

**All NEMOs' proposal for the back-up methodology in
accordance with Article 36(3) of the Commission Regulation
(EU) 2015/1222 of 24 July 2015 establishing a guideline on
capacity allocation and congestion management**

14 February 2017

All NEMOs, taking into account the following

Whereas

Background

- (1) This document is a NEMO proposal developed in cooperation with the relevant TSOs and in accordance with article 36 of Commission Regulation (EU) 2015/1222 establishing a guideline on capacity allocation and congestion management (hereafter referred to as the “CACM Regulation”) for the back-up methodology for single day-ahead coupling and for the single intraday coupling (hereinafter referred to as the “Back-up Methodology”).
- (2) According to paragraph (21) of the recitals of the CACM Regulation *“Despite the creation of a reliable algorithm to match bids and offers and appropriate back-up 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.”*
- (3) According to Article 36(3) *“By 18 months after the entry into force of this Regulation, all NEMOs shall in cooperation with TSOs develop a proposal for a back-up methodology to comply with the obligations set out in articles 39 and 52 respectively”.*
- (4) According to Article 7(1)(h), NEMOs are responsible for establishing jointly with relevant TSOs back-up procedures for national or regional market operation in accordance with Article 36(3) if no results are available from the MCO functions in accordance with Article 39(2), taking into account of fallback procedures provided for in Article 44.
- (5) For the purpose of this proposal, terms used in this document have the meaning of the definitions included in Article 2 of the CACM Regulation and Regulation 543/2013.
- (6) According to Article 36 *“The proposal for a methodology shall be subject to consultation in accordance with Article 12”.*
- (7) The NEMOs proposal for a Backup Methodology will be prepared in cooperation with TSOs, taking into account the comments from the consultation, and will be submitted to the Regulatory Authorities for approval no later than 18 months after the entry into force of the CACM Regulation, i.e. 14 February 2017.
- (8) Decisions of the NEMO Committee in this proposal refers to decisions of All NEMOs coordinated via the NEMO Committee.

Impact on the objectives of CACM Regulation

- (1) The proposed Back-up Methodology takes into account the general objectives of capacity allocation and congestion management cooperation described in Article 3 of the CACM Regulation.
- (2) By requiring NEMOs to develop, implement and operate appropriate back-up procedures for each step of the DA and ID market coupling process, the proposal aims at reducing the risk of market disruption associated with full or partial decoupling, and fulfils the requirement of “promoting effective competition in the generation, trading and supply of electricity”.
- (3) By requiring appropriate back-up procedures for the submission of cross-border capacity to the DA and ID MCO Function, and for appropriate NEMO and TSO validation of results, the proposed Back-up Methodology helps to promote the optimal allocation of cross-zonal capacity and to ensure the optimal use of the transmission infrastructure.
- (4) By requiring NEMOs to develop, implement and operate appropriate back-up procedures for each step of the DA and ID market coupling process, the proposal fulfils the objective of “ensuring operational security” of the Single Day Ahead Coupling and Single Intraday Coupling.

- (5) The proposal fulfils the objective of "ensuring fair and non-discriminatory treatment of TSOs, NEMOs, the Agency, regulatory authorities and market participants" by requiring all NEMOs that are operational to follow the common procedures required by this Back-up Methodology, and by identifying and ensuring appropriate delegation for those procedures that are best agreed and applied locally.
- (6) By requiring NEMOs to develop, implement and operate appropriate back-up procedures for each step of the DA and ID market coupling process, the proposal aims at maintaining the operational integrity of the single day-ahead and single intraday coupling and fulfils the objective of "contributing to the efficient long-term operation and development of the electricity transmission system and electricity sector in the Union".
- (7) The proposal fulfils the objective of "respecting the need for a fair and orderly market and fair and orderly price formation" by requiring NEMOs to develop, implement and operate appropriate back-up procedures for each step of the DA and ID market coupling process.
- (8) The proposal fulfils the objective of "creating a level playing field for NEMOs" by requiring all NEMOs that are operational to follow the common procedures required by this Back-up Methodology.
- (9) The proposal fulfils the objective "providing non-discriminatory access to cross-zonal capacity" by requiring all NEMOs that are operational to follow the common procedures required by this back-up methodology.

Legal requirement

- (1) For the avoidance of doubt, where NEMOs need to translate this proposal into their national language(s), in the event of inconsistencies between the English version published by the NEMOs in accordance with Article 9(14) of the CACM Regulation and any version in another language, the relevant NEMOs shall be obliged to dispel any inconsistencies by providing a revised translation of this proposal to their relevant national regulatory authorities.

Implementation timeline

The NEMOs shall implement the Back-up Methodology Proposal with respect to operation of the SDAC/SIDC immediately after:

1. the common grid model methodology developed in accordance with Article 17 of the CACM Regulation, the capacity calculation methodology developed in accordance with Article 20 of the CACM Regulation, and the relevant coordinated capacity calculator have been set up in accordance with Article 27 of the CACM Regulation on the borders of the relevant Capacity Calculation Region, and
2. the MCO function has been implemented in accordance with Article 7(3)) of the CACM Regulation, and, the arrangements to accommodate multiple NEMOs developed in accordance with Article 57, are implemented in all the Bidding Zones where there are multiple NEMOs.

Article 1

Definitions

Day-ahead Definitions

1. ***Market Coupling Session (MCS)***: means the processes followed by the NEMOs to perform the day-ahead market coupling.
2. ***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).

3. **Coordinator:** means a day-ahead NEMO which, in addition to performing the tasks of an Operator, during the Market Coupling Session is responsible for coordinating the operation of the MCS. The Operators share the Coordinator role according to a rotational scheme calendar.
4. **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.
5. **DA MCO Function Service Providers:** mean external parties who provide technical services such as common communication system, common market coupling session service application, the algorithm and all approved common provided services.
6. **DA MCO function systems:** mean the systems needed to perform the DA MCO Functions. It comprises the PCR Matcher Broker (PMB). NEMOs use a dedicated and secured communication solution to exchange data between each PMB.
7. **Global issues for DA:** mean issues during the MCS which jeopardize all Operator to carry out the MCO Functions.
8. **Local issues for DA:** mean issues which may arise in pre-coupling, post-coupling and during the MCS processes that are managed in local procedures and therefore are out of the scope of this methodology.

Intraday Definitions

9. **Central Admin:** means the role of performing operational tasks on the SOB module on behalf of the NEMOs collectively
10. **ID Coordinator:** means the party that coordinates resolution of an operational incident on behalf of all NEMOs and TSOs
11. **Global Issue for ID:** means an operational incident requiring resolution involving more than one party.
12. **Local Issue for ID:** means an operational incident requiring resolution involving a single party.
13. **Affected Party:** means a party affected by an operational incident.
14. **Hosting Entity:** means the service provider of the hosting platform of the SIDC system.
15. **Explicit Participants:** means the market parties that make use of explicit access to intraday transmission capacity as this may be provided by TSOs on specific interconnectors.

SDAC back-up procedures and steps

1. The SDAC is based on a decentralized solution with a rotating Coordinator as responsible for leading the DA MCO Function procedures and where a rotating Backup Coordinator shall be able to take over the Coordinator role in any process of the Market Coupling Session. In addition, other Operators that are part of the Coordinator/Backup Coordinator rotation, are also able to take over any process in the Market Coupling Session, in order to minimise the possibility of interruption. In addition, a distinction is made between issues related to local and common coupling operations.
2. The procedures for the common coupling operation are supported by the common backup methodologies and led by the Coordinator. Every Operator who will act as both Coordinator and Backup Coordinator according to an approved rotational scheme calendar must ensure the needed ability and technical resources to be able to fully perform these roles. Requirements for these common backup methodologies are described in this Back-up Methodology.
3. The resolution of the Local pre-/post coupling issues will follow local/regional NEMOs and TSOs procedures which are out of the scope of this Back-up Methodology.
4. NEMOS will sufficiently assure the well-functioning of the backup methodology and operations with regular training tests. Purpose of these trainings is a constant refresh of common procedures to be used by all NEMOs as well as their improvement (preventive analysis of possible real situations during a Market Coupling Session). Test can be classified as follows:
 - a. *Regular NEMO training tests*: as preventative measure, DA MCO function testing systems will be used by all NEMOs to test the application of the backup procedures in real situations.
 - b. *Regular communication tests with DA MCO Function Service Providers*: as preventative measure, NEMOs, in cooperation with Service Providers, will test technical services to assure well-functioning of the backup-methodology and operation of the MCO Function. Tests will include technical services such as common communication system, common market coupling session service application, the algorithm and all approved common provided services.
 - c. *Stress tests*: will be regularly performed in order to analyse proportional growth in the technical services, information to be used by the Price Coupling Algorithm as well as the results produced by the Price Coupling Algorithm.
5. During the Market Coupling Session impacted parties may mutually agree derogations from the critical timelines in extreme circumstances if this can reasonably be expected to avoid a decoupling and to not jeopardize the nomination deadline. The deadlines established in CACM must be complied with, but the intermediate timelines can be rescheduled during the market coupling session if needed, in order to avoid a decoupling.
6. To assess ex-post procedures according to a well-defined and transparent process, and as they cannot be accurately defined ex-ante, every incident which can impact the obligations set out in articles 39 and 52 respectively in the CACM Regulation, will be presented in the relevant stakeholder forums organized in accordance with Article 11 of CACM Regulation. This ex-post analysis will be used to improve the procedures in case they were not followed properly.
7. The NEMOs will maintain the procedures and make them available to NRAs on request.
8. Fallback solutions should be initiated as soon as it is clear that the coupling (including backup processes) have failed, but no later than a deadline to be agreed with TSOs. The deadline, which should be published, should

reflect a reasonable balance between the objective of maintaining the coupled markets where possible and the constraints on the post-coupling tasks, including nomination.

9. NEMOs in coordination with TSOs shall implement procedures for the monitoring and initiating of fallback procedures for full and partial decoupling.
10. Article 39 of the CACM Regulation lists the main elements that are part of the day-ahead price coupling algorithm solution. They have been classified in four groups:
 - a. Information to be used by the Price Coupling Algorithm: allocation constraints established in accordance with Article 23(3); cross-zonal capacity results validated in accordance with Article 30 and orders submitted in accordance with Article 40.
 - b. Results to be produced by the Price Coupling Algorithm: a single clearing price for each bidding zone and market time unit in EUR/MWh; a single net position for each bidding zone and each market time unit and the information which enables the execution status of orders to be determined.
 - c. Processes to be performed by NEMOs to ensure the accuracy and the efficiency of the results.
 - d. Processes to be performed by TSOs to ensure that the results are consistent with cross-zonal capacity and allocation constraints.
11. The following requirements will describe back-up measures regarding common communication systems, files exchanged during the Market Coupling Session, Price Coupling Algorithm and all processes needed by Operators to ensure that the information used by the day-ahead price coupling algorithm is available when something fails with the normal way of producing the information.

Requirement for back-up common communication system

12. In a normal Market Coupling Session Operators establish communication among each other through a main file exchange mechanism.
13. There must be at least one alternative connection among all Operators. If a problem occurs with the main file exchange mechanism the distribution of data files will be done with the primary back-up file exchange method. Confidential data will be exchanged in a secured way.
14. Different alternative secured methods to exchange anonymous input and output data amongst Operators will be established taking into account the technical solutions available.

Requirement for back-up datacenter

15. In a normal Market Coupling Session Operators will perform the MCO functions in a primary datacenter.
16. If a problem occurs with the primary datacenter an Operator may switch to the secondary datacenter, if available, it will be done to continue with the Market Coupling Session in automatic mode. A Market Coupling Session with the secondary datacenter will require a change of the common configuration parameters previously established by all Operators.
17. The secondary datacenter shall have the same performance as the primary datacenter. To ensure this it shall be tested and certified as the primary datacenter.

Requirement for Backup Coordinator

18. In a normal Market Coupling Session the MCO functions are led by one Operator who shall act as a Coordinator while another Operator shall act as a Back-up Coordinator.
19. At any moment during the SDAC process, in case of inability of the Coordinator to continue the SDAC process the Backup Coordinator will take the Coordinator role.
20. In case the Backup Coordinator cannot take the Coordinator role, any other Operator having the Price Coupling Algorithm implemented may take over the role. This mechanism guarantees that, at least one Operator is always ready to take over the Coordinator role.

Requirement for cross zonal capacities for allocation

21. The cross zonal capacities for allocation are inputs that will be provided to Operators by corresponding TSOs. This step is decentralized on local level and therefore out of scope of this Back-up Methodology.
22. There must be at least one alternative connection between Operators and the DA MCO function systems. If a problem occurs with the cross zonal capacities for allocation file delivery to DA MCO function systems, the distribution will be done with the back-up file exchange methods. This alternative method to deliver cross zonal capacities data to DA MCO function systems will be established taking into account the technical solutions available.

Requirement for aggregated anonymized order books

23. The anonymized aggregated order books per Bidding Zone and per NEMO are inputs that will be provided by Operators. The steps for bid reception and preparation of aggregated order books are performed by each Operator locally and therefore out of scope of this Back-up Methodology.
24. There must be at least one alternative connection between Operators and the DA MCO function systems. If a problem occurs with the aggregated order book delivery to DA MCO function systems, the distribution will be done with the back-up file exchange methods. The file needs to be exchanged in a secured way in order to ensure full confidentiality. This alternative method to deliver aggregated order books to DA MCO function systems will be established taking into account the technical solutions available.

Requirement for algorithm results

25. In a normal Market Coupling Session the SDAC results will fulfil all the requirements described in the Algorithm Methodology.
26. Every problem will be analyzed during the Market Coupling Session and depending on the nature will be fixed locally or globally with the Coordinator and if needed with the relevant DA MCO Function service provider.
27. If there is a risk that the DA Price Coupling Algorithm is not able to produce results the algorithm provider can analyze the MCS and can propose to operators an alternative pre-tested configuration.

Requirement for Operators results confirmation

28. The confirmation/rejection is a validation that assures the compliance/non-compliance of the Price Coupling Algorithm calculation outputs which will be forwarded by all Operators. Each Operator is responsible for the validation of its own results in and linked to the bidding zones where they are active and have order books.

Requirement for TSOs results confirmation

29. The confirmation/rejection is a TSO or market agent validation that assure the compliance/non-compliance of the algorithm calculation outputs.

Requirement for timings

30. Latest time to start following common backup methodology:
 - a. Deadline established according to Art. 46 of the CACM Regulation to receive the capacity allocation information for all the interconnections needed.
 - b. Deadline established according to Art. 47 of the CACM Regulation to receive the bids and offers.
 - c. Deadline established in the procedures for algorithm results. The results calculation process is started at a predefined moment agreed by all Operators.
 - d. Deadline established in the procedures for Operators results confirmation. At an agreed time, the Operators submit the results confirmation.
 - e. Deadline established in the procedures for TSOs results confirmation. At an agreed time, the Operators submit the results confirmation.
 - f. Deadline established according to Art. 43 of the CACM Regulation to publish the results.

Requirements for technical support

31. In a normal Market Coupling Session the Operator should be ready to carry out the DA MCO Functions of the SDAC without additional technical support for the common provided services, such as, DA MCO function system, algorithm, communication systems, etc.

Article 3

Intraday timeframe price coupling algorithm back-up procedures and steps.

1. The ID continuous market is defined as a (largely) centralized solution. This architecture, which differs from the DA architecture, results in a different set of back-up procedures compared to those in DA.
2. A distinction between Global Issues for ID and Local Issues for ID needs to be made. The resolution of the Global Issues for ID shall be carried out according to the common back-up methodologies described in this Backup Methodology. The resolution of Local Issues for ID will follow local NEMOs and TSOs procedures which are out of the scope of this Backup Methodology and the common backup methodologies described in it.
3. The resolution of the Local pre-/post coupling Issues for ID will follow local/regional NEMOs and TSOs procedures which are out of the scope of this Back-up Methodology.

4. NEMOS will sufficiently assure the well-functioning of the backup methodology and operations with regular tests. Purpose of these tests is a constant refresh of common procedures to be used by all NEMOs as well as their improvement (preventive analysis of possible real situations during a Market Coupling Session).
5. The NEMOs will maintain the procedures and make them available to NRAs on request.

Requirement for back-up communications

6. This section describes how to solve technical problems that may occur in the main communication line between the related parties and the ID hosting service provider.
7. According to the centralized architecture of the ID continuous market, all NEMOs, their CCPs, and TSOs (from now on “parties”) shall be connected to the central ID hosting service provider through both a primary and secondary communication line to ensure redundancy.
8. An automatic switch between primary and secondary communication line will be done by the affected party when an error is detected in the primary line.
9. Every problem will be analyzed and depending on the nature (Local or Global) backup procedures will apply.
10. For the Global Issues for ID, the support of the Coordinator and/or the Central Admin will be requested. The support of the ID algorithm provider will be required in case it would be needed.
11. The affected parties will analyze the communication problem and will contact the communication service provider.

Requirement for back-up datacenter

12. During normal operation, Operators will perform the MCO functions in a primary data centre.
13. If a problem occurs with the primary datacentre, the ID hosting service provider may switch to the secondary data centre to continue operations. Switch process must prevent data loss.
14. The secondary data centre shall have the same performance as the primary data centre.

Requirement for database back-up

15. Backups of the database of the central system are made at regular intervals.
16. If a problem occurs with the database on the central system which affects both in the primary data centre and the secondary data centre the latest database backup is restored.

Requirement for back-up of file exchanges

17. This section describes how to solve technical problems that may occur in the transaction mechanism used by parties towards the central ID system and vice versa.
18. No single technical solution can be provided for potential file exchange issues, as these may have many different causes. The solution given here is of a generic, procedural nature. Every problem will be analysed and depending on the nature (Local or Global) backup procedures will apply.
19. For the Global Issues for ID, the support of the Coordinator and/or the Central Admin will be requested. The support of the ID algorithm provider will be required in case it would be needed.
20. If a problem occurs between the central ID system and the Local Trading Solutions, then jointly agreed back-up methods and incident management process will apply.

Requirement for back-up operational processes

21. This section describes how to solve problems connected to operational processes.
22. For every regular operational procedure at least one backup operational procedure or process shall be available (which may include local procedures), which is to be followed in case the regular procedure cannot be followed.
23. Every problem shall be analysed and depending on the nature (Local or Global) backup procedures will apply.
24. For the Global issues for ID, the support of the ID Coordinator and/or the Central Admin may be requested.

Requirement for operational roles

25. This section describes how to solve problems resulting from the inability of parties to perform the operational role(s) assigned to them.
26. If the party that performs the Central Admin or ID Coordinator role experiences difficulties performing this role, then another party that is able to perform the role takes over.

Requirement for Closing Areas or Interconnectors

27. This section describes how to mitigate and solve the different situations and problems in the ID continuous market when an issue occurs that is confined to one or more, but not all, areas or to one or more, but not all, interconnectors.
28. In case of such incidents, the affected areas or interconnectors shall be closed, in order to isolate the problem and prevent its proliferation.
29. The support of the Coordinator and/or the different Admins shall be requested. The support of the ID algorithm provider will be required as well in case it would be needed.