

**Explanatory document concerning the Nordic
TSOs' proposal for establishment of fallback pro-
cedures in accordance with Article 44 of the
Commission Regulation (EU) 2015/1222 of 24 July
2015 establishing a Guideline on Capacity Alloca-
tion and Congestion
Management**

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1. Introduction

According to article 44 of the CACM Regulation each TSO, in coordination with the other TSOs, in a capacity calculation region (CCR) shall develop a proposal for fallback procedures.

Today fallback procedures are already harmonized for the CCR Nordic. In order to provide a reliable and transparent market for all involved actors, the fallback procedures need to be well-functioning in a future situation with multiple NEMOs active in the Nordic area. It is, therefore, necessary to update current fallback procedures.

This document contains an explanation of the proposal for new fallback procedures to be applied in the CCR Nordic, applicable to the day-ahead market. The fallback procedures proposed are to comply with the requirements of Article 44 of the CACM Regulation.

All timings in the explanatory document refer to CET, and wherever the Nordic region is mentioned this refers to the CCR Nordic.

2. Legal requirements and interpretation

There are two types of fallback processes described in the CACM Regulation:

1. Fallback procedures related to the day-ahead algorithm and calculation of price and net positions
2. Fallback procedures for capacity calculation, for the case where the initial capacity calculation does not lead to any results.

The second type of fallback is outside the scope of the proposal and this explanatory document as this procedure must, according to Article 21(3) of the CACM Regulation, be included in the capacity calculation methodology.

Besides these fallback procedures, all NEMOs have to develop and submit for approval a backup methodology in accordance with Article 36(3) to secure the smooth operation of the single day-ahead coupling in order to avoid a partial and full decoupling and initiation of fallback procedures.

According to Article 8(2), TSOs shall:

“establish and operate fallback procedures as appropriate for capacity allocation in accordance with Article 44”.

Article 39(2) of the CACM Regulation specifies the results of the day-ahead coupling algorithm:

“The price coupling algorithm shall produce at least the following results simultaneously for each market time unit:

- (a) a single clearing price for each bidding zone and market time unit in EUR/MWh; (b) a single net position for each bidding zone and each market time unit;
- (c) the information which enables the execution status of orders to be determined.”

Article 44 states the following:

“By 16 months after the entry into force of this Regulation, each TSO, in coordination with all the other TSOs in the capacity calculation region, shall develop a proposal for robust and timely fallback procedures to ensure efficient, transparent and non-discriminatory capacity allocation in the event that the single day-ahead coupling process is unable to produce results. The proposal for the establishment of fallback procedures shall be subject to consultation in accordance with Article 12.”

Article 50(1) states that:

“In the event that all NEMOs performing MCO functions are unable to deliver part or all of the results of the price coupling algorithm by the time specified in Article 37(1)(a), the fallback procedures established in accordance with Article 44 shall apply”.

Furthermore, according to Article 50(2):

“In cases where there is a risk that all NEMOs performing MCO functions are unable to deliver part or all of the results within the deadline, all NEMOs shall notify all TSOs as soon as the risk is identified. All NEMOs performing MCO functions shall immediately publish a notice to market participants that fallback procedures may be applied.”

The preamble of the CACM Regulation states the following on fallback procedures:

“(21) Despite the creation of a reliable algorithm to match bids and offers and appropriate backup processes, there may be situations where the price coupling process is unable to produce results. Consequently, it is necessary to provide for fallback solutions at a national and regional level to ensure capacity can still be allocated.”

2.1 Interpretation and scope of the proposal

This proposal has been developed by the four Nordic TSOs in coordination with the relevant NEMOs. NEMOs are according to Article 7(1)(h) of the CACM Regulation to take into account fallback procedures as established via this proposal.

The proposal applies to the bidding zone borders within the CCR Nordic. Fallback procedures for the bidding zone borders in the CCR Hansa (and the CCR Baltic) are developed separately and are outside the scope of this proposal.

Fallback procedures apply in the event that the single day-ahead coupling process is unable to produce results. The results meant are specified in Article 39(2) of the CACM Regulation and relate to the output of the day-ahead price coupling algorithm, i.e. prices and net positions. Reasons for activating fallback procedures may relate to malfunctioning of the algorithm Euphemia, lacking order data from at least one NEMO, malfunctioning communication channels, etc.

3. Present Nordic fallback procedures

In this section, the present fallback procedure in place within the Nordic area is described – starting with an introduction to the European market coupling.

3.1 The Multi-Regional Coupling (MRC)

In the Multi-Regional Coupling (MRC), prices are calculated in the PCR Matcher-Broker system (PMB) using the Euphemia algorithm, which all involved NEMOs have developed in close cooperation. The PMB system is designed so that the calculation will start when all the needed data is received, being all Network Data (Cross-Zonal Capacities and Allocation constraints, CZCs and ACs) and Order Data (Order books).

The NEMOs take turns being the Coordinator – or responsible party – for the calculation. Currently, Nord Pool (NP), EPEX, GME and OMIE each spend two weeks as the Coordinator, two weeks as a hot backup (being able to take over the role as Coordinator on short notice) and two weeks off. NP and EPEX perform a full MRC shadow calculation today in order to validate the valid results delivered by the calculation from the MRC to all the other parties.

3.2 MRC procedures

Within MRC, TSOs and NEMOs have an agreed set of procedures for the day-ahead market coupling. These common procedures describe the way to act in normal situations, backup situations, fallback situations and special situations. Underlying to these common procedures each region has local procedures to ensure compliance with the MRC procedures (e.g. local procedures for fallback in case MRC declares fallback based on the common procedures for doing so).

3.2.1 MRC fallback procedures

As soon as an incident occurs that prevents the timely allocation of the CZCs via the implicit allocation process and/or the timely publication of the market coupling results, an MRC incident committee is convened by the NEMO acting as coordinator. The incident committee identifies the issue, assesses and agrees on potential fallback solutions.

MRC fallback procedures identify two overall fallback situations: Partial coupling or full decoupling.

In the case of partial coupling, one region might experience problems and therefore has to be decoupled from the rest of MRC, which continues to be coupled. In the case of full decoupling, all MRC regions and bidding zones are decoupled from each other.

Following the MRC incident committee declaring partial coupling or full decoupling, local fallback procedures are activated in order for the individual regions or bidding zones to allocate cross-zonal capacities and calculate a price for each bidding zone.

Depending on the reason for declaring a partial coupling or a full decoupling, the MRC fallback procedures identify 5 main situations, each of them with its specific deadline:

Partial Coupling			
Partial coupling known during the daily market coupling session			
1	Partial coupling for CZC-related reasons	→ 11:45 deadline	A NEMO has not submitted the network data by the deadline, which will lead to a partial coupling, meaning that the area(s) with the problem will be missing in the MRC-system. For example: if NP has not submitted the network data, this will lead to MRC declaring a partial coupling. The Nordic/Baltic region will in this case be missing from the calculations in the rest of MRC.
2	Partial coupling for reasons not related to the CZCs	→ 12:40 deadline	A NEMO has not submitted the order data, which will lead to a partial coupling, meaning that the region/area(s) with the problem will be missing in the MRC-system. For example: if NP has not submitted the order data this will lead to MRC declaring partial coupling. The Nordic/Baltic region will in this case be missing from the calculations in the rest of MRC.
Partial coupling known in advance			
3	Partial coupling known in advance	→ 10:30 deadline	Can only be declared in case the previous day's market coupling session resulted in partial coupling and the issue cannot be solved by 10:30 at the latest.

Full Decoupling			
Full decoupling known during the daily market coupling session			
4	Full decoupling known during the daily market coupling session	→ 13:50 deadline	Under normal circumstances, all NEMOs will receive the prices, net positions and flow results of the common price calculation in the MRC-system. Each NEMO checks the results for max/min prices, thresholds etc. and either confirms or rejects the results. If one or more of the NEMOs cannot provide this confirmation by 13:50 this will lead to a full decoupling.
Full decoupling known in advance			
5	Full decoupling known in advance	→ 10:30 deadline	Can only be declared in case the previous day's market coupling session resulted in full decoupling and the issue cannot be solved by 10:30 at the latest.

Table 1: Partial and full decoupling procedures

3.3 Current Nordic situation – local fallback procedures

3.3.1 Extension of calculation time for the CCR Nordic until 20:00

In case of activation of the MRC fallback procedures, the current Nordic procedure is to always keep the Nordic (and Baltic) bidding zones coupled. This is independent of whether or not the reason is partial coupling or full decoupling. NP will use the PMB system locally, only containing Nordic-Baltic Network Data and Order Data, and set capacity on interconnectors of the adjacent CCR Hansa to 0 MW. Hence, all internal Nordic-Baltic connections will remain coupled¹.

In order to keep the Nordic bidding zones coupled, the Nordic TSOs have asked NP to continue calculations until 20:00.

The relatively late deadline increases the possibility of solving the issue(s) and thereby avoiding a no-price situation. The deadline has been agreed between NP and the Nordic TSOs and it has been included in NP's Rulebook since August 4, 2013.

3.3.2 No-price situation in the CCR Nordic (no result at 20:00)

If NP is not able to determine the Elspot Prices before 20:00 on the day prior to the Delivery Day a no-price situation occurs. In this case the Price Report from the previous day will be deemed valid hour by hour in respect of both Auction Prices and Energy Volumes for the Delivery-Day in question.

In this context, the "previous day" means the previous working day if the auction failure has an effect on a working day, and the previous weekend day or public holiday, as appropriate, if the auction failure has an effect on a Saturday, Sunday or public holiday. Working day means days from Monday to Friday, not including legal public holidays which are identified as public holiday in countries in the Electricity Exchange Area together having at least 67% of the consumption the previous year. Christmas Eve (24/12) and New Year's Eve (31/12) are considered public holidays. Thereby, a transparent and reliable Nordic market is maintained.²

¹ Current fallback in CCR Hansa is to conduct shadow auction. Following the auction conducted by JAO.EU, the order books of NP are reopened for 10 minutes.

² Elspot Market Regulations, NP 2016, <http://www.nordpoolspot.com/TAS/Rulebook-for-the-Physical-Markets/Nordic-Baltic/>

Time	Action
11:45/12:40/13:50	MRC Market Coupling is declared to be partially coupled or fully decoupled.
11:45/12:40/13:50	Local procedures are activated in case the CCR Nordic is affected. NP will use the PMB system locally, only containing Nordic & Baltic data, and 0 MW capacity on all CCR Hansa interconnectors
20:00	In case of no results, the Elspot auction is canceled, and NP will send out price and volume from last common banking day / not banking day for tomorrow.

Table 2: Deadlines for fallback procedures in the CCR Nordic

3.3.3 Planned flow on the CCR Hansa interconnectors in case of no-price situation in the CCR Nordic

If a situation occurs where NP is not able to determine bidding zone prices by 20:00, the results from the previous day will be used, according to current procedures described in the NP rulebook.

During local NP calculations of the Nordic bidding zone prices, the planned flow on the Hansa interconnectors is set to 0 for the NP calculation. If the no-price situation occurs the results from a previous day will be copied, and the planned flow on the Hansa interconnectors will most likely be different from 0.

The planned flow according to the previous day's results will then be treated as an imbalance in the respective areas. The relevant TSO's handle this imbalance either via intraday market, Regulating Power market, Counter-trade or etc.

If CCR Hansa is in a fallback situation, the capacity on the interconnectors will be subject to a shadow auction.

4. Proposed fallback procedures for the CCR Nordic

This chapter provides a description of and explanations for the proposed future fallback procedures and addresses important matters that have been considered in order to ensure well-functioning fallback procedures for the CCR Nordic. In line with Article 36(4) of the CACM Regulation, existing procedures will be reused as much as possible.

4.1 Keeping the CCR Nordic coupled

CCR Nordic is characterized by a high number of bidding zones (12) compared to the rest of Europe, where a bidding zone normally corresponds to a country. The CCR Nordic has a high proportion of cross-border capacity and trade, compared to the internal generation and consumption within each bidding zone. Bidding zone borders reflect the internal transmission constraints within a TSO's control area, and they are important tools for system operations. Full decoupling of all Nordic bidding zones will therefore have a more negative effect on system security compared to a similar full decoupling in continental Europe, where bidding zones are considerably larger in terms of generation and consumption.

It is also important for liquidity in the Nordic market to keep the Nordic bidding zones coupled, especially since 94,8 %³ of the total consumption of power in the Nordic and Baltic market is traded on NP. As mentioned earlier the CCR Nordic comprises a high number of bidding zones. The majority of the Nordic bidding zones are therefore not large bidding zones in terms of generation and consumption. A small number of market participants within each Nordic bidding zone cannot ensure liquid

³ Figure 2016 according to NP.

markets if the bidding zones are decoupled and, as a result, it is not necessarily possible to obtain a reliable price for the Nordic bidding zones.

4.2 Multiple NEMOs in the CCR Nordic - impact on fallback procedures

The Nordic national proposals for arrangement concerning more than one NEMO in one bidding zone all state that each NEMO offering services in the Nordic bidding zones shall allow its orders to be used for calculating and publishing a unique clearing price for the bidding zones during fallback situations.

This proposal for fallback procedures therefore incorporates a solution, where all NEMOs are equally involved and equally treated while at the same time respecting the need for keeping the CCR Nordic internally coupled also during a fallback situation. This results in a robust and non-discriminatory arrangement, in compliance with Article 44 of the CACM Regulation.

4.3 Activation of Nordic fallback procedures

The Nordic TSOs expect that the MRC will continue evolving into the future European single day-ahead coupling solution (SDAC). Based on this assumption the existing setup, procedures, technical solutions etc. will be reused as much as possible in the future SDAC. The timings used in this proposal are therefore mentioned under this assumption. Should SDAC timings or procedures be changed, this will then also affect when to activate Nordic fallback procedures.

4.3.1 SDAC partial coupling is declared

If one or more order books have not been submitted to the PMB by 12:40, a SDAC partial coupling will be declared. If the problem with a missing order book is due to issues in the CCR Nordic, the CCR Nordic will be partially decoupled from the rest of the MRC and Nordic fallback procedures will be activated. If partial coupling is declared due to problems in another region, the CCR Nordic will generally stay coupled with SDAC (in case the neighbouring CCR Hansa has decoupled this will, however, de facto also lead to a decoupling of the CCR Nordic).

An example of partial decoupling in the CCR Nordic

If one or more of the NEMOs in the CCR Nordic are not able to submit order data to the PMB by deadline, this will lead to the SDAC declaring a partial coupling resulting in the CCR Nordic not being part of the SDAC calculations. This is independent of whether or not one of the NEMOs in the CCR Nordic is able to submit order data.

4.3.2 SDAC full decoupling is declared

If the SDAC price coupling results are not confirmed by 13:50, the SDAC will be fully decoupled. For all regions, including the CCR Nordic, this means decoupling from the rest of the CCR regions and the activation of regional fallback procedures.

An example in the CCR Nordic that can lead to declaring SDAC full decoupling

If one or more of the NEMOs in the CCR Nordic experience problems in confirmation of results by the deadline, this will lead to full decoupling of MRC. This is independent of whether or not one of the NEMOs in the CCR Nordic is experiencing problems and leads to the activation of fallback procedures in the CCR Nordic.

4.4 Course of action when Nordic fallback procedures have been activated

Activation of the Nordic fallback procedures results in a two-step approach, which will be further described in detailed procedures during implementation. However, the principles are as follows:

4.4.1 Step 1 – calculation until 20:00

“Fallback Coordinator” means the day-ahead NEMO, which in addition to performing the tasks of an operator during Market Coupling Session (MCS) is responsible for coordinating the operation of the

MCS within the CCR Nordic in case of SDAC full decoupling or partial coupling. The role of Fallback Coordinator will follow a rotational setup as outlined in this Proposal and further detailed in procedures. The Fallback Coordinator shall initiate the fallback procedures in the CCR Nordic when SDAC declares a full decoupling or a partial coupling affecting the CCR Nordic. In both a partial coupling and a full decoupling situation the bidding zone borders of the CCR Nordic will remain coupled. Prices will be calculated for the coupled CCR Nordic using the PMB system in a "local" mode by a Nordic Fallback Coordinator. This calculation will contain Nordic network data and Nordic order data and set cross-zonal capacities on interconnectors from/to Nordic bidding zones to 0 MW. These interconnectors will be handled according to proposed fallback procedures for the CCR Hansa and the CCR Baltic.

The Fallback Coordinator's deadline for completing the price calculation and delivering the validated results of the calculation to the relevant NEMOs is 20:00 CET and 20:05 CET respectively. Applying this relatively late deadline of 20:00 CET increases the probability of solving the existing problem(s) and avoiding a no-price situation. This absolute deadline of 20:00 CET for when the day-ahead auction will be canceled must be transparent for the market participants.

4.4.2 Step 2 - no-price situation

Only in the unlikely event that the Fallback Coordinator is not able to complete calculations by 20:00 CET, the no-price situation comes into effect. In that case NEMOs are to use results from the Reference Day. "Reference day" means the previous working day if the auction failure has effect on a working day, and the previous weekend day or public holiday, as appropriate, if the auction failure has effect on a Saturday, Sunday or public holiday. Working day means days from Monday to Friday, not including legal public holidays which are identified as public holiday in countries in the CCR Nordic with at least 67% of the consumption of the previous year. Christmas Eve (24/12) and New Year's Eve (31/12) are considered as public holidays.

The planned flow on interconnections from/to the CCR Nordic according to the reference day's results will be treated as an imbalance in the respective TSOs' areas. In the event of a no-price situation a) the respective local imbalance settlement regulation shall apply to the market participants and b) any imbalances on interconnections from/to the CCR Nordic shall be handled by the relevant TSOs.

4.5 Fallback Coordinator

The Fallback Coordinator shall calculate market coupling results in case of SDAC partial coupling or full decoupling and deliver the results to relevant NEMOs by 20:05 CET. NEMOs shall then deliver the result to the market participants by the deadlines set in the fallback proposal.

4.5.1 Selection of Fallback Coordinator

In case there is only one NEMO designated in the bidding zone, this NEMO can act as Fallback Coordinator. However, there will be at least two NEMOs offering trading services in the CCR Nordic and equal treatment of these NEMOs has to be taken into account when the Fallback Coordinator is assigned. Nordic TSOs shall assign at least one Fallback Coordinator in the CCR Nordic. When more than one NEMO is either designated or offering trading services⁴ in all the bidding zones of the CCR Nordic, the assignment by the TSOs of Fallback Coordinator shall be based on neutral and equal treatment of all NEMOs.

There are two options for the assignment of a Fallback Coordinator:

- tendering for one Fallback Coordinator;
- assigning each NEMO meeting the predefined qualifications as Fallback Coordinator applying a rotational setup.

⁴ By "offering trading services" it is also meant to be committed to offer trading services in each bidding zone.

Nordic TSOs have considered both options for the selection of the Fallback Coordinator. Tendering has some drawbacks, e.g.:

- lengthy process as European procurement rules and procedures have to be applied;
- there is a legal requirement to retender after a certain period;
- very limited number of tenderers.

Nordic TSOs have taken the view that assigning each qualified NEMO as Fallback Coordinator in a rotational setup would be the best option due to the following:

- complies with the future SDAC approach, where NEMOs can act as coordinator, backup coordinator or operator in a rotational setup;
- ensures the equal treatment between the competing NEMOs in a cost efficient way.

However, assigning each NEMO to be the Fallback Coordinator in a rotational setup should ensure that the rotational setup does not have any negative impact on operational security. A prerequisite for selecting the rotational setup is that the procedures detailing the interaction between the assigned Fallback Coordinator and the TSOs in a fallback situation are sufficient and appropriate from a system security point of view. The NEMOs in the rotational setup shall, in cooperation with the TSOs, develop detailed procedures including, but not limited to, the following requirements:

- Detailed steps to be followed after fallback has been declared including the management of an incident committee for the concerned NEMOs and TSOs.
- Single point of contact for TSOs to the Fallback Coordinator role.
- List of the legal public holidays from February until end of January for the following year in the CCR Nordic in line with the definition in Article 2.
- Definition of standard messages to market participants.
- Publication of prices and net positions to market participants.

When the rotational setup is applied, the role of the Fallback Coordinator is always assigned to a NEMO. The basis for this assignment is that a NEMO shall comply with the coordinator calendar of the SDAC and apply the following roles as defined in current proposal for backup methodology by all NEMOs:

- Operator means a day-ahead NEMO that is setup to be able to perform the DA MCO Functions during the Market Coupling Phase, and which provides all connected Operators, including the Coordinator of the day, with the information needed for the calculation of the market coupling results. The Operator participates in the actions convened by the Coordinator, complies with commonly agreed decisions and accepts or rejects the market coupling results for its own results (plus those of any NEMO that it services).
- Coordinator means a day-ahead NEMO which, in addition to performing the tasks of an Operator, during the Market Coupling Session (MCS) is responsible for coordinating the operation of the MCS. The Operators share the Coordinator role according to a rotational scheme calendar.
- Backup Coordinator means a day-ahead NEMO which in addition to performing the task as an Operator, is responsible, if necessary, to take over the Coordinator role at any moment. The Operators share the Backup Coordinator role according to a rotational scheme calendar.

The NEMOs qualified to act as Fallback Coordinator in the CCR Nordic should develop a backup solution for the Fallback Coordinator role in line with the same principles and calendar as the SDAC.

4.5.2 Requirements to act as Fallback Coordinator in the CCR Nordic

Partial coupling or full decoupling of MRC have been rare events and since the introduction of the Euphemia algorithm (February 2014) no fallback procedures have been initiated in the Nordic area. Implementation of backup methodology to be developed in accordance with the CACM regulation aims to prevent the partial coupling and full decoupling implying that these situations would be rare

also in the future. Thus, it may be foreseen that the additional workload of being the Fallback Coordinator is expected to be very limited. The workload will mainly consist of maintaining the readiness to act as the Fallback Coordinator in case the partial or full decoupling is announced affecting the CCR Nordic.

To qualify as a Fallback Coordinator in the CCR Nordic, a NEMO shall meet the following requirements:

- provide SDAC trading services in each bidding zone of the CCR Nordic; or
- commit to offer SDAC trading services in each bidding zone of the CCR Nordic and notify the needed lead-time to start operation; and
- be coordinator and backup coordinator in the SDAC.

By providing or committing to provide trading services NEMOs commit to help ensure a robust and reliable Nordic market also in fallback situations. Part of committing to operate is to implement relevant procedures, sign needed agreements with e.g. the TSOs and implement and test relevant interfaces and systems.

By requiring that the Fallback Coordinator is acting as coordinator and backup coordinator in SDAC, it is ensured that the qualified NEMOs are performing a daily shadow calculation, limiting the additional resources associated with the Fallback Coordinator role.

The Fallback Coordinator shall in cooperation with TSOs send relevant NRAs an incident report following an incident of partial coupling or full decoupling affecting the CCR Nordic evaluating used procedures.

4.6 Nordic fallback procedures – robust, reliable and transparent

This chapter explains and justifies the proposed Nordic fallback procedures.

Equal treatment of multiple NEMOs

The proposed fallback procedures are aimed to be robust for future market conditions. Thus the suggested fallback procedures have been designed to be able to handle two or more NEMOs within the CCR Nordic. Equal treatment is ensured by applying a rotational principle for the Fallback Coordinator role.

Keeping the CCR Nordic coupled

As described in section 4.1 it is important to keep the CCR Nordic coupled in all fallback situations. The proposal for the future fallback procedures are designed to ensure this as step 1 is to keep calculating for as long time as possible whereas step 2 (only if needed) is to use the results from the Reference Day, thereby still ensuring that the region is coupled.

One price per bidding zone per market time unit and the Nordic system price

Reliability of prices in the Nordic bidding zones is extremely important. As mentioned earlier most of the total consumption of power in the Nordic and Baltic market is currently traded on the power exchange. This will be endangered if market participants cannot trust the prices.

The bidding zone prices and especially the Nordic system price is the basis for most financial trade in the CCR Nordic and is used as reference price in bilateral trades and as a reference to contracts in the end user market to a larger extent than in other parts of Europe.

The importance of one price per bidding zone and a reliable Nordic system price is also the reason why it has been excluded from the proposal that the CCR Nordic would still stay coupled with MRC/SDAC if at least one NEMO has no problems and can calculate. In such a case the price formation would be without a complete order book from the CCR Nordic bidding zones. This poses a

risk of highly volatile prices, more than one price in a bidding zone per market time unit (MTU), the risk of the interconnector capacity not being used optimally since orders corresponding to all production and consumption would not be matched in a single process. A situation could occur, where one NEMO has high prices and another NEMO has very low prices thereby endangering the reliability of prices.

Calculation until 20:00 compared to other solutions

Common practice in the rest of Europe in a MRC declared fallback situation is to cancel the day-ahead auction at the deadline 13:50 (or 11:45/12:40 in case of partial coupling and then only for the involved interconnectors), and to either apply shadow auction (handled by JAO.EU) or let market participants use the intraday market to trade their power production and consumption.

Shadow auction

The alternative of applying shadow auction in the CCR Nordic would entail carrying out explicit capacity auctions on each bidding zone border in the region. This solution would result in a situation where it is no longer possible to keep the CCR Nordic coupled – one of the most important outcomes to be ensured by a Nordic fallback procedure.

One of the reasons for applying shadow auctions on many European interconnectors is that the Continental European TSOs need nominations earlier than Nordic TSOs. Common practice for Continental European TSOs is a nomination deadline at 15:30. The Nordic TSOs are, however, under special fallback circumstances, able to delay own procedures and wait for nominations. Therefore calculation time can be extended, improving the possibility for finding prices, net positions and flows through price coupling and not through the less efficient explicit auctions.

The late deadline can have some negative impact on TSOs since in some cases it could cause the cancellation of reserve exchange between the TSOs, causing financially non-optimal maintenance of reserves. However, the negative impacts of having no price in the day-ahead market are considered greater.

Intraday

The alternative with leaving all volume planned for day-ahead to the intraday market might be challenging for some Nordic market participants. Several minor Nordic market participants do not have the possibility to trade as they do not have 24/7 personnel available and they are not a member on intraday trading.

Hence, it is questionable whether leaving all market participants on their own without any prices is a realistic option as several market participants will not be able to sell/buy the needed volume in intraday timeframe, and the market prices in the intraday market will not be representative.

From a system security perspective, the TSOs need to be notified about the planned flow following the Nordic market coupling. The strong case for keeping the Nordics coupled justifies that the TSOs wait until 20:00. However, in the rare situation where market coupling is not successful within that deadline, the operational centres of the TSOs need a planned flow based on a market outcome. The operational phase would be challenging without any planned flow except that following from the intraday market.

The proposal is therefore to keep 20:00 as deadline for calculation of day-ahead prices in case of MRC partial or full decoupling thereby ensuring a very high probability that correct prices will be calculated for the Nordic bidding zones.

No-price situation at 20:00 in the CCR Nordic

In the unlikely event that the Fallback Coordinator is not able to produce results by 20:00, results from the Reference Day will keep the Nordics coupled internally with one price per bidding zone, ensuring predictability and stability for the operational centres.

Historically there is a very minimal risk of a no-price situation in the CCR Nordic. This has only happened once and happened before go-live of the NWE price coupling (North West Europe – now MRC). At that time, it was concluded that the no-price situation would not have happened if the NWE price coupling had already been implemented.

Market coupling towards Germany, Netherlands and Poland (via CCR Hansa borders) and increased amount of wind generation are some of the reasons why making use of reference day's results may cause imbalances. However, the logic behind the proposed approach is that the market and the TSOs are better off by having some results – prices, volumes and cross-border flows – rather than starting out with nothing before planning the day-ahead operations. The day-to-day changes in prices and flows in the Nordic region are limited⁵.

For the market parties, having prices from Reference Day as a starting point limits the need to make adjustments in the intraday market. For the TSOs it is important to ensure system security. This entails establishing fallback procedures, which ensure that the operational centres receive needed information. In the unlikely event that the Fallback Coordinator cannot calculate prices and flows for the CCR Nordic by 20:00, the TSOs need for information can be met by applying the results from a reference day⁶.

Over the years, Nordic TSOs have discussed different alternatives to using results from a reference day in a no-price situation, e.g. where NEMOs should analyse the next day, and find a similar day from previous price calculations. However, in a no-price situation the NEMOs may not have time (concentrating until 20:00 on solving the problem and calculating a price), expertise or relevant data to find the best day, seen from TSOs' and market participants' perspective.

There may also be conflicting interests between different market actors, which could lead to some actors complaining to the NEMOs if they do not agree with the day chosen. To avoid these uncertainties and to have the best possible transparency towards TSOs and market participants, a clear procedure to select the representative day needs to be prioritized and communicated. For the market, the most important in case of no-price situation is that the rule for choosing the day as the valid price results is transparent and ensures equal treatment for the market participants. Hence, requesting the NEMO as Fallback Coordinator to pick a day is not a good option for the market.

The proposal is, therefore, to use the Reference Day as defined in the legal document Art. 2(2)(b) to set the prices for each bidding zone in case prices cannot be calculated by 20:00. The planned flows on interconnections from/to the CCR Nordic according to the reference day's results are treated as imbalances and handled by the relevant TSOs. For market participants, the local imbalance settlement regulations apply also in no-price situations.

⁵ Calculations based on data from Nord Pool show that in 2016 the average change per hour from one day to another was 5 % or less for all areas except wind dominated DK1.

⁶ The use of a reference day is also discussed in other situations, such as e.g. in the Nordic project for aFRR (automatic Frequency Restoration Reserves). Analyses in this specific project have shown that the use of a reference day (use of previous day or previous weekend) with actual day-ahead market prices in order to calculate the capacity to be reserved for aFRR on a daily basis should be sufficient. The analyses have shown that a reference day is good enough for a majority of hours, even if several reasons exist for price fluctuations between days. Based on these analyses it has been decided in the project to use a reference day and this is currently under development.

4.7 Impact on the CCR Nordic from other CCR fallback procedures

Activation of fallback procedures in other CCRs, especially CCR Baltic and CCR Hansa might affect TSOs and NEMOs in the CCR Nordic. In that case, the Nordic TSOs and the relevant NEMOs shall work together with the adjacent CCRs during implementation to find solutions to ensure that their fallback procedures do not affect the fallback procedures for the CCR Nordic in a negative way. The assumption is that the launching of the fallback procedures in the neighbouring CCRs does not affect the CCR Nordic in a way that would be essentially different from the current situation. This assumption is based on the knowledge of the Nordic TSOs that the neighbouring CCRs design their CACM compliant fallback proposals on the basis of the prevailing practices similarly as is done in the proposal of the Nordic TSOs.

The proposed fallback procedure of the CCR Hansa is to conduct shadow auction. Following the auction, the order books of the NEMOs shall be reopened for 10 minutes. This should be reflected in the detailed procedures of the CCR Nordic as well.

5. Evaluation of the proposal against the objectives of the CACM Regulation

This proposal contributes to the achievement of the objectives of Article 3 of the CACM Regulation. The main purpose of this proposal is to achieve an efficient market coupling process also in the situation when the normal market coupling process fails. In particular, by keeping all bidding zones within the Nordics coupled, the proposed solution respects the need for a fair and orderly market as well as fair and orderly price formation also in a situation where the CCR Nordic is decoupled from the rest of MRC.

The CACM Regulation has the objective to ensure optimal use of the transmission infrastructure, operational security and optimizing the calculation and allocation of cross-zonal capacity. In this respect, the proposed fallback procedure opens up for a transparent and efficient use of transmission capacity in critical situations by in any case providing the market with DA auction results. The operational security is also ensured by establishing simple procedures and a distinct allocation of responsibility in a fallback situation.

In regard to the aim of the CACM Regulation to promote effective competition in the generation, trading and supply of electricity, this proposal has taken into account the importance of creating a level playing field for market parties active on cross-zonal markets, e.g. by keeping the Nordic market coupled in a fallback situation and avoiding a situation where all the volume planned for day-ahead is left to the intraday market. The creation of a level playing field for NEMOs specifically is supported by equal obligations and requirements for acting as Fallback Coordinator in the CCR Nordic.

By keeping the bidding zones within the CCR Nordic coupled also in a fallback situation, a functioning day-ahead market is ensured also in a situation where the primary market coupling process fails.

6. Implementation planning

The implementation of the fallback procedures on all bidding zone borders within the CCR Nordic will take place within three months after the approval of the fallback proposal and within three months after the market coupling operator function developed in accordance with Article 7(3)) of the CACM Regulation has been implemented on the bidding zone borders within the CCR Nordic.

The implementation of the fallback procedures is irrespective of whether there is one or several NEMOs providing SDAC trading services in the Nordic bidding zones.

7. Stakeholders' comments and assessment

Stakeholders have had the opportunity to provide input on the Nordic TSOs explanatory document containing the proposal for fallback procedures for the CCR Nordic. The consultation was open from 13th March 2017 to 13th April 2017.

Two parties responded to the consultation. Their comments and Nordic TSOs' response has been collected and included in Annex 1 to this explanatory document.

Annex 1: CCR Nordic fallback consultation – TSO responses

TSO Question 1: Do you agree that the fallback operator’s deadline for completing the price calculation should remain at 20:00 (CET)?

Reviewer (Organisation)	Response to consultation question 1	Nordic TSOs’ reply	Changes to proposal and other to-dos
Nordenergi – the umbrella association of the Nordic electricity industry associations	Yes, this is identical with the present solutions and gives the Nordic TSOs enough additional time for completing their price calculation in a fallback situation. We accept that prices might come late, which is better than having no prices/reference day prices in that situation.	Thank you for the support to the suggested deadline.	-
EPEX SPOT	<p>In the case in which at least one Nordic NEMO cannot connect to the Price Coupling infrastructure (PCR), the remaining NEMO(s) should be able to maintain the coupling with MRC and the rest of Europe. EPEX SPOT is of the opinion that if at least one NEMO is operational for performing the MCO function, then the coupling to Continental Europe should be maintained in respect with applicable deadlines.</p> <p>Under this assumption, a regional decoupling from MRC would be less probable to happen with several NEMOs operating the market and the Nordic region would fully benefit from having two NEMOs performing the MCO function. A single clearing price per bidding zone may still be achieved through the calculation of a weighted average price from the different NEMOs’ market results.</p> <p>The current Nordic Fallback proposal does not provide for such a possibility and EPEX would like to raise awareness of the fact it may increase the risks of decoupling, and decrease the welfare potential of the European Market Coupling in the Nordic region.</p>	<p>Nordic TSOs cannot agree to a situation where one NEMO cannot connect to the price coupling and the remaining NEMO would maintain the coupling with the rest of Europe.</p> <p>The importance of keeping CCR Nordic coupled covering all bidding zones, having one reliable price per bidding zone and a reliable Nordic system price are some of the reasons why this situation has been excluded from the proposal. In such a case the price formation would be without a complete order book from the CCR Nordic bidding zones. This poses a risk of highly volatile prices, more than one price in a bidding zone per market time unit (MTU), the risk of the interconnector capacity not being used</p>	

	<p>If the priority is put on the coupling among NEMO hubs in a bidding zone over MRC coupling, then as a NEMO we generally welcome the possibility to have an extended time schedule to be able to solve an issue and ensure the price coupling of the Nordic region. However, such a possible late price calculation and settlement might have far-reaching implications for cross-CCP collateralization and NEMOs' collateral requirements towards market participants.</p> <p>Indeed, in case the Day-Ahead exposure cannot be set off by payments next morning, this could result in adding up the exposure of other CCP(s) and market participants of one Day-ahead trading day to the next and could result in a considerable increase of required collateral for such specific situations. Moreover, it remains challenging for the market participants and their commercial banks to adjust collateral for the next trading day on time in case of a final decoupling decision at 20:00.</p> <p>In case a decoupling takes place on a non-business day, the above-mentioned collateral increase corresponding to this higher exposure will not be possible. In addition, some NEMOs may offer the possibility to their members and commercial banks to diminish their risk by using pre-trade limits which limit the exposure of a participant and therefore support the participant's and its commercial bank's risk management. In case market participants' pre-trade limits would have already been exhausted, additional trades would not be allowed by NEMOs' trading systems and the delayed fallback would lead to limited trading opportunities for market parties having used this functionality.</p> <p>Such an exceptional late settlement of Day-Ahead transactions would also affect the daily operations and therefore</p>	<p>optimally since orders corresponding to all production and consumption would not be matched in a single process. A situation could occur, where one NEMO has high prices and another NEMO has very low prices thereby endangering the reliability of prices. This risk increases with smaller bidding zones.</p> <p>TSOs appreciate the general welcome from EPEX to the extended calculation time (until 20:00). TSOs cannot, however, include issues into the legal fallback proposal which puts requirements on the way NEMOs and CCPs conduct their business regarding e.g. collaterals. This would exceed the TSOs legal mandate.</p> <p>TSOs do not foresee that market participants will face unmanageable challenges concerning collaterals for the next trading day. The suggested fallback setup is equal to the current setup in CCR Nordic and this issue has never been raised by market participants, nor have market participants commented on this issue during this consultation.</p>	
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	needs to be carefully foreseen in NEMOs/CCPs' procedures and respective contracts with TSOs (balancing of local market due to missing cross-border flows and coverage of any liability caused by a member default).		
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TSO Question 2: In CACM it is not stated explicitly that NEMOs shall reopen their order books in a fallback situation. Do market participants see a benefit that NEMOs reopen their order books before fallback calculation/price calculation? If yes, please provide a reasoning/explanation.

Reviewer (Organisation)	Response to consultation question 2	Nordic TSOs' reply	Changes to proposal and other to-dos
Nordenergi – the umbrella association of the Nordic electricity industry associations	<p>Nordenergi can see benefits in both approaches, in re-opening and in not re-opening the order books.</p> <p>Given the changed situation (causes triggering the fallback, the potential use of reference day prices ...) and given that the capacity on the connections to the continent and the Baltic region is set to 0, since these connections will be addressed in a separate fallback procedure, it might make sense to re-open the order books to allow market actors to adapt their bids.</p> <p>On the other hand, water values, an important factor in the bidding process, have not changed in a fallback situation. And a re-opening of the order books will take time from the Nordic fallback process running until 8 o'clock and might thereby increase the risk of having to use reference prices.</p> <p>In addition, if the order book is re-opened for only a short period or after normal working hours, it is not given, that all market participants, even smaller players and consumers, will actually readjust their orders.</p> <p>Last, a re-opening of the order book should ideally be coordinated with the fallback procedures for the Hansa and the Baltic region, in order to give a complete picture.</p>	<p>Thank you for the answer stating benefits for both approaches.</p> <p>Nordic TSOs agree that any re-opening of order books should be coordinated with relevant regions.</p>	<p>TSOs will consider the comments when establishing the relevant procedures</p> <p>Nordic TSOs assume that re-opening of order books will be required in neighbouring CCRs due to shadow auctions and Nordic TSOs will coordinate with these CCRs when establishing the relevant procedures.</p>

TSO Question 3: Do you agree that the results from a previous day/reference day should be used in the unlikely event that the fallback operator is not able to solve the problems by 20:00 (CET)?

Reviewer (Organisation)	Response to consultation question 3	Nordic TSOs' reply	Changes to proposal and other to-dos
Nordenergi – the umbrella association of the Nordic electricity industry associations	Using the results from a previous day/reference day is the current procedure, which works in the unlikely event that the fallback operator does not find a solution. Starting shadow auctions on all bidding zone borders is not practicable due to the high number of bidding zones. Moving all capacity over to the intraday market is not practicable yet since participation in the intraday market is currently too low compared to the broad participation in the day-ahead markets. In the future, if liquidity and participation in the intraday market increase, this could be an option.	Thank you for the support to the reference day. We agree with your comments on shadow auction and intraday.	-
EPEX SPOT	<p>EPEX SPOT does not consider the proposed fallback solution satisfying as it obliges NEMOs to use the previous' days results for settlement of transactions which do not correspond to orders submitted on that day (no contractual basis for nomination of transactions and risk of imbalances for market participants).</p> <p>Should this principle be confirmed, it is not acceptable that NEMOs would bear any responsibility or liability for what qualifies as a specific regulatory requirement. Indeed, even though the risk of a contractual claim towards a NEMOs' liability might be mitigated in their Market Rules (subject to applicable law), third parties may claim for any damages occurred in such an exceptional circumstance (market participants, CCP but also other MRC TSOs).</p> <p>Hence, we would first request that the use of the previous day/reference day's results is explicitly made a regulatory requirement through a decision from Nordic NRAs in the pro-</p>	<p>The principle of using a previous day's results in case of the unlikely situation where NEMOs are not able to calculate by 20:00 (no-price situation) has been in place in CCR Nordic for several years. Nordic TSOs therefore take into account the principles of the CACM regulation implying that already implemented solutions should be used where appropriate.</p> <p>One of the main reasons for using this principle, in case of a no-price situation, is to still ensure the overall principle of keeping all bidding zones within CCR Nordic coupled at all times and applying reference days' results as a proxy to</p>	-

	<p>cess of approving this Fallback proposal. EPEX SPOT also requests that any damage, loss or claim suffered by the NEMOs (e.g. imbalances costs, third party claims...) caused by this procedure is fully covered by the Nordic TSOs. NEMOs need sufficient insurance from TSOs in the form of an agreement holding them harmless from all kind of damages and third party claims. This procedure should be embedded not only in the Nordic Day-Ahead Operational Agreement but also in the MRC Day-Ahead Operational Agreement.</p> <p>Moreover, solutions need to be found for the unlikely but possible event that a market participant has been set by default on the day of decoupling (e.g. due to insolvency) and would have been stopped from trading under normal market conditions. According to the proposed fallback procedure in the Nordic markets, such market participant would be assigned the same trade position as on the previous trading day (when it had not been in default yet). Associated legal and economic risks for commercial banks and CCPs due to insolvency law will need to be mitigated for such exceptional cases.</p>	<p>this principle.</p> <p>In case of a no-price situation, the NEMOs will not be asked to cover any imbalances due to the use of a previous day's results. Market participants shall follow local imbalance settlement regulation stating that they themselves are responsible for being in balance. Any imbalance that might occur on interconnectors from/to CCR Nordic will be handled by relevant Nordic TSOs.</p> <p>Nordic TSOs therefore believe that the NEMOs are facing minimal, if any risk due to this principle and cannot agree to EPEX SPOTs request that Nordic TSOs ensure full coverage.</p> <p>EPEX asks for an agreement holding them harmless from all kind of damages and third party claims. Nordic TSOs cannot agree to this request. TSOs are not in the first place causing this fallback situation. Triggers for such a situation (Single day ahead coupling declaring fallback) will lie within NEMO owned systems.</p> <p>NEMOs have the possibility to include provisions into their agreements with market participants to</p>	
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		<p>handle the concerns raised by EPEX SPOT based on the later approved fallback proposal, but TSOs cannot include more on this in the legal proposal.</p> <p>Nordic TSOs believe, as EPEX, that a situation where a market participant would have been stopped from trading due to insolvency is very unlikely. Should this, however, occur, Nordic TSOs would expect that it does not pose a risk to NEMOs. Such a situation should be covered by the collaterals posted by the market participant in order to be able to trade on the power exchange.</p>	
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TSO Question 4: In the unlikely event of a no-price situation where prices from a previous day/reference day are chosen according to agreed procedures, market parties may need to adjust their positions in the intraday market. The exchanges could have liability provisions, as Nord Pool has today, against any claims from market parties due to these imbalances. This is a risk Nordic market parties are currently facing. Is this a risk market parties in any way mitigate today?

Reviewer (Organisation)	Response to consultation question 4	Nordic TSOs' reply	Changes to proposal and other to-dos
Nordenergi – the umbrella association of the Nordic electricity industry associations	The majority of market parties currently seem not to mitigate that risk, given that that situation occurs only very rarely. In addition, there are uncertainties of how that risk could be mitigated if there was a wish to do so. Signing an insurance or introducing liability provisions at the exchanges?	Thank you for the comment. Nordic TSOs leave it up to market participants to consider if they see the need to mitigate the risk and way to do it.	-

TSO Question 5: A prerequisite for selecting the rotational setup is that the procedures detailing the interaction between the assigned fallback operator and the TSOs in a fallback situation are sufficient and appropriate from the TSOs point of view. These detailed procedures must be developed and approved before the rotational setup can be implemented. It must be known at all times, which NEMO is assigned as the Nordic fallback operator and what procedures this fallback operator has to take to handle the fallback situation. Given that the aforementioned preconditions are met, does a rotational setup pose any additional risks compared to the current fallback solution in the Nordic?

Reviewer (Organisation)	Response to consultation question 5	Nordic TSOs' reply	Changes to proposal and other to-dos
Nordenergi – the umbrella association of the Nordic electricity industry associations	Nordenergi supports a rotational setup of the fallback solution since that solution clearly implies that all NEMOs competing in the Nordic region have a responsibility for providing backup. Given that the procedures are clear to all involved actors, we do not think that this poses an additional risk compared to the current solution. Nordenergi emphasizes that the MCO function should be separated from NEMOs' competitive services. If the MCO was to be recognized as a monopoly function, it could provide the fallback set-up.	Thank you for the support to the rotational setup. TSOs agree with Nordenergi that the MCO function should be separate. TSOs believe this is ensured by the MCO plan.	TSOs will include in the legal proposal the setup for establishing procedures, which are clear to all involved parties
EPEX SPOT	EPEX SPOT sees no impediment to implementing such a rotational principle for the fallback in terms of operational security. We support this rotational principle amongst NEMOs to determine the Nordic fallback operator as it will allow a secured and cost-efficient solution. The rotation should be based on the roles defined in MRC/PCR and the PCR calendar, allowing for always having one clear Nordic fallback operator at a time. A detailed procedure should be drafted and could be annexed to the Nordic Day-Ahead Operational Agreement; it should contain the exact procedures with the timings, taking into account and aiming at minimizing the risk of parallelization of tasks related to coupling activities with other MRC regions. This procedure should be drafted by the NEMOs, based on the rotational principle established in the Nordic Fallback proposal. The same rotational principle is currently used for the market	Thank you for the support to the rotational setup. TSOs agree that detailed procedures are to be drafted, reusing where possible and relevant, roles already defined in MRC/PCR.	-

	<p>coupling operation through Europe without major issues encountered over the past years.</p> <p>This rotational set-up presents many advantages as it:</p> <ul style="list-style-type: none">- ensures a safety net with having another NEMO always able to step in as fallback operator;- builds upon existing infrastructures and PCR procedures;- maximizes synergies and cost efficiencies on European level.		
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