

Multiple NEMO Arrangements

July 2017

Public



Introduction

The EU regulation 2015/1222 of the commission on the 24th July 2015 established a guideline for allocating cross-zonal capacity and congestion management, which entered into force on the 14th August 2015. It sets the modalities for designation of electricity market operators participating in day ahead or intraday market coupling. Such Nominated Electricity Market Operators (NEMO) are now designated in each country by the relevant authority. The CACM regulation allows every operator which hasn't been defined as a national legal monopoly to be active in other member states.

A number of potential models exist which could be used for the implementation of a multi-NEMO approach in I-SEM. Initial analysis highlights the wide variety of possible design options for multi-NEMO arrangements – timing, hub arrangements, shipping arrangements etc. Implementing any of them in a small market will clearly involve complexity and cost. The challenge of introducing two further geographic areas with dual currency arrangements into the Euphemia algorithm also needs to be carefully considered and potentially integrated with the current Price Coupling of Regions (PCR) initiatives in relation to Euphemia enhancements to support multi-NEMO arrangements.

There are valuable experiences to be gained by reviewing arrangements in other European member states. There a number of potential options in Europe being used or in the process of implementation for multiple NEMOs. It is likely that there are also other possible combinations.

The scope of this paper is to highlight the arrangements and methodologies that other TSO's across Europe have adopted. Its purpose is to provide a knowledge base of practical experience in relation to implementation of Multi-NEMO Arrangements (MNA) to provide an informed basis for engagement with stakeholders on the issues, options and potential models.

NORDIC TSO's Arrangements

Day-ahead

Nordic TSOs expect that the MRC will evolve into the future European single day-ahead coupling solution. Based on this assumption the existing setup, procedures, technical solutions etc. will be reused (as much as possible) as basis for the day-ahead arrangement for more NEMOs in the Nordic region. This assumption is in line with the CACM Regulation CACM Regulation preamble 14 and CACM Regulation article 36(4)). A prerequisite for NEMOs in the day-ahead market in the Nordic region is therefore to be full members of MRC and to implement the MRC procedures. This requirement is already today fulfilled by both Nord Pool and EPEX SPOT. The current MRC procedures will be updated when the plan to set up and perform the MCO function by the NEMOs has been approved and implemented as required by CACM 11 article 7(3). The TSOs and the NEMOs are then required to implement the updated procedures. The Nordic procedures for pre- and post-coupling will be updated during the implementation phase to accommodate for the new arrangement in accordance with this proposal. This will be done in cooperation with the relevant NEMOs and CCPs.

Multiple NEMOs in a bidding zone

To enable several NEMOs to provide single day-ahead market coupling services within a bidding zone, the bidding zones are divided into hubs. This approach is used since there is currently no solution in place for merging order books within a bidding zone. There will be one hub per NEMO per bidding zone and each hub will be connected to the order book of the concerned NEMO. Between the different hubs within the bidding zone and between each hub and its bidding zone there are in effect infinite capacities, i.e. there are no limitations on how many transactions that can take place between the different hubs/order books within the bidding zone. Should more NEMOs wish to provide their services at a later stage, the relevant bidding zones will be divided into further hubs to correspond to number of NEMOs.

Pre-coupling

The pre-coupling phase starts with the calculation of CZCs and possible ACs and ends for the TSOs when the CZCs and the ACs have been provided by the Coordinated Capacity Calculator (CCC) and ends for the NEMOs, when their order books (OBKs) have been provided to the MCO function.

Cross Zonal Capacity and allocation constraints

From the time where the CCC has been established according to the CACM Regulation article 27(2), the CCC will be responsible for providing the internal Nordic CZCs and ACs to the relevant NEMOs in accordance with the CACM Regulation article 46(1) to ensure the publication of CZCs and ACs. For capacity allocation in accordance with article 30(3) the CCC will provide the data to

a platform from which all relevant NEMOs can collect the CZCs and ACs. During implementation of this proposal, the details of such a platform will be further defined. For the time being the platform is to be seen as a place where data is available and at the same time ensures equal access to this data for all relevant NEMOs. By having such a platform the risk of CZCs being provided to the wrong recipients are lowered. According to the CACM Regulation article 7(2) the relevant NEMOs are responsible for processing the provided CZCs and ACs as part of the MCO functions to be carried out jointly with other NEMOs. The relevant NEMOs are responsible for the necessary arrangements between them in order to process the information from the platform. Format and timing for sending of the CZCs and ACs to the MCO function must follow the corresponding MRC and/or NEMO procedures. It is necessary for the CCC to be able to validate that the correct CZCs and ACs are used as input for the calculations by the MCO. The MCO is therefore to provide information back to the platform, which ensures that the CCC can make this validation. The CCC should according to article 27 (2) of the CACM Regulation be established by mid-January 2018. If this deadline is moved as a consequence of possible delayed NRA decisions on e.g. the Capacity Calculation Regions, an interim solution will be implemented. Such an interim solution will ensure that all relevant NEMOs are provided the internal Nordic CZC and ACs at the same time. The current TSO pre-coupling system will be used to provide the CZCs on the specific Nordic borders. The Nordic TSOs will, in the absence of the CCC, define the CZCs across the bidding zones borders.

Clearing and settlement

The shipper is responsible for providing cross-border nominations and scheduled exchanges to the TSOs. This shall be done in due time in accordance with defined processes and procedures in order for the TSOs to start planning for the next time frame (intraday). In addition, the shipping agent shall collect the congestion income and distribute it to the TSOs. There are economies of scale in using only one common shipping agent in the Nordic countries compared to a solution with different shipping agents on all Nordic borders. In the common shipping agent approach, there is only one shipping IT-infrastructure to be set up by the TSOs and by the common shipper instead of developing and maintaining several parallel systems as the case would be if there were different shipping agents on all borders. The number of shipping agents may also have an impact on the collateral requirements. Using one common shipping agent would reduce the need of collateral contribution from the Nordic TSOs. In general having one common shipping agent is expected to ensure a more cost-efficient solution, which as a result will not affect the tariffs of the TSOs in a negative way. From a TSO operational point of view there are also advantages of having one common shipping agent, especially when incidents occur and normal procedures cannot be followed. In particular, this is important for the intraday timeframe when there is limited time to be able to manage incidents before the operational hour. Hence the common shipping agent is also preferable from an operational security perspective. Lastly, having one common shipper is cost efficient from a contractual perspective as only one contract will be needed.

Fall-back

When the proposal for fall-back has been developed, approved and implemented according to the requirements of the CACM Regulation article 44, this will be included into the arrangement for multiple NEMOs in the Nordic region. It is to be ensured during the process that the proposal for fall-back will incorporate a solution where more NEMOs are equally involved and equally treated while at the same time respecting the need for keeping the Nordic region internally coupled also during a fall-back situation.

Legal agreements

The current Nordic Day Ahead Operations Agreement (Nordic DAOA) will be redrafted to accommodate for the new arrangement with more NEMOs. The new Nordic DAOA will define roles and responsibilities of the Nordic TSOs and of the NEMOs operating in the Nordic market. The redrafting is the responsibility of the Nordic DAOA Steering Committee but the relevant NEMOs will be consulted. Apart from the new Nordic DAOA, it is expected that further agreements will be needed, such as e.g. a shipping agreement. It remains to be seen what the final contractual setup will be.

System Price

Because the majority of the standard financial contracts traded in the Nordic region use the system price as reference price, it is important to ensure that a system price is also calculated with more NEMOs in the Nordic region. A specific Nordic TSO requirement is therefore that all NEMOs offering services in the Nordic bidding zones shall allow their order books to be used for calculating and publishing this additional system price (called reference price in the algorithm requirements) for the Nordic region. The calculation and publication will not be exclusive to one NEMO.

Change of Bidding Zone configuration

It is important for the Nordic TSOs that a change in bidding zone configuration can be implemented within the same deadlines as are currently enforced. A specific Nordic TSO requirement is therefore that each NEMO offering services in the Nordic bidding zones shall be able to implement a change of bidding zone configuration in its procedures no later 4 weeks after a TSO requests a change. The change of bidding zone configuration shall be done in accordance with the CACM Regulation article 32 and 33.

Intraday Arrangements

XBID will evolve into the future European intraday solution. Based on this assumption the setup, procedures, technical solutions etc. being developed in the XBID project will be reused (as much as possible) as basis for the intraday arrangement for more NEMOs in the Nordic region. This assumption is in line with the CACM Regulation.

Pre-coupling

XBID Nordic TSOs will, from XBID go live, provide the daily CZCs on the internal Nordic bidding zone borders to the Capacity Management Module (CMM). The CMM is defined in Article 2 (40) of the CACM Regulation as a system which contains up-to-date information on available cross-zonal capacity for the purpose of allocating intraday cross-zonal capacity. The CMM is then makes the capacities available for the NEMOs in each bidding zone. This operation is independent of number of NEMOs within a bidding zone.

The Shared Order Book (SOB) allows for the simultaneously matching of all orders received by the NEMOs active in the single intraday coupling solution, regardless of how many NEMOs are active within a single bidding zone. The shipping module (SM) contains information on cross zonal flows on each bidding zone border to be sent to the assigned shipper. Some TSOs can also receive this information from the CMM. When the CCC has been established according to the CACM Regulation article 27.2, the CCC will make sure that the NEMOs will have the Nordic cross-zonal capacities and allocation constraints available at the same time and at the latest 15 min before gate opening as stated in the CACM Regulation article 58. If the establishment of the CCC is delayed the same situation applies as for day-ahead where the current TSO pre-coupling system will be used to provide data.

Post-coupling

The TSOs will require information from the XBID system on net scheduled flow per bidding zone border per MTU. The TSOs need to agree on a model to handle the shipping between the bidding zones, common Nordic shipping agent is the proposed solution. The arguments for a common Nordic shipping agent are the same for day-ahead as for intraday, which is why the Nordic TSOs proposed that the solution for intraday and day-ahead should be aligned to have one common Nordic shipping agent for both day-ahead and intraday. Specifically for intraday one further reason is that the XBID Shipping Module would most likely be much more complex and more expensive if it would have to take multiple shippers per bidding zone border into account.

Clearing and settlement

The same principles apply as for day-ahead.

Financial Arrangements

As a general principle, all parties, NEMOs and TSOs, shall cover their own costs which relate to adapting current systems to the arrangements contained in this proposal. In regards to costs incurred by the TSOs for establishing the platform as needed for the pre-coupling arrangement for the day-ahead market, the NEMOs shall cover all these costs. These costs shall be shared equally by relevant NEMOs. Should more NEMOs join at a later stage they shall also cover a share of the costs. In that case the NEMOs that have already paid a share will receive a partial

refund. Services of the common shipping agent shall be remunerated by the TSOs based on contract. Remuneration of the shipping agent by CCPs is outside the scope of this arrangement. Moreover, costs for shipping between CCPs within the bidding zone are not part of this arrangement and shall not be recovered by TSOs as these costs do not relate to capacity allocation.

GB TSO'S Arrangements

Day-ahead

GB TSOs' Day Ahead proposal for arrangements concerning more than one Nominated Electricity Market Operator (NEMO) in the GB Bidding Zone in accordance with Article 45 of the Commission Regulation (EU) 2015/1222 of 24 July 2015 establishing a Guideline on Capacity Allocation and Congestion Management.

Multiple NEMOs in a bidding zone

The NEMO's will all cooperate with each other and with other NEMOs participating in the single day ahead coupling process. If at any time an additional person becomes a relevant NEMO, that person shall accede to the GB Framework Agreement or any successor or replacement agreement. In order to facilitate the accession of a new relevant NEMO to the GB Agreements (which for the avoidance of doubt includes the GB Framework Agreement and the GB Agreed Procedures) the new relevant NEMO shall, prior to acceding to the GB Agreements, be afforded access to such agreements (and associated procedures) in their entirety provided that it enters into a confidentiality agreement with the existing parties.

Cross Zonal Capacity and allocation constraints

Each Interconnector TSO in the GB jurisdiction will enter into agreement from time to time with a relevant NEMO, or any person designated as a NEMO by the national regulatory authority in any other Member State to perform day ahead trading activities in an interconnected bidding zone, in relation to each of its relevant interconnectors for the purposes of one or more of the following:

- a) submitting to the price coupling algorithm the day ahead cross zonal capacity and allocation constraints in accordance with Article 46 of the CACM Regulation;
- b) delivering the single day ahead coupling results to the applicable Interconnector TSO in accordance with Article 48(1) of the CACM Regulation
- c) acknowledgement of the NEMO task of counter-party for the exchange of energy between bidding zones in respect of the single day ahead coupling process in accordance with Article 68(3) of the CACM Regulation;
- d) undertaking the activity of shipping in respect of the single day ahead coupling process in accordance with Article 68 of the CACM Regulation; and
- e) (save as otherwise agreed with the applicable Interconnector TSO) collecting all congestion incomes arising from the single day ahead coupling process and transferring such incomes to the applicable Interconnector TSO in accordance with Article 68(7) and 68(8) of the CACM Regulation.

Clearing and settlement

Under the CACM Regulation Article 7(1g) GB NEMOs shall be responsible for acting as central counter parties for clearing and settlement for the exchange of energy between bidding zones. The GB proposal does not contain a proposal on cross-border clearing and settlement arrangements that is subject to approval by the Authority under Article 77(2) of the CACM Regulation, such arrangements to be proposed separately by the relevant NEMOs.

Fall-back

Fall-back procedures shall be initiated in accordance with Article 50 of the CACM Regulation. In the event of failure of the day ahead price coupling algorithm to complete single day ahead coupling within the necessary timescales there are a number of decoupling scenarios, such as full decoupling (where there are no allocation results for any bidding zone border), or partial decoupling (where only some bidding zone borders have a capacity allocation result).

The processes to be followed in the event of decoupling of the GB Bidding Zone from neighbouring bidding zones shall be set out in the GB Agreed Procedures, which relevant NEMOs shall publish on their respective websites.

System Price

The relevant NEMO's shall ensure that at all times that the price coupling algorithm reflects all Intra-GB links, sufficient volumes of day ahead Intra-GB capacity are submitted to the price coupling algorithm in respect of any Intra-GB link each day to avoid any constrain on the matching of relevant NEMO's order books and validate the price coupling algorithm results associated with the Intra- GB links.

Bidding Zone configuration

Relevant bidding zone border means a border between the GB bidding zone and an interconnected bidding zone. Interconnected bidding zone in relation to the GB bidding zone, means another bidding zone participating in single day ahead coupling which is interconnected with the GB bidding zone by an interconnector.

Intraday Arrangements

GB TSOs' intraday proposal for arrangements concerning more than one Nominated Electricity Market Operator (NEMO) in the GB Bidding Zone in accordance with Article 57 of the Commission Regulation (EU) 2015/1222 of 24 July 2015 establishing a Guideline on Capacity Allocation and Congestion Management.

Decoupling Arrangements

In the event of unavailability of the single intraday coupling algorithm, either on a pan-XBID scale or on certain bidding zone borders, the processes to be followed in relation to GB operations shall be set out in the GB Intraday Agreed Procedures which relevant NEMOs shall publish on their respective websites.

Additional NEMOs

The relevant NEMOs shall cooperate with each other and with other NEMOs participating in the single intraday coupling process to accommodate any person becoming a relevant NEMO in relation to:

- a) the development and operation of the continuous trading matching algorithm to ensure that the requirements of Article 4(1) continue to be met; and
- b) the establishment of efficient clearing and settlement arrangements in respect of all Intra-GB Links.

If at any time an additional person becomes a relevant NEMO, that person shall accede to such of the agreements referred to in Article 6(1) as may be relevant. In order to facilitate the accession of a new NEMO to such agreements the new NEMO shall, prior to acceding to such agreements, be afforded access to such agreements (and associated procedures) in their entirety provided that it enters into a confidentiality agreement with the existing parties.

The relevant NEMOs and the Interconnector TSOs that are each party to the GB Intraday Agreed Procedures shall cooperate with each other in amending the GB Agreed Procedures as necessary to accommodate an additional relevant NEMO.

Financial Arrangements

No costs relating to the performance by NEMOs of their regulated activities within the single intraday coupling process shall be borne by Interconnector TSOs unless and until required by a binding decision of the Authority.

French TSO's Arrangements

Day-ahead

With regard to the day-ahead timeframe, the technical solution proposed by RTE is based on the price coupling of regions project (hereinafter referred to as "PCR") which currently organises the coupling between 19 Member States and the scope of which should be extended to all Member States of the European Union as part of the CACM Regulation. Within the PCR project, an optimisation algorithm called Euphemia allows interconnection capacity to be allocated implicitly and the net position as well as the spot price of each bidding zone to be calculated. To date, PCR does not provide that several NEMOs active within the same bidding zone can each send their order books. The technical solution proposed by RTE therefore provides that the day-ahead coupling algorithm is to be modified to allow each French NEMO to send its order book. The algorithm should also consider that there is no limitation on interconnection capacity between the French NEMOs in order to calculate a single net position and a single price for the French bidding zone. RTE proposes to modify and use PCR to allow several NEMOs to share their order books with each other without limitation and therefore all be active in France. Because of a PCR technical constraint, the data relating to interconnection capacities cannot be sent to PCR directly by a TSO but only through a NEMO. RTE proposes that the data exchanges required between RTE and PCR are done through a single access point per capacity calculation region which will be used in turn by the NEMOs. CRE considers that this alternating transfer of information means that the various NEMOs will be treated fairly. CRE is in favour of the technical solution for the day-ahead timeframe as proposed by RTE.

Reference Spot Price

RTE's Reference Spot Price for France is equal to the day-ahead coupling price for the French bidding zone, unless there is total or partial decoupling. In this case, it will be equal to the average of the price of each NEMO weighted by its volumes of buys and sells. RTE will be responsible for determining and publishing the Reference Spot Price in France. CRE is in favour of the determination and publication of the Reference Spot Price as proposed by RTE.

Setting up a back-up coupling for France

The technical solution proposed by RTE does not provide for the setting up of a back-up coupling for France between the NEMOs in the event of a total decoupling of France or of one of the NEMOs operating on the French market. In this case, the decoupled NEMO(s) will be isolated and prices will be determined by each NEMO over its trading hub. CRE considers that the absence of back-up coupling for France is likely to constitute a barrier to entry for a new NEMO, as less offers would be submitted to it and it would be more exposed to

price spikes in the event of decoupling. CRE nevertheless considers, as RTE indicates in its proposal, that this back-up coupling between NEMOs exceeds the framework of the technical solution to allow several NEMOs to operate in France as proposed by RTE. CRE considers that this discussion should be conducted by all the NEMOs at European level as part of the drawing up of the back-up methodology by all the NEMOs as provided for by article 36 of the CACM Regulation.

Intraday Arrangements

With regard to the intraday timeframe, the technical solution proposed by RTE is based on the project to create an integrated cross-border intra-day market (hereinafter referred to as "XBID", which stands for Cross-Border Intraday Market Project) which is currently being developed at European level and should enable continuous and implicit allocation of inter-connection capacities. XBID particularly allows the orders submitted by market players to the NEMOs from one bidding zone to be matched continuously with the orders submitted to the NEMOs from another bidding zone. It is provided that, in XBID, all NEMOs use the same shared order book which would directly gather all the orders transmitted by market players. The task of sharing order books will therefore be carried out by XBID3 and the algorithm should guarantee the same access to capacity for all the French NEMOs. RTE proposes to use XBID to allow several NEMOs to share their order books with each other without limitation in France. CRE is in favour of the technical solution at the intraday timeframe as proposed by RTE.

Cross-border energy exchanges

After the coupling procedures are completed, the NEMOs are responsible for nominating exchanges of energy between France and neighbouring bidding zones. These exchanges give rise to settlements which are both physical and financial. Exchanges of energy for each French NEMO will be determined through scheduled exchanges resulting from coupling. The methodologies for calculating the scheduled exchanges resulting from day-ahead and intraday coupling will be submitted by all TSOs to all regulators concerned sixteen months at the latest after the CACM comes into force, namely by 14 December 2016, pursuant to the provisions of articles 43 and 56 of the CACM Regulation. RTE proposes that, on condition that the methodologies for calculating scheduled exchanges allow the exchanges to be determined at a NEMO trading hub level, each NEMO can carry out these exchanges over all borders, both for imports and exports. CRE considers that the fact that each NEMO is permitted to carry out exchanges of energy over its trading hub guarantees a fair treatment of the NEMOs.

Germany/Austria/Luxembourg TSO's Arrangements

Day-ahead

The TSOs analysed two scenarios for the data exchange for pre and post coupling arrangements. The approach that was agreed to be proposed has a centralised approach where the calculation of net positions for each NEMO of DE/AT/LU bidding zone is performed on PCR level. The interface between TSOs and MCO will be provided by (at least) one NEMO in the framework of PCR. The second option looked at a decentralised approach where the calculations of net positions for each NEMO of the bidding zones are performed within the local MNA (outside of PCR).

On a PCR side the approach can be easily implemented and the solution can be re-used for all bidding zones where multiple NEMOs were designated for a cost efficiency reason. The impact on TSOs compared to the current MRC processes is limited and mainly affects the data exchange with the MCO function.

General principles of the solution

For the communication between TSOs and the MCO-function the following general principles shall apply:

- A technical solution shall be used for TSO data submission to the NEMOs and reception of results from the NEMOs as a central interface accessible to all NEMOs on equal terms. (one single endpoint for data exchange)
- CZCs (cross-zonal capacity) and allocation constraints (if applicable) are sent by TSOs to one single endpoint for data exchange.
- Each NEMO shall have access to this single endpoint; the data access/usage by NEMOs has to be documented.
- One or several NEMOs download the CZCs from the single endpoint.
- It is up to the NEMOs to organize themselves with regards to who is in charge of forwarding the CZCs and allocation constraints to the PMB (PCR Matcher/Broker) for a given day (the so called Coordinator of Local NEMO IT Systems or CLNIS) and who is designated as its back-up.
- Should the NEMOs not agree within 2 months after one of the NEMOs is ready to start operations, the following rule shall apply: monthly rotations of the NEMOs starting in alphabetical order of the company names of the NEMOs. Furthermore a precondition is to ensure a coordinated approach with other relevant TSOs in CWE.
- After the calculation performed in the PMB, the preliminary price coupling results are sent to the single endpoint for data exchange by the CLNIS. (Coordinator of Local NEMO IT Systems)

- The price coupling results are checked by the TSOs. (in the TSO Common System)
- The final confirmation is sent by the TSOs to the single endpoint and forwarded to by the CNLIS to the PMB.
- When all parties have sent the Final Confirmation to the PMB Coordinator, the PMB Coordinator provides the Global Final

Summary of the necessary changes compared to the current coupling configuration

In order to enable multiple NEMO participation in the single DA coupling for the bidding zone DE/AT/LU the following high-level changes are relevant:

- Additional tasks for TSOs:
 - Limited need for changes on TSO side (align data exchange with MCO function)
 - BEC-calculation by the CWE TSOs' Common System (TSO CS): to be defined based on shipping arrangement
- Additional tasks for NEMOs:
 - Submit infinite capacity between NEMO 1, NEMO 2 and NEMO 3 (depends on how the bidding zone DE/AT/LU is modelled within PCR but in principle to be treated similar as CZCs and allocation constraints) Changes within PCR (to be specified by NEMOs):
 - Due to the fact that currently only one NEMO of the bidding zone DE/AT/LU is operationally involved in the day-ahead market coupling process the DE/AT/LU bidding zone is modelled as one single hub in PCR.
 - To model in PCR the prospective configuration, i.e. all three NEMOs in the bidding zone DE/AT/LU in principle **two options** would exist:
 - **Option 1** (maximum 18 Net Positions - related to each CCP per Scheduling Area):
 - Modelling for each Scheduling Area within the DE/AT/LU bidding zone
 - three NEMO hubs (connected between each other via infinite capacity)
 - PCR calculates for all NEMO hubs within each Scheduling Area of the bidding zone DE/AT/LU the CCP's Net Position and prices per Scheduling Area (identical prices)
 - Provided that all NEMOs designated in Germany and/or Austria and/or Luxembourg become active in each of the six Scheduling Areas the Market Coupling result would consist for the bidding zone DE/AT/LU of 18 Net Positions (present working assumption; 3 x 6). This needs to be respected in the PCR modelling of the bidding zone DE/AT/LU.
 - **Option 2** (maximum 3 Net Positions for the bidding zone DE/AT/LU):
 - Modelling of a second and third NEMO hub for the DE/AT/LU bidding zone (connected between each other via infinite capacity)
 - PCR calculates for all three NEMO hubs of the bidding zone DE/AT/LU Net Position and prices (identical prices)
 - In that case the Market Coupling result would consist for the bidding zone DE/AT/LU of 3 Net Positions. This needs to be respected in the PCR modelling of the bidding zone DE/AT/LU.

- Each CCP calculates his part of the Net Position per Scheduling Area based on the results from the PCR

Clearing and Settlement

Clearing fees are usually charged for the transferred MWh assuming that the financial and physical exchanges are coherent. In case this coherence is not maintained anymore the underlying of the variable clearing is to be clarified.

Intraday Arrangements

The MCO function for the single intraday coupling is being implemented by the ongoing “XBID Market Project”. Details thereof will be provided by the NEMOs’ proposal for the MCO function in accordance with Article 7 (3) GL CACM. In general, the XBID solution is designed to easily accommodate more than one NEMO per Bidding Zone.

With regards to the data exchange with the Intraday MCO function, the XBID solution foresees a direct access for TSOs to the relevant central modules, i.e. Capacity Management Module (CMM) and Shipping Module (SM). TSOs will upload and maintain cross-zonal capacities and other input for the single intraday coupling via the CMM. Results will be received from the CMM as well as from the Shipping Module This will allow TSOs (and NEMOs) to submit and receive all necessary data on a non-discriminatory basis. The use of these modules and their respective technical interfaces will be defined in the course of the implementation of the XBID project. No additional technical or legal arrangements have to be implemented on Bidding Zone level.

Clearing & settlement

TSOs of the DE/AT/LU Bidding Zone propose to use for the intraday timeframe the same solution which will be eventually implemented for the day-ahead timeframe. Thereby, synergies can be easily used and the same level of equal treatment can be applied for both timeframes. The concrete concepts for clearing and settlement are being developed together in close coordination with neighbouring TSOs and will be presented to NRAs at a later stage.

Fall-back

The bidding zone DE/AT/LU may be coupled through their interconnectors. In that light the case may occur that the bidding zone DE/AT/LU is only coupled through some bidding zone borders whilst for other borders it is decoupled. In this case a backup explicit allocation solution on decoupled borders will be applied.

In the day-ahead timeframe, notwithstanding of the partial decoupling, a single price shall be calculated for the bidding zone DE/AT/LU. Hence, a subset of the DE/AT/LU NEMO hub(s) will be coupled and therefore in these hubs a single price will result. In this case the orders of the non-coupled NEMO(s) are isolated: the bidding zone capacities are used for the coupling remaining

NEMO hub(s). In day-ahead, a single price is calculated on the remaining coupled NEMO hubs, and a different price on each of the decoupled NEMO hub(s).

In cases of full decoupling, the NEMO hubs shall each calculate separate prices. If required, a single bidding zone price can be calculated from hub prices (e.g.: a weighted average bidding zone price).

Financial Arrangements

Terms for financial cooperation in these contracts will have to be set following agreements on cost sharing and recovery of national costs. Such agreements will have to be concluded between relevant parties and NRAs, according to the provisions of the CACM regulation.

In light of this and in order to ensure a level playing field and non-discriminatory treatment of competitors, a sustainable, stable model for sharing and recovery of these costs will need to be agreed between all concerned parties and NRAs with reference to the relevant articles of GL CACM.

In context of the requirements to implement the multiple NEMO arrangements (MNA) in accordance to Article 45 and 57 several cost related questions arise. For these questions clear guidance from NRAs is required. In that light especially for the topics listed in the table below the question of cost sharing and cost recovery becomes relevant.