



METHODOLOGY FOR PROCUREMENT OF COUNTERTRADE ENERGY

4. The intraday methodology

With the methodology for procurement of countertrade energy, Energinet will buy or sell countertrade energy in the intraday market. This will make Energinet a significant player in the intraday market, making it important that the methodology is compliant with the REMIT regulation as described in section 5.10.1.

Within this regulatory framework, Energinet has different options when it comes to when and how often countertrade can be requested, how capacity adjustment on the border is done, how much information is published to the market, the degree of automation, trading times and trading strategy. This is described in the following.

4.1 Scope of the methodology

The methodology covers Energinet's procurement of countertrade energy.

Countertrade means a cross-zonal exchange initiated by system operators between two bidding zones to relieve physical congestion. The methodology is therefore to be used when Energinet buys or sells energy in DK1 and DK2 to relieve bottlenecks in the electricity grid on the request of a neighbouring TSO. This applies for both structural and unexpected countertrade requests.

The methodology also applies when Energinet requests an adjacent TSO to assist with countertrade.

Regardless of whether Energinet or a neighbouring TSO is the requesting TSO, the methodology only covers the procurement by Energinet of countertrade energy on the Danish side of the border. The methodology does not cover how the counterparty chooses to procure countertrade energy on their side of the border.

The existence of structural countertrade and unexpected countertrade makes it necessary to consider if the same countertrade process should be applied to both types. The table below illustrates which types of countertrades are within the scope of proposal. In short, only countertrade needs which can be procured in the intraday market are within the scope of the proposal. The process for procurement of structural and unexpected countertrade is not the same.

Other countertrade needs are handled as imbalances.

	Structural	Unexpected
Countertrade needs arising close to IDGCT (cannot be handled in intraday using the methodology).	If TSOs, for example due to their planning process, request countertrade later than the defined times for requesting CT set by Energinet.	The trip of an interconnector or internal critical network element (CNE) cannot be countertraded in the intraday market for the first couple of hours after the trip as IDGCT is one hour before operational hour.
Countertrade needs known well ahead (can be handled in intraday using the methodology). ID GCT is one hour before the operational hour.	Countertrade needs deriving from Tennet Commitment and the 70% rule, which is requested prior to the deadline for requesting structural CT.	A need for CT as a result of a trip of an interconnector or internal critical network element (CNE) may be requested when the need occurs and is countertraded in the intraday market for all requested hours (D) which can be traded before ID GCT.

Table 4: The scope of the intraday methodology is limited to countertrade needs which can be traded in the intraday time frame. Countertrade must be requested approximately 2 hours before the operational hour to be traded on intraday.

4.2 The intraday market

The Danish intraday market is, through the single intraday coupling, connected to a large number of European intraday markets (SIDC). This cross-zonal European intraday market uses implicit cross-zonal capacity allocation which allows continuous matching of bids and offers (hereafter just referred to as bids) entered by market participants in any bidding zone with bids submitted in any bidding zone, to the extent that necessary cross-zonal transmission capacity is available in the intraday market.

Market participants can either (i) enter a bid in the order book or (ii) accept bids already entered. Bids already placed in the system will be settled at the entered price (pay-as-bid) when matched with a newly entered bid.

The implicit capacity allocation implies that cross-zonal trades trigger an adjustment of the “already allocated capacity” (AAC)³⁹ on the concerned interconnectors, thus the available capacity is adjusted continuously as trades take place. For example, if an interconnector has 1000 MW southbound and 1000 MW northbound available capacity in the intraday market and a 500 MW trade is made in the southbound direction, then available capacity on the interconnector is instantly updated to 500 MW southbound and 1500 MW northbound.

4.3 Detailed description of the methodology

The current section describes the intraday methodology in chronological order from a TSO’s request for countertrade is received by Energinet to trading in intraday and finally ending with the settlement.

Please note that unless otherwise explicitly stated, the procedure in this section must be read mutatis mutandis to describe Energinet’s procurement of countertrade energy in DK1 and DK2 for its own needs.

³⁹ See annex 5 for abbreviations and definitions

4.3.1 Methodology design basics

Based on requests for countertrade from a neighbouring TSO, Energinet will trade the countertrade energy in the intraday market by following an active trading strategy where volumes requested in one slot can be traded during the entire trading slot and not just at one specific time.

Structural countertrade and unexpected countertrade are handled according to different procedures.

For structural countertrade, the requesting TSO will face request gate closure times for each trading slot. A “trading slot” is a period in which Energinet will be active in the intraday market (say 15.00 (D-1) to 22.00 (D-1))⁴⁰ for a specific traded period⁴¹. The traded period for the first trading slot is H24 (D-1) to H23 (D). The number of trading slots and the traded periods for the relevant windows will be arranged between the TSOs and will be publicly available. Energinet determines the TSO request gate closure times for each of the trading slots. Examples of how this could be set up with 2 or 3 slots are provided in figure 5 and figure 6.

The transition from 1-hour MTU to 15 minutes MTU mentioned in section 2.3.5.1 does not necessitate changes to the course of action for countertrade. The methodology’s basic design will remain the same after 15-minute MTU is implemented in intraday.

For unexpected countertrade, the procedure is more flexible. Countertrade can be requested at any given time. Energinet can attempt to procure the energy in the intraday market as soon as a request is received, however, approximately two hours is needed to trade the energy in the intraday market. This ensures half an hour to receive, confirm and publish the countertrade request, and another half an hour to trade the energy in the intraday market, which adds up to approximately one hour before ID GCT⁴². Energinet will procure countertrade energy in the intraday market for as many hours as the requesting TSO finds it necessary. Requests that cannot be traded in the intraday market before ID GCT will be handled as a system imbalance.

The bids placed by Energinet in the intraday market will be non-complex hourly (or quarter-hourly bids after the transition to 15-minute MTU, see section 2.3.5.1). Energinet can be active in the intraday market as soon as capacity is released on the Nordic borders at 15:00 (D-1).

In principle, it would be possible to trade all countertrade energy continuously from the opening of the intraday market until an hour before ID GTC. However, Energinet will not procure structural countertrade continuously as TSOs need to perform manual adjustments following any changes to the external TSO schedule. As Energinet assesses that this is more cumbersome than the added value warrants, a design choice has been made to trade structural countertrade energy in defined slots during the continuous intraday trading and thereby limit the need for manual adjustments.

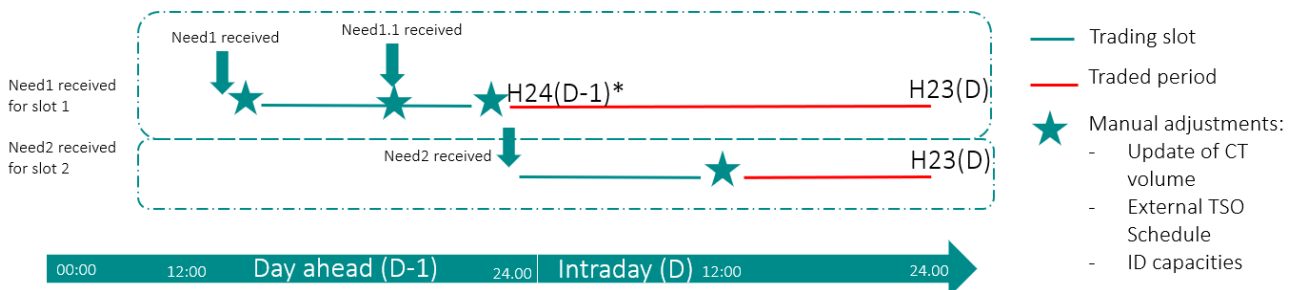
Below are two illustrations of the interdependencies between countertrade requests, trading slots, manual adjustments, and updates of countertrade requests. Figure 5 illustrates the operational execution in case of two slots, and figure 6 in case of three slots. In both figures, it is assumed that Energinet has determined two request gate closure

⁴⁰ Illustrated with turquoise and called trading slot in figure 5 and 6

⁴¹ Illustrated with red and called traded period in figure 5 and 6

⁴² ID GCT is the gate closure time in intraday for submission of bids (see generally annex 5 for abbreviations and definitions). In intraday GCT is 1 hour before the operational hour.

times with regards to the first slot; one request gate closure time before the first trading slot, and one request gate closure time for updates of the countertrade request during the first trading slot.



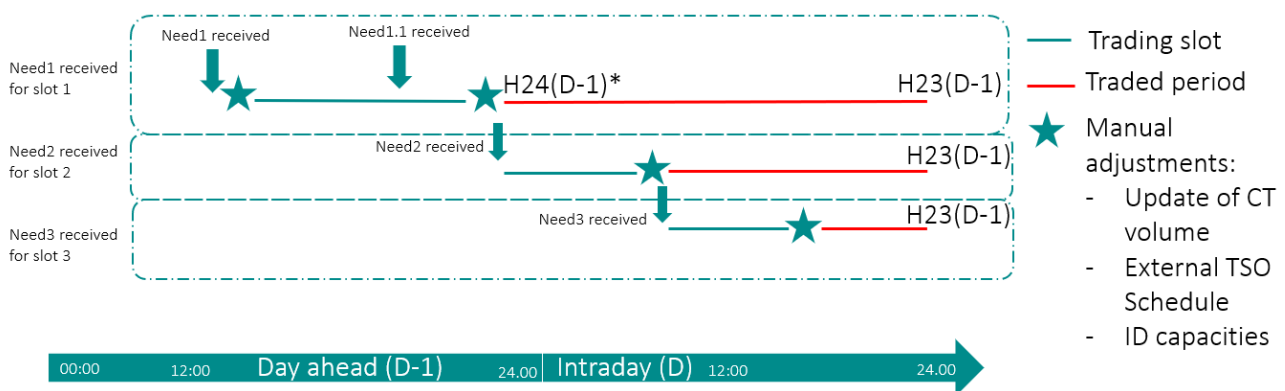
*The last hour within the day is traded together with hour 1 to 23 of the coming day

Figure 5: An illustration of the interdependencies between the request for countertrade, trading slots, manual adjustments, and update of countertrade volume if two slots are applied.

In line with the assumptions of (i) one request gate closure time before the first trading slot and (ii) one request gate closure time during the trading slot, Need1 and Need1.1 above illustrates that countertrade requests are received both before and during the first trading slot for the first traded period. This involves two manual adjustments.

In case not all was traded during the first trading slot, or an additional CT volume has been received after the last request gate closure time for the first trading slot, the updated CT volume is transferred to the second trading slot ("Need2 received"). Non-traded volumes trigger manual adjustments for those hours where the requested volumes could not be traded, and similarly, new requests will trigger manual adjustments for the second traded period for the hours included in traded period 2. Trading slot 2 can, for example, last from 00.00 (D) to 10.00 (D), and the traded period could be from H12(D) – H23(D) as illustrated in figure 5.

If the requested volume is not traded – for some or all hours – in trading slot 2, then the external TSO schedule must be updated again, which again leads to the manual adjustments, indicated by a star in figure 5.



*The last hour within the day is traded together with hour 1 to 23 of the coming day

Figure 6: An illustration of the interdependencies between the request for countertrade, trading slots, manual adjustments, and update of countertrade requests if three slots are applied.

As illustrated in figure 6, three trading slots increase flexibility as structural countertrade can be requested again closer to the delivery hour and the option to trade countertrade volumes in several slots (however, only in the last hours of the operational day – trading period 3).

The increased flexibility gained with three trading slots and/or several request gate closure time as illustrated in figure 6, must be considered in relation to the increased workload of the operator (described in sections 4.3.2.3 and 4.3.2.6). The number of slots for structural countertrade, and request gate closure times for structural countertrade will therefore be decided upon together with the neighbouring TSO to ensure proportionality between workload and value of the flexibility.

Trading slots are published on Energinets website and the beginning of the first trading slot is conditioned by the release of capacity on the Nordic borders.

4.3.2 Procedure for handling structural requests for countertrade

In the following, all the steps and manual adjustments from receiving the countertrade request until trading time can begin are described.



Figure 7: Illustrates that in the following sections the request of countertrade and the manual adjustments prior to trading are described

4.3.2.1 Structural countertrade requests from neighbour TSOs

When the day-ahead market closes at 12:00 on the day ahead, and once the market coupling results (commercial schedules) have been received by the TSOs, the TSOs know how much capacity has been allocated in the day-ahead market, making an assessment of the need for structural countertrade possible. However, the time needed to calculate the need for countertrade depends on the individual TSOs processes for calculation of countertrade and redispatch, which is why a second request gate closure time during the trading slot may be necessary.

A requesting TSO must request structural countertrade to Energinet before agreed request gate closure times to allow for coordination and validation of the countertrade volumes before publishing and trading as detailed in the following sections.

Subject to the choice of the requesting TSO, unmatched volumes in the first slot also relevant to the second slot may be transferred to the second slot. A requesting TSO may also, at its own discretion, choose to countertrade part of its need

in the first slot and the remaining need in the second. This also applies if an agreement has been made that structural countertrade can be requested several times prior to, or during, a trading slot.

At the end of the final trading slot, Energinet will withdraw unmatched bids for the hours and inform the requesting TSO that the volumes could not be traded. The requesting TSO must then reduce the countertrade and take operational measures to ensure operation within security limits.

4.3.2.2 Acceptance of countertrade volumes

Following the request for countertrade, the requesting TSO will update external TSO schedules. Energinet uses the updated external TSO schedules to confirm the requested countertrade volumes.

Energinet's acceptance of a countertrade request implies confirmation to the requesting TSO that Energinet will place a bid for the said amount of energy in the market in accordance with the request. Prior to confirmation, Energinet will assess that the countertrade request does not pose a threat to system security.

Energinet's acceptance and confirmation of a countertrade request does not guarantee that the requested energy volumes are, in effect, traded. This is only ensured if, and when, the bid placed by Energinet is matched. As such, the countertrade is not firm until Energinet communicates this to the requesting TSO.

4.3.2.3 Update of external TSO schedule

Countertrade impacts the intended cross-zonal flow which must be reflected in the external TSO schedule to provide operators with a correct expectation of the later flow.

Energinet will update the external TSO schedules after accepting countertrade request and only adjust the schedules and capacities in case the requested countertrade volumes could not be traded, or if updates/new countertrade requests are received in any of the slots.

SIDC and market participants do not have access to external TSO schedules. External TSO schedules are operational time series used to forecast the balance of the system.

4.3.2.4 Publication of volumes prior to trading

Following the confirmation to the requesting TSO (section 4.3.2.2) and the update of external TSO schedules (section 4.3.2.3), Energinet will publish volumes to notify market participants. Volumes will be published by Energinet at least ten minutes before trading is initiated, i.e. at least ten minutes before the initiation of trades in each slot.

If Energinet accepts updates to a countertrade request during a trading slot, trading is paused for a minimum of 10 minutes to comply with the commitment to publish volumes prior to trading, before trading is resumed (see examples in figure 5 and figure 6, "Need1.1 received")

4.3.2.5 Netting of countertrade requests

If there are two requests for countertrade in the same hour and in the same Danish bidding zone, these two countertrade needs must be netted before trading is initiated.

Thus, if Energinet receives a request from TenneT for downward regulation in DK1 and a request from Statnett for upward regulation in DK1, respectively, for the same hour, the net volume to be either procured or sold will be published prior to trading in SIDC. The requests will likewise be subtracted from one another before bids are submitted to SIDC.

The settlement price used for netting is the day ahead-price in the bidding zone where countertrade was requested.

4.3.2.6 Capacity adjustment prior to submission to SIDC

As a result of implicit capacity allocation described in section 4.2, the requesting TSO must adjust the capacity on the interconnector, and the adjusted capacities must be submitted by the appointed⁴³ TSO (or Regional Security Coordinator on specific interconnectors for some interconnectors), before Energinet initiates the procurement of countertrade energy in SIDC. If the capacity adjustment does not take place, then countertrade in the opposite direction of the market flow, trigger a re-release of capacity in the market flow direction undermining the countertrade, and thus does not lead to a reduced flow on the interconnector.

The submission of capacities to SIDC after the day-ahead market closure is handled differently on Danish borders⁴⁴. Procedures for submission of capacities are agreed upon between adjacent TSOs.

However, with regards to adjusting capacity (NTC and AAC) to account for countertrade prior to sending the capacity to SIDC, there is currently only a solution in place on DK1-DE/LU.

4.3.2.6.1 Current capacity adjustment solution on DK1-DE/LU

On DK1-DE/LU, the following solution for adjusting the capacity in relation to countertrade is in place. The solution will be replaced by a new capacity adjustment solution (see section 4.3.2.6.2).

The formula for calculating available transfer capacity is $ATC = NTC - AAC$ ⁴⁵.

Countertrade will generally be needed when physical NTC is below the day ahead AAC which, all else equal, will lead to the calculation of a negative ATC.

An example of how capacity is currently adjusted for countertrade on DK1-DE/LU

TenneT has calculated the physical NTC to be 600 MW; however, due to the 70 % rule, capacity provided to the day-ahead market must be at least 1100 MW.

SDAC: Energinet and the adjacent TSO submit $NTC = 1100$ MW to day-ahead, and 1000 MW is allocated ($AAC = 1000$ MW).

SIDC: The requesting TSO uses the physical NTC, calculated to be 600 MW.

⁴³ Appointed TSO means the TSO which is responsible for sending the calculated NTC and AAC to SIDC on each border.

⁴⁴ The Nordic Operational Information System, NOIS, submits capacity to SIDC on all Nordic borders. Energinet submits capacities for DK2-DE, whereas TenneT (Germany) and TenneT (Netherlands), respectively, submit capacity to SIDC on DK1-DE/LU and DK1-NL. This implies that if Energinet submits the NTC on DK1-DE/LU or DK1-NL, coordination with TenneT (Germany) and TenneT (Netherlands), respectively, is required, as these TSOs must manually update the capacities submitted to SIDC. If Energinet updates NTC on DK2-DE, no further coordination is needed, as Energinet already has capacities from 50Hertz.

⁴⁵ See abbreviations and definitions in annex 5

Countertrade: 400 MW countertrade is requested by the requesting TSO to reduce the flow to 600MW in the market flow direction.

SIDC: The requesting TSO submits the physical NTC of 600 MW NTC_{ID} to SIDC, and SIDC calculates $(600 \text{ MW} - 1000 \text{ MW}) = -400 \text{ MW } ATC_{ID}$ in SIDC in the day-ahead market flow direction.

Note that 2100 MW $(1100+1000 \text{ MW})$ will still be made available to the intraday market in the opposite direction of the market flow. This means that, with the current capacity adjustment solution, too much capacity is made available in the opposite direction, as the actual capacity available is reduced to 1700MW $(1100+600)$ due to countertrade.

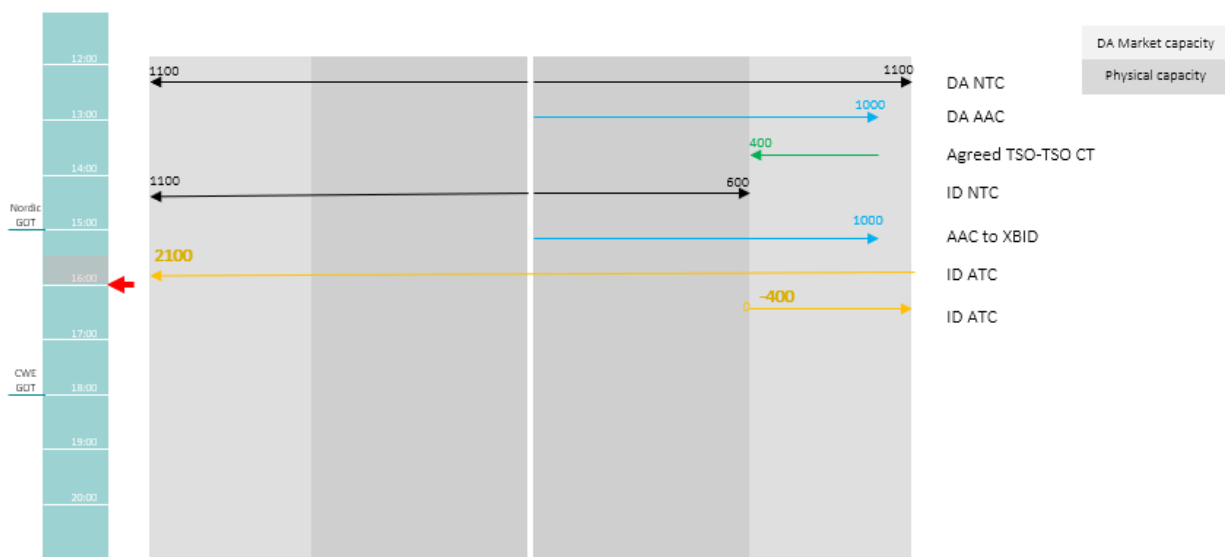


Figure 8: SIDC will calculate a negative available transfer capacity (ATC) of -400 MW in the intraday market, when net transfer capacity submitted to intraday (ID NTC) is adjusted to 600 MW.

In figure 8 above, the blue arrows (AAC_{DA}) show the DA flow direction. The black arrows illustrate the net transfer capacity for both day-ahead (NTC_{DA}) and intraday (NTC_{ID}), and after the countertrade only 600 MW will flow in the market flow direction. -400 MW (yellow arrow) available transfer capacity is left for the intraday market in the market flow direction. In the opposite direction, 2100 MW (yellow arrow) is available for the intraday market.

4.3.2.6.2 New capacity adjustment solution

Due to the disadvantages of the current capacity adjustment solution for the bidding zone border DK1-DE/LU described in section 5.10.5, Energinet and TenneT have agreed to transition to the solution described in this section (the “new capacity adjustment solution”) subject to the conditions set out in section 4.3.2.6.2.1.

When adjusting the capacity for the intraday market, adjustments can either be made to the NTC, the AAC or both, as the formula for calculating the available transfer capacity is $ATC = NTC - AAC$, as mentioned in 4.3.2.6.1.

The above-mentioned practice, updating the NTC_{ID} to the actual physical capacity in the intraday timeframe, will also be used in the new solution. In addition, the AAC_{ID} will be adjusted to account for the agreed countertrade. This will ensure that SIDC will calculate 0 MW ATC_{ID} (instead of a negative ATC_{ID}) if the requested countertrade equals the difference between AAC_{DA} and NTC_{ID} .

Below is an example of how the solution will work:

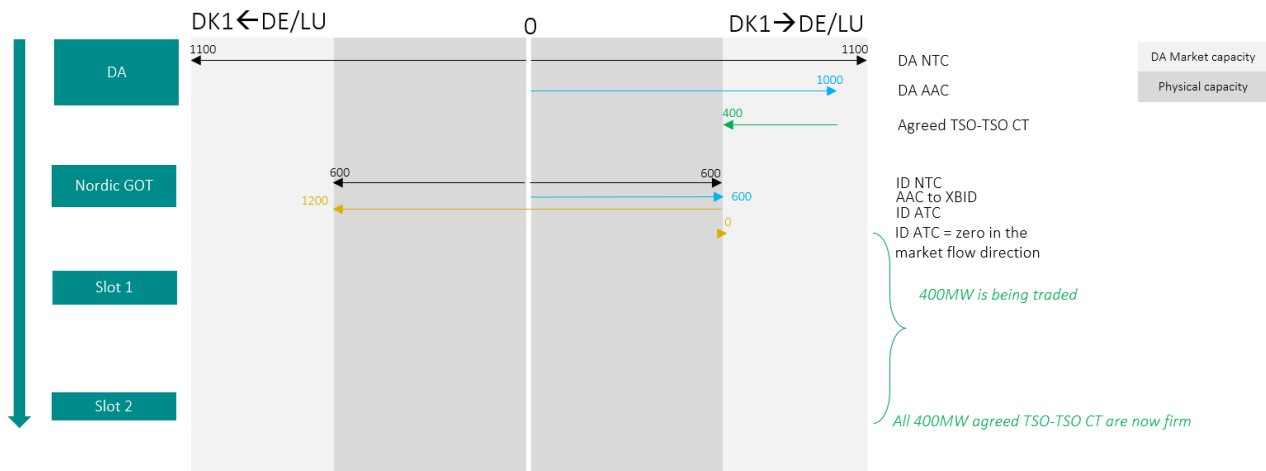


Figure 9: ATC_{ID} is 0 MW in the market flow direction after taking countertrade into account. The capacity in the opposite direction of the market flow is 1200 MW, as there is a physical flow in the market flow direction of 600 MW.

In the example illustrated in figure 9 the AAC_{ID} sent to SIDC (the blue arrow) is 600 MW and the net transfer capacity (NTC_{ID}) sent to SIDC (the black arrow) is 600 MW, as the calculated physical NTC_{ID} is 600 MW and the AAC_{ID} is adjusted for the requested countertrade of 400 MW. The result is that available transfer capacity (ATC_{ID}) calculated in SIDC is 0 MW (bottom yellow arrow) in the day-ahead market flow direction, and 1200 MW (top yellow arrow) in the opposite direction. In practice, this adjusts the capacity for the intraday market to the actual physical NTC. If the ATC_{ID} is adjusted to 0 MW, and trades in the opposite direction of the market flow are performed in the intraday market, the new capacity, equalling the volume of the trade, will be released in the intraday market. By also adjusting the AAC_{ID} to account for the countertrade, all the disadvantages of the current capacity adjustment solution can be overcome.

Annex 6 includes examples of adjustments to capacity in different cases (eg. the inability to trade the total requested countertrade volume or new countertrade request).

4.3.2.6.2.1 The legal basis for capacity adjustment mechanisms

CACM article 10(2) determines that

“No later than 10 months after the approval of the proposal for a capacity calculation region in accordance with Article 15(1), all TSOs in each capacity calculation region shall submit a proposal for a common coordinated capacity calculation methodology within the respective region. [...]”

Regional capacity calculation methodologies determine how capacity given to the day ahead and the intraday market shall be calculated. The Danish utility regulator approves capacity adjustment mechanisms on the Danish borders until the regional CCMs enter into force⁴⁶.

The new capacity adjustment mechanism is submitted for regulatory approval on DK1-DE/LU with an implementation deadline of 6 months after approval by the Danish utility regulator (DUR) and on all other Hansa borders with effect from approval by the Danish utility regulator, cf., however section 4.3.2.6.3. Alternatively – if the Danish utility regulator cannot approve the new capacity adjustment mechanism described in 4.3.2.6.2 – the current capacity adjustment practice described in 4.3.2.6.1 is submitted for regulatory approval on the Hansa borders.

In all circumstances, regulatory approval shall cover the period of time until Hansa CCM⁴⁷ enters into force, currently expected in 2024⁴⁸

Energinet is aware that the new capacity adjustment solution is not compliant with the CCR Hansa CCM as countertrade is neither a part of the mathematical description in article 12 nor included in article 15 “Rules for Taking into Account Previously Allocated Cross-Zonal Capacity in the Intraday Time Frame”. Energinet and TenneT have agreed to propose an amendment of the Hansa CCM to include countertrade in article 15, implying that countertrade may be included in the calculation of AAC. If the proposal is implemented the new capacity adjustment solution will comply with the Hansa CCM.

In consequence thereof one capacity adjustment mechanism may apply now (after DUR’s approval) and another when Hansa CCM enters into force. In Energinet current assessment however, the prospect of amending the Hansa CCM is good, implying that the new capacity adjustment solution in practice may apply before as well as after entry into force of the CCM Hansa (even if the legal basis is different).

4.3.2.6.3 New capacity adjustment model on other borders than DK1-DE/LU

Energinet has initiated dialogue with all TSOs with bidding zones bordering DK1 or DK2 to pursue an agreement on a capacity adjustment solution on the interconnector. The solution proposed by Energinet when pursuing such agreements is similar to the new capacity adjustment solution.

However, the final content of a capacity adjustment solution is, as described in section 4.3.2.6.2.1, subject to agreement between the adjacent TSO in respect of the period of time until the CCM enters into force on a border (subject to the Danish Electricity Supply Act article 73a (1) in respect of the Danish borders).

This implies that even though the methodology is submitted for regulatory approval it is not given that the capacity adjustment solution is, in effect, implemented on all Hansa borders, or that it will be applied the entire time until Hansa CCM enters into force. Energinet submits the methodology on all Hansa borders to ensure that an approved capacity adjustment mechanism is in place and may be applied until it is replaced, subject to the request of a neighbour TSO, by another arrangement (perhaps with a different content) and the necessary regulatory approvals are obtained with respect to that specific agreement.

⁴⁶ the Danish Electricity Supply Act article 73(1)

⁴⁷ Microsoft Word - 20180918 CCR Hansa CCM Amended Legal Document - FINAL (entsoe.eu)

⁴⁸ Implementation of the Hansa CCM is a stepwise process following the milestones listed in its article 19. One of the milestones is the implementation of the flow-based CCMs of CCR Core and of CCR Nordic, including Advanced Hybrid Coupling (AHC) for the CCR Hansa interconnectors. Implementation of AHC is currently planned for 2024.

It is a prerequisite for Energinet to procure energy to cover a neighbouring TSOs countertrade need, that a capacity adjustment solution is applied when trading the energy on the intraday market.

This also applies on the external Danish borders covered by the Nordic CCM⁴⁹

It is Energinets understanding that the content of the Nordic CCM is based on the basic assumption that countertrade is performed in the balancing timeframe (as special regulation), such that it has not actively been considered whether countertrade may be included in the AAC in intraday. As the Nordic CCM is expected to enter into force Q1 2023, it is Energinets assessment, that it is most relevant to work for a Nordic clarification of the question for the time being.

In case Energinet receives a request from a Nordic TSO, concerning the establishment of a capacity adjustment mechanism on a Danish border, which can be applied until the Nordic CCM enters into force, Energinet will submit the mechanism agreed upon to DUR for regulatory approval, as soon as Energinet and the neighboring TSO agrees upon the content thereof.

4.3.3 Trading

In the following, the procurement of countertrade energy in the intraday market will be described.



Figure 10: Illustrates that the following sections concerns the trading slot

The trading of countertrade energy will be initiated at any given point in time after cross-border capacity has been provided on the Nordic borders. Essentially at some point after 15.00.

Trading will be performed as active trading, i.e. Energinet will trade as any other market participant, aiming to fulfil its need for energy at the best possible price.

Trading may be performed using an intelligent trading algorithm developed to fulfil specific requirements to ensure that Energinets need for countertrade energy is covered at the best possible price⁵⁰.

⁴⁹ All TSOs' of the Nordic Capacity Calculation Region proposal for capacity calculation methodology in accordance with Article 20 (2) of Commission Regulation (EU) 2015/1222 of 24 July 2015 establishing a guideline on capacity allocation and congestion management (nordicenergyregulators.org)

⁵⁰ The requirements to a trading algorithm, if relevant, shall ensure Energinets compliance with the REMIT regulation. Energinets effort to ensure REMIT compliance is not subject to regulatory approval and will therefore be discussed with the Danish Utility Regulator in a different format than the methodology.

4.3.3.1 Pricing

The requesting TSO can decide on a (not publicly available) maximum and minimum price that the requesting TSO is willing to buy or sell countertrade energy for, respectively.

4.3.4 Unexpected countertrade

Unlike structural countertrade, unexpected countertrade can be requested or agreed upon at any given point in time if an interconnector or internal CNE relevant to cross-zonal capacity trips. Requests with a shorter deadline than two hours will be handled in the balancing market. Energinet will attempt to procure energy in the intraday market before ID GCT when the requests have a longer deadline than two hours. Energy will be procured for the all the hours the request TSO deems necessary.

The procedure for handling structural countertrade requests, described in section 4.3.2, is also applicable for unexpected countertrade except for the following modifications:

- In section 4.3.2.1, countertrade will be mutually agreed between the involved TSOs in case of an interconnector trip. If the fault is on an internal CNE, affecting the physical flow on a border, countertrade will be requested by the TSO with the fault.
- In section 4.3.2.2, countertrade is always firm as the flow on the interconnector must be reduced. Volumes which could not be traded in intraday will become imbalances, contrary to structural countertrade described in 4.3.2.1.
- The capacity adjustment in case of an interconnector trip is as follows: Both NTC and AAC will be set at zero (ATC=0), and the SIDC system halt function is applied, as no capacity can physically flow on the interconnector.
- As an addition to the publication of volumes prior to trading in section 4.3.2.4, the TSOs on the border will also determine who will publish an Urgent Market Message (UMM) on NUCS⁵¹ to inform the market of the unexpected volumes which will be countertraded on SIDC.

An example: At 15:56 p.m., Skagerrak trips.

Energinet will handle countertrade for the first 2-3 hours (subject to an individual assessment by the control centres on each side of the interconnector) after the trip (approximately 15:56 -17:00 p.m. within the current day) by activating bids in the balancing market. For the remainder of the expected outage, the full flow from the day-ahead and intraday markets as of 17:00 D-1 and until (in the worst case) the end of the next day (D) must be traded in the intraday market for all relevant hours. The following day will be handled by limiting the interconnector capacity allocated to the day-ahead market to zero by both TSOs, eliminating the need for further countertrade.

4.3.5 Publication of traded countertrade volumes

The volumes countertraded (both structural and unexpected) will be published as required by the transparency regulation.

4.3.6 Backup - Issues in the day-ahead or intraday market affecting countertrade

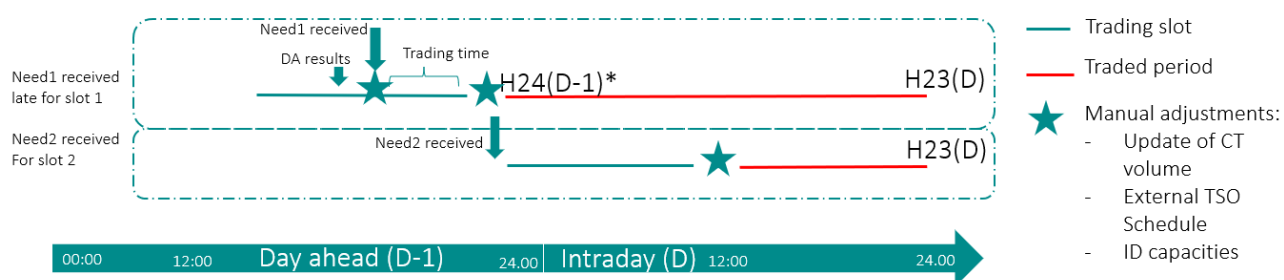
4.3.6.1 Backup - delay of market results

If the market coupling results are delayed, leading to partial or full decoupling and/or shadow auctions, structural countertrade can be requested as unexpected countertrade by the requesting TSO, allowing the countertrade request to be

⁵¹ See annex 5

submitted at any point in time after market coupling results have been produced. The hours which can be traded in SIDC is determined by the timing of the countertrade request.

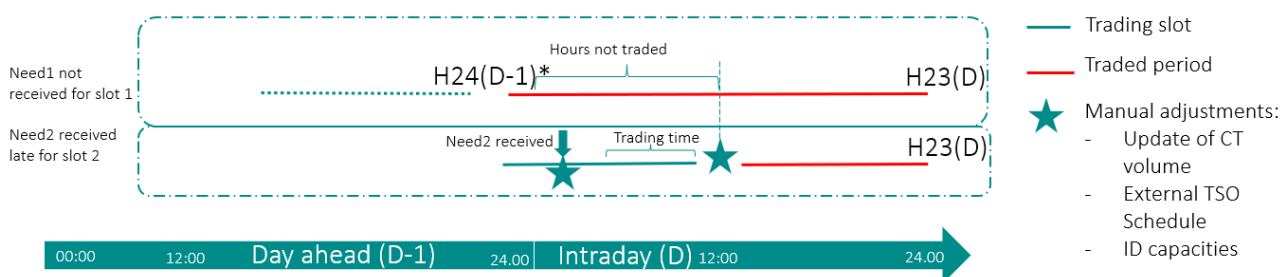
Below is an example of a delay in the market coupling results, which will only result in reduced trading time in the first slot.



*The last hour within the day is traded together with hour 1 to 23 of the coming day

Figure 11: Market coupling results delayed.

If decoupling is declared, resulting in shadow auctions on the borders, and the market results are delayed until after the first slot has ended, then the first lot of hours within the operational day cannot be countertraded since these can only be traded in the second slot.



*The last hour within the day is traded together with hour 1 to 23 of the coming day

Figure 12: Market coupling results received later than the first slot.

This results in several hours (e.g., H24(D-1) to H6(D)) that cannot be traded on intraday. In such rare cases it will be agreed upon with the requesting TSO, whether the relevant hours shall be handled through the balancing market, or whether other remedial actions can be applied (e.g., redispatch).

4.3.6.2 Backup – SIDC out of operation

If SIDC, due to maintenance or a fault, is out of operation for a short period, e.g., the first couple of hours during the first slot, the time left to trade the requested volumes will be shorter than usual as is also the case if market coupling results are delayed. This is illustrated in figure 11.

If SIDC, due to maintenance or a fault, is out of operation for a long period, e.g., the entire first trading slot, Energinet cannot assist with countertrade for the first hours of the day of operation. If SIDC is back in operation for the second trading slot, then all the following hours can be countertraded according to the slots. This is illustrated in figure 12. Hours which could not be traded in intraday is handled the same way as if market coupling results are delayed till after the first slot (described in 4.3.6.1).

An example:

A UMM was published by the NEMOs (Nominated Electricity Market Operators), stating that the SIDC systems would be out of operation for maintenance on 28 April from 08:00 a.m. to 18:30 p.m. CEST at the latest, and that the option to do any intraday cross-border trading would be unavailable.

In this case, Energinet would agree with the requesting TSO whether the purchase of countertrade energy is to be performed without capacity on the borders, or whether the volume is to be countertraded after 18.30 when the SIDC system is back in operation, thus decreasing the trading time in the first slot.

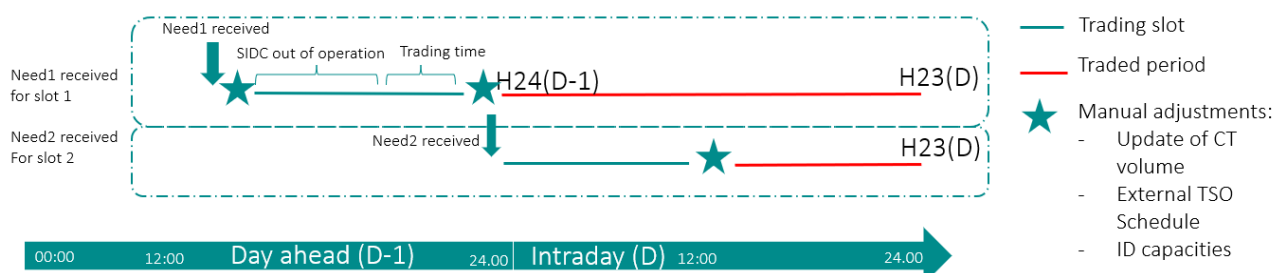


Figure 13: Request received on time, but trading time is postponed until cross-border capacity is available on SIDC.

If SIDC is completely out of operation for, for example, 24 hours, Energinet will reject structural countertrade requests as volumes cannot be traded on SIDC.

4.4 Costs of intraday trading

Costs of procuring the countertrade energy in intraday is paid by the requesting TSO.

In case of unexpected countertrade (on the interconnector), the current practice of splitting the costs for upward and downward regulation on either side of the border will continue.

4.5 Implementation of the methodology

As explained in section 2.3.5.1, the AOF is scheduled to go into operation on the Nordic platform November 2022. The intraday methodology for procurement of countertrade energy needs to be fully implemented by that time.

To ensure that liquidity in the intraday market is increased to match Energinet's countertrade volumes by November 2022, a gradual transition to procurement of countertrade energy in the intraday time frame will begin in August 2022. Countertrade volumes traded in the intraday time frame will gradually increase until November 2022, when all structural countertrade volumes will be traded in the intraday market.