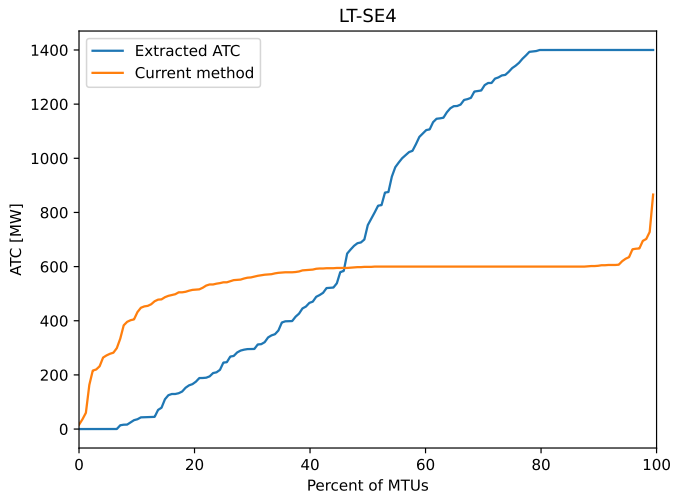
FI-SE3 ATC duration curves



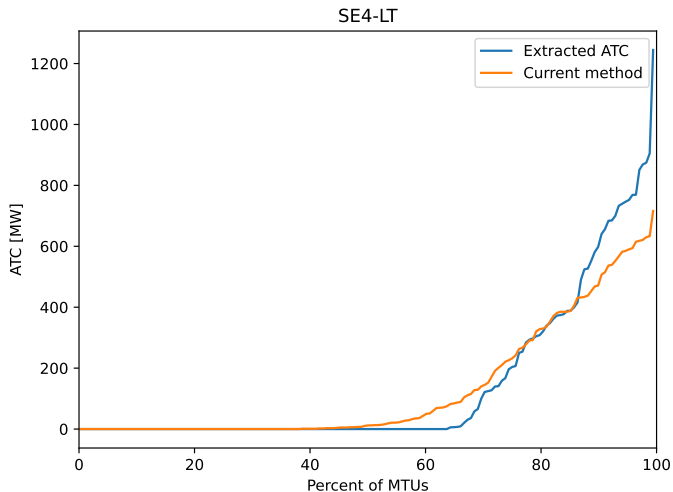
SE3-FI ATC duration curves



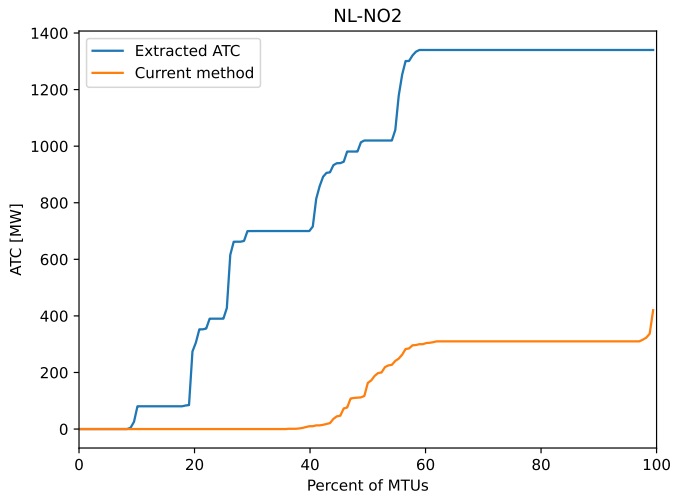
LT-SE4 ATC duration curves



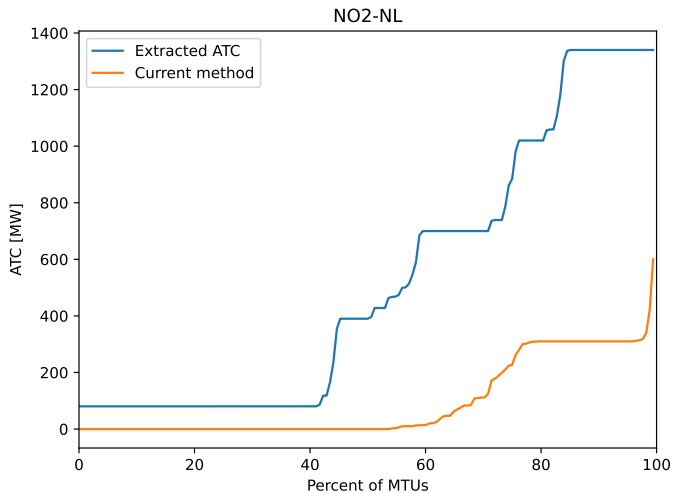
SE4-LT ATC duration curves



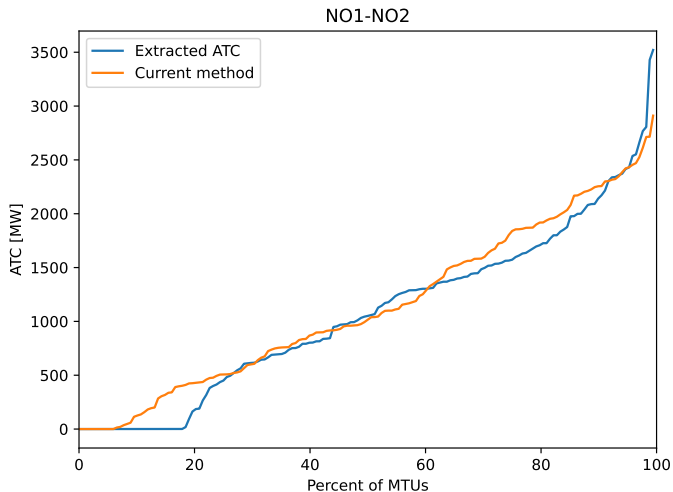
NL-NO2 ATC duration curves



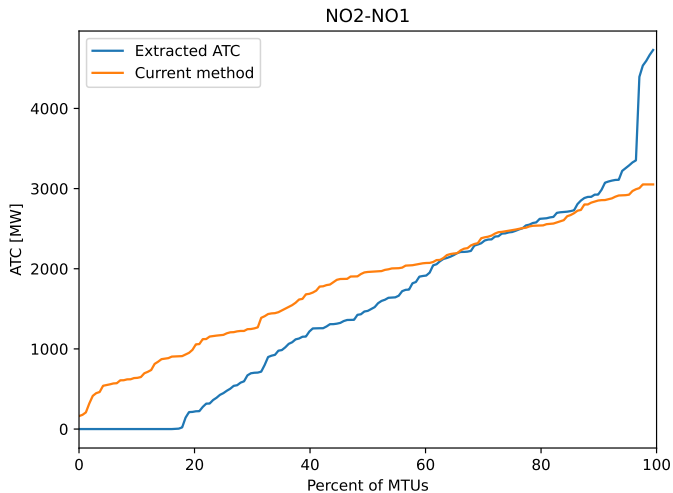
NO2-NL ATC duration curves



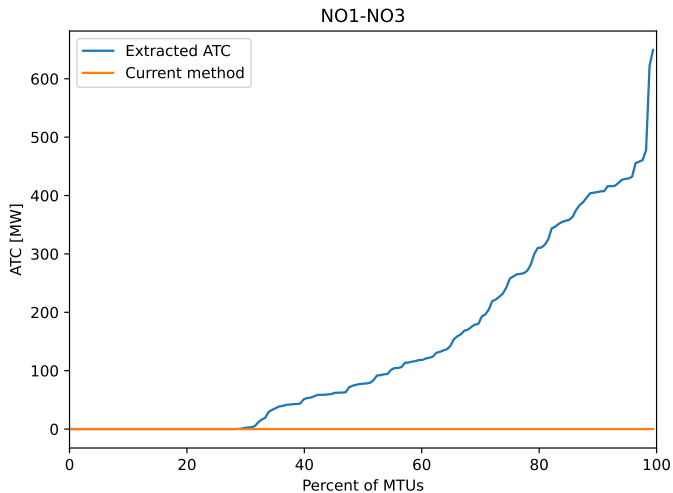
NO1-NO2 ATC duration curves



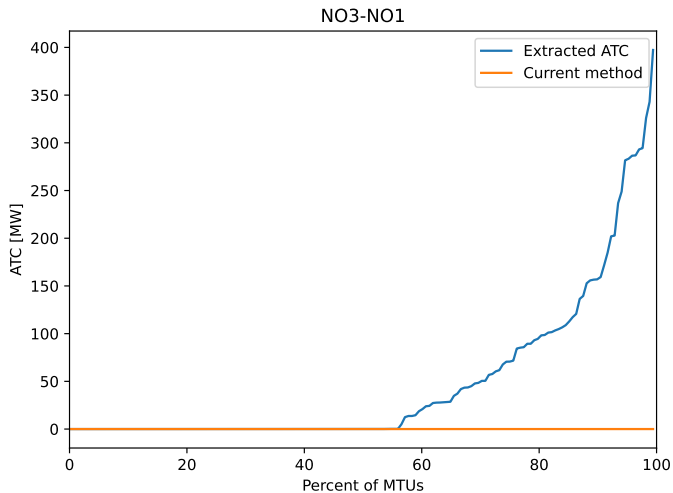
NO2-NO1 ATC duration curves



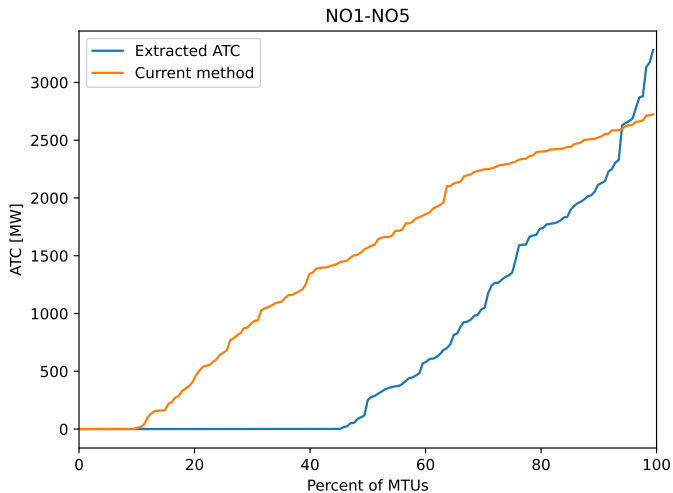
NO1-NO3 ATC duration curves



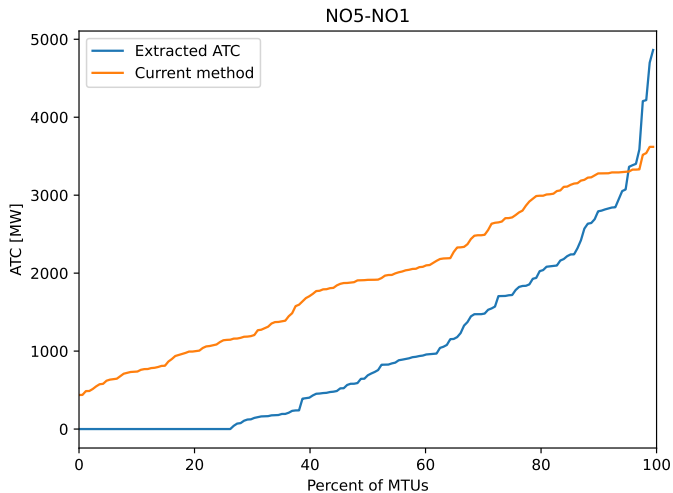
NO3-NO1 ATC duration curves



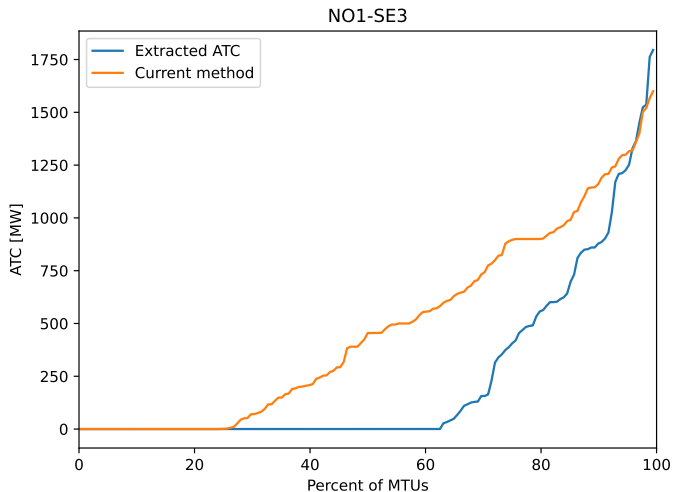
NO1-NO5 ATC duration curves



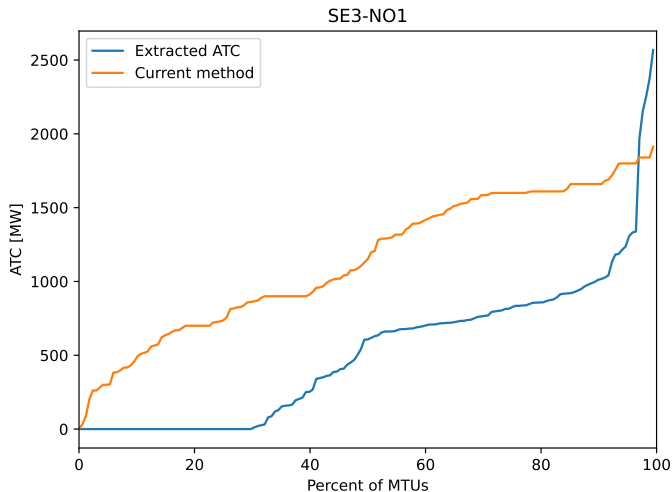
NO5-NO1 ATC duration curves



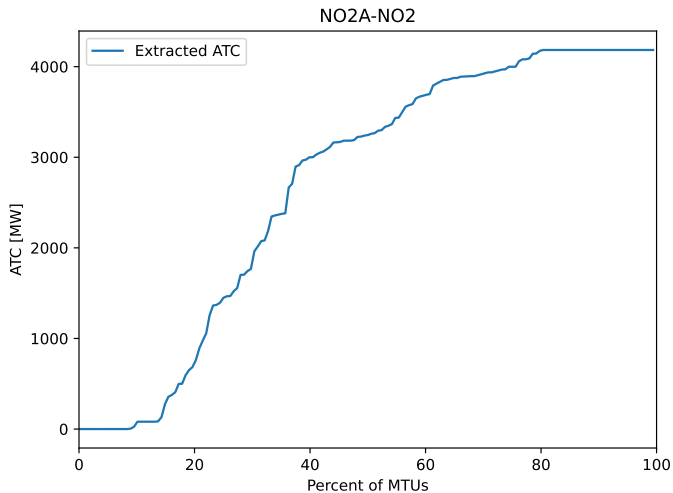
NO1-SE3 ATC duration curves



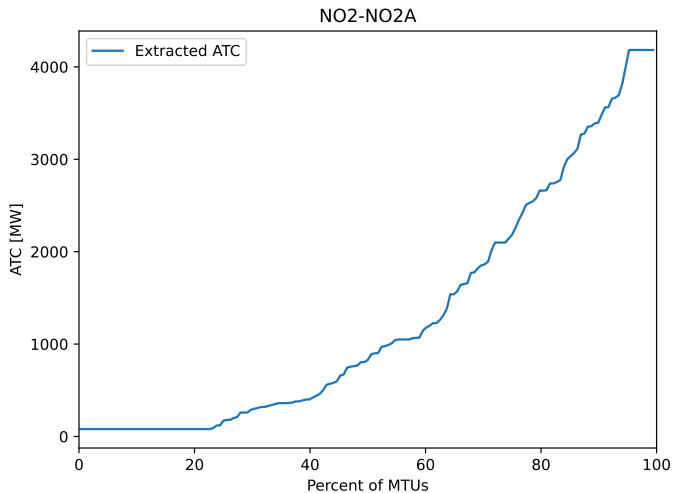
SE3-NO1 ATC duration curves



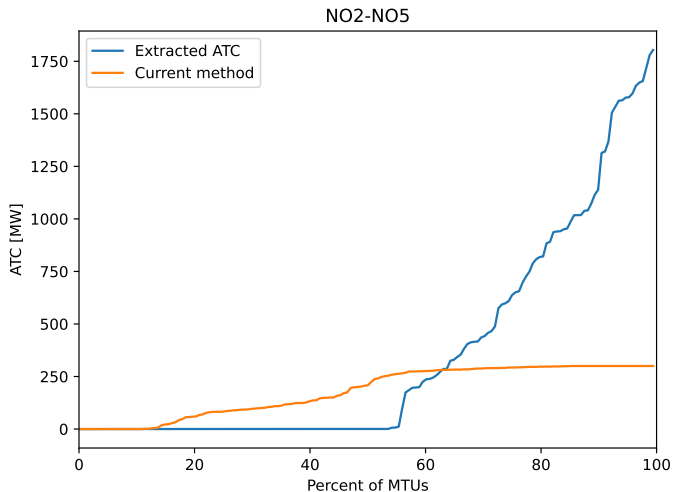
NO2A-NO2 ATC duration curves



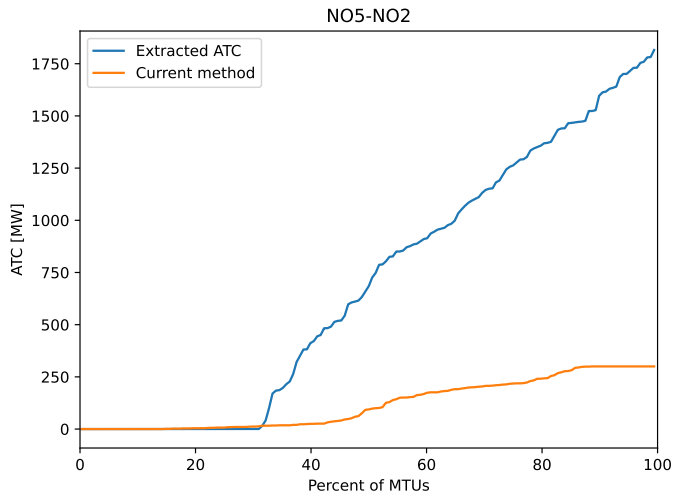
NO2-NO2A ATC duration curves



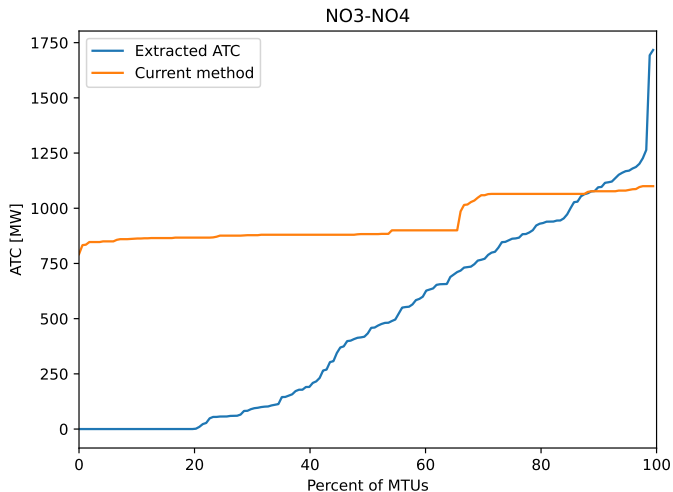
NO2-NO5 ATC duration curves



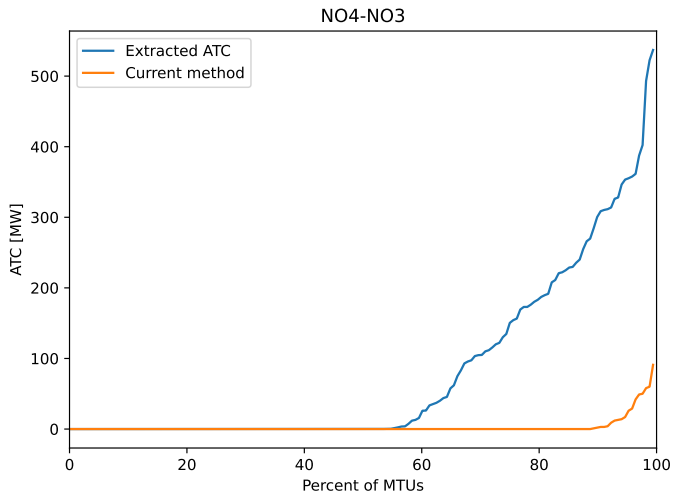
NO5-NO2 ATC duration curves



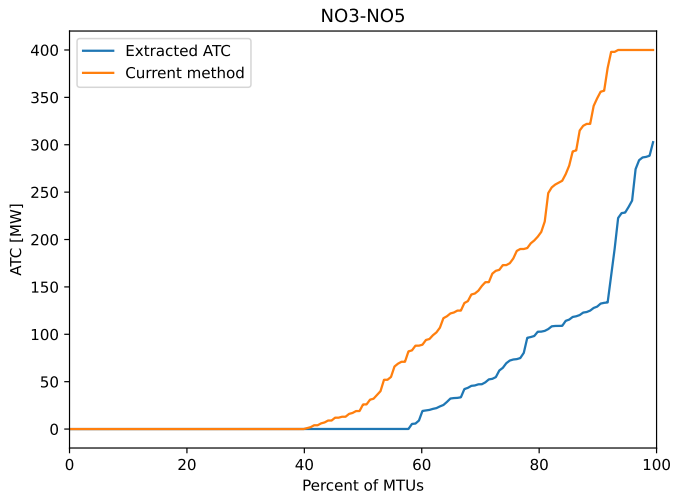
NO3-NO4 ATC duration curves



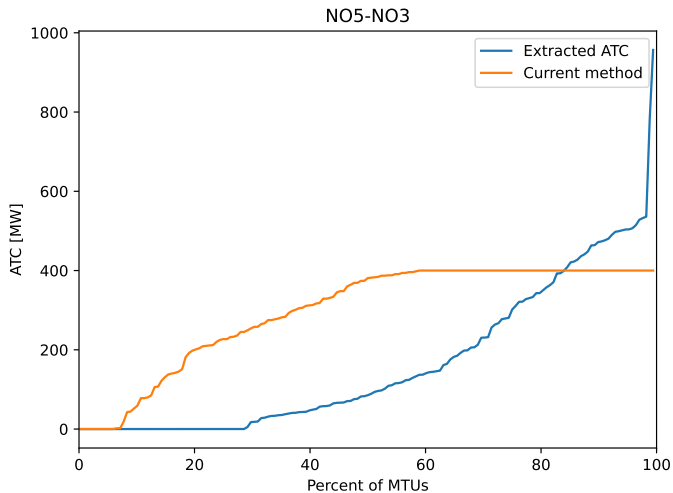
NO4-NO3 ATC duration curves



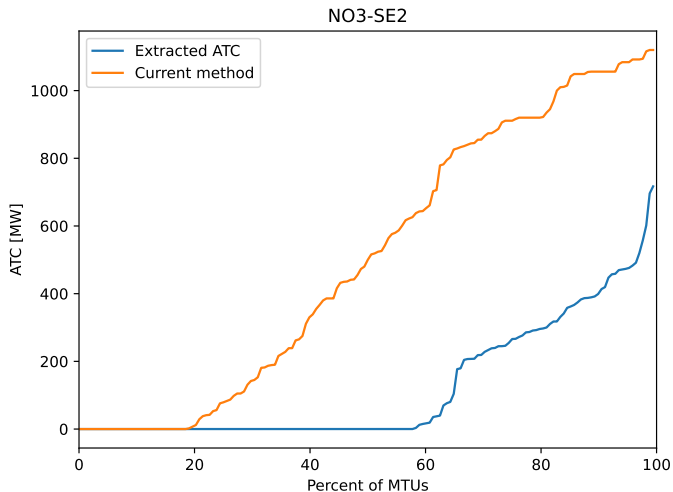
NO3-NO5 ATC duration curves



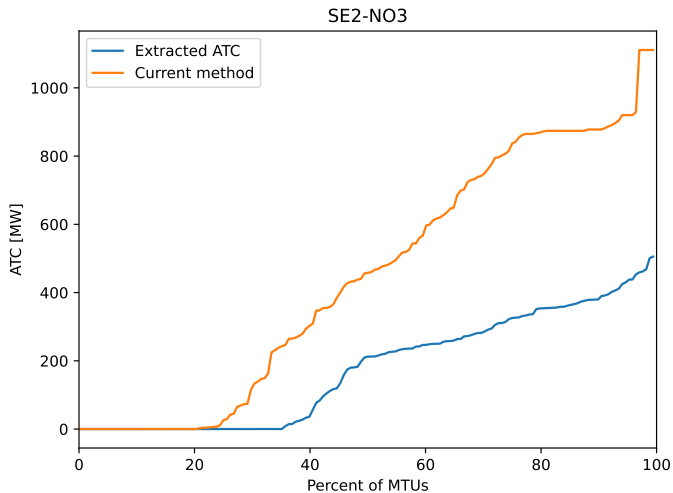
NO5-NO3 ATC duration curves



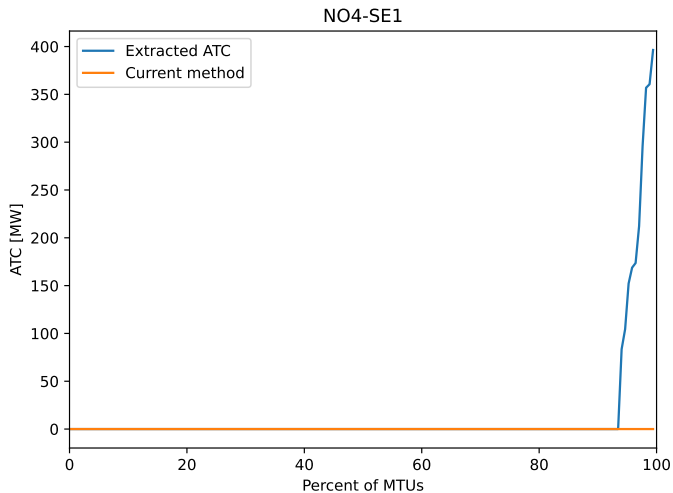
NO3-SE2 ATC duration curves



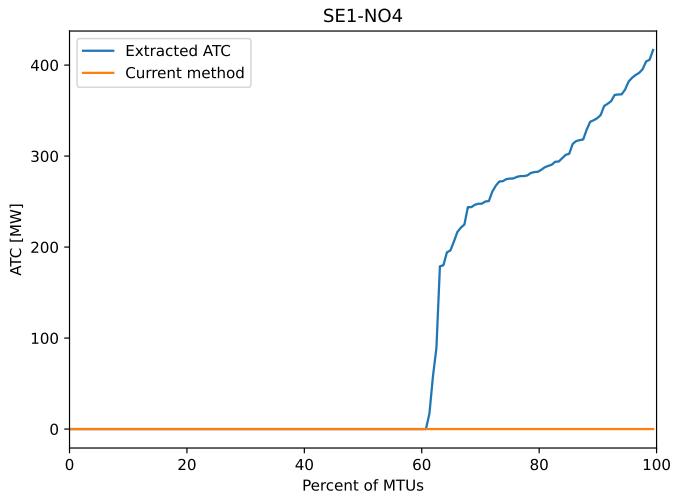
SE2-NO3 ATC duration curves



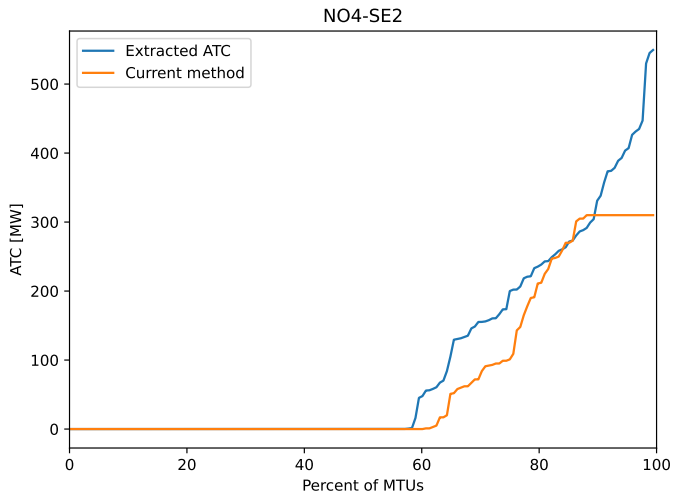
NO4-SE1 ATC duration curves



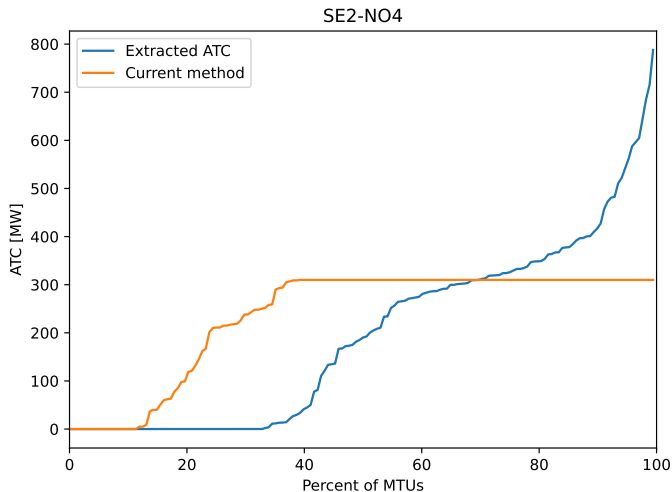
SE1-NO4 ATC duration curves



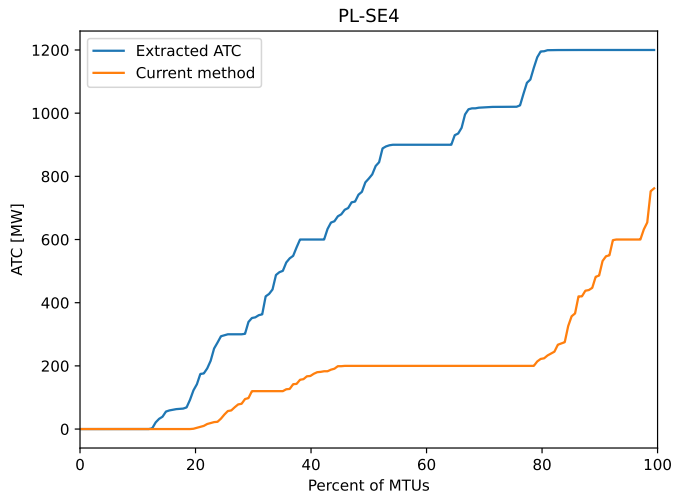
NO4-SE2 ATC duration curves



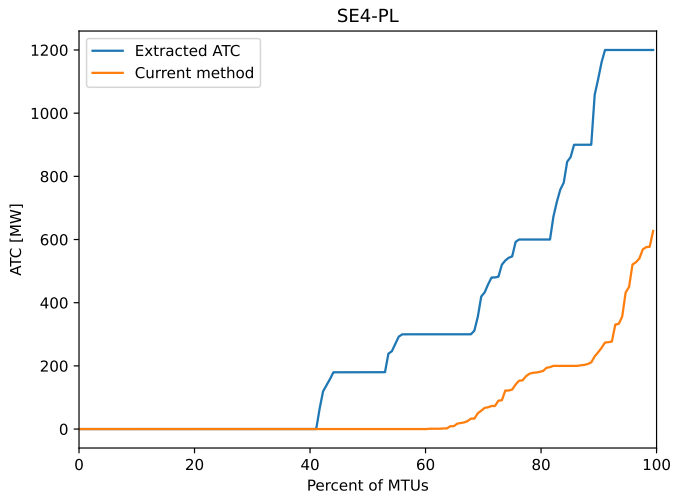
SE2-NO4 ATC duration curves



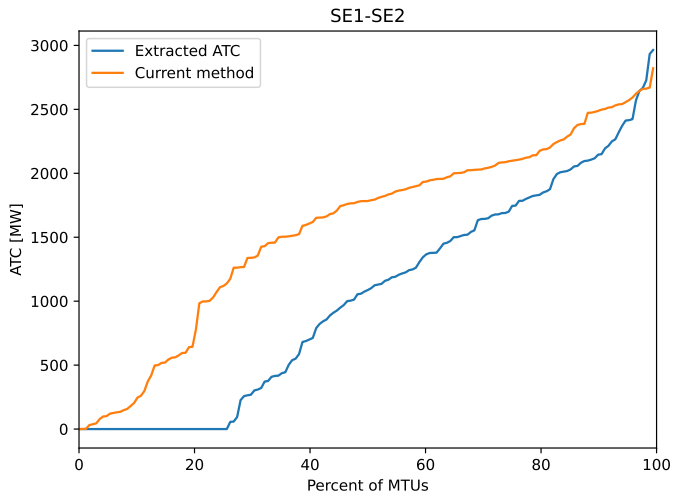
PL-SE4 ATC duration curves



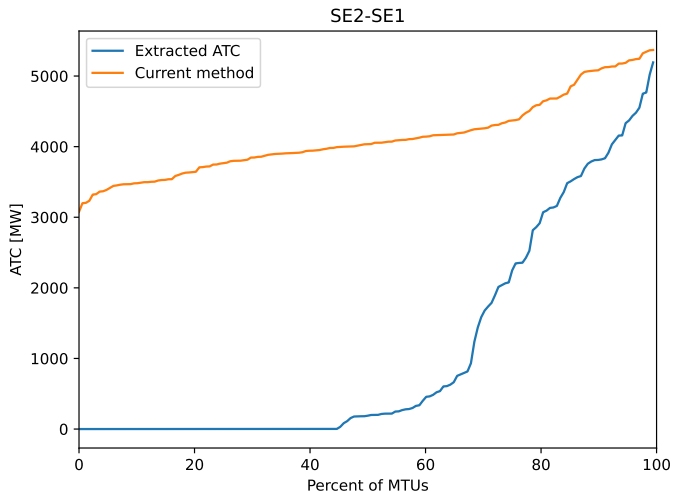
SE4-PL ATC duration curves



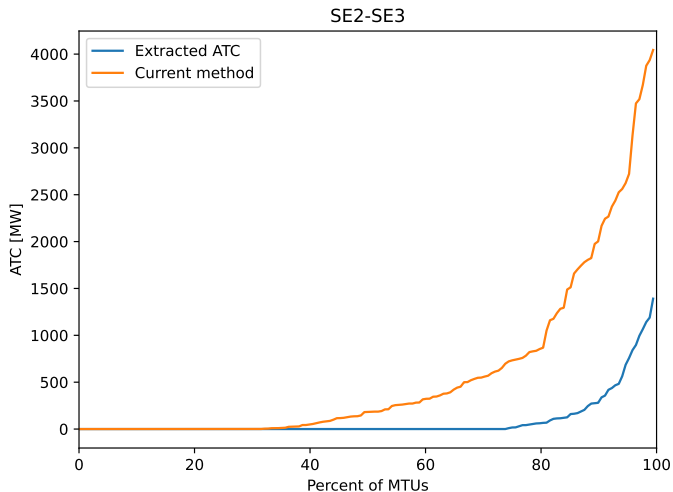
SE1-SE2 ATC duration curves



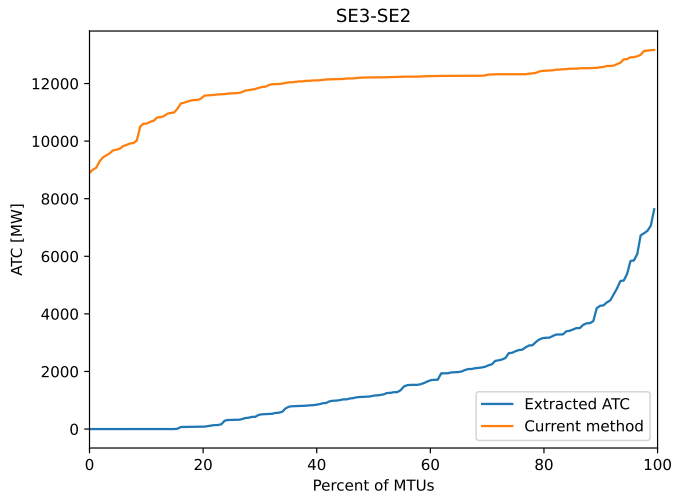
SE2-SE1 ATC duration curves



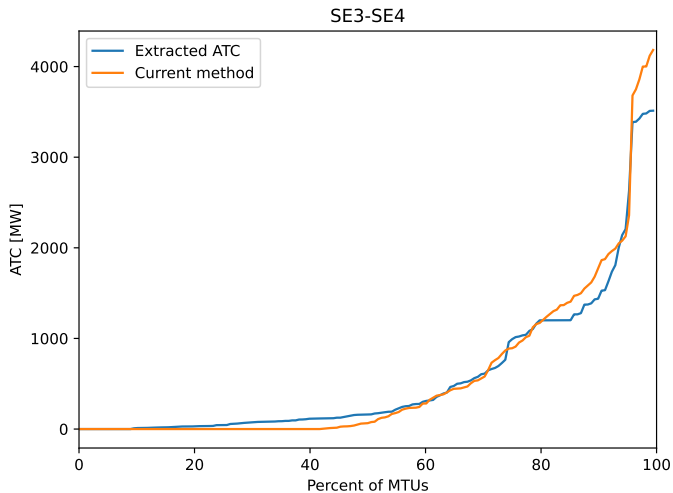
SE2-SE3 ATC duration curves



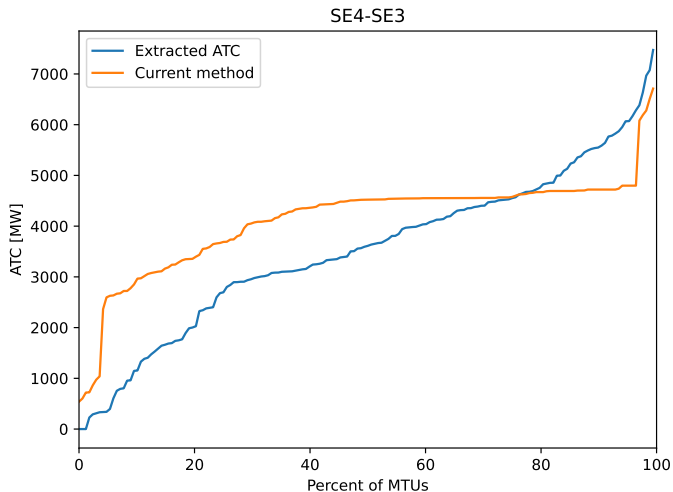
SE3-SE2 ATC duration curves



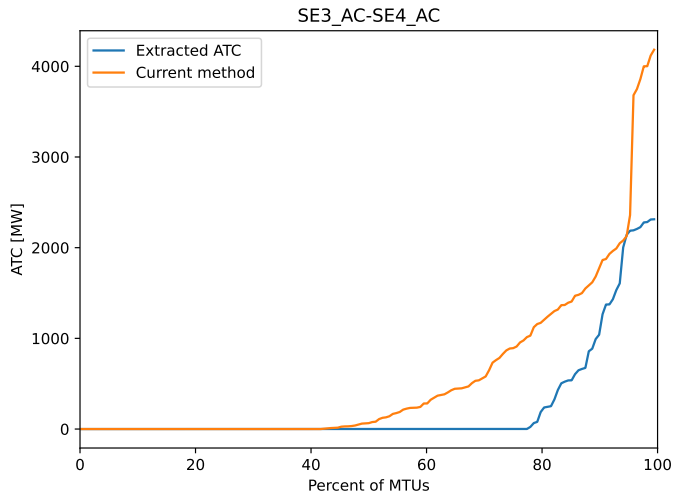
SE3-SE4 ATC duration curves



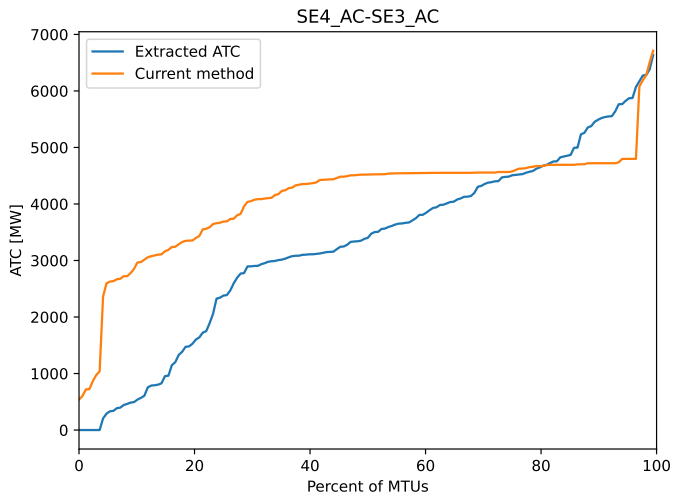
SE4-SE3 ATC duration curves



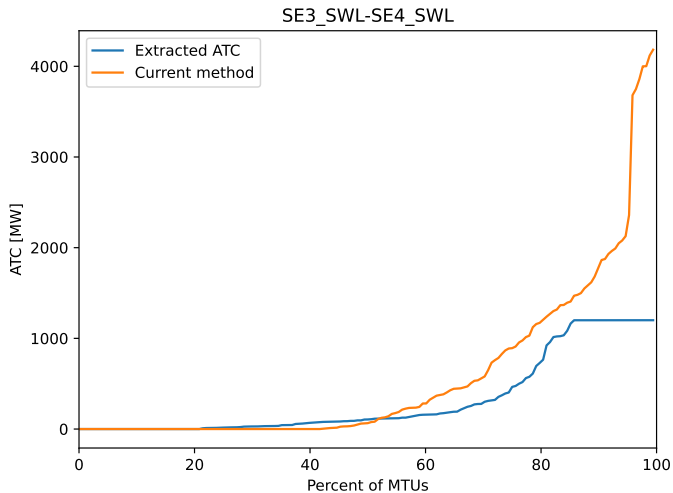
SE3_AC-SE4_AC ATC duration curves



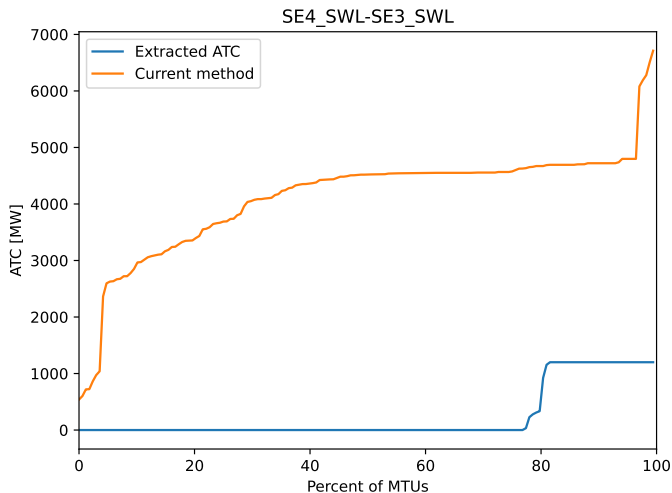
SE4_AC-SE3_AC ATC duration curves



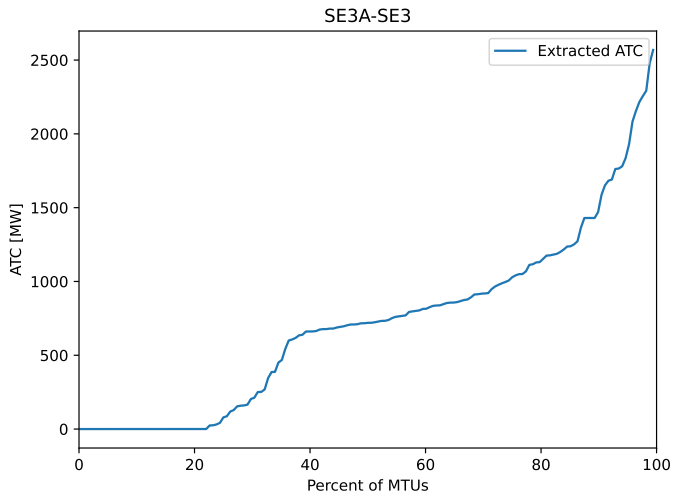
SE3_SWL-SE4_SWL ATC duration curves



SE4_SWL-SE3_SWL ATC duration curves



SE3A-SE3 ATC duration curves



SE3-SE3A ATC duration curves

