

All NEMO proposal for the MCO Plan

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1 INTRODUCTION

Whereas:

1. This document is a common proposal developed by all Nominated Electricity Market Operators (the “NEMOs”) for a plan that sets out how NEMOs will jointly set up and perform the Market Coupling Operator (MCO) Functions (the “MCO Plan”) pursuant to article 7(2) of Commission Regulation (EU) 2015/1222 establishing a guideline on capacity allocation and congestion management (the “CACM Regulation”).
2. The MCO Functions comprise developing and maintaining the algorithms, systems and procedures for single day-ahead and intraday coupling, processing input data on cross-zonal capacity and allocation constraints provided by coordinated capacity calculators, operating the price coupling and continuous trading algorithms and validating and sending single day-ahead and intraday coupling results to NEMOs (the “MCO Functions”).
3. This MCO Plan takes into account the general principles and goals set in the CACM Regulation. In particular, this MCO Plan includes an explanation of the necessary draft agreements between NEMOs and with third parties; a proposed timescale for implementation, which is not longer than 12 months; a description of the expected impact of the MCO Plan on the objectives of the CACM Regulation; and, a description of the expected impact of the terms and conditions or methodologies on the establishment and performance of the MCO Functions.
4. Prior to the entry into force of the CACM Regulation, power exchanges initiated several voluntary regional projects to develop, implement and operate day-ahead and intraday market coupling solutions. These regional projects promoted the completion and efficient functioning of the internal market in electricity. For the efficient implementation of the MCO Plan we propose to build single day-ahead and intraday coupling on existing solutions developed as part of these voluntary projects.
5. This MCO Plan proposes a governance structure for NEMOs to jointly set up and perform the DA MCO Function and the ID MCO Function which builds on solutions developed as part of these voluntary projects. The governance structure proposed in this MCO Plan includes the following contracts: one “All NEMO Cooperation Agreement” (the “ANCA”), two “NEMO Operational Agreements” (one for the DA and one for the ID), plus a set of contracts between NEMOs and third party service providers needed for the delivery of the MCO Functions.
6. The ANCA will be developed based on the principles set out in this MCO Plan and will be open to all NEMOs. In particular, the MCO Plan contains provisions to make necessary the signature of the ANCA by all designated NEMOs wishing to make use of the DA or ID MCO Function. As NEMOs are incorporated legal entities, each governed by the law of their country of incorporation, it is essential that any agreement to co-operate to meet the requirements of the CACM Regulation is enshrined not only in the MCO Plan, but also in a binding contract. It is envisaged that such contract will set out in detail the rights and responsibilities of each NEMO to the others with respect to the performance of the MCO Functions prescribed in articles 7 and 9(6) of the CACM

Regulation. Such a contract will also be key in ensuring that the cooperation between NEMOs is strictly limited to what is necessary to perform the MCO Functions, as required by article 7(4) of the CACM Regulation.

7. The proposed operational governance for the DA MCO Function and the ID MCO Function will be based on the principles set out in this MCO Plan and by adapting existing solutions developed as part of the voluntary projects.
8. It is understood that this MCO Plan sets the basis for the NEMOs to enter into the contracts with the DA and ID service providers already in use, after the approval of this MCO Plan.
9. In accordance with the CACM Regulation NEMOs have included the necessary draft agreements. Where these agreements are still in the process of being finalised, the content provided is based on the most accurate information available at the time of submission of this MCO Plan to NRAs and may change.
10. The NEMO arrangements explained in the MCO Plan that are necessary for the design, implementation and operation of the MCO Functions have to be complemented by additional “all NEMO - all TSO” agreements, as well as national and regional “NEMO and TSO” agreements, which are necessary for pre-coupling and post-coupling activities. These additional agreements are necessary for the operation of single day-ahead and intraday market coupling and are outside the scope of the MCO Plan.
11. The reference language for the MCO Plan shall be English. For the avoidance of doubt, where NEMOs need to translate this MCO Plan into the national language(s) of the relevant NRA, in the event of inconsistencies between the English version submitted in accordance with article 9 (14) of the CACM Regulation and any version in another language, the relevant NEMO(s) shall be obliged to dispel any inconsistencies by providing a revised version of this MCO Plan to their relevant national regulatory authorities.

1.1 Assessment against the objectives listed in article 3 of the CACM Regulation

1.1.1 General remarks

1. The expected impact of the MCO Plan on the objectives of the CACM Regulation is outlined below. This assessment focus on the following objectives (the “CACM Objectives”):
 - a) Promoting effective competition in the generation, trading and supply of electricity;
 - b) Ensuring optimal use of the transmission infrastructure;
 - c) Ensuring operational security;
 - d) Optimising the calculation and allocation of cross-zonal capacity;
 - e) Ensuring fair and non-discriminatory treatment of TSOs, NEMOs, the Agency, regulatory authorities and market participants;
 - f) Ensuring and enhancing the transparency and reliability of information;
 - g) Contributing to the efficient long-term operation and development of the electricity transmission system and electricity sector in the Union;

- h) Respecting the need for a fair and orderly market and fair and orderly price formation;
 - i) Creating a level playing field for NEMOs;
 - j) Providing non-discriminatory access to cross-zonal capacity.
2. The proposed DA MCO Function and ID MCO Function build on contractual arrangements, processes and systems that have already been established in existing methodologies and developments, and carefully assessed and approved by the competent regulatory authorities, which should already help ensure that the proposed solutions meet the CACM Objectives.
 3. A number of operational features common to the proposed DA and ID MCO functions contribute to the achievement of the CACM Objectives. These features are:
 - a. The use of one single algorithm for the DA timeframe, and of one single algorithm for the ID timeframe, each designed to achieve optimal cross zonal capacity allocation and maximise welfare;
 - b. The use of one single set of input data for the whole coupled area for each timeframe;
 - c. The production of one single set of results for the whole coupled area for each timeframe;
 - d. The requirement that each NEMO prepares and collects input data to the algorithm according to local Regulations and/or market contracts in a common format;
 - e. The requirement that the respective input data provider (TSO or Market Participant) is responsible for the input data content according to local regulations and/or market contracts;
 - f. The requirement that MCO results for each timeframe are reproducible and auditable.
 4. In addition, some operational features of the DA MCO function contribute to the achievement of the CACM Objectives in the DA timeframe. These are listed in Section 6.1.1 and are:
 - a. The fact that the complete input data file is received by the Coordinator/Backup Coordinator and all Operators in an anonymised manner. This guarantees the transparency of the process since all parties guarantee that the same input data is used in the DA MCO results calculation process;
 - b. The right of each NEMO, in exercising the Operator function to compute the results in parallel to the MCO Function Coordinator and Backup Coordinator;
 - c. The obligation placed on each NEMO (directly or together with its Servicing NEMO) to validate its results and being liable for them;
 - d. The fact that, once results are finally accepted by all NEMOs they are absolutely firm, and there is no possibility for any NEMOs to contest the accepted results or to claim the other NEMOs including the Coordinator.
 5. The features listed in Section 7.1.1, paragraphs 2 to 8, ensure the achievement of the CACM Objectives for the ID MCO Function.
 6. Finally, the fact that development and implementation of the PCR Solution and XBID Solutions has been undertaken together with TSOs will help to ensure operational security, helps ensure that the MCO Plan meets requirements b, c, d, e, h, i and j of article 3 of the CACM Regulation.
 7. In Sections 1.1.2 to 1.1.10 we provide additional information specific to each objective.

- 1.1.2 Assessment of objective a) Promoting effective competition in the generation, trading and supply of electricity
1. In addition to the assessment made in Section 1.1.1, the architecture, principles and procedure listed in Sections 6.1.2, 6.1.3 and 6.1.4 for the DA timeframe, and in Sections 7.1.1.2, 7.1.1.3, 7.2, 7.2.1 and 7.2.2 for the ID timeframe are designed to promote, among other objectives, effective competition in the generation, trading and supply of electricity.
- 1.1.3 Assessment of objectives b) Ensuring optimal use of the transmission infrastructure; and c) Ensuring operational security
1. The operational features mentioned in Sections 1.1. and 1.1.1 are designed to ensure the achievement of these objectives.
- 1.1.4 Assessment of objective d) Optimising the calculation and allocation of cross-zonal capacity
1. Optimising the calculation and allocation of the cross-zonal capacity depends mostly on the features of the DA and ID algorithms – which are described in a separate methodology.
 2. Insofar as the MCO Plan is concerned, the operational features mentioned in Sections 1.1. and 1.1.1, in conjunction with the specific features of the algorithm, aim to ensure an optimal calculation and allocation of the cross-zonal capacity.
- 1.1.5 Assessment of objective e) Ensuring fair and non-discriminatory treatment of TSOs, NEMOs, the Agency, regulatory authorities and market participants
1. The All NEMO Committee will ultimately be responsible for ensuring fair and non-discriminatory treatment of TSOs, NEMOs, the Agency, regulatory authorities and market participants, in line with the principles included in this MCO Plan and the other relevant methodologies, terms and conditions listed in article 9 of the CACM Regulation. The competent regulatory authorities assess and approve such methodologies and may request changes. They have the right to access any underlying contracts and documentation upon request.
 2. The following All NEMO Committee responsibilities aim to ensure that fair and non-discriminatory treatment is guaranteed by:
 - a. Submitting information and necessary reports to the Agency, ENTSO-E, regulatory authorities and the European Commission as required under the CACM Regulation TSOs as detailed in Section 4.2(5), point e.
 - b. Providing information to ENTSO-E, if it has been requested jointly by the Agency and ENTSO-E as detailed in Section 4.2(5), point f.
 - c. Providing an annual report to stakeholders on progress with the implementation and the operational performance of the DA MCO Function and the ID MCO Function, acting as a joint point of contact for regulatory authorities, the Agency, ENTSO-E and the European Commission in relation to the design, implementation, operation and amendment of the DA and ID MCO Functions and communicating externally in relation to the above-mentioned functions, as detailed in Section 4.2(5), points m, l and n.

3. For more information in relation to the fair and non-discriminatory treatment among NEMOs - see Section 1.1.9 on the assessment of CACM requirement (i) 'Creating a level playing field for NEMOs'.

4. In addition, the whole governance structure and associated procedures, outlined in Sections 6.1 to 6.2 for the DA timeframe and Sections 7.1 to 7.2 for the ID timeframe are designed to ensure fair and equal treatment of all participating NEMOs, TSOs and market participants.

1.1.6 Assessment of objective f) Ensuring and enhancing the transparency and reliability of information

1. This MCO Plan aims to ensure and enhance the transparency and reliability of information in three main ways:

- a. The reporting duties outlined in Section 1.1.5 above;
- b. The governance structure outlined in Section 1.1.5 and
- c. Specific operational features listed in Sections 6.1.2, 6.1.3 and 6.1.4 for the DA timeframe, and in Sections 7.1.1.2, 7.1.1.3, 7.2, 7.2.1 and 7.2.2 for the ID timeframe.

1.1.7 Assessment of objective g) contributing to the efficient long-term operation and development of the electricity transmission system and electricity sector in the Union

1. This MCO Plan aims to ensure the achievement of this objective by:

- a. Building on contractual arrangements, processes and systems that have already been established in existing methodologies and developments, and carefully assessed and approved by the competent regulatory authorities.
- b. Establishing a sound governance structure, open to scrutiny by the competent regulatory authorities and stakeholders, and underpinned by binding legal contracts between the NEMOs, between the NEMOs and the TSOs and between the NEMOs and service providers.
- c. Establishing robust operational procedures, including, where appropriate, in cooperation with TSOs. These are subject to approval by the competent regulatory authorities and underpinned by binding legal contracts.

1.1.8 Assessment of objective h) Respecting the need for a fair and orderly price formation

1. For the DA timeframe, the procedures aiming to ensure a fair and orderly price formation are outlined in Section 6.1.3 on Operational sequence of events in a Market Coupling session and Section 6.1.4 on Validation of the Day Ahead Market Coupling session results.

2. For the ID timeframe, such procedures are listed in Section 7.1.1.2 on Cross-border matching during the continuous trading period and Section 7.1.1.3 on Validation of the Intraday Market Coupling results.

1.1.9 Assessment of objective i) Creating a level playing field for NEMOs

1. This MCO Plan foresees a contractual structure (outlined in Section 3.1) that is designed to create a level playing field among NEMOs insofar as all aspects related to the performance of the MCO function are concerned.

2. The key elements that will ensure the establishment of a level playing field among NEMOs include:
 - a. The requirement on all NEMOs to sign up to the ANCA agreement, which sets out the rules for the cooperation between NEMOs, and set up an All NEMO Committee as its main decision-making body. The ANCA must be agreed unanimously by all NEMOs and is specifically designed to be open to the adherence of new parties.
 - b. The requirement that all Operational NEMOs in the DA and ID timeframes must sign up to a DA and/or to an ID Operational Agreement, which set out the rules for the cooperation of NEMOs in accordance with article 7 of the CACM Regulation. These agreements are specifically designed to be open to the adherence of new parties.
 - c. The areas where cooperation will be regulated by the NEMO DA Operational Agreement are listed in Section 5.1.2(4), whereas the areas where cooperation will be regulated by the NEMO ID Operational Agreement are listed in Section 5.2.2(13). These rules are equal for all signatory NEMOs. Further safeguards are included:
 - i. If no consensus is reached among the concerned NEMOs on a decision taken in execution of the scope of the ID or DA Operational Agreements, the decision is escalated to the All NEMO Committee.
 - ii. In an effort to ensure equal participation of all NEMOs, such the Agreements can also be signed by NEMOs which are not yet Operational NEMOs on a voluntary basis.
 3. The separation of the processes and bodies for operational decisions related to the MCO function (taken by NEMOs by consensus) from high level decisions stemming from the CACM requirements (taken by qualified majority voting).
 4. The obligation set on the All NEMO Committee to ensure, among others, that the MCO Function assets (i.e. rules, procedures and specifications) meet the requirements of the CACM Regulation and the approved terms and conditions or methodologies.
- 1.1.10 Assessment of objective j) Providing non-discriminatory access to cross-zonal capacity.
1. In addition to the assessment made in Section 1.1, the architecture, principles and procedure listed in Sections 6.1.2, 6.1.3 and 6.1.4 for the DA timeframe, and in Sections 7.1.1.2, 7.1.1.3, 7.2., 7.2.1 and 7.2.3 for the ID timeframe are designed to provide non-discriminatory access to cross-zonal capacity.

2 DEFINITIONS

In this MCO Plan, the same definitions used in Commission Regulation EU 2015/1222 are applied, plus the following.

- [1]. **APCA:** All Party Cooperation Agreement between NEMOs and TSOs, to be extended from the implementation timescale for the ID MCO Function.
- [2]. **Backup Coordinator:** means a DA NEMO which in addition to performing the task as an Operator, is prepared, if necessary, to take over the Coordinator role at any moment.
- [3]. **Capacity Management Module (CMM):** that collects directly from TSOs the Cross-Zonal Capacity available at any instant for ID implicit trading, and ensures that the concluded ID trades respect such capacities.
- [4]. **Coordinator:** means a DA NEMO which, in addition to performing the tasks of an Operator, during the Market Coupling Phase is responsible for coordinating the operation of the Market Coupling Phase.
- [5]. **DA Market Coupling Operator (MCO) Function:** means the task of matching orders from the day-ahead markets for different bidding zones and simultaneously allocating cross-zonal capacities, as defined in article 2(30) of the CACM Regulation.
- [6]. **Global Products:** means all products set up in the XBID Solution and eligible to be matched in the XBID Solution are deemed as Global Products.
- [7]. **ID Market Coupling Operator (MCO) Function:** means the task of matching orders from the intra-day markets for different bidding zones and simultaneously allocating cross-zonal capacities, as defined in article 2(30) of the CACM Regulation.
- [8]. **LIP:** local implementation project, which is national or regional in scope, whose readiness is a pre-condition to join Single Intraday Coupling operations.
- [9]. **Local Products:** means all products not set up in the XBID Solution and not eligible to be matched in the XBID Solution are deemed as Local Products.
- [10]. **Nominated Electricity Market Operator (NEMO):** means an entity designated by the competent authority to perform tasks related to single day-ahead or single intraday coupling in accordance with article 6 of the CACM Regulation.
- [11]. **Operational NEMO:** means
 - a. In DA: a DA NEMO whose orders are being matched by the DA MCO Function;
 - b. In ID: an ID NEMO whose orders are being matched by the ID MCO Function.
- [12]. **Operator:** means a DA NEMO performing the DA MCO Functions during the Market Coupling Phase, which provides the Coordinator information needed for the calculation of the market coupling results, 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).
- [13]. **PCR Assets:** means the assets used for Single DA coupling co-owned by the parties to the PCR Co-ownership Agreement. Including EUPHEMIA and PMB.
- [14]. **PCR Co-Owners:** means all DA NEMOs which have entered into the PCR Co-Ownership Agreement and are owners of the PCR Assets.
- [15]. **PMB:** means the PCR Matcher and Broker (a PCR Asset).
- [16]. **Serviced NEMO:** means a NEMO which has delegated some of his MCO tasks to another NEMO, according to a bilateral service provision agreement.

- [17]. **Servicing NEMO:** means a NEMO acting in the name and for the account of a serviced NEMO in the delegated tasks.
- [18]. **Shared Order Book (SOB):** means a module in the continuous intraday coupling system collecting all matchable orders from the NEMOs participating in single intraday coupling and performing continuous matching of those orders.
- [19]. **Shipping Module (SM):** computes the scheduled exchanges for TSOs and central counter parties to ship and settle cross-zonal and cross-delivery area and cross- central counter party trades, where relevant.
- [20]. **Single Day Ahead Coupling (SDAC):** means the process defined in article 2(26) of the CACM Regulation.
- [21]. **Single Intraday Coupling (SIDC):** means the process defined in article 2(27) of the CACM Regulation.
- [22]. **Transitional PCR Cooperation Agreement:** means the amended PCR Co-operation Agreement, which will be effective during the day ahead transitional phase and will become the basis for the NEMO DA Operational Agreement.
- [23]. **XBID Project:** means the implementation project of the XBID Solution.
- [24]. **XBID Solution:** means the solution (system, procedures, contract, etc.) to be implemented by the PXs and TSOs for implicit cross zonal continuous intraday capacity allocation and also explicit allocation within the scope of the Single Intraday Coupling according to the principles set forth in the CACM Regulation.
- [25]. **XBID System Supplier:** means the entity providing the Intraday market coupling services according to the respective agreements signed with XBID power exchanges.
- [26]. **XBID System:** means the software and ICT applications (incl. hardware) to be used for the operation of the XBID Solution to interact with amongst others the Local Trading Systems of each PX, the TSOs systems and the explicit capacity allocation participants in borders where this possibility exists.

3 GENERAL PRINCIPLES FOR THE NEMO COOPERATION

1. The cooperation of the NEMOs for the implementation and delivery of the MCO Functions under articles 7(2) and 7(3) of the CACM Regulation and the definition of the relevant terms and conditions or methodologies under article 9(6) of the CACM Regulation will be managed through the following set of contracts¹:
 - a. One “*ALL-NEMO Cooperation Agreement*” (ANCA), signed by all designated NEMOs, which will set out the rules for the cooperation of the NEMOs in accordance with article 9 of the CACM Regulation;
 - b. Two “*NEMO Operational Agreements*” (one for the DA and one for the ID), signed respectively by all DA and ID Operational NEMOs and optionally by any NEMOs, which are not yet Operational NEMOs, which will set out the rules for the cooperation of NEMOs in accordance with article 7 of the CACM Regulation;
 - c. A set of contracts between NEMOs and third party service providers, including the PCR Co-owners, needed for the delivery of the MCO Functions.

2. Contracts provided under Section 3(1) of this MCO Plan shall:
 - a. Benefit from existing contractual arrangements for the development and operation of DA and ID market coupling;
 - b. Be extended via an adherence process to NEMOs that are not yet signatories;
 - c. Reflect the fact that, while all NEMOs will have to sign the ANCA, not all NEMOs are Operational NEMOs in the DA and/or ID timeframes;
 - d. Support and safeguard the efficient management of the overall process by clearly distinguishing the responsibilities for operational decisions, from higher level decisions;
 - e. Set obligations for NEMOs to cooperate for the implementation and delivery of the MCO Functions.

3. A NEMO designated to perform tasks related to SDAC or SIDC shall enter into the relevant contracts described in the MCO Plan for the implementation and delivery of the MCO Functions which are necessary for the common, coordinated and compliant operation of SDAC and SIDC.

4. The cooperation between NEMOs to implement the MCO Plan shall ensure that the joint performance of the MCO Functions shall be based on the principle of non-discrimination and ensure that no NEMO can benefit from unjustified economic advantages arising from its role in the MCO Functions.

5. In accordance with article 7(4) of the CACM Regulation the cooperation among NEMOs shall be strictly limited to what is necessary for the joint delivery of the DA MCO Function and ID MCO Function, to enable the efficient and secure design, implementation and operation of single DA and ID coupling. Therefore, apart from the provisions which are strictly necessary to coordinate

¹ Contracts among all NEMOs and all TSOs as well as national and regional agreements needed to set out the pre- and post-coupling phase/processes of the MCO functions in DA and ID are outside the scope of this MCO Plan.

their matching into a price coupling mechanism, each Party will keep its full independency and self-determination for its own business.

6. It is understood that NEMOs shall be able to perform DA and/or ID coupling operations only if further agreements between NEMOs and TSOs for the availability of cross-border capacity and the provision of the cross-border shipping are set up. Such agreements are beyond the scope of this MCO Plan.
7. Under the contractual structure proposed in Section 3(1) of this MCO Plan, the following tasks related separately to DA and/or ID shall be managed by all NEMOs designated for DA and/or ID respectively:
 - a. Approval of budget, high-level investments and planning for further development of the MCO Functions;
 - b. Resolution of any issues escalated from the Operational NEMOs;
 - c. Submission of external reporting and representation;
 - d. Management of stakeholder consultations.

Any decision needed to fulfil tasks performed by NEMOs designated for DA and/or ID respectively shall be taken by the All NEMO Committee as described in Section 4 of this MCO Plan.

8. Under the contractual structure proposed in Section 3(1) of this MCO Plan, the following tasks shall always be managed by the Operational NEMOs that have signed the relevant NEMO Operational Agreement as referred to in Section 3(1)(b) of this MCO Plan:
 - a. Approval of relevant² rules and procedures for the operation of single DA and/or ID market coupling respectively;
 - b. Preparation³ of proposals for investment, budget and planning for further development of MCO Function as referred to in Section 3(7)(a) of this MCO Plan;
 - c. Management of the change control process and its impact assessment and overseeing the implementation of changes.

Any decision needed to fulfil the tasks mentioned above shall be taken unanimously. The decision shall be escalated to the All NEMO Committee if no consensus can be reached among Operational NEMOs.

9. Under the contractual structure proposed in Section 3(1) of this MCO Plan, the following tasks shall always be managed by all NEMOs who are Coordinator, Backup Coordinator or Operators in DA or by Operational NEMOs in ID:
 - a. Maintenance and day to day operation of the MCO Function according to the rules and procedures agreed by the Operational NEMOs;
 - b. Real time decisions related to the application of the procedures in MCO Function operation;
 - c. Analysis of incidents incurred in the MCO Function operation;

² Does not refer to the methodologies listed in article 9(6) of the CACM Regulation.

³ Only NEMOs affected by the budget shall participate in the decision taking.

- d. Provide necessary support for analysis and testing related to further development of the MCO Function for any decision by the Operational NEMOs.

Any decision needed in order to fulfil the above-mentioned tasks shall be taken according to the agreed procedures.

10. In accordance with the article 81 of the CACM Regulation a NEMO may delegate operational activities associated with the performance of the MCO Function to a Servicing NEMO. In such case:
 - a. The delegating NEMO (hereinafter Serviced NEMO) shall remain responsible for the performance of the MCO Function.
 - b. The delegation of operational activities under Section 3(9) from one NEMO to another will be managed through bilateral contracts entered into between Serviced NEMO and Servicing NEMO, that shall be compliant with the operational rules, including liability, set out in the NEMO Operational Agreements.
 - c. Without prejudice to the rights under Sections 3(7) and 3(8) of this MCO Plan, the operational decision making under Section 3(9) is delegated by the Serviced NEMO to the Servicing NEMO.
11. NEMOs may apply different governance rules in DA and/or ID while complying with the general principles of non-discrimination and maintaining the level-playing field set by the CACM Regulation and by this MCO Plan.
12. Paying due regard to the objectives of CACM as well as to the applicable European and national legal provisions, MCO Function system and service providers shall be selected consistently with the principles of equal treatment, objectiveness of the selection criteria, transparency, economic efficiency, efficacy and timeliness as further described and implemented through the relevant agreements among NEMOs.

4 ALL NEMO COMMITTEE

4.1 All NEMO Cooperation Agreement (ANCA)

1. To be able to participate in the single day-ahead and intraday coupling under CACM all NEMOs shall become a party to the ANCA. An entity designated as a NEMO in at least one bidding zone shall be entitled to become party to the ANCA and join the All NEMO Committee. An adhering NEMO may request an amendment of the ANCA.
2. The ANCA shall:
 - a. Set up the All NEMO Committee as further described in Section 4.2 of this MCO Plan;
 - b. Establish an escalation procedure to manage the cases of the refusal of any NEMO to sign or approve a revised version of the DA and/or ID NEMO Operational Agreements;
 - c. Establish decision making rules for the All NEMO Committee based on article 9 of the CACM Regulation;
 - d. Provide an adherence process;
 - e. Be developed based on the principles set out in this MCO Plan and approved by All NEMOs unanimously.
3. An entity designated as a NEMO in a non-EU country shall be entitled to become party to the ANCA and join the All NEMO Committee if it meets the requirements of article 1(4) of the CACM regulation.
4. An entity designated as a NEMO in a non-EU country participating in single DA and/or ID coupling shall have rights and responsibilities equivalent to the rights and responsibilities of a NEMO designated in a Member State, in order to allow a smooth functioning of the single day-ahead and intraday coupling systems implemented at European Union level, and a level-playing field for all stakeholders.

4.2 All NEMO Committee: roles and responsibilities

1. The All NEMO Committee shall facilitate cooperation between NEMOs for all common European tasks necessary for the efficient and secure design, implementation and operation of single day-ahead and intraday coupling.
2. To fulfil this role, the All NEMO Committee shall be formed by the appointed representatives of each NEMO. Organisation and representation of the NEMOs shall be established in the internal rules of All NEMO Committee as set out in the ANCA. The All NEMO Committee may create or dissolve working groups or task forces. In such event the All NEMO Committee shall determine the purpose, composition, organisational and governance arrangements for such task force or working group.
3. The All NEMO Committee shall publish approved summary minutes of its meetings on a designated website.

4. The European Commission and the Agency shall be invited to participate in All NEMO Committee meetings as observers.
5. The All NEMO Committee shall be responsible for:
 - a. Facilitating the necessary cooperation between NEMOs for common European tasks required by the CACM Regulation.
 - b. All tasks associated with the development, consultation, approval, submission, implementation, publication and future amendment of the MCO Plan required by article 7 paragraph 3 of the CACM Regulation, and other terms and conditions or methodologies required by article 9 paragraph 6 of the CACM Regulation.
 - c. Necessary cooperation between NEMOs and TSOs, where TSOs are responsible for submitting or amending proposals for terms and conditions or methodologies specified in article 9 paragraph 6 of the CACM Regulation.
 - d. Determining changes to the governance framework, including the structure of committees set up under the NEMO DA Operational Agreement and NEMO ID Operational Agreement.
 - e. Submitting information and necessary reports to the Agency, ENTSO-E, regulatory authorities and the European Commission as required under the CACM Regulation. In particular, the All NEMO Committee shall report to:
 - i. The Agency on NEMO progress in establishing and performing the DA and ID MCO Functions in accordance with article 7 paragraph 5 of the CACM Regulation.
 - ii. The Agency, in cooperation with TSOs, to provide a review of the operation of the price coupling algorithm and continuous trading matching algorithm in accordance with article 37 paragraph 6 of the CACM Regulation.
 - iii. Regulatory authorities, on the costs of establishing, amending and operating single day-ahead and intraday coupling in accordance with article 80 paragraph 1 of the CACM Regulation.
 - f. Providing information to ENTSO-E, if it has been requested jointly by the Agency and ENTSO-E, for the purpose of implementation monitoring, in accordance with article 82 paragraph 6 of the CACM Regulation.
 - g. Ensuring that the MCO Function assets (i.e. rules, procedures and specifications) meet the requirements of the CACM Regulation and the approved terms and conditions or methodologies.
 - h. Setting the criteria for decisions relating to change of the assets or providers.
 - i. Establishing a process for the All NEMO Committee to act as an escalation body for the committees under the NEMO DA Operational Agreement and the NEMO ID Operational Agreement, where they have not been able to reach agreement on the basis of unanimity. In such cases the DA Operational Committee or the ID Operational Committee shall provide a written report to the All NEMO Committee. Disputes regarding the execution of contracts shall not be subject to escalation to the All NEMO Committee but shall be governed by the relevant provisions in each contract.
 - j. Providing an annual report to stakeholders on progress with the implementation and the operational performance of the DA MCO Function and the ID MCO Function.

- k. Approving the proposed budget related to All NEMO responsibilities as described in this Section of the MCO Plan. A process shall be established to update this budget over the course of the relevant year.
 - l. Facilitating NEMOs participation in the establishment and performance of joint TSO and NEMO organisation of the day-to-day management of the single day-ahead coupling and single intraday coupling in accordance with article 10 of the CACM Regulation.
 - m. Acting as a joint point of contact for regulatory authorities, the Agency, ENTSO-E and the European Commission in relation to the design, implementation, operation and amendment of the DA and ID MCO Functions. This includes any process launched by the Commission to consult NEMOs on amendments to the CACM Regulation. The All NEMO Committee may delegate this responsibility to the DA Operational Committee and the ID Operational Committee.
 - n. External communication related to the DA MCO Function and ID MCO Function and promoting the role and position of NEMOs.
6. The decision making rules of the All NEMO Committee shall be based on the requirements of article 9 paragraph 2 of the CACM Regulation.
7. For the avoidance of doubt, DA-related decisions shall be taken only by NEMOs designated for day-ahead, and similarly ID-related decisions shall be taken only by NEMOs designated for intraday.

5 IMPLEMENTATION TIMELINE

5.1 Implementation of the DA MCO Function

1. The MCO Plan sets out the necessary tasks for all NEMOs to jointly set up and perform the DA MCO Function. The tasks include the adoption of PCR as the starting point for the DA MCO Function (as described in Section 5.1.1), technical milestones (as described in Section 5.1.3), and contractual milestones to implement the necessary contracts and governance arrangements for the operation of the DA MCO Function (as described in Section 5.1.2).
2. In accordance with the CACM Regulation the MCO Plan includes a detailed description of the milestones and a proposed timescale for the implementation of the DA MCO Function, which shall not be longer than 12 months. In accordance with article 7(5) of the CACM Regulation the All NEMO Committee shall report to Agency on progress in meeting the technical and contractual milestones.
3. Prior to implementation of the MCO Plan NEMOs and TSOs need to agree on the allocation of development costs related to TSO responsibilities and requirements.
4. The MCO Plan shall be considered implemented when the technical and contractual milestones set out in this Section of the MCO Plan have been completed, and the DA MCO function is available for any NEMO to use.
5. In order for NEMOs to use the DA MCO Function they must in addition meet the necessary technical and contractual preconditions which are explained in Section 5.1.4.
6. NEMOs plan that the DA MCO Function implementation, and all technical and contractual milestones necessary for NEMOs to deliver the DA MCO Function, is targeted to completed by December 2017, and shall in any case not be longer than 12 months. Achieving this timeline is also dependent on NRAs and TSOs, as explained for each milestone below.
7. The implementation of pre and post coupling activities necessary for the DA MCO Function to be used for capacity allocation on a bidding zone border are outside the scope of the MCO Plan.

5.1.1 Adoption of the PCR Solution as the DA MCO Function

1. NEMOs propose that the delivery of the DA MCO Function, in accordance with article 36(4) of the CACM Regulation, shall be based on the PCR Solution.
2. The DA MCO Function becoming operational in a Member State, is contingent on:
 - a. Agreement with TSOs on the allocation of operational costs related to TSO responsibilities and requirements;
 - b. Contractual readiness (Section 5.1.2), technical readiness (Section 5.1.3) and local implementation readiness (Section 5.1.4).
3. NEMOs seek clarification on appropriate arrangements for operational cost recovery at latest three months before the DA MCO Function starts operation in a Member State.

5.1.2 Contractual milestones for implementation of the DA MCO Function

1. Following adoption of the PCR Solution as the DA MCO Function the NEMO cooperation for delivering the DA MCO Function shall be based on the following contractual framework:
 - a. the All NEMO Cooperation Agreement (“ANCA”)
 - b. The NEMO DA Operational Agreement, which will govern the cooperation between NEMOs and the relationship with the DA MCO Function service provider, the PCR Co-owners.
2. Upon entry into force of the ANCA, the general governance framework shall be set by the ANCA. Specifically, under the ANCA, decisions by signatories to the NEMO DA Operational Agreement, related to the implementation and operation of the SDAC, will be taken based on unanimity, and shall be escalated to the All NEMO Committee when unanimity cannot be reached.
3. NEMOs plan that all NEMOs designated to perform SDAC shall adhere to the ANCA by September 2017 at the latest.
4. The NEMO DA Operational Agreement shall be open to all NEMOs that are designated to perform SDAC. The NEMO DA Operational Agreement shall set out the NEMOs cooperation for the performance of the DA MCO Function provided under Article 7 of the CACM Regulation. This contract will govern the NEMOs cooperation in respect of:
 - a. The daily management of the DA coupling operations;
 - b. The different operational options of the NEMOs (operating NEMOs vs serviced NEMOs) and the technical requirements to satisfy in order to be an operator and to ensure safe and reliable operations;
 - c. The contractual management of MC operational liabilities and results acceptance;
 - d. The rules for participation in the bodies established under the contract, including for NEMOs not yet in operation;
 - e. The management of cost reporting;
 - f. The rules for the selection of the DA MCO Function service provider;
5. NEMOs plan that all NEMOs designated to perform SDAC shall enter into the NEMO DA Operational Agreement by December 2017, and in any case not longer than 12 month MCO Plan implementation period, to enter into force at go-live.
6. From an operational perspective, during the MCO Plan implementation period day-ahead market coupling operations shall continue to be regulated under existing agreements, methodologies and developments.
7. Becoming a party to the PCR Co-Ownership Agreement and therefore becoming a PCR Co-Owner remains open to any NEMO subject to existing contractual conditions.

5.1.3 Technical milestones for implementation of the DA MCO Function

1. The following technical and operational changes are necessary for PCR to meet the CACM requirements for the DA MCO Function (for example, arising from new products or algorithm requirements):
2. Optimality gap indicator(s)
 - a. To assess the quality of the solutions found by the SDAC algorithm, indicator(s) of the possible distance to optimality will be computed.
 - b. The DA MCO Function updates implementation timescale is divided into phases:
 - i. A phase to develop changes to the DA MCO Function;
 - ii. A phase to test the DA MCO Function systems, including testing;
 - iii. A phase to prepare the publication framework, which will be performed in parallel to the test phase;
 - iv. The gap metric will be available from November 2017 at the latest.
3. Repeatability
 - a. Results of the price coupling algorithm should be able to be subjected to audits. The price coupling algorithm results and the inputs (order data and network constraints) shall be kept available. The algorithm will also be fitted with two new functionalities:
 - i. During the course of the calculation process, information relevant to be able to repeat the resulting solution will be logged;
 - ii. The price coupling algorithm will support a dedicated mode, which allows repeating the historical results using the same version of the price coupling algorithm and on the same machine, considering historical input data and the information logged under point (i) above.
 - b. The DA MCO Function updates implementation timescale will be divided into phases:
 - i. A phase to develop changes to the DA MCO Function
 - ii. A phase to test the DA MCO Function systems, including testing of potential impact on performance of the price coupling algorithm and the quality of the calculated results;
 - iii. The auditability function shall be available for operation dependent on successful finalisation of the test phase (target April 2017).
4. Multi-NEMO arrangement requirement:
 - a. To facilitate configurations with more than one NEMO in a bidding zone the DA MCO Function shall be updated to include the following functionalities (the “**Multi-NEMO Functionalities**”):
 - i. Collecting input data at a NEMO level, instead of the currently supported bidding zone level;
 - ii. Perform aggregation of NEMO input data to a bidding zone level;
 - iii. Perform disaggregation of resulting output data to retrieve results for the individual NEMO in a bidding zone;
 - iv. Provide bidding zone prices and net positions as an output of DA MCO Function;
 - v. Calculate aggregate bidding zone to bidding zone flows (this is to support the scheduled exchanges calculation function, where required);

- vi. Calculate NEMO hub to NEMO hub flows, within a bidding zone as well as between NEMO hubs of adjacent bidding zones (this is to support the scheduled exchanges calculation and/or multi-NEMO arrangements function, where required).
- b. The DA MCO Function updates implementation timescale will be divided into phases:
 - i. A phase to develop changes to the DA MCO Function;
 - ii. A phase to test the DA MCO Function system, including testing of the potential impact on performance of the price coupling algorithm and quality of the calculated results;
 - iii. The Multi-NEMO solution function shall be put available for operation dependent on successful finalisation of test phase (target November 2017).
- c. The proposed timescale to implement the Multi-NEMO Functionalities is dependent on the following assumptions and preconditions:
 - i. No additional Multi-NEMO Functionalities will be requested. If additional Multi-NEMO Functionalities are requested, this may considerably impact the time needed for the phase to develop changes to the DA MCO Function;
 - ii. The developed solution will not have a significant negative impact on performance of the DA MCO Function or price coupling algorithm, leading to an inability to produce the necessary results in the given time constraints;
 - iii. The activation of new NEMOs using the Multi-NEMO Functionality will follow the change process set out in Article 7 of the Algorithm Proposal;
 - iv. NEMOs have not included scheduling areas as an initial requirement for the price coupling algorithm; if the inclusion of scheduling areas becomes an initial requirement for the price coupling algorithm, this would represent a significant change request, which will require full evaluation in terms of its impact on the performance of the price coupling algorithm and the timescale for implementation;
 - v. To achieve the proposed technical milestone for the DA MCO Function a proven prototype must be ready by March 2017, based on requirements to be specified by the relevant TSOs and NEMOs.

5.1.4 Milestones for NEMOs local implementation of the DA MCO Function

1. Implementation of the DA MCO function shall be governed by regional timescales which are local and may vary in each region. In the following we explain the milestones for a NEMO to implement the DA MCO Function:
 - a. Enter into NEMO DA Operational Agreement for the management of the coupling phase in coordination with all NEMOs.
 - b. Perform necessary testing and simulations in accordance with the Testing and Simulation Procedure of the NEMO DA Operational Agreement. Each NEMO, party to the NEMO DA Operational Agreement, shall individually ensure that, as of the date at which it starts coupling operations, its own systems, business processes, Market Rules and traded products involved in the SDAC ensure a smooth testing and implementation of the DA MCO Function.
2. To implement Single Day Ahead Coupling NEMOs shall enter into local, regional or European agreements with TSO, for the management of the pre and post coupling process, including where necessary, multi-NEMO arrangements foreseen by article 45 of the CACM Regulation.

Implementation of such local arrangements, including pre and post coupling, are the joint responsibility of the respective TSOs and NEMOs, and are outside the scope of the MCO Plan.

5.2 Implementation of the ID MCO Function

1. The MCO Plan sets out the tasks necessary for all NEMOs to jointly set up and perform the ID MCO Function. The tasks include the adoption of the XBID Solution as the starting point the ID MCO Function (as described in Section 5.2.1), technical milestones for the implementation, testing and go-live of ID MCO Function (as described in Section 5.2.3), and contractual milestones to implement the necessary contracts and governance arrangements for the operation of the ID MCO Function (as described in Section 5.2.2).
2. In accordance with the CACM Regulation the MCO Plan includes a detailed description of the milestones and a proposed timescale for implementation of the ID MCO Functions, which shall not be longer than 12 months. In accordance with article 7(5) of the CACM Regulation the All NEMO Committee shall report to Agency on progress in meeting the technical and contractual milestones.
3. Prior to implementation of the MCO Plan NEMOs and TSOs will need to agree on the allocation of development costs related to TSO responsibilities and requirements.
4. The MCO Plan shall be considered implemented when the technical and contractual milestones set out in this Section have been completed and the ID MCO Function is available for any NEMO to use.
5. In order for NEMOs to use the ID MCO Function they must in addition meet the necessary technical and contractual preconditions which are explained in Section 5.2.4.
6. NEMOs plan that the ID MCO Function implementation, and all technical and contractual milestones necessary for NEMOs to deliver the ID MCO Function, is targeted to completed by September 2017 and shall in any case not be longer than the 12 month MCO Plan implementation period. Achieving this timeline is also dependent on NRAs and TSOs, as explained for each milestone below.
7. The implementation of pre and post coupling activities necessary for the ID MCO Function to be used for capacity allocation on a bidding zone border are outside the scope of the MCO Plan.

5.2.1 Adoption of the XBID Solution as the ID MCO Function

1. NEMOs propose that the delivery of the ID MCO Function, in accordance with article 36(4) of the CACM Regulation, shall be based on the XBID Solution. Adoption by NEMOs of the XBID Solution as the basis for the ID MCO Function shall be contingent on agreement with TSOs (and NRAs where relevant) for the continuation and extension of the APCA.

2. Any impact on the MCO Plan completion date of a delayed approval and agreement with NRAs will be assessed by NEMOs at the time. NEMOs shall aim to limit this impact to the extent reasonable.
3. The ID MCO Function becoming operational in a Member State, is contingent on:
 - a. Agreement with TSOs on the allocation of operational costs related to TSO responsibilities and requirements;
 - b. Technical readiness (Section 5.2.3) contractual readiness (Section 5.2.2) and local implementation readiness (Section 5.2.4).
4. NEMOs seek clarification on appropriate arrangements for operational cost recovery three months before the ID MCO Function starts operation in a Member State.

5.2.2 Contractual milestones for implementation of the ID MCO Function

1. Following adoption of the XBID Solution as the basis for the ID MCO Function the NEMO cooperation for delivering the ID MCO Function shall be based on the following contractual framework:
 - a. The All NEMO Cooperation Agreement (“ANCA”);
 - b. PXs Cooperation Agreement (“PCA”), and its successor, the NEMO ID Operational Agreement;
 - c. All Party Cooperation Agreement - between NEMOs and TSOs (“APCA”) and its successor, the Intraday Operational Agreement;
 - d. The back to back agreement between NEMOs and TSOs, which will become part of the Intraday Operational Agreement;
 - e. Contracts with ID MCO Function service providers:
 - i. Master Service Agreement and Deliverable Service Agreements (DSAs) with the ID MCO Function System Supplier;
 - ii. Contract with MPLS Service Provider;
 - iii. Contract with PMO Service Provider.
2. Upon entry into force of the ANCA, the general governance framework shall be set by the ANCA. Specifically, under the ANCA, decisions by signatories to the PCA Agreement, and its successor the NEMO ID Operational Agreement, related to the implementation and operation of the Single Intraday Coupling, will be taken based on unanimity, and shall be escalated to the All NEMO Committee when unanimity cannot be reached.
3. NEMOs plan that all NEMOs designated to perform SIDC shall adhere to the ANCA by September 2017.
4. The PCA shall be open, subject to the terms of the PCA, to all NEMOs that are designated to perform SIDC. The PCA shall set forth the terms of the cooperation among NEMOs during the Development Phase of the ID MCO Function for the development and the implementation of the

XBID System and the ID MCO Function. Decision making under the PCA shall be based on unanimity.

5. According to the PCA all participating NEMOs agree to develop and implement all elements of the ID MCO Function, enter into agreements to coordinate with TSOs, and to cooperate to steer, prioritise and manage development and implementation of the XBID System and the ID MCO Function. The PCA entered into force in June 2014. A summary of the PCA is included in Annex 3 of this MCO Plan.
6. The APCA shall identify the roles and responsibilities of NEMOs and TSOs to design and develop the XBID System and the ID MCO Function during the Development Phase. Pursuant to the APCA, NEMOs shall engage suitable ID MCO Function service providers for the delivery of the ID MCO Function, while adhering to the planning and budget agreed with the TSOs. The APCA shall provide for TSOs to define requirements and to monitor and test that such requirements are implemented. The APCA shall also provide for the interfaces with the local implementation projects (the "LIPs") and pre- and post-coupling procedures. Decision making under the APCA shall be based on unanimity. The APCA entered into force in July 2014.
7. The back to back agreement between NEMOs and TSOs, who are parties to APCA, reflects the fact that only NEMOs have entered into a contract with the ID MCO Function System Supplier for developing the ID MCO Function. During the Development Phase TSOs will test and accept functionalities without being a party to the contract with the ID MCO Function System Supplier. This is because the NEMO contracts with XBID System Supplier include features that are not part of the ID MCO Function but deliver TSO tasks under CACM (such as the CMM and the SM), and are not directly signed by TSOs. The purpose of the back to back agreement is to regulate the access of the TSOs to the ID MCO Function and the cooperation and information exchange between PXs and TSOs, and to pass through liabilities that may arise from any actions or omissions of the TSOs. The back to back agreement entered into force in March 2015.
8. All NEMOs designated for SIDC will be entitled and required to join, the ANCA, the NEMO ID Operational Agreement, the Intraday Operational Agreement and the contracts with the ID MCO Function service providers and the ID MCO Function System Supplier.
9. Prior to go-live, NEMOs shall establish the following contractual framework to underpin NEMO cooperation for SIDC:
 - a. The All NEMO Cooperation Agreement;
 - b. NEMO ID Operational Agreement among all NEMOs, replacing the PCA;
 - c. Intraday Operational Agreement between all NEMOs and TSOs, replacing the APCA and back to back agreement;
 - d. Contracts with ID MCO Function service providers, including the ID MCO Function System Supplier, MPLS communication system supplier and co-location service supplier.
10. All NEMOs and TSOs shall enter into the Intraday Operational Agreement, which will identify the roles and responsibilities of NEMOs and TSOs in the operation of SIDC. This will include a back to back agreement between NEMOs and TSOs which shall reflect the fact that only NEMOs have

entered into a contract with the ID MCO Function System Supplier for the provision of the ID MCO Function. This is because the NEMO contracts with XBID System Supplier include features that are not part of the ID MCO Function but deliver TSO tasks under CACM (such as the CMM and the SM), and are not directly signed by TSOs. The purpose of the back to back agreement is to ensure that TSOs and their explicit participants comply with the XBID System requirements and to regulate the liability that may arise from any actions or omissions of the TSOs, their explicit participants and the behaviour and results of the XBID System, in what relates to the CMM and SM parts of it that, as explained have been contracted to the XBID System Supplier to provide a service to TSOs.

11. NEMOs plan that all NEMOs designated to perform SIDC shall enter into the Intraday Operational Agreement with TSOs by September 2017, or at the latest 3 months before such NEMO expects to join operationally the ID MCO Function. All NEMO designated for SIDC will be entitled to adhere to the Intraday Operational Agreement.
12. The NEMO ID Operational Agreement shall be open to all NEMOs designated for SIDC that will use the ID MCO Function. The NEMO ID Operational Agreement shall be based on the PCA. The main terms of this contract are summarised in Annex 3 of this MCO Plan.
13. The NEMO ID Operational Agreement shall set out the terms of NEMOs cooperation for the performance of ID MCO Function tasks provided under article 7 of the CACM Regulation. This contract will govern the NEMOs cooperation in respect of:
 - a. The daily management of the ID MCO Function operations;
 - b. The contractual management of the operational liabilities and results acceptance;
 - c. The rules for participation in the bodies established under the contract;
 - d. The management of cost reporting;
 - e. The rules for the selection of the ID MCO Function System Supplier;
 - f. The rules under which NEMOs will act towards ID MCO Function System Supplier;
 - g. The rules under which NEMOs will act towards TSOs in the context of the agreements signed among all participating NEMOs and participating TSOs for the SIDC.
14. NEMOs plan that all NEMOs designated to perform SIDC shall enter into the NEMO ID Operational Agreement by September 2017, or at the latest 3 months before such NEMO expects to join operationally the ID MCO Function. The NEMO ID Operational Agreement may be concluded after ID MCO Function becomes operational with retroactive effect.
15. The NEMO ID Operational Agreement shall be supplemented by specific contracts for the provision of the ID MCO Function with ID MCO Function service providers that require to be signed by all participating ID NEMOs. These contracts will be the ones presently entered into, or being negotiated by the ID NEMOs with the ID MCO Function service providers.
16. The contracts with ID MCO Function System Supplier, as a service provider to the NEMOs that are signatories of those contracts, will regulate the development, use, operation and maintenance of the ID MCO Function. The contracts will include obligations to ensure equal treatment of the NEMOs and maintaining a level playing field between them.

17. NEMOs plan that all NEMOs designated to perform SIDC shall enter into the contracts with the ID MCO Function service providers and the ID MCO Function System Supplier in due time before such NEMO expects to join operationally the ID MCO Function.

5.2.3 Technical milestones for implementation of the ID MCO Function

1. Following adoption of the XBID Solution as the ID MCO Function the NEMOs shall complete the following milestones to deliver the ID MCO Function. The milestones below are for implementation of the XBID System, a part of which relates to TSO features (such as the CMM and SM), and a part of which relates to the ID MCO Function (the SOB).
2. The implementation timescale foresees two parallel streams to allow for a development of:
 - a. the SOB and CMM; and,
 - b. the SM.

The implementation timescale foresees to align both streams prior start of User Acceptance Test.

3. The implementation timescale is divided into phases:
 - a. A phase to develop the required technology and IT systems to be used for the ID MCO Function, which was completed in February 2016;
 - b. A phase to test the SOB and CMM ("test phase") that consists of the following milestones:
 - i. Factory Acceptance Test (FAT) with monitoring role of NEMOs, which was successfully completed in May 2016;
 - ii. Integration Acceptance Test (IAT) with a leading role of NEMOs to ensure that Local Trading Systems are compatible with the ID MCO Function, which was successfully completed in September 2016;
 - iii. User Acceptance Test (UAT) with a leading role of NEMOs to validate all functionalities and technical parameters of the ID MCO Function, and which consists of the following sub-phases:
 1. Functional Test to validate all functional requirements and conceptual principles, consisting of three executions to be completed by December 2016;
 2. Integration Test to validate all external interfaces of the ID MCO Function, consisting of three executions to be completed by February 2017;
 3. Emergency Plan Simulation, to validate ID MCO Function System robustness, stability and recovery during and after an emergency situation where the ID MCO Function System is damaged or lost, consisting of one execution to be completed by April 2017;
 4. Performance Test to validate that the ID MCO Function System is able to cope with both sustainable load and peak load, consisting of one execution to be completed by May 2017;
 5. Simulation Tests to validate that the ID MCO Function can follow all processes applicable for the Operation Phase, with a focus on the technical aspects of the system, consisting of two executions to be completed by June 2017.
 - c. SM Test Phases similar to those above but to be performed by the involved NEMOs and TSOs to guarantee the quality of the SM development, which was successfully completed by October 2016. UAT Phase for SM is identical as for the SOB and CMM.

- d. Go-live preparation to ensure readiness of the operational staff, readiness of ID MCO Function for the start of the Operational Phase, and readiness of the LIPs (which are not part of this MCO Plan):
 - i. The start of go-live preparation is dependent on successful finalisation of the UATs, readiness of the operational procedures and training of operational staff, readiness of contractual arrangements with the ID MCO Function System Supplier and ID MCO Function service providers and readiness of the Intraday Operational Agreement between NEMOs and TSOs;
 - ii. Go-live preparation will be completed by September 2017 in line with the milestones set out in Section 5.2.4 of this MCO Plan.
4. Any change to the ID MCO Function System implementation timescale shall be subject to a change management process established in the contracts with the ID MCO Function System Supplier.

5.2.4 Milestones for NEMOs local implementation of the ID MCO Function

1. Implementation of the ID MCO function shall be governed by timescales which are regional and may vary for each project. In the following we explain the milestones for a NEMO to ensure operational readiness:
 - a. Readiness of the NEMO for the testing, to ensure that each NEMO has fulfilled all technical and procedural requirements for coordinated testing, to be completed by February 2017. NEMOs have to demonstrate their readiness to exchange data with the ID MCO Function System during the IAT and the ID MCO Function must pass UAT Integration tests.
 - b. Completion of the Functional Integration Test to ensure all data between parties (TSOs and NEMOs) for implementation of SIDC on a specific border can be exchanged and that all business processes for a specific border can be successfully processed, to be completed by June 2017.
 - c. Completion of the Simulation Integration Test to demonstrate that all end to end business processes for a specific border, and in conjunction with other borders, are processed correctly, to be completed by August 2017.
 - d. Official confirmation of go-live readiness, to confirm the full readiness of the NEMOs, to be completed by September 2017.
2. The NEMOs who are not operationally ready with regard to the timescale set out in Sections 5.2.3 and 5.2.4 will enter as soon as possible the same process for implementation of the NEMO readiness.
3. Single intraday Coupling will be implemented via local implementation projects (LIPs). The LIPs are national and/or regional in scope and are therefore not part of this MCO Plan. However, readiness of a LIP is a pre-condition to join Single Intraday Coupling operations.
4. To implement Single Intraday Coupling NEMOs shall enter into local, regional or European agreements with TSOs, for the management of the pre and post coupling process, including where necessary multi-NEMO arrangements, in accordance with article 57 of the CACM Regulation. Implementation of such local arrangements, including pre and post coupling, are the joint responsibility of the respective TSOs and NEMOs, and are outside the scope of the MCO Plan.

6 DAY AHEAD COOPERATION

6.1 Description of the DA MCO Function

6.1.1 Operation

1. The price coupling algorithm is operated in a decentralised manner and shall be based on the following principles:
 - a. One single algorithm;
 - b. One single set of input data for the whole coupled area;
 - c. One single set of results for the whole coupled area;
 - d. Input data to the algorithm is prepared and collected by each NEMO according to local Regulations and/or market contracts in a common format;
 - e. The responsibility for the input data content is allocated to the respective input data provider (TSO or Market Participant) according to local regulations and/or market contracts;
 - f. The complete input data file is received by the Coordinator/Backup Coordinator and all Operators (in an anonymised manner). This guarantees the transparency of the process since all parties guarantee that the same input data is used in the DA MCO results calculation process;
 - g. Each Operator has the opportunity to compute the results in parallel;
 - h. The single results of the DA MCO process, prior to each NEMO finally validating them, are validated and accepted by each responsible party (TSO and/or Market Participant) according to local regulations and/or market contracts;
 - i. Each NEMO is responsible (in a decentralised manner) for its results, since each NEMO has the opportunity (directly or via its Servicing NEMO) to validate its results. The Servicing NEMO may share the relevant DA MCO Function results with the Served NEMO for the purposes of validation (including validation by each responsible party (TSO and/or Market Participant) according to local regulations and/or market contracts);
 - j. Once results are finally accepted by all NEMOs (directly or via its Servicing NEMO) they are absolutely firm and there is no possibility for any NEMOs to contest the accepted results or to claim against the other NEMOs, including the Coordinator;
 - k. The DA MCO results are reproducible and auditable.

6.1.2 NEMO Operational Roles

1. The roles, principles and rules related to the execution of operational roles performed by NEMOs including the performance of DA MCO Function will be set in the NEMO DA Operational Agreement.
2. With respect to the DA MCO Function, Operational DA NEMOs must perform according to one of the following roles:
 - a. Coordinator or Backup Coordinator, whose responsibilities are explained in Section 6.1.2.1. below;
 - b. Operator, whose responsibilities are explained in Section 6.1.2.2 below.

3. To perform the daily operations one NEMO is appointed as Coordinator and one NEMO is appointed as Backup Coordinator. The Backup Coordinator monitors the NEMO acting as Coordinator and is always prepared to take over the Coordinator role at any moment in case any problem appears in the Coordinator activities (“hot backup”). All other Operators may perform in parallel the same processes can also take over from the Coordinator the role if necessary (“warm backup”).
4. The roles of Coordinator and Backup Coordinator are rotated amongst the PCR Co-owners. To be a Coordinator/Backup Coordinator, a NEMO must be a PCR Co-owner and satisfy specific technical requirements established by the NEMO DA Operations Committee and ratified by the All NEMO Committee in order to guarantee safe and reliable operation of the SDAC. The NEMOs playing the role receive remuneration from all the benefiting NEMOs whose prices are formed during each SDAC session.
5. The Coordinator tasks are established in the NEMO DA Operational Agreement so that the Coordinator does not assume any additional liability versus that of an Operator. Each NEMO is responsible for validating the individual results for its respective bidding areas. The transfer of the responsibility from the NEMOs to the corresponding TSO or Market Party is done according to local regulations and/or market contracts. Only Coordinator, Backup Coordinator and Operators may access the PMB.
6. In order to properly perform their tasks, in particular to manage correctly the maintenance of the PCR Assets, Coordinators, Backup coordinators and Operators are required to co-own the PCR Assets, based on equal and non-discriminatory terms. NEMOs that are PCR Co-owners will remain responsible for managing the relationship with the DA MCO Function service providers and for managing the process to implement any changes agreed by the All NEMO Committee, with the DA MCO Function service providers.
7. The PCR Co-owners will undertake to follow the decision of the All NEMO Committee with regard to change requests or other matters regarding the DA MCO Function service providers. The costs and liabilities associated with following such All NEMO Committee decisions are not borne by the PCR Co-owners but will be passed through to all DA NEMOs.

6.1.2.1 Coordinator/Backup Coordinator

1. A Coordinator is responsible for the following tasks during the operation of the DA MCO Function:
 - a. Coordinate the operation of the DA MCO Function;
 - b. To perform the calculation of the market coupling results (this includes calculating the results, according to the operational procedures, by using the applied MCO operational assets and by using and processing the data on cross-zonal capacity as well as the bids received daily from all Operational NEMOs);
 - c. Act as single point of contact between the Operators and MCO service providers in case of an incident;
 - d. Intervene in the event of an incident and perform necessary coordinating actions;
 - e. File report summarizing the performed steps.

2. A Backup Coordinator is responsible for the following tasks during the DA Market Coupling Phase:
 - a. Be ready to take over the Coordinator tasks at any moment during the Market Coupling Phase;
 - b. To perform the calculation, the market coupling results (that includes calculating the results, according to the operational procedures, by using the applied PCR assets and by using and processing the data on cross-zonal capacity as well as the bids received daily from all Operational NEMOs) and indicates any irregularity it may become aware of to the Coordinator;
 - c. To provide towards the NEMO acting as Coordinator the needed information and support.

6.1.2.2 Operator

1. Operators perform the following main responsibilities:
 - a. Provide all other Operators, including the Coordinator with the information needed for the calculation of the market coupling results for its markets or any serviced markets;
 - b. Where it is calculating in parallel the market coupling results, to indicate any irregularity it may become aware of towards the Coordinator;
 - c. To participate to the actions convened by the Coordinator and comply with commonly agreed decisions;
 - d. To accept or reject the market coupling results for its own markets and serviced markets.
2. Any NEMOs can perform the Operator role provided it (a) is a PCR Co-owner, and (b) satisfies specific technical requirements established by the DA Operations Committee and ratified by the All NEMO Committee in order to guarantee safe and reliable operation of the DA market coupling.
3. The Operator role may be delegated, subject to article 81 of the CACM Regulation, by a NEMO signatory to the NEMO DA Operational Agreement to a PCR Co-owner who can perform at least Operator role in its own name. The precise scope of this delegation and the operational details that shall apply between a serviced and servicing NEMO shall be established under a bilateral agreement to be entered into by Serviced and Servicing NEMO, that shall be compliant with the operational rules and procedures set out in the NEMO DA Operational Agreement.
4. The main features of this delegation, that will be established in the NEMO DA Operational Agreement, are the following:
 - a. The Servicing NEMO will collect all the network constraints, in accordance with regional agreements, and order information from the serviced NEMO and will perform all the MCO Function operational steps described under Section 6.1.3 in the name and on behalf of the serviced NEMO.
 - b. There will be no direct communication between a Serviced NEMO and Operators during the operation of the Day Ahead Market Coupling sessions, other than through its Servicing NEMO. The Serviced NEMO delegates at least his representation for operational decisions to the Servicing NEMO, that will act in the name of the Serviced NEMO in the operational bodies.
5. This delegation shall not impact the obligations of the Serviced NEMO under the CACM Regulation, the MCO Plan, or the NEMO DA Operational Agreement. Accordingly, the delegation shall not alter the responsibility that each NEMO undertakes for its results according to Section 6.1.1 of this MCO Plan.

6.1.3 Operational sequence of events in a Market Coupling session

1. A market coupling session consists of a sequence of process steps that need to respect agreed timings:
 - a. At an agreed time, Operational NEMOs receive the network constraints from the corresponding TSOs. This reception process is decentralized and performed according to National Regulations and/or Market Contracts.
 - b. The bid reception process is performed by all Operational NEMOs, including the opening and closing of the order acceptance period in a decentralised way according to their local regulations and/or market contracts. For operational reasons there might be exceptionally delays in this bid reception process.
 - c. At an agreed time, all Operational NEMOs submit to each other the set of network constraints (received from TSOs according to local regulation or market contracts) and the anonymised orders that they are responsible for.
 - d. The results calculation process is started at a predefined moment by the Coordinator, the Backup Coordinator and all other Operators that want to do it.
 - e. When results are obtained by the Coordinator they are shared with all Operators for NEMOs to validate them, potentially by comparing the Coordinator results with the results of their own run of the algorithm.
 - f. Once this step is done, preliminary prices are published to the market, at a common time (unless the process has been delayed).
 - g. Each NEMO can now disclose to its own market participants their specific results; where required by local regulations and/or market contracts, these should be used by them to perform a validation of the results.
 - h. NEMOs disclose to relevant TSOs the information necessary for them to perform a validation of the results according to local regulations and/or contracts.
 - i. Once the final validation is done, and shared with all other NEMOs by each NEMO, the results are declared firm and net position and area prices cannot be modified in any way.
2. The NEMO DA Operational Agreement will include a precise set of procedures describing each step in the market coupling process performed by Operational NEMOs. This includes backup mechanisms, information messages to participants and TSOs and reports that are generated in normal cases and in case there is any kind of incident. The NEMO DA Operational Agreement will also include provisions of how to update and to modify the procedures.

6.1.4 Validation of the Day Ahead Market Coupling session results

1. There are two types of validation:
 - a. The validation inherently performed by the Price Coupling Algorithm, to ensure that network constraints and orders characteristics are respected by the results.
 - b. The validation performed by all NEMOs, either alone or with a TSO and market participants, to assign appropriate liability for the results.
2. These validations are done according to local regulations and/or market contracts and in accordance with article 48 of the CACM Regulation.

6.2 DA MCO Function systems

1. The systems needed to perform the DA MCO Function comprise the PCR Matcher Broker (PMB); which in turn is comprised of two core sub-modules (the Broker and the Matcher) and the Algorithm (described above):
 - a. The Broker module acts as the interface to every other PMB (to share data via a dedicated and secured cloud) and with local NEMO IT systems.
 - b. The Matcher module makes all the data received from the Broker module available to the Price Coupling Algorithm and activates the Price Coupling Algorithm. This module also receives the results of the price coupling from the algorithm and forwards to the results to the Broker module.
2. In normal operational mode, the Broker module performs its actions automatically (files interchange, keep-alive messages, etc.). However, if necessary, the Broker module allows an Operator to manually launch all of these actions.
3. NEMOs use a dedicated and secured cloud-based communication solution ("MPLS Cloud") to exchange data between each PMB. Each PMB connects to the Cloud through the PCR Broker.
4. All operational MCO Function systems shall comply with the performance and disaster recovery requirements as decided by the NEMOs under the NEMO DA Operational Agreement.

6.2.1 Change Control Procedure

1. Any change to the PCR Assets such as Euphemia, the PMB, the operational procedures etc., any relevant changes to the connected local systems, as well as any changes to the format or nature of the input data to the market coupling system that may cause a risk of malfunction, a performance degradation or a problem for the continuity of operations, is subject to a DA Market Coupling change control procedure.
2. The impact of a change request must be assessed, before signoff for implementation can be given. NEMOs are responsible to set acceptance criteria for implementation and to approve changes.
3. All NEMOs are entitled to request a change for their single use, or for the use by a subset of NEMOs, provided they finance the change to the registered PCR Assets and provided they meet the acceptance criteria for implementation and the approval by All NEMOs.

7 INTRADAY COOPERATION

7.1 Delivery of the ID MCO Function

7.1.1 Delivery of the ID MCO Function operation

7.1.1.1 Introduction

1. The XBID Solution provides functionalities to perform the continuous matching of orders as well as the TSO functionalities in respect of capacity allocation taking into account the relevant available intraday cross-zonal capacity (the CMM), as well as the calculation of scheduled exchanges for shipping and settlement for TSOs (the SM) and central counterparties to ship and settle cross-zonal, cross-delivery area and cross-central counter party trades.
2. The XBID System is a centralised system supporting 24/7 trading of Global Products. Global Products are eligible for matching in the XBID System, as opposed to Local Products, which are matched solely in the respective LTS.
3. The ID MCO Function shall be based on the XBID System, which consists of the following modules:
 - a. Shared Order Book that supports the collection and matching of ID orders from all connected NEMOs Local Trading Systems via Public Message Interface ("PMI").
 - b. Capacity Management Module that collects directly from TSOs the Cross-Zonal Capacity available at any instant for ID implicit trading, and ensures that the concluded ID trades respect such capacities. It also supports explicit cross-zonal capacity allocation function where it is requested by relevant NRAs.
 - c. Shipping Module that computes the scheduled exchanges for shipping and settlement calculations for TSOs and central counter parties to ship and settle cross-zonal and cross-delivery area and cross-central counter party trades, where relevant.
4. The Intraday cross-zonal matching shall be based on the following principles:
 - a. First-come first-served where the orders with highest buy price and the lowest sell price get served first given that also the cross zonal capacity constraints are respected if the Orders are in separate bidding zones.
 - b. Cross zonal capacities and order books (OBK) are simultaneously updated in the CMM and SOB respectively on a continuous basis based on latest matching of orders and creation, modification and deletion of orders as well as capacity upgrades by TSOs.
 - c. In addition, such simultaneous updates per bidding zone and towards the individual NEMOs LTS connected to XBID are exclusively provided via the central XBID System.
 - d. Input data (orders) to the matching submitted from the various NEMO LTSs is centralised in one SOB to enable full cross matching between the connected OBKs and combined with, where existing, explicit capacity allocation requests when it comes to utilization of cross zonal capacities available via CMM.
 - e. Input data in the form of intraday cross zonal capacities between bidding zones to the matching is made available by the TSOs in CMM.
 - f. All input data regarding bids/offers coming from the respective NEMOs individual LTSs are shared in the SOB in a fully anonymised manner to ensure both that competing NEMOs do not know which market participants connected to another NEMOs LTS are placing the individual orders and in general to protect the confidentiality of individual market participants' orders.

- g. The solution will be designed to accommodate possible intraday auctions in accordance with article 63 of the CACM regulation and capacity pricing in accordance with article 55 of the CACM Regulation.
5. The XBID Solution also requires implementation of interfaces between the XBID System and other NEMO and TSO systems. This includes the following interfaces:
 - a. With NEMOs' LTSs. The SOB processes anonymised orders with support of the CMM:
 - i. Market participants do not connect to the SOB directly, but via one or more LTSs of NEMOs, to trade Global Products.
 - ii. Orders for Global Products are entered in NEMOs LTSs, which in turn connect to the SOB via the public message interface only by means of the XBID dedicated MPLS network to transmit orders for Global Products and to receive global trades.
 - iii. Matching of global orders is performed in the SOB, irrespective of whether the global orders have been entered for the same bidding zone, or for different delivery areas.
 - iv. Matching of local orders is performed in NEMOs LTSs and does not form part of the XBID System or the ID MCO function.
 - v. The SOB module maintains a consolidated order book for all global orders (not local orders).
 - b. With TSOs in order for TSOs to provide and receive relevant information for pre-coupling and post-coupling processes.
 - c. With market participants to perform explicit allocation of cross-zonal capacities, where it is requested by relevant NRAs.
 - d. With central counter parties acting under the responsibility of the NEMOs to ensure clearing and settlement of the matched orders as specified in the article 68 of the CACM Regulation.
 6. Finally, each NEMO that is active in the Single Intraday Coupling shall be provided with access/connection to the SOB from the LTS of its own choosing via an PMI/API solution that secures equal access to and performance towards the SOB/CMM order matching process.
 7. The XBID System Supplier is delivering systems that meet TSOs requirements, that are not part of the ID MCO Function, and will be provided as a contractual service by NEMOs to all TSOs that are active in the Single Intraday Coupling. These include the CMM, the SM and the explicit capacity function, which allows the allocation of available cross-zonal capacity by TSOs to those participants that request it, where this arrangement is requested by NRAs pursuant to the CACM Regulation.
 8. The ID MCO Function shall be able to accommodate functionalities related to future TSO requirements, in particular: flow based capacity allocation, cross-zonal capacity pricing, support of Hub to Hub shipping and settlement, incorporation of losses, matching complex products. NEMOs will aim to implement such changes once approved according to the CACM Regulation, subject to technical feasibility and agreement on full cost recovery.

7.1.1.2 Cross-border matching during the continuous trading period

1. Trading period consists of a sequence of process steps that need to respect agreed timings:

- a. All NEMOs connected to the SOB/CMM via the common API and the LTS of its own choosing will be able to continually feed orders into the SOB and modify such orders as long as the instrument is open for trading.
- b. Cross-zonal ID capacities are continually made available by the corresponding TSOs via the CMM from the cross zonal gate opening time until an agreed time for each bidding-zone to bidding-zone border when cross-zonal ID capacities cannot be changed any more for the delivery period.
- c. All instruments on XBID System are traded continuously on every calendar day in accordance with the matching rules.
- d. All NEMOs agree to respect the execution conditions available on the XBID System, these will be further specified according to Section 7.2 of the MCO Plan and implemented and transparently detailed by the XBID System Supplier.
- e. At regular intervals the SM computes and sends net positions and cross-zonal and delivery areas information to the relevant parties in order to enable settlement.
- f. Each TSO individually, or in co-ordinated manner with other TSOs, runs its own procedures required for cross-zonal scheduling (Bidding Zone to Bidding Zone or intra Bidding Zone where there are multiple Delivery Areas within a Bidding Zone). Scheduling is based on the output of SM and/or the CMM and should respect the matched orders.

7.1.1.3 Validation of the Intraday Market Coupling results

1. The validation inherently performed by the matching algorithm makes sure that all the network constraints and the characteristics (price, volume, duration, etc.) and matching rules for the orders, are respected when matching of orders and pricing results are determined.

7.1.1.4 Delegation of tasks assigned to NEMOs in the Intraday Market Coupling

1. According to article 81 of the CACM Regulation, NEMOs have the possibility of delegating tasks assigned under the CACM Regulation. Although this possibility has not been developed yet in the XBID Project, it is envisioned that the NEMO ID Operational Agreement could allow for this possibility and could establish the rights and limitations of this kind of services to be performed by one NEMO (the Servicing NEMO) for another NEMO (the Serviced NEMO) in the ID Operations environment. This kind of service will need to respect the legal and technical requirements in the applicable contracts.

7.2 ID Matching concept

1. Matching in continuous trading
 - a. Matching process in the continuous trading matching algorithm is deterministic.
 - b. The term order matching is used to describe the creation of a trade, based on a buy and a sell order with compatible execution characteristics.
2. Execution Priority - execution of orders is based on the price-time-priority principle:
 - a. Price - orders are always executed at the best price. The best buy order is always executed against the best sell order first (the best price for buy orders is the highest price, for sell orders it is the lowest price).

- b. Time - when an order is entered into a SOB, it is assigned a timestamp. This timestamp is used to prioritize orders with the same price limit. Orders with earlier timestamps are executed with a higher priority than orders with a later timestamp.
3. Price determination
- a. The price at which two orders are matched is the price of a trade.
 - b. When two orders are matched in continuous trading, one of these orders must always be a newly entered or a modified existing order.
 - c. The trade price is the order price of the best order which is already in the SOB:
 - i. If a newly entered buy order is matched against an existing sell order, the limit price of the sell order becomes the trade execution price.
 - ii. If a newly entered sell order is matched against an existing buy order, the limit price of the buy order becomes the trade execution price.
4. Matching process
- a. The matching process usually starts with an order entry. A newly entered order is executed immediately if another order with the opposite side, for the same contract and crossed price within the price limit setup for the exchange already exists in the SOB. Otherwise it is, depending on the order's execution restriction, either deleted or entered into the SOB. When an order is matched in a trade, its quantity is reduced by the trade quantity.
 - b. If an order can be executed, it may not necessarily be executed at a single price, but may sequentially generate multiple partial transactions at different prices against multiple different orders that already exist in the SOB. When an order was executed against the total available quantity (in other words: against all orders that were entered with this price limit) at a given price level, the next best price level becomes best and the newly entered order continues to be matched against orders entered at this price level. This process continues as long as the incoming order remains executable and has a positive order quantity. Subsequently the order is either deleted (if the order quantity has reached zero or depending on the execution restriction) or entered into the order book with its remaining quantity.
 - c. The matching process can also be triggered by events leading to a crossed order book which may occur when TSOs release additional cross-zonal capacity or when cross-zonal trades release cross-zonal capacity. In such cases, all matchable orders will be matched at once by means of a matching process, with the calculation of a single price at which all orders are matched.

7.2.1 ID Systems

1. The primary ID Systems that are part of ID XBID System are SOB, CMM, SM, and the PMI/API, e. g. for connecting the NEMOs LTSs to the SOB.
 - a. The SOB is designed to enable matching of all order types that from time to time are permissible in XBID Solution and submitted via the common PMI/API as part of the anonymized OBK per bidding zone from each of the NEMOs via the LTS of its choice. The matching of orders in the SOB, which represents the sum of all separate NEMOs OBKs, is done continually for all periods open for trading and respects both the capacity constraints given by the TSOs to the CMM, and the matching rules to combine the Implicit (NEMOs) OBKs with the separately given explicit cross zonal capacity orders.

- b. The CMM refers to a capacity allocation module which offers the ability to continually allocate cross zonal capacity at any given point in time:
 - i. either to the best orders available in the SOB in case of Implicit capacity allocation (between bidding zones based on NEMO OBKs); or,
 - ii. outside OBKs in case of Explicit (cross zonal capacity request) capacity allocation.
- c. The SM provides information from the relevant trades concluded within XBID Solution to each NEMO(s) involved in the trade and calculates the scheduled exchanges necessary to perform the required shipping and settlement as part of the post-coupling process. The SM receives data from the SOB about all trades concluded between two (or more) bidding zones, as well as between multiple delivery areas within a bidding zone wherever that applies and between central counterparties within one bidding zone. Based on that information the SM ensures that information on the physical shipping from “source to sink” is transferred within given time stipulations to involved NEMOs and their central counterparties, shipping agents and TSOs, as well as necessary information to make financial handover between central counterparties.
- d. The API/PMI is the common protocol/interface that enables each NEMO to connect to the SOB on equal terms, as well as separately is done for the explicit cross zonal capacity requests.

7.2.2 ID Procedures

1. The NEMO ID Operational Agreement will include a precise set of procedures that establish how all steps in the Single Intraday Coupling process are performed and how unexpected incidents are handled by each NEMO connected to the XBID System, and how it is secured in accordance with equal treatment and performance requirements by the XBID Service Provider. The NEMO ID Operational Agreement will also include provisions of how, and when necessary why, to update and to modify the procedures.
2. It is important to note that there will be an IDOA, signed by all participating NEMOs and all participating TSOs that should be aligned and coherent with the NEMO ID Operational Agreement for the Single Intraday Coupling to be able to be performed. This IDOA is not part of the MCO Plan since it needs to be developed and agreed together with TSOs. The IDOA between NEMOs and TSOs will cover completely the services provided by NEMOs to TSOs in the ID Coupling which are the CMM and most of the elements of the SM.
3. The NEMO ID Operation Agreement and IDOA will establish process to develop and modify procedures (NEMO procedures and NEMO-TSOs procedures respectively), which will describe how the functionalities of the XBID system will be used in order to perform market operation processes.

7.3 Governance

7.3.1 Change Control Procedure

1. ID change control procedures will be adopted in line with the principles of the DA change control procedure, adapted to the particular circumstances of the SIDC.

8 EXPECTED IMPACT OF CACM METHODOLOGIES

1. The CACM Regulation requires the MCO Plan to include a description of the expected impact of the terms and conditions or methodologies on the establishment and performance of the MCO Functions.

8.1 All NRA methodologies:

2. NEMOs do not expect that the capacity calculation region methodology prepared by TSOs in accordance with article 15(1) of the CACM Regulation will have an impact on the establishment and performance of the MCO Functions.
3. NEMOs do not expect that the generation and load data provision methodology developed by TSOs in accordance with article 16(1) of the CACM Regulation will have an impact on the establishment and performance of the MCO Functions because this is a pre-coupling task.
4. NEMOs do not expect that the common grid model methodology developed by TSOs in accordance with article 17(1) of the CACM Regulation will have an impact on the establishment and performance of the MCO Functions because this is a pre-coupling task.
5. NEMOs do not expect that the proposal for a harmonised capacity calculation methodology developed by TSOs in accordance with article 21(4) of the CACM Regulation will have an impact on the establishment and performance of the MCO Functions.
6. NEMOs expect that the Back-up methodology, developed by NEMOs in accordance with article 36(3) of the CACM Regulation, will be submitted to all regulatory authorities for approval by February 2017. NEMOs expect that the Back-up methodology will be approved by all regulatory authorities by August 2017. NEMOs do not expect that the Back-up methodology will impact the timescale for the establishment of the MCO Functions. NEMOs expect that the Back-up methodology will ensure that efficient and appropriate back-up procedures will be established for the performance of the MCO Functions.
7. NEMOs expect that the algorithm proposal submitted by NEMOs in accordance with article 37(5) of the CACM Regulation (hereafter referred to as the "Algorithm Proposal", including the TSOs' and NEMOs' sets of requirements for algorithm development in accordance with article 37(1) of the CACM Regulation (hereafter referred to as the "Algorithm Requirements"), will be submitted to all regulatory authorities for approval by February 2017. NEMOs expect that the Algorithm Proposal and Algorithm Requirements will be approved by all regulatory authorities by August 2017.
8. NEMOs do not expect that the Algorithm Proposal and Algorithm Requirements will impact the timescale for the establishment of the MCO Functions. This is because developments necessary to meet the initial requirements described in the Algorithm Requirements have already been taken into consideration in this MCO Plan. The future requirements described in the Algorithm Requirements will be implemented after the MCO Plan implementation timescale in accordance with the procedures established in the Algorithm Proposal. NEMOs do not expect the initial requirements to impact the performance of the DA MCO Function and the ID MCO Function. NEMOs do expect the future requirements described in the Algorithm Requirements to impact the performance of the DA MCO Function and ID MCO Function. To mitigate and manage the

potential impact of any future requirements on algorithm performance NEMOs have, in the Algorithm Proposal, proposed measures to assess and control algorithm performance and to establish a transparent and robust change management procedure.

9. NEMOs expect that the proposal for products (hereafter referred to as the “Products Proposal”) that can be taken into account by NEMOs in the single day-ahead and intraday coupling process developed by NEMOs in accordance with articles 40 and 53 of the CACM Regulation, will be submitted to all regulatory authorities for approval by February 2017. NEMOs expect that the Products Proposal will be approved by all regulatory authorities by August 2017.
10. NEMOs do not expect that the Products Proposal will impact the timescale for the establishment of the MCO Functions. This is because the developments necessary to take into account the products listed in the Products Proposal have already been taken into consideration in this MCO Plan. NEMOs do not expect that the products listed in the Products Proposal will necessarily impact the performance of the MCO Functions. To mitigate and manage the potential impact of the products listed in the Products Proposal on performance of the MCO Functions, the Algorithm Proposal, proposes measures to assess and control algorithm performance. Furthermore, to mitigate and manage the potential impact of the introduction of any new products on performance of the MCO Functions, the Algorithm Proposal establishes a transparent and robust change management procedure.
11. NEMOs expect that the maximum and minimum prices methodology developed by NEMOs in accordance with articles 41(1) and 54(2) of the CACM Regulation, will be submitted to all regulatory authorities for approval by February 2017. NEMOs expect that the maximum and minimum prices methodology will be approved by all regulatory authorities by August 2017.
12. NEMOs do not expect that the maximum and minimum prices methodology will impact the timescale for the establishment of the MCO Functions because the proposed maximum and minimum prices have already been taken into account in this MCO Plan. NEMOs do not expect the maximum and minimum prices methodology, or more specifically the proposed level of the maximum and minimum prices, to affect the performance of the MCO Functions.
13. NEMOs expect that the intraday capacity pricing methodology developed by TSOs in accordance with article 55(1) of the CACM methodology will be submitted to all regulatory authorities for approval by August 2017. NEMOs expect that the intraday capacity pricing methodology will be approved by all NRAs by February 2018.
14. NEMOs do not expect that the intraday capacity pricing methodology to impact the timescale for the establishment of the MCO Functions. This is because we expect that the MCO Functions will be implemented before the intraday capacity pricing methodology is approved by NRAs. NEMOs expect that the intraday capacity pricing methodology will affect the performance of the ID MCO Function. To mitigate and manage the potential impact of the intraday capacity pricing methodology on the performance of the ID MCO Function, NEMOs propose to follow the robust and transparent change management procedures established in accordance with the Algorithm Proposal and this MCO Plan.
15. NEMOs expect that the intraday cross-zonal gate opening and intraday cross-zonal gate closure times (hereafter referred to as the “TSO ID Gate Opening and Closing Proposal”) developed by TSOs in accordance with article 59(1) of the CACM Regulation will be submitted to all regulatory

authorities for approval by December 2016. NEMOs expect that the intraday cross-zonal gate opening and intraday cross-zonal gate closure times will be approved by all regulatory authorities by June 2017.

16. NEMOs do not expect that the TSO ID Gate Opening and Closing Proposal will impact the timescale for the establishment of the ID MCO Function. NEMOs expect that the TSO ID Gate Opening and Closing Proposal will impact the performance of the ID MCO Function by setting limits on the time period for which the ID MCO Function is able to allocate cross-zonal capacity.
17. NEMOs expect that the day-ahead firmness deadline (hereafter referred to as the "TSO DA Firmness Deadline Proposal") developed by TSOs in accordance with article 69 of the CACM Regulation will be submitted to all regulatory authorities for approval by December 2016. NEMOs expect that the TSO DA Firmness Deadline Proposal will be approved by all regulatory authorities by June 2017.
18. NEMOs do not expect that the TSO DA Firmness Deadline Proposal will impact on the timescale for the establishment DA MCO Function or the performance of the DA MCO Function. This is because the day-ahead firmness deadline proposed by the TSOs is in line with existing methodologies and developments and has been taken into consideration in this MCO Plan.
19. NEMOs do not expect that the congestion income distribution methodology developed by TSOs in accordance with article 73(1) of the CACM Regulation will have an impact on the establishment and performance of the MCO Functions because this is a post coupling task.

Regional methodologies:

20. NEMOs expect that TSOs in each capacity calculation region will submit a common capacity calculation methodology, developed in accordance with article 20(2) of the CACM Regulation, to the relevant regulatory authorities no later than 10 months after the approval of the proposal for capacity calculation regions.
21. Any impact on the MCO function implementation timescale or algorithm performance can only be evaluated once the new methodologies have been defined. To mitigate and manage the potential impact of the regional capacity calculation methodologies on the performance of the MCO Functions, NEMOs propose to follow the robust and transparent change management procedures established in accordance with the Algorithm Proposal and this MCO Plan.
22. NEMOs do not expect that the regional methodologies for coordinated redispatching and countertrading developed by TSOs in accordance with article 35(1) of the CACM Regulation will impact on the establishment and performance of the MCO Functions as we do not expect that TSO cross-border actions will take place in the same timeframe as the operation of the MCO Functions.
23. NEMOs expect that TSOs will submit the common methodologies for the calculation of scheduled exchanges, developed in accordance with articles 43(1) and 56(1) of the CACM Regulation, to regulatory authorities by December 2016. The TSO proposal may have an impact on the establishment and performance of the MCO Functions. This is because the current TSO proposal seeks to make the calculation of the scheduled exchanges a responsibility of the MCO Functions.
24. NEMOs do not expect that the regional fallback procedures, developed by TSOs in accordance with article 44 of the CACM Regulation will impact on the timescale for the establishment and the

performance of the DA MCO Function. This is because the fallback procedures are intended to ensure efficient, transparent and non-discriminatory capacity allocation in the event that the single day-ahead coupling process is unable to produce results.

25. NEMOs expect that TSOs will submit proposals for complementary regional auctions, developed by TSOs in accordance with article 63(1) of the CACM regulation, to the relevant regulatory authorities by February 2017 at the earliest.
26. NEMOs do not expect that the proposals for complementary regional auctions will necessarily impact the timescale for the establishment of the ID MCO Function. This is because we expect the ID MCO Function to be implemented before we know the detailed requirements related to the implementation of complementary regional auctions. Complementary regional auctions may impact the performance of the ID MCO Functions. To mitigate and manage the potential impact of the complementary regional auctions on the performance of the ID MCO Functions, NEMOs propose to follow the robust and transparent change management procedures established in accordance with the Algorithm Proposal and this MCO Plan.

National methodologies:

27. NEMOs do not expect proposals of individual TSOs for a review of the bidding zone configuration in accordance with article 32(1)(d) of the CACM Regulation will impact on the timescale for the establishment of the MCO Functions. A decision to amend the bidding zone configuration may impact the performance of the MCO Functions. To mitigate and manage the potential impact of a decision to amend the bidding zone configuration on the performance of the MCO Functions, NEMOs propose to follow the robust and transparent change management procedures established in accordance with the Algorithm Proposal and this MCO Plan.
28. NEMOs do not expect that proposal for cross-zonal capacity allocation and other arrangements developed by TSOs in accordance with articles 45 and 57 of the CACM Regulation will impact the on the timescale for the establishment and the performance of the MCO Functions. This is because the MCO Functions are being developed to be able to accommodate bidding zones with more than one NEMO and/or interconnectors that are not operated by certified TSOs.

9 ANNEX 1 – Summary of Interim NEMO Cooperation Agreement

Terms of the contract	
Object	Contractual framework for governance and coordination of common European NEMO responsibilities by a NEMO Committee
Scope	<p>To establish an interim framework to facilitate the necessary cooperation between designated NEMOs with respect to the performance of all common tasks that need to be performed in connection with:</p> <ul style="list-style-type: none"> a) The development and submission of the MCO Plan in accordance with article 7 (3) of the CACM Regulation; b) The development and submission of other appropriate terms and conditions and/or methodologies required in accordance with article 9 (6) of the CACM Regulation; c) The development of the Enduring Cooperation Agreement as proposed in the MCO Plan; d) Any additional tasks as may be agreed unanimously from time to time by the Parties.
Parties	<p>All designated NEMOs as of 3rd March 2016: APX Commodities Ltd., APX Power B.V, Belpex SA, BSP Regional Energy Exchange LLC, Croatian Power Exchange Ltd, EirGrid plc, EPEX SPOT SE, EXAA Abwicklungsstelle für Energieprodukte AG, Gestore dei Mercati Energetici S.p.A, Hungarian Power Exchange Ltd, Independent Bulgarian Energy Exchange EAD, Operator of Electricity Market S.A (LAGIE), Nord Pool AS, OKTE a.s., OMI Polo Español S.A., Operatorul Pieței de Energie Electrică și de Gaze Naturale "OPCOM" SA, OTE, A.S., SONI Limited, Towarowa Gielda Energii SA</p>
Date of signature	3rd March 2016
Obligations of the parties	<ul style="list-style-type: none"> - Best effort obligation and good faith cooperation for the achievement of the Scope of the INCA - Cooperation based on the principles of non-discrimination and subsidiarity
Costs	Costs related to the performance of the Scope shall be:

	<ul style="list-style-type: none"> - Proposed as Common Costs for the purpose of the CACM Regulation; - Adequately and effectively monitored by the Committee; - Tracked and reported to competent NRAs by Parties in compliance with article 80 of the CACM Regulation.
Applicable law	Belgian law
Dispute resolution	<ul style="list-style-type: none"> - Amicable settlement by referring the matter in Dispute to the Committee established by the INCA; - In the event of failure, the Committee shall solicit ACER for a non-binding opinion on the Dispute and; - At last resort, arbitration under the ICC Rules of Arbitration in Brussels.
Intellectual Property Rights	All works, preparations, creations, studies, etc. jointly elaborated by the Parties or by a subset of them within the Scope of the INCA shall become the joint property of the Parties or of the relevant subset of them as they are developed, at no additional cost or remuneration.
Confidentiality	No right to disclosure except in exceptional cases and to internal and external representatives.
Liability	In the event of a breach by a Party caused by gross misconduct or negligence, affected Parties are in aggregate entitled to claim compensation or indemnification within the cap 100.000 € per calendar year for all incurred direct losses, damages, charges, fees or expenses.

10 ANNEX 2 – Summary of DA Contracts

10.1 Summary of the draft NEMO DA Operational Agreement

1. Purpose

The NEMO DA Operational Agreement (“**NEMO DAOA**”) shall be entered into by all DA Operational NEMOs, including Serviced NEMOs. Entering into the NEMO DAOA is a precondition for being an Operational NEMO.

The purpose of the NEMO DAOA is to set forth the main principles of cooperation between Operational NEMOs in respect of DA MCO Function for Single Day Ahead Coupling, and the terms and conditions under which the parties will:

- Design, test and request changes to the DA MCO Function operational assets (including the PCR assets, subject to the PCR Co-ownership Agreement); and,
- Secure performance and operation of the DA MCO Function

The NEMO designation and the signature of the ANCA will be conditions for becoming a Party to the NEMO DAOA.

2. General principles

- Participation in Single Day Ahead Coupling is based on the following options. An Operational NEMO may participate as:
 - a Coordinator/Backup Coordinator/Operator;
 - only an Operator; or,
 - a Serviced NEMO.
- As a consequence of the fundamental principle of subsidiarity and the agreed decentralised approach: (i) the operation and results of a NEMO’s own trading platform and of the common NEMO DAOA market coupling systems remain the individual responsibility of each NEMO (ii) necessary arrangements with TSOs, NRAs and third parties to have cross-border capacities made available and to ensure the related cross-border shipping are the local responsibilities of NEMOs.
- Congestion revenue shall be reattributed to TSOs or to NRAs in accordance to applicable legal provisions.
- The Parties agree to evaluate the performance of the NEMOs DAOA at least every two years.
- Delegation is possible by one NEMO to another NEMO of MCO Functions in accordance with the MCO Plan and article 81 of the CACM Regulation.

3. Cooperation in respect of PCR Assets and Individual Assets

- The Parties to the NEMO DAOA jointly make proposals on the design and development of the PCR Assets that are effectively developed and maintained by the PCR Co-Owners under the PCR Co-ownership Agreement.

- The PCR Assets, developed and maintained by the PCR Co-owners, are provided “as is” without any warranty of fitness for any particular purpose.
- Any proposal of changes to the PCR Assets shall be subject to the NEMO DAOA change control procedures.
- The budget/costs and scope of any proposal of changes to the PCR Assets required for the SDAC is agreed by the parties to the PCR Co-ownership Agreement and approved by the All NEMO Committee.
- The PCR Assets (the hardware excluded) shall only be put in operation after fulfilment of the acceptance criteria regarding testing and simulation set by the DA Operational Committee of the NEMO DAOA.

4. Daily operation

- The designated Coordinator coordinates for a given day and supervises the operation of the Single DA Coupling MCO Function operations. The Coordinator and Backup Coordinator will daily perform simultaneously these operations in accordance with the NEMO DAOA Operational Manual. Operators have the right to perform the Single DA Coupling price calculation operations in shadow mode.
- Each Party for whom Single DA Coupling operations is Operational provides, if applicable and not assigned to another Party: (i) the network features from the relevant TSOs to take into account for market coupling and (ii) the anonymous and aggregated order books per Bidding Zone related to the orders market participants have submitted on its trading platforms.
- The Market Coupling Results calculated by the Coordinator shall always prevail once accepted by each Operator (including the Coordinator itself and the Backup coordinator). However, each party acting as Operator has the right to accept or reject the Market Coupling Results according to the NEMO DAOA Operational Manual. No reaction from a Party is considered as a deemed acceptance of the Market Coupling Results. Market Coupling Results cannot be published prior to an agreed time in the Procedures. Each Operator, Coordinator or Backup Coordinator has the right to reject the Market Coupling Results and decouple in compliance with the agreed procedures, but this should be a last resort solution.
- Decoupling in compliance with the agreed procedures is not considered a default nor a contractual breach by the parties to the NEMO DAOA. Such decoupling is an agreed backup procedure and as a consequence it does not lead in itself to any indemnification obligation for damages incurred by the decoupling.
- No Party may undertake to any third party that the SDAC is conducted under an obligation of result.
- In case of an incident, the Coordinator shall convene a call with the Backup Coordinator and Operators to jointly take a decision to solve the incident in accordance with the procedures in the NEMO DAOA Operational Manual. Such emergency calls shall be recorded.
- If the Coordinator fails to perform, the Backup Coordinator takes over the Coordinator role. Parties can decide to suspend a Party as Coordinator/Backup Coordinator.

- Each Party that is directly performing the Operator role shall participate as Coordinator/Backup Coordinator on an equal shared number of days and on a rotating basis provided that the technical conditions established in the NEMO DAOA and in the Operational Manual for acting as Coordinator and Backup Coordinator are fulfilled.
- A Party acting as a Coordinator/Backup Coordinator will be remunerated as a Common Cost.
- The NEMO DAOA Operational Manual will establish the full operational processes and procedures.

5. Adherence

- Adherence to NEMO DAOA by a NEMO is subject to:
 - written evidence of its designation as NEMO;
 - signature of the ANCA.
- Costs incurred by other parties due to the accession/geographic extension of the SDAC shall be recoverable from the adhering NEMO.

6. Confidentiality and communication to third parties

- All information under this Agreement (including Market Data of the Parties) is Confidential Information unless otherwise specified. Market Data provided by NEMOs to the MCO, market prices and matched orders remain the exclusive property of the providing NEMO (or as otherwise established under relevant national regulation).
- NEMOs are not entitled to access or analyse Market Data of other NEMOs except for the strict purpose of operational or performance management or development where this is undertaken as part of jointly controlled process under the Steering Committee.
- NEMOs may use the Market Data of other NEMOs for the purposes of performing simulations on their own markets provided that this does not prejudice competition between NEMOs. NEMOs may publish the results of their simulations in terms of prices and net positions of their own markets.
- Taking into account confidentiality, Parties shall be free to express written or oral positions or opinions about all NEMO DAOA related matters in their own name, provided they do not prejudice or negatively affect the collective and/or individual interests or the reputation of the other Parties.
- Commonly agreed communication after an incident in coordinated matching however each Party being liable for its own order book, and is, as such free to communicate with its clients/customers provided that such communication does not impair the commonly agreed position and uses as much as possible the commonly agreed communication.

7. Liability

- Since the Coordinator, the Backup Coordinator and Operator(s) (i) have access at the same time to the required information to assess due performance of Single DA Coupling MCO Function

operations and have the possibility to intervene to ensure due performance of those operations, and (ii) have the possibility to run or check in shadow mode in real time the matching algorithm, and (iii) have the right to Decouple itself and/or Decouple its Serviced NEMOs; all Operational NEMOs waive any right or remedy against each other for any financial compensation for damages incurred by a wrongful act or omission under the Coordinator, Backup Coordinator or Operator role.

- Overall liability under this Agreement including hold harmless is capped per calendar year for all damages with certain exceptions.
- No joint and several liability.
- Waiver of any rights to request financial compensation for damages related to the production of Market Coupling Results such as, but not limited to, damages deriving from:
 - a wrongful act or omission under the Coordinator, Backup Coordinator or Operator role;
 - any error or malfunctioning of PCR Assets;
 - the absence of Market Coupling Results;
 - decoupling;
 - any decision taken within the Incident Committee.

8. Entry into force, Term and Termination

- The Agreement shall enter into force when signed by all the Parties for an indefinite period.
- Full termination of the Agreement is possible by mutual agreement only.
- A Party may exit from the Agreement in the following circumstances:
 - With 12 months' notice without any motivation being due;
 - With 6 months' notice in case of failure to reach an agreement motivated by a change due to regulatory reasons.
- The parties may terminate this Agreement in respect of a party:
 - In the event of bankruptcy, material breach of this Agreement and subsequent non-compliance, cease of business etc;
 - in the event the party is no longer designated as a NEMO for day-ahead.
- The exiting Party shall use its best efforts to mitigate the damage of the termination and shall assist and cooperate in measures of continuity for the remaining parties.

9. Governing law and Dispute resolution

- Governing law: Belgian law.
- Amicable settlement by the CEOs (within 1 month).
- If the matter falls under the scope of competence of the All NEMO Committee, it may be escalated to the all NEMO Committee.

- In other cases:
 - amicable settlement by the parties;
 - ACER nonbinding opinion;
 - mediation;
 - ICC arbitration.

10. Key points of the PCR Co-ownership Agreement

- The PCR Co-Ownership Agreement governs the rights pertaining to the PCR Assets. The PCR Co-Ownership Agreement is an Agreement open to all NEMOs, subject to payment of equal share of the historical costs as the existing PCR Co-Owners, without it being a condition for NEMO DAOA membership.
- All PCR Assets and modifications to the PCR Assets are co-owned by the parties to the PCR Co-Ownership Agreement.
- If one or a subset of NEMOs asks for a specific functionality to be added in to given PCR Assets which other NEMOs for the time being do not wish to use but which is compatible with the CACM/MCO Plan requirements, the other NEMOs will allow for its implementation provided that the costs are borne by the requesting NEMO(s) and that there are no adverse impacts in the common functionalities, including for the price calculation algorithm. This functionality shall be co-owned by all PCR Co-owners. A NEMO wishing to use this functionality at a later stage will then have to also pay to the original requesting NEMO(s) its own share in the development costs, previously duly accounted.






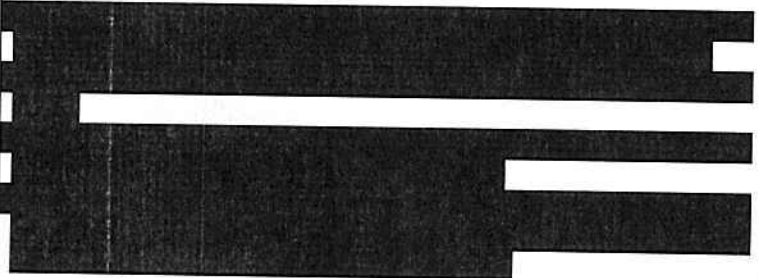
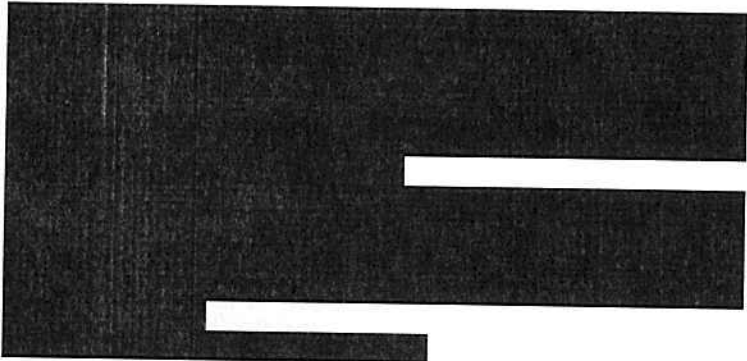
10.2 Summary of contract with DA MCO Function service provider – PMB Service Provider

Terms of the contract	
Whereas	[REDACTED]
Object	[REDACTED]
Parties	[REDACTED]
Date of signature	[REDACTED]
Obligations of the parties	[REDACTED]
Remuneration	[REDACTED]
Date of entry into force and termination	[REDACTED]

	[REDACTED]
Applicable law	[REDACTED]
Dispute resolution	[REDACTED]
IPR	[REDACTED]
Confidentiality	[REDACTED]
Liability	[REDACTED]
Incident Management Services	[REDACTED]

10.3 Summary of contract with DA MCO Function service provider – Algorithm Service Provider

Terms of the contract	
Whereas	[Redacted]
Object	[Redacted]
Parties	[Redacted]
Date of signature	[Redacted]
Obligations of the parties	[Redacted]
Remuneration	[Redacted]

Date of entry into force and termination	
Applicable law	
Dispute resolution	
IPR	
Confidentiality	
Liability	
Incident Management Services	

10.4 Summary of contract with DA MCO Function service provider – Communication Network Supplier

Terms of the contract	
Whereas	[REDACTED]
Object	[REDACTED]
Parties	[REDACTED]
Date of signature	[REDACTED]
Obligations of the parties	[REDACTED]
Price, conditions of payment	[REDACTED]

Date of entry into force and termination	[REDACTED]
Applicable law	[REDACTED]
Dispute resolution	[REDACTED]
IPR	[REDACTED]
Confidentiality	[REDACTED]
Liability	[REDACTED]
Incident Management	[REDACTED]

11 ANNEX 3 – Summary of ID Contracts

11.1 Summary of the draft NEMO ID Operational Agreement

1. Purpose

- The ID Operational Agreement is an agreement to be entered into by all NEMO's performing the ID MCO function.
- It sets forth the main principles of cooperation in respect of ID MCO Function for Single Intraday Coupling (cross border implicit intraday continuous trading to be implemented in EU countries and electrically connected countries in accordance with the Agreement, hereafter XBID) setting the terms and conditions under which the Parties will:
 - Design, test and request changes to the ID MCO Function IT assets, and
 - Operate the ID MCO Function;
 - Connect their Trading Systems to the XBID System.
- The NEMO designation and the signature of the ANCA will be conditions for becoming a Party to the NEMO IDOA.
- The NEMO IDOA also regulates the relationship of the NEMOs:
 - with the common service providers; and
 - with the TSOs for the XBID Solution.

2. General principles

- The NEMO IDOA is open to any designated NEMO having signed the ANCA.
- Equal treatment amongst market participants, NEMOs, TSOs and their explicit participants.
- All parties to the NEMO IDOA shall enter into the relevant service agreements with the common service providers.
- The Parties agree to evaluate the performance of the NEMOs IDOA at least yearly.

3. Cooperation in respect of ID MCO Function Assets and Individual Assets

- The Parties jointly design the ID MCO Function Assets. Any changes to the ID MCO Function Assets are subject to the change control procedure, approval by the relevant Committee.
- Local trading systems are defined as Individual Assets. A Party may contract the development of specific functionalities of a trading system connected to the XBID System and developed by the XBID System Supplier provided that:
 - the XBID System Supplier has undertaken appropriate commitments to ensure that (a) the granting of rights by the XBID System Supplier shall in no way prevent the other NEMOs to be granted at least the same rights in the specific functionalities; and (b) NEMOs who have procured or wish to procure a trading system connected to the XBID System and developed by the XBID System Supplier are treated in a fair and non-discriminatory manner by the XBID System Supplier in respect of the costs charged for and the terms and modalities applicable to any granted rights.
 - The possibility is guaranteed towards other parties to convert upon agreement of all parties such rights into a joint license or joint ownership.

- The costs incurred in the context of the design, development, testing, implementation and maintenance of the ID MCO Function Assets shall be approved by the relevant committee.
 - The ID MCO Function systems shall only be put in operation after fulfilment of the acceptance criteria regarding testing and simulation.
- 4. Permanent operation of the XBID System**
- The Agreement shall at least include detailed procedures for:
 - stopping and restarting the XBID System, including for connection of Local Trading Solutions; and
 - Incident Committee (comprising Operational NEMOs and the XBID System Supplier).
- 5. Adherence**
- Any NEMO designated for Intraday having signed the ANCA is entitled to adhere subject to participation in the historical costs.
 - NEMOs shall have an observer status (without any voting right related to operation decision) until operations are allowed by the other parties according to objective technical parameters.
- 6. Governance**
- The Parties shall setup governance structure in order to discuss and decide on any matter related to the Agreement. Changes to the Agreement can only be done by the legal representatives of the Parties following approval by unanimous decision.
 - Decisions will be taken by unanimity. In case of disagreement on certain issues, an escalation procedure to the All NEMO Committee is foreseen.
- 7. Confidentiality and communication to third parties**
- All information under this Agreement (including Market Data of the Parties) is Confidential Information unless otherwise specified. Market Data provided by NEMOs to the ID MCO Function, market prices and matched orders remain the exclusive property of the providing NEMO (or as otherwise established under relevant national regulation).
 - NEMOs are not entitled to access or analyse Market Data of other NEMOs except for the strict purpose of operational or performance management or development where this is undertaken as part of jointly controlled process under the relevant committee.
 - Taking into account confidentiality, Parties shall be free to express written or oral positions or opinions about all IDOA related matters in their own name, provided they do not prejudice or negatively affect the collective and/or individual interests or the reputation of the other Parties.
 - NEMOs shall commonly agree communication after an incident in coordinated matching. However each Party is liable for its own order book, and is, as such free to communicate with its clients/customers provided that such communication does not impair the commonly agreed position and uses as much as possible the commonly agreed communication.
- 8. Liability**
- No joint and several liability;
 - Incidental, indirect or consequential damages are excluded;

- The total indemnification obligation of a party shall be limited, with certain exceptions for third party claims, such as the claims raised by common service providers.

9. Entry into force, Term and Termination

- The Agreement shall enter into force when signed by all the Parties for an indefinite period;
- Full termination of the Agreement is possible by mutual agreement only;
- A Party may exit from the Agreement in the following circumstances:
 - With 8 months' notice without any motivation being due;
 - With 6 months' notice in case of failure to reach an agreement motivated by a change due to regulatory reasons.
- The parties may terminate this agreement in respect of a party:
 - In the event of such party bankruptcy, material breach of this Agreement and subsequent non-compliance, cease of business etc;
 - In the event of a party is no longer designated as a NEMO for Intraday.
- The exiting Party shall use its best efforts to mitigate the damage of the termination and shall assist and cooperate in measures of continuity for the remaining parties.

10. Governing law and Dispute resolution

- Governing law: Belgian law;
- For contractual disputes, a dispute resolution process will be established;
- Certain matters may be escalated to All NEMO Committee.

11.2 Summary of NEMO Cooperation Agreement – XBID PCA

Terms of the contract	
Whereas	In the light of the 2014 European Integrated Electricity Market Target, Parties intend to enter into an agreement with the ICT service provider previously selected for the development of the XBID system.
Object	<i>Determine the terms and conditions of their EU XBID PX cooperation for the further design, the development, the implementation and the operation of the XBID Solution in compliance with the XBID Model.</i>
Parties	APX POWER BV, BELPEX NV, APX Commodities Ltd, EPEX SPOT SE, GME SPA, NORD POOL AS, OMIE SA
Adherence	Adherence to the PCA is conditioned on support of the relevant TSO or NRA (this will evolve to being designated as a NEMO for Intraday) and participation in historical costs.
Date of signature	5 th June 2014
Obligations of the parties	<ul style="list-style-type: none"> - Parties commit to: <ul style="list-style-type: none"> o Jointly steer, prioritize and manage the design and development of the Joint PX Components and the performance of the Parties in compliance with the XBID Solution; o Ensure the development, implementation, operation and maintenance of the Joint PX Components in compliance with the XBID Solution; o Cooperate to couple their Own Intraday Continuous Market Places in accordance with the XBID Model and the XBID Solution; - Cooperate closely and actively, taking into account their mutual interests, with a view of the XBID Solution and exercise their rights and perform their obligations in good faith and transparently; - Best effort obligations; - Keep full independency and self-determination; - Non-discrimination regarding adherence ; - Compliance with Legal provisions; - Use of XBID Solution by a Party solely for the operation for the operation of its Own Intraday Continuous Market Places;

	<ul style="list-style-type: none"> - Use of exchanged information or material only within the framework and purpose of the EU XBID Cooperation; - Take appropriate measures and actions to promote the XBID Solution as the solution for the harmonized European cross border implicit intraday continuous trading.
Price, conditions of payment	Cost Sharing for Common Costs that are budgeted and approved by the SC or any other body designated by the SC. Share in accordance with the sharing key of costs incurred for the selection process, the design and development of the Joint PX Components
Date of entry into force and termination	Entry into force : date of signature by all Parties – 5th June 2014 Duration : Indefinite
Applicable law	Belgian law
Dispute resolution	System of Dispute Settlement Request: <ul style="list-style-type: none"> - conciliation with or without appointment of a DS chairman and; - in case amicable settlement not reached, solicit ACER for non-binding legal regulatory opinion; - in the event of failure, external independent mediator and; - at last resort, arbitration under the ICC Rules of Arbitration in Brussels.
IPR	<p>Joint PX Components</p> <ul style="list-style-type: none"> - Automatic co-ownership by all Parties of joint PX Components and the rights including IPR, title and interest in them as developed by one or more Parties or developed on their joint behalf. No right of use or third party use for Parties that have not paid the costs incurred for the development of such joint PX Component; - Grant of a License by a service provider must be entered into by all Parties; - Management and commercialization of rights (including licensing) requires the consent of all Parties; - Non-exclusive, non-sublicensable right to use, reproduce, distribute, commercialize and further develop subject to prior notification of other Parties to perform analysis, operate within the Anticipated Scope of the Cooperation in isolated mode without capacity allocation. For any other purpose, remuneration agreed upon by the Parties. <p>Local Trading System</p>

	<ul style="list-style-type: none"> - Joint license with a subset to all Parties of rights including IPR pertaining to the Optional Local trading system; - Rights to use, commercialize and sub-license granted under the license may be exercised independently by the Parties, does not require joint decision making; - Access, use, related costs, rights and obligations related to the license limited to the Parties that have contracted such license. Non participating Parties entitled to adhere to the Agreement; - Party contracting with the Service Provider for the development of specific functionalities for the Optional Trading System or for another Local Trading System connected to the XBID System and developed by the Service Provider is entitled to enter into a separate individual agreement as long as it does not prevent other PXs from being granted the same rights and treats the Parties in a non-discriminatory manner; - Possible for parties to convert to a joint license and joint ownership rights granted to a Party by the Service Provider (related to Optional Trading Solution), subject to payment by other Parties of their share in the costs.
Confidentiality	No right to disclosure except in exceptional cases and to internal and external representatives.
Liability	<p>Liability limited to loss that the Defaulting party foresaw or could be reasonably be expected to have foreseen at the time of conclusion of contractual obligation. Subject to a cap of 100k€, including in case of gross misconduct.</p> <p>Uncapped in case of fraud, intentional misconduct, delay or default in Payments.</p> <p>In case of breach of the IPR or Confidentiality obligations, lump sum+ 5k€ per non-defaulting Party.</p> <p>Hold harmless obligation and indemnify in case of third party claim: cap of 100k€ per year. Uncapped in case of a third party claim from a service provided jointly contracted by the parties or from a TSO. In respect of TSOs the foregoing provision shall, no longer apply as soon as the Parties and the TSOs have entered into an agreement governing their relationship during the Operational Phase.</p>

11.3 Summary of contract with ID MCO Function service provider – XBID System Supplier

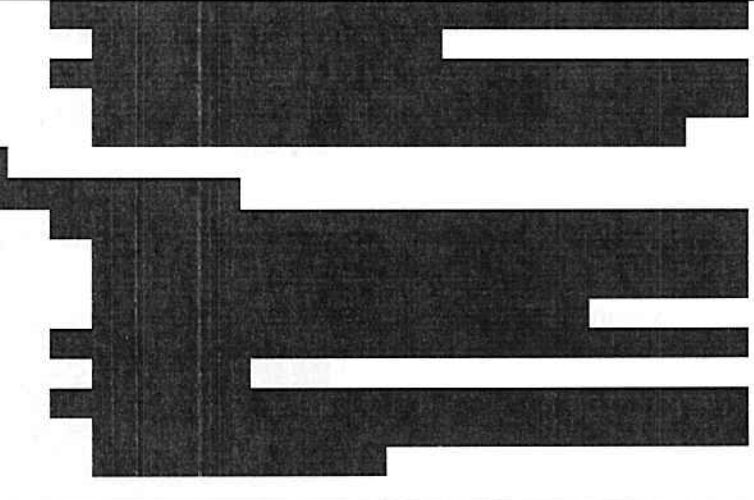
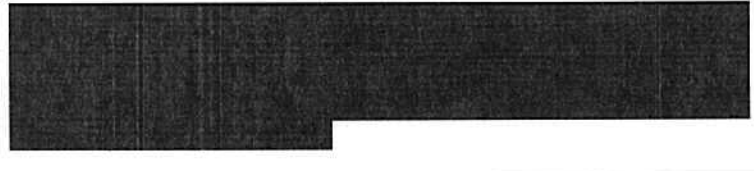
Terms of the contract	
Whereas	<div style="background-color: black; width: 100%; height: 100%; min-height: 150px;"></div>
Object	<div style="background-color: black; width: 100%; height: 100%; min-height: 80px;"></div>
Parties	<div style="background-color: black; width: 100%; height: 100%; min-height: 120px;"></div>
Date of signature	<div style="background-color: black; width: 100%; height: 100%; min-height: 60px;"></div>
Obligations of the Vendor	<div style="background-color: black; width: 100%; height: 100%; min-height: 60px;"></div>

	[REDACTED]
Remuneration	[REDACTED]
Date of entry into force and termination	[REDACTED]
Applicable law	[REDACTED]
Dispute resolution	[REDACTED]
IPR	[REDACTED]
Confidentiality	[REDACTED]
Liability	[REDACTED]
Incident Management Services	[REDACTED]

11.4 Summary of contract with ID MCO Function service provider – Communication Network Supplier

Terms of the contract	
Whereas	[Redacted]
Object	[Redacted]
Parties	[Redacted]

	[REDACTED]
Date of signature	[REDACTED]
Obligations of the supplier	[REDACTED]
Price, conditions of payment	[REDACTED]
Date of entry into force and termination	[REDACTED]
Applicable law	[REDACTED]
Dispute resolution	[REDACTED]
IPR	[REDACTED]
Confidentiality	[REDACTED]
Liability	[REDACTED]

	 The content of this cell is completely redacted with black bars.
Incident Management	 The content of this cell is completely redacted with black bars.