



**The third amendment of the Dutch TSOs
explanatory note for the day-ahead and
intraday proposal for arrangements
concerning more than one NEMO in the Dutch
bidding zone in accordance with Article 45 and
57 of the CACM Regulation**

9 June~~16 February~~ 2026~~17~~

Disclaimer

This explanatory document is submitted by the Dutch TSOs to the Dutch National Regulatory Authority for information and clarification purposes only accompanying the "The Second Amendment of the Dutch TSOs day-ahead proposal for arrangements concerning more than

one NEMO in the Dutch bidding zone in accordance with Article 45 of the CACM Regulation” and “The Dutch TSOs ~~day-ahead~~Intraday proposal for arrangements concerning more than one NEMO in the Dutch bidding zone in accordance with Article ~~45~~7 of the CACM Regulation”.

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TITLE 1 INTRODUCTION

General

This document is an ~~common~~ explanatory note from ~~all the Dutch~~ TSOs (the "TSOs explanatory note") within the Dutch bidding zone that has ~~ve~~ as at the date hereof been certified as TSOs regarding cross-zonal capacity allocation and other necessary arrangements in bidding zones where more than one NEMO is designated and/or offers trading services, as required by Article 45 and 57 of CACM Regulation.

~~This TSOs explanatory note is a joint submission by BritNed Development Limited (hereinafter "BritNed") and TenneT TSO B.V. (hereinafter "TenneT").~~

The explanatory note is submitted to the Dutch Authority for Consumers and Markets (hereinafter "Authority") for providing information and clarification in the choices made in "The ~~Second Ammendment of the~~ Dutch TSOs day-ahead proposal for arrangements concerning more than one NEMO in the Dutch bidding zone in accordance with Article 45 of the CACM Regulation" (hereinafter "day-ahead proposal") and "The Dutch TSOs intraday proposal for arrangements concerning more than one NEMO in the Dutch bidding zone in accordance with Article 57 of the CACM Regulation" (hereinafter "intraday proposal").

This TSOs explanatory note is the ~~second-third~~ submitted note. This amended TSOs explanatory note is a result from ~~questions augmented by the Dutch Authority for Consumers and Markets (hereinafter "Authority"). Further explanations are given on (1) the implementation of the MNA arrangement, (2) the costs related to NEMOs, TSOs and the intraday proposal and day-ahead proposal, and (3) shipping arrangements. Following, amendments are made in TITLE 6, TITLE 7, and TITLE 3 of this note the Second Amendment of the day-ahead proposal. This amended day-ahead proposal aligns the Dutch MNA proposal as approved by the Authority on 17 February 2017 with the Regulation (EU) 2024/1747 of the European Parliament and of the Council of 13 June 2024, which amends Article 7 paragraph 2, point (c) of Regulation (EU) 2019/943 by introducing a new point (ca), which stipulates that for the day-ahead market, from one hour before the gate closure time until the latest point in time where day-ahead trade is allowed, NEMOs shall submit all orders for day-ahead products and products with the same characteristics to the single day-ahead coupling on the one hand and shall not organise trading with day-ahead products with the same characteristics outside the single day-ahead coupling on the other.~~

This TSOs explanatory note does not place any obligations or enforcements to the TSOs and NEMOs in the Dutch bidding zone, and is not subject to Authority approval.

Document structure

The document is structured in several chapters and structure:

1. **TITLE 1:** introduction of the explanatory note to the day-ahead proposal and intraday proposal;
2. **TITLE 2:** argumentation of the application of a virtual hub solution for the day-ahead proposal and intraday proposal;
3. **TITLE 3:** description and explanations of the preferred shipping solution clearing and settlement arrangements;
4. **TITLE 4:** description and explanations of the fallback arrangements for the day-ahead timeframe in case of market decoupling situations;
5. **TITLE 5:** explanation of the coordination with NEMOs and cross-clearing parties in the Dutch bidding zone during the drafting of the day-ahead proposal and intraday

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proposal;

6. **TITLE 6:** explanation of the intraday proposal and day-ahead proposal; and
7. **TITLE 7:** explanation of the costs related to the design, processes, and implementation of the intraday proposal and day-ahead proposal.

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Definitions and interpretation

For the purposes of the TSOs explanatory note, terms used in this document shall have the meaning of the definitions included in Article 2 of the CACM Regulation, the day-ahead proposal, and the intraday proposal as the case may be.

MNA contribution to the objectives of CACM Regulation

The day-ahead proposal and intraday proposal furthermore aim for the following points:

1. harmonization between intraday and day-ahead timeframes;
2. applicable solution regardless of the number of NEMOs operating in the Dutch bidding zone; and
3. where possible to include harmonized solutions agreed upon with other TSOs in the concerned region(s).

TITLE 2 VIRTUAL HUB APPLICATION

Introduction

For the application of multiple NEMOs in the Dutch bidding zone, at least two design options were feasible to be proposed; a virtual hub solution and a PCRANDOA-project solution. The Dutch day-ahead proposal and intraday proposal, put forward a multiple NEMO arrangement design that is facilitated by a virtual hub solution since:

1. European change trajectory projects need to be organized for the PCRANDOA-project in order to facilitate multiple NEMOs per bidding zone in MRCSDAC;
2. in case of new NEMO designations, European change trajectory projects need to be organized for the PCRANDOA-project in order to facilitate multiple NEMOs per bidding zone;
3. change trajectory projects include at least software changes and member testing where it is assumed that this will introduce long lead times and high costs to NEMOs, TSOs, and market participants;
4. European bidding zones all separately needed to submit a day-ahead proposal and intraday proposal whereby harmonization upon changes in price coupling regions was assumed infeasible;
5. a virtual hub solution is assumed to be implemented more straightforward than changes to PCRANDOA-project;
6. a virtual hub solution has limited implications to the TSOs since the solution is in line with the current MRC-SDAC processes; and
7. a virtual hub solution merely affects the data exchange with the MCO function solution.

Day-ahead

The high-level virtual hub solution is depicted in Figure 1. The Dutch bidding zone is divided into as many NEMO Trading Hubs as NEMOs in which the hubs are part of the Dutch bidding zone. All the NEMO Trading Hubs are coupled by means of infinite capacity.

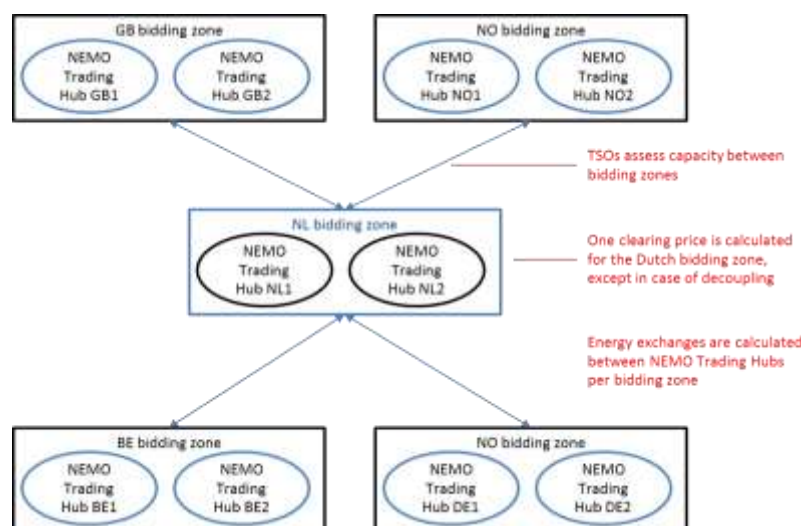


Figure 1: high-level virtual hub solution day-ahead proposal

TSOs provide the cross-zonal capacity to the dedicated NEMO(s) and the capacity is subsequently forwarded to the market coupling algorithm. The calculation of the single

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clearing price and single net position for bidding zone the Netherlands is executed by ~~PCR~~ANDOA-project. Since NEMOs don't provide TSOs access to the market coupling system, it is proposed that the virtual hub interface needs to be developed and implemented by the NEMOs in the Dutch bidding zone.

The virtual hub is a centralized approach in which an interface between TSOs and the Market Coupling Operator (MCO) is provided in the framework of ~~PCR~~ANDOA-project. The market coupling algorithm calculates a single clearing price for bidding zone the Netherlands (~~SDAC price, also called DAMC price~~) for each market time unit in EUR/MWh, and a single net position for bidding zone the Netherlands for each market time unit. Multiple day-ahead wholesale market prices in the Netherlands, or in other bidding zones, can only be a result when markets are decoupled in market coupling ("~~full decoupling~~"). Nonetheless, the wholesale market prices will be calculated for bidding zone the Netherlands for each market time unit in EUR/MWh. ~~The market coupling fallback solution will generate a single net position for bidding zone the Netherlands for each market time unit.~~

The detailed day-ahead virtual hub solution is depicted in Figure 2. The TSO pre-coupling modules and post-coupling modules interact with the NEMO interfaces to facilitate the single day-ahead coupling. A dedicated NEMO(s) will act as a single point of contact for delivering cross-zonal capacity to the ~~price coupling regions~~PMB. ~~PCR-project~~The Euphemia algorithm calculates net positions per NEMO per bidding zone to NEMO(s). Furthermore, ~~PCR-project~~NEMOs delivers net positions per bidding zone to TSOs.

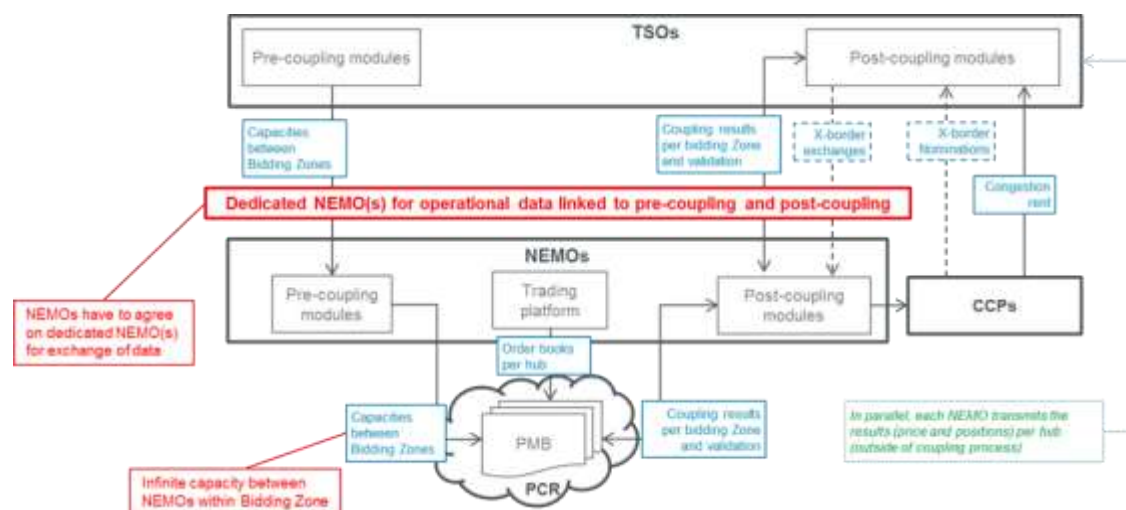


Figure 2: detailed virtual hub solution day-ahead proposal

Each NEMO acts as central counter party (CCP) in the Dutch bidding zone and the shipping solution in the day-ahead proposal fits the Dutch Balanced Responsible Party (BRP) license system, recognitions, and processes. Infinite capacity between the NEMO's Trading Hubs in the Dutch bidding zone is applied to ensure an unlimited exchange between the NEMO Trading Hubs. Hence, commercial congestions between the NEMO Trading Hubs in the Dutch bidding zones cannot arise. In effect, it is guaranteed that the Dutch bidding zone will have one electricity price per market time unit.

Intraday

The high-level virtual hub solution is depicted in Figure 3. The Dutch bidding zone is divided into as many NEMO Trading Hubs as NEMOs in which the hubs are part of the Dutch bidding zone. In the single intraday coupling solution the capacity within a bidding zone is considered to be unlimited. As such, there is an infinite capacity between NEMO Trading Hubs in bidding zones. Infinite capacity between the NEMO's Trading Hubs in the Dutch bidding zone is applied to ensure an unlimited exchange between the NEMO Trading Hubs. Hence, commercial congestions between the NEMO Trading Hubs in the Dutch bidding zones cannot arise. In effect, it is guaranteed that the Dutch bidding zone will have one electricity price per market time unit.

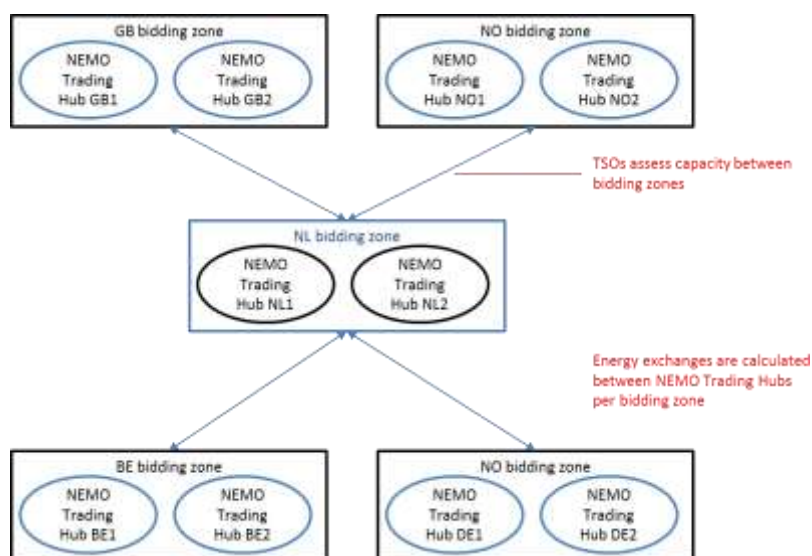


Figure 3: high-level virtual hub solution intraday proposal

TSOs provide the cross-zonal capacity to the dedicated NEMO(s) and the capacity is subsequently forwarded to the single intraday coupling. The single intraday coupling allocates supply and demand bids, and calculates the single net position for bidding zone the Netherlands for each market time unit.

The virtual hub is a centralized approach in which an interface between TSOs and the single intraday coupling is provided in the framework of XBID. XBID allocates continuously capacity by means of a first-come first-served principle. Finally, XBID calculates the exchanges between bidding zones.

The shipping solution in the intraday proposal fits the Dutch Balanced Responsible Party (BRP) license system, recognitions and processes. Each NEMO will upload its order book into the Shared Order Book function (SOB) of the central XBID system and acts as CCP in the Dutch Bidding. Figure 4 depicts the high-level European target model for the single intraday coupling. It is important to emphasize that cross-zonal capacities are implicitly allocated by applying a first-come, first-served mechanism.

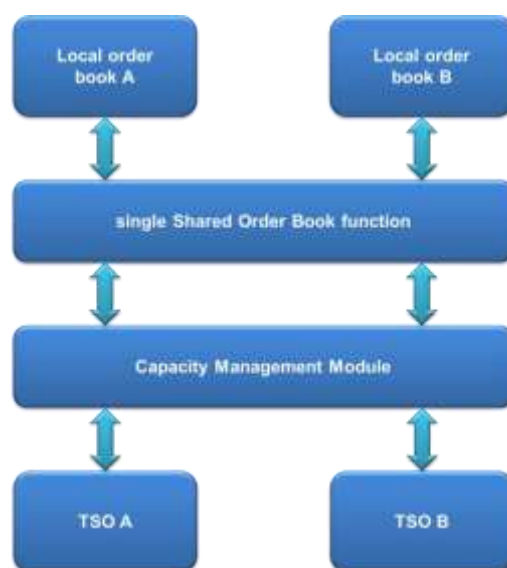


Figure 4: European single intraday coupling target solution

The single intraday coupling platform consists of two modules that interact with one another:

1. the single Shared Order Book function (SOB) that pools all the ~~PX's~~-NEMO's bids and offers for intraday; and
2. the Capacity Management Module (CMM) that provides the available cross-zonal capacity for intraday trade.

TSOs will upload and maintain cross-zonal capacities and other input for the single intraday coupling via the CMM. Trading results from the market will be received by the TSOs from the CMM as well as from the SOB. 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-has been 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.

In the continuous trading mechanism, a trader can log in at his bidding zone and monitor the available electricity bids in the same bidding zone and, depending on available capacities, on the other bidding zones. The trader can also give a bid into the system. The platform will check if the bid can be matched:

1. if the matching bid is in the same bidding zone, no cross-zonal capacity is needed; and
2. if the matching bid is in another bidding zone, the bids will be given to the capacity queue. Capacity will be checked and - if available - capacity will be allocated.

After each allocated trade, the available cross-zonal capacity is updated in the CMM.

TITLE 3 CLEARING AND SETTLEMENT ARRANGEMENTS

Introduction

The day-ahead proposal and intraday proposal distinguish three layers of clearing and settlement:

1. intra-hub layer: clearing and settlement of market participants buy and sell orders selected by the market coupling processes on NEMO Trading Hub level;
2. intra-zonal layer; clearing and settlement of energy exchanges between NEMO Trading Hub or, where applicable, with a shipping agent, within the Dutch bidding zone; and
3. cross-zonal layer; clearing and settlement of energy exchanges between bidding zones or, if applicable, scheduling areas.

The clearing and settlement layers under points (1) and (2) above relate to internal energy exchanges within the Dutch Bidding zone, whereas point (3) relates to cross-zonal energy exchanges.

Four different shipping solution were considered in the day-ahead and intraday proposal, being:

1. **single shipping**: one party is the importing and exporting shipper in bidding zone A as well as the importing and exporting shipper in bidding zone B for the border A – B.
2. **dual shipping**: one party is the importing and exporting shipper in bidding zone A and another party is the importing and exporting shipper in bidding zone B for the border A – B.
3. **directional shipping**: one party is exporting shipper in bidding zone A as well as the importing shipper bidding zone B for the direction A – B. Another party is exporting shipper in bidding zone B as well as the importing shipper bidding zone A for the direction B – A.
4. **preferred shipping**: each CCP has a preferred shipper and hence several parties can be the importing or exporting shipper in bidding zones. No specific shipping arrangements are made per bidding zone border and the parties that perform the shipping are a result of the allocation of supply and demand bids from the specific NEMO.

The shipping solutions – related to cross-border energy exchanges – are high-level graphically illustrated in Figure 5.

~~At this moment, shipping arrangements are in place on all Dutch bidding zone borders. The shipping arrangements are:~~

- ~~• NL-BE bidding zone border: single shipping arrangement;~~
- ~~• NL-DE bidding zone border: single shipping arrangement;~~
- ~~• NL-NO bidding zone border: dual shipping arrangement;~~
- ~~• NL-UK bidding zone border: single shipping arrangement.~~



Figure 5: cross-border shipping arrangement for intraday and day-ahead

The single shipping, dual shipping, and directional shipping solutions are seen as (predefined) shipping arrangements since these solutions need to be arranged on bidding zone borders. A preferred shipping solution does not require shipping arrangements on bidding zone borders since shipping is a result of the allocation of supply and demand bids from a specific NEMO.

For the Day-Ahead and Intraday timeframe TSO's in the [CoreWE](#) project and XBID project agreed upon a shipping solution being a preferred shipper solution. For Day-Ahead the [CoreWE](#) TSOs have agreed on the use of the preferred shipper solution and in XBID there is a Steering Committee decision to use preferred shipper solution wherever possible. Notwithstanding these decision, it remains possible to implement the "single shipping", "dual shipping", or "directional shipping" on bidding zone borders.

The principles of the preferred shipping solution are the following:

1. NEMOs carry out the tasks related to physical and financial shipping of energy to be transferred, within each bidding zone (or scheduling area) between the relevant NEMO Trading Hubs (intra-zonal) and between the coupled bidding zones (or scheduling area) (cross-zonal); and
2. Quantities settled between each NEMO Trading Hubs are set according to scheduled exchanges calculated from the net positions resulting from market coupling and intraday coupling. No separation between physical and financial shipping is imposed by the approach.

Although the shipping solution decisions made - in XBID- and [CoreWE](#)-project - foresee the implementation of the preferred shipping solution, it remains possible to implement the shipping arrangements "single shipping", "dual shipping", and "directional shipping" on Dutch bidding zone borders. Although a combination of the preferred shipping solution and one of the shipping arrangements is possible (on different Dutch bidding zone borders), such a solution stands against the agreed decisions in XBID - and [CoreWE](#)-project. Hence, an implementation of shipping arrangements ("single shipping", "dual shipping", or "directional shipping") on Dutch bidding zone border will lead to inefficiencies with NEMOs and TSOs all over Europe and bidding zone borders because other bidding zone borders do not have

specific shipping arrangements. Moreover, such a solution would somewhat be in contradiction~~ionery~~ with CACM Regulation since CACM Regulation envisages European harmonization upon processes and solutions that facilitate the single day-ahead coupling and single intraday coupling. By implementing a preferred shipping solution, the clearing and settlement procedures, processes, and designs are harmonized over XBID bidding zone borders and ~~CoreWE~~ bidding zone borders.

The day-ahead proposal and intraday proposal distinguish three layers of clearing and settlement:

1. **intra-hub layer:** clearing and settlement of market participants buy and sell orders selected by the market coupling processes on NEMO Trading Hub level;
2. **intra-zonal layer;** clearing and settlement of energy exchanges between NEMO Trading Hub or, where applicable, with a shipping agent, within the Dutch bidding zone; and
3. **cross-zonal layer;** clearing and settlement of energy exchanges between bidding zones or, if applicable, scheduling areas.

Shipping (or settlement) consists of both:

1. physical shipping: responsibility for performing the exchange of energy, which is linked to balancing responsibility (often CCP under current arrangements); and
2. financial shipping: financial settlement of exchanged energy, which is currently performed by CCPs, and requires collaterals between the involved entities.

In the preferred shipping solution the financial and physical flows are identical and settled by the NEMOs/CCPs themselves.

Preferred shipping solution – general provisions

~~Although the TSOs in the Dutch bidding zone had a strong preference for a single, dual, or directional shipping arrangement on the Dutch bidding zone borders, the intraday proposal and day-ahead proposal both envisage a preferred shipping arrangement. NEMOs have been involved in the process to discuss feasibility and conditions of the MNA proposals in both XBID project and CWE project. Hence, European harmonization was sought. Although the preferred shipping solution is foreseen as the shipping solution for the Dutch bidding zone borders, a single, dual, and directional shipping arrangement is possible for bidding zone borders.~~

The preferred shipper approach, for a given energy exchange defined between a source NEMO Trading Hub and a sink NEMO Trading Hub within two different bidding zones (or if applicable scheduling areas), might be implemented in the following way:

1. the CCP or its designated preferred shipping agent of the source NEMO Trading Hub can be responsible of physical settlement in source and sink bidding zone (or, if applicable, scheduling area) and between bidding zones (or, if applicable, scheduling areas);
2. the central counter party or its designated preferred shipping agent of the source NEMO Trading Hub performs the financial settlement in sink bidding zone (or, if applicable, scheduling area) with the central counter party of the sink NEMO Trading Hub.

Physical and financial settlement are both performed according to the scheduled exchanges calculated from the net positions resulting from day-ahead market coupling and intraday coupling. This multiple NEMO arrangement – and all the ~~CoreWE~~ multiple NEMO arrangements

– require that the scheduled exchanges from day-ahead market coupling need to be

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calculated per NEMO per Scheduling Area. Therefore, the methodology for calculation of scheduled exchanges resulting from market coupling has ~~to be~~en defined accordingly.

~~The definition and further implementation of methodology for the calculation of scheduled exchanges resulting from market coupling shall be performed respectively in consultation and coordination with NEMOs during the implementation phase of the multiple NEMO arrangement.~~

Preferred shipping solution – intra-hub layer

The CCP of each NEMO Trading Hub:

1. Is charged with the financial settlement of the market participants' buy and sell orders, as selected by the market coupling process,
2. Nominates the volumes of matched orders per Balance Responsible Party ("BRP") to the relevant TSO (i.e. local hub nominations).

Each NEMO Hub has a net position corresponding to the netted volume of selected buy and sell orders; this net position is covered by selected orders on other NEMO Trading Hubs, either within the same zone (Intra-Zonal) and/or cross-zonal. From the TSO point of view, the only change for a multiple NEMO context with regards to intra-hub settlement is that there are multiple NEMO Hubs in its area (hence multiple hub nominations). These principles are depicted in Figure 6.

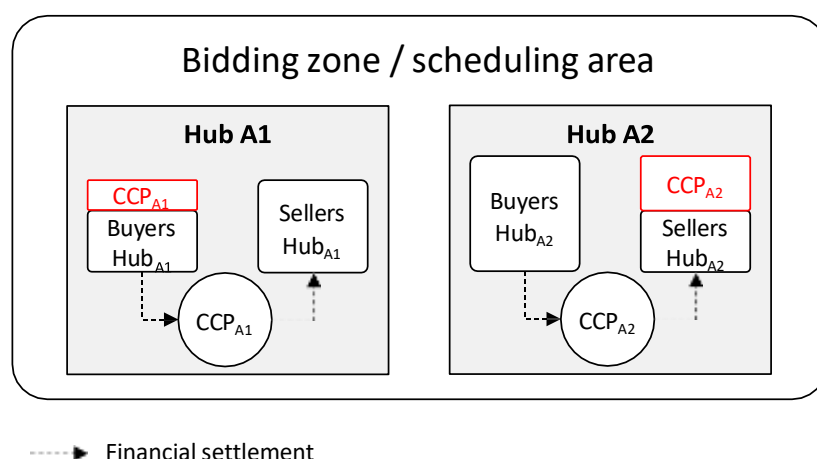


Figure 6: intra-hub settlement

CCP_{A1} and CCP_{A2} are BRP. CCP_{A1} acts as counter party for all Buyers and Sellers in Hub_{A1} and CCP_{A1} takes care of the financial clearing for all Buyers and Sellers in Hub_{A1}. The same applies for CCP_{A2} for all Buyers and Sellers in Hub_{A2}. In intra-hub trading the Buyer and Seller are both at the same Hub, either Hub_{A1} or Hub_{A2}, and each of the involved CCPs can handle the physical shipping and financial clearing by itself.

Preferred shipping solution – intra-zonal layer

Each NEMO designates a preferred Shipping Agent for its NEMO Trading Hub within each bidding zone (or Scheduling Area). The designation of a preferred Shipping Agent for each NEMO Trading Hub is under responsibility of each NEMO. The preferred shipping agents designated for each NEMO Trading Hub performs both physical and financial settlements according to the scheduled exchanges resulting from day-ahead market coupling and intraday coupling. The CCPs of all NEMO Hubs of a given bidding zone (or scheduling area) and the

preferred shippers of these CCPs are in charge of enabling energy exchanges between all NEMO Trading Hubs of the Dutch bidding zone (or scheduling area).

CCPs of all NEMO Trading Hubs shall:

1. act as CCPs to Shipping Agents within the bidding zone and / or scheduling area;
2. perform the physical settlement by nominating the volumes of energy exchanged between CCPs and/or Shipping Agents within this bidding zone through relevant BRP to the relevant TSO (i.e. local hub nominations) according to the scheduled exchanges calculated from the net positions resulting from day ahead market coupling; and
3. perform the financial settlement between the CCPs and/or Shipping Agents within this bidding zone (or scheduling area).

Shipping agents of the CCPs of all NEMO Trading Hubs shall:

1. act as counter party to other CCPs within the bidding zone and / or scheduling area;
2. perform the physical settlement by nominating the volumes of energy exchanged between CCPs and/or Shipping Agents within this bidding zone through relevant BRP to the relevant TSO (i.e. local hub nominations) according to the scheduled exchanges calculated from the net positions resulting from day ahead market coupling; and
3. perform the financial settlement between the CCPs and/or Shipping Agents within this bidding zone (or scheduling area).

These principles are depicted in Figure 7.

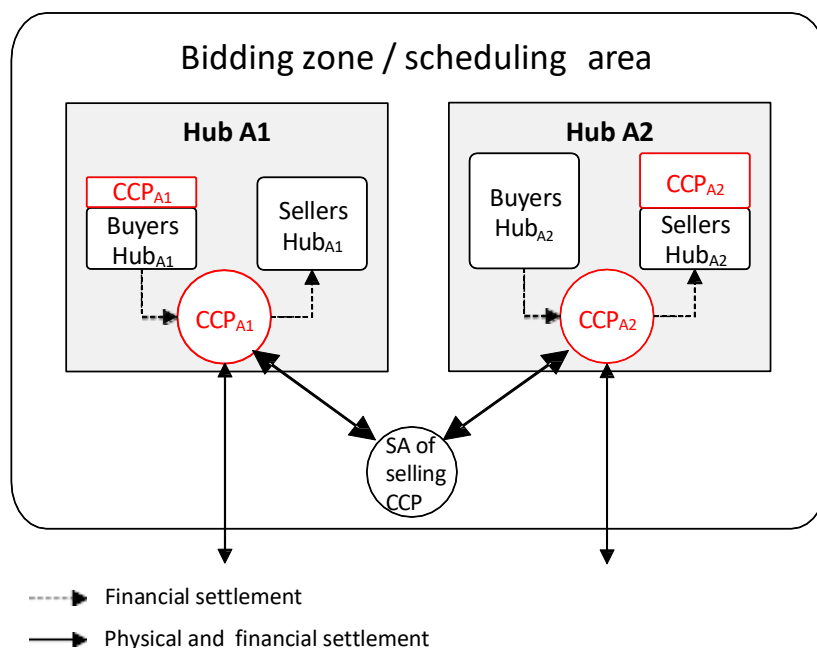


Figure 7: intra-zonal settlement

CCP_{A1} and CCP_{A2} are BRP. CCP_{A1} acts as counter party for all Buyers and Sellers in Hub_{A1} and CCP_{A1} takes care of the financial clearing for all Buyers and Sellers in Hub_{A1}. The same applies for CCP_{A2} for all Buyers and Sellers in Hub_{A2}. In intra-zonal trading the Buyer and Seller are at different Hubs within the same Bidding zone / scheduling area, either Hub_{A1} or

Hub_{A2}, CCP_{A1} and CCP_{A2} represent the Buyers and Sellers at their respective Hubs towards the other CCP involved in the intra-zonal trade. The CCP of the Seller starts the physical shipping by a hand over to its preferred shipper (Shipping Agent (SA) of selling CCP) and this preferred shipper hands over to the CCP of the Buyer. The CCPs either follow the opposite route for the financial clearing or they directly clear with each other.

Preferred shipping solution – cross-zonal layer

Each NEMO designates a preferred Shipping Agent for its NEMO Trading Hub within each bidding zone (or Scheduling Area). The designation of a preferred Shipping Agent for each NEMO Trading Hub is under responsibility of each NEMO. The preferred shipping agents designated for each NEMO Trading Hub performs both physical and financial settlements according to the scheduled exchanges resulting from day-ahead market coupling and intraday coupling. Concretely, this means that, for a given energy exchange defined between a source NEMO Trading Hub and a sink NEMO Trading Hub within two different bidding zones (or scheduling areas):

1. The preferred shipping agent of the CCP of the source NEMO Trading Hub is responsible for physical settlement in source and sink bidding zones (or Scheduling Areas), and between bidding zones (or scheduling areas);
2. The preferred shipping agent of the CCP of the source NEMO Trading Hub nominates the volumes of energy exchanged between source and sink NEMO Trading Hubs to the relevant TSOs (i.e. cross-zonal nominations); and
3. The preferred shipping agent of the CCP of the source NEMO Trading Hub performs the financial settlement in sink bidding zone (or scheduling area) with CCP of the sink NEMO Trading Hub,

These principles are depicted in Figure 8.

The NEMOs will collect the congestion income resulting from day-ahead market coupling (and if applicable from intraday coupling), which is transferred to the relevant TSO (or the entity acting on behalf of the TSO).

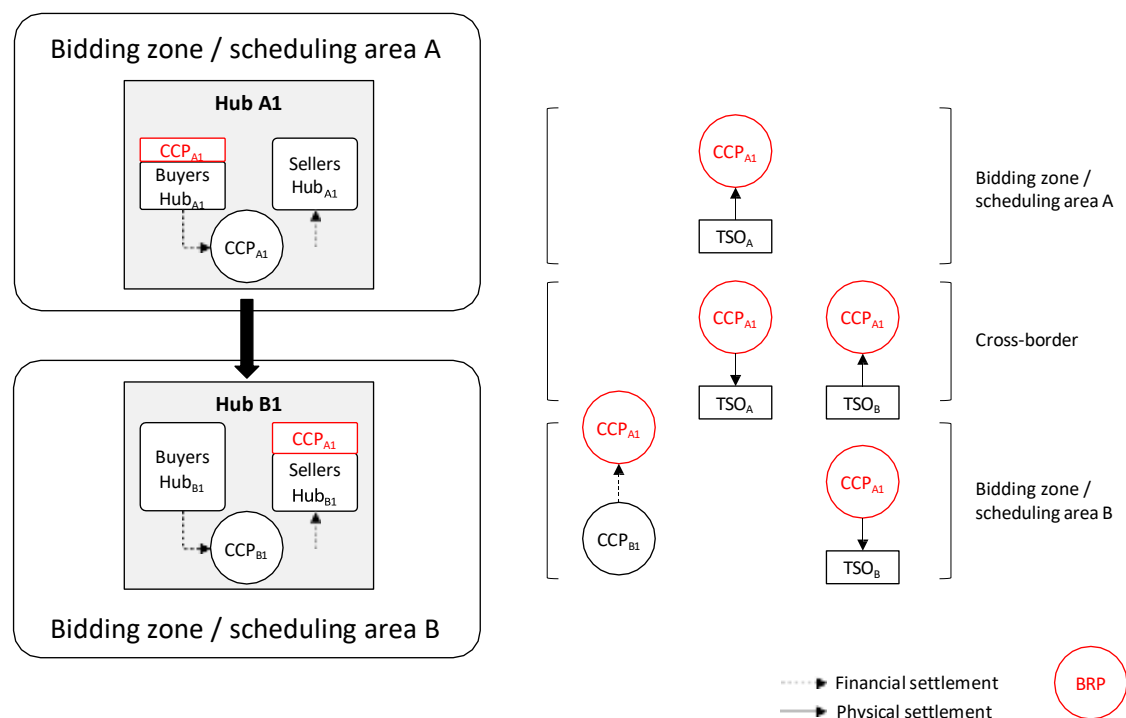


Figure 8: cross-zonal settlement

CCP_{A1} and CCP_{A2} are BRP. CCP_{A1} acts as counter party for all Buyers and Sellers in Hub_{A1} and CCP_{A1} takes care of the financial clearing for all Buyers and Sellers in Hub_{A1}. The same applies for CCP_{A2} for all Buyers and Sellers in Hub_{A2}. In cross-zonal trading the Buyer and Seller are at different Hubs in different Bidding zones / scheduling areas, CCP_{A1} and CCP_{A2} represent the Buyers and Sellers at their respective Hubs towards the other CCP involved in the cross-zonal trade. The CCP of the Seller starts the physical shipping by a hand over to its preferred shipper and this preferred shipper hands over to the CCP of the Buyer. The CCPs either follow the opposite route for the financial clearing or they directly clear with each other.

TITLE 4 DAY-AHEAD FALLBACK ARRANGEMENTS

Introduction

Issues may arise that provide challenges to TSOs, NEMOs and the market coupling system. In most extreme circumstances, the market coupling stakeholders and shareholders face a day-ahead decoupling. Different cases of day-ahead decoupling are possible:

1. bidding zones are partially coupled;
2. bidding zones are fully decoupled; and
3. bidding zones are coupled with subset of bidding zone hubs.

The day-ahead decoupling cases are of concern to TenneT: ~~since a single clearing price in the Dutch bidding zone is no longer guaranteed when multiple NEMOs are functioning in the Dutch bidding zone. The single clearing price for the Dutch bidding zone is a keystone in the TenneT processes, e.g. imbalance price, settlement of losses, reconciliation of profile consumers, et cetera. For this reason, for relevant cases,~~ the day-ahead proposal introduces the reference bidding zone price so that the calculation of prices for TenneT operational processes are safeguarded. Three prices need to be distinguished:

- The NEMO Trading Hub price of each NEMO in the Dutch bidding zone. These prices are necessarily equal to the day-ahead market coupling (DAMC) price. Note: ,except in cases where the NEMO Trading Hub is not included in the day-ahead market coupling under certain cases of decoupling, this NEMO is not allowed to determine its own clearing price, e.g. by running a local auction.
- The day-ahead market coupling (DAMC) price of the Dutch bidding zone determined by the day-ahead market coupling.
- The reference bidding zone price of the Dutch bidding zone. The reference price is used for the settlement of services used by TenneT to balance the Dutch bidding zone and to ensure security of supply. The day-ahead market coupling (DAMC) price single clearing price is usually equal to the reference price of the Dutch bidding zone, except in the case of full decoupling of the Dutch bidding zone. In such case, TenneT shall determine the reference bidding zone price based on the volume weighted average of all NEMO Trading Hub prices of the Dutch bidding zone per market time unit.

In the following sections, the various cases of decoupling are further explored also with regards to the three distinguished prices.

Bidding zone partially coupled

During the single day-ahead coupling, the Dutch bidding zone shall be coupled through the borders Netherlands-Belgium, Netherlands-Germany, Netherlands-~~Great Britain~~Denmark, and Netherlands-Norway. However, it may be the case that the Dutch bidding zone is only coupled with CWE bidding zone a subset of borders whilst for other borders it is decoupled. In such case a ~~backup-explicit fallback~~ allocation solution on decoupled borders will be applied. Nonetheless, ~~for the Dutch bidding zone a single price shall be calculated while; partial coupling. b~~Because a single SDACDAMC price is calculated for the Dutch bidding zone as part of SDAC, there is no need to apply a reference bidding zone price. Table 1 shows the Day Ahead Market Coupling (DAMC) prices per hub in the bidding zone resulting from the day-ahead auction.

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Table 1: DAMC bidding zone price per hub in case of partial coupling.

	Hub 1	Hub 2
Hub price	DAMC bidding zone price	DAMC bidding zone price
Bidding zone price	DAMC bidding zone price	

Bidding zone fully decoupled

The case may arise that the Dutch bidding zone is fully decoupled from the neighbouring bidding zones. It may be the result of a local problem specific to the Netherlands, or a global problem causing the total decoupling of several or all SDAC bidding zones. In the latter, a ~~backup explicit~~fallback allocation solution on all decoupled borders will be applied. Each NEMO in the Dutch bidding zone determines its NEMO Trading Hub Price, which is a different isolated price per NEMO Trading Hub. Backup solutions enabling the local market coupling of NEMO Trading Hubs could be examined later (this is outside the scope of day-ahead proposal and intraday proposal).

The NEMOs in the Dutch bidding zone are required to timely send their NEMO Trading Hub Prices of every decoupled day-ahead auction together with relevant volumes to TenneT. TenneT uses this information to calculate a volume weighted average price of all Dutch NEMO Trading Hub Prices and traded energy volumes. Table 2 shows the DAMC prices per hub in the bidding zone.

Table 2: DAMC bidding zone price per hub in case of full decoupling.

	Hub 1	Hub 2
Hub price	Hub price 1	Hub price 2
Bidding zone price	Weighted average bidding zone price from hub 1 and 2	

Bidding zone coupled with subset of bidding zone hubs

The case may arise that only a subset of the NEMO Trading Hubs in the Dutch bidding zone will be coupled in the single day-ahead coupling. It corresponds to the situation where a technical problem prevents at least one of NEMO from participating in the market coupling process. This event may for instance occur if one of the NEMO is unable to transmit the orders from its power exchange members to the market coupling algorithm. In this case the orders of the non-coupled NEMO(s) are isolated: the bidding zone capacities are used for the coupling of the remaining hub(s). In day-ahead, the Dutch single clearing price is calculated under consideration of the order books of the coupled NEMOs. The Dutch single clearing price is then equivalent to the NEMO Trading Hub Price of all coupled NEMOs. The ~~decoupled~~ NEMOs that are decoupled from SDAC shall not organise a local auction but may shall offer to their market participants the possibility to have at least some of their volumes on their platform(s) settled at the SDAC Price by way of volume allocation, have a NEMO Trading Hub Price that differs from the Dutch clearing price. Volume allocation is a fallback process activated by the decoupled NEMO(s) that allocates buy and sell volumes within the Dutch bidding zone only: this means that there are no cross-border trades involved. The buy and sell volumes are matched by the decoupled NEMO(s) based on the SDAC price of the Dutch bidding zone. Hence, no price is determined during the volume allocation process, only volumes are matched. Market parties are allowed to update or withdraw their bids prior to the volume allocation. The Dutch reference price is in this case equivalent the Dutch single clearing price. Table 3 shows the DAMC prices per hub in the bidding zone.

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Table 3: DAMC bidding zone price per hub in case of coupling of subset bidding zones.

	Hub 1	Hub 2
Hub price	DAMC bidding zone price	Hub price 2 Not applicable (no price calculation in Hub 2); DAMC shall be applied (Volume Allocation)
Bidding zone price	DAMC bidding zone price	

TITLE 5 COORDINATION WITH NEMOs

During the process of drafting the day-ahead and intraday proposal for arrangements concerning more than one NEMO in the Dutch Bidding Zone in accordance with Article 45 and Article 57 of the CACM Regulation, dedicated teleconferences and physical meetings were organized between TSOs, NEMOs, and CCPs.

Two dedicated physical meetings were organized in February, 2016 and March, 2016. The first meeting primarily focussed on information sharing regarding a virtual hub solution in the Dutch bidding zone. The following subjects were discussed: (1) requirements for a virtual hub solution in the Dutch bidding zone on the *Day-Ahead time frame* – presenting and discussing the requirements from TSOs and presenting and discussing the ideas from the NEMO's; and (2) requirements for a virtual hub solution in the Dutch bidding zone on the *Intraday time frame* – presenting and discussing the requirements from TSOs and presenting and discussing the ideas from the NEMO's. The second physical meeting was dedicated to (1) discuss the requirements as set by the TSOs in the Dutch bidding zone, (2) present and discuss the ideas from the NEMO's in the Dutch bidding zone, (3) discuss fallback arrangements, and (4) discuss shipping services, cross-clearing services, and data exchange services. The results of the discussion from the meetings were a basis for the day-ahead and intraday proposals for arrangements concerning more than one NEMO in the Dutch bidding zone in accordance with Article 45 and Article 57 of the CACM Regulation.

Throughout the drafting of the day-ahead proposal and intraday proposal, several draft versions were sent to the NEMOs and CCPs in the Dutch bidding zone. During teleconferences, the progress and solutions put forward were discussed. Where possible, comments and amendments from NEMOs and CCPs in the Dutch bidding zone were included in the day-ahead proposal and intraday proposal.

TITLE 6 IMPLEMENTATION

Intraday

The cross-border intraday project is currently under development for stepwise implementation by TSOs and NEMOs in line with their local implementation plans.

Implementation of the intraday proposal as set out in the TSOs' Proposal will involve the entering into force of all agreements, processes and interfaces necessary to enable the content of the intraday proposal to be put into operation, as follows:

1. Development by TSOs of standard form agreements in order to reflect the roles and responsibilities of TSOs and NEMOs and describe the activities as are respectively required to be performed by each in furtherance of their CACM obligations;
2. Entering into individual TSO-NEMO bilateral arrangements substantially in the agreed standard form as described in point 1; and
3. Finalisation of the specific NEMO-NEMO arrangements which NEMOs identify as being necessary to achieve the Dutch bidding zone requirements of the intraday proposal, the timing of which will be no later than the date of the first Dutch bidding zone border to enter into operation.

Day-Ahead

The day ahead proposal required by Article 45 of the CACM Regulation contains a requirement to modify existing Agreements to be in line with the CACM Regulation in order to reflect the roles and obligations which the CACM Regulation describes. In terms of implementation, the proposed approach requires that there is a two-stage process, i.e.

1. Development by TSOs of standard form agreements, i.e. the "Proposed Terms" (either bilateral in consultation with NEMOs and/or multilateral in nature, as required), such Proposed Terms being generic in order to promote transparency and uphold the principle of a level playing field being in place between NEMOs; and
2. Subsequent redrafting and execution or amendment of existing agreements in order to comply with any applicable legislation and/or the decision of a competent authority and incorporating the Proposed Terms referred to in point 1.

In the case of point 1 above, TSOs will draft the Proposed Terms to be entered into following approval of the day ahead proposal based on cooperation with NEMOs and, once finalised, such Proposed Terms will be published in order to aid transparency of the requirements/process.

In the case of point 2 above, amendments are to be agreed upon the earlier of (1) the MCO plan entering into force; or (2) 12 months after approval of the day ahead proposal, notwithstanding that existing agreements may run to their full stated expiry. Following such expiry, TSOs may invite proposals based on the Proposed Terms referred to in point 1 above.

TITLE 7 COSTS

The CACM Regulation contains a number of provisions regarding costs associated with day ahead and intraday market coupling development and operation. These provisions relate to the requirements for TSOs and NEMOs to report on costs, to cost-sharing provisions between member states, and to the process of cost recovery to be carried out at member state level. At the time of submission of the TSOs' Proposals discussions on implementation of all of these aspects have been under way but not concluded.

Ahead of Dutch decisions on cost recovery, TSOs consider that costs associated with performance of CACM obligations should remain with the parties who have such obligations. This appears to be supported by the CACM Regulation, for example by reference to Article 76 (NEMOs shall bear the costs of establishing, amending and operating day ahead and intraday coupling) and Article 78 (TSOs shall bear the costs of establishing and operating the coordinated capacity calculation process).

Such costs referred to in Articles 76 and 78 of the CACM Regulation are stated as being subject to cost recovery, as set out in Article 75 thereof, and that "costs assessed as reasonable, efficient and proportionate shall be recovered in a timely manner through network tariffs or other appropriate mechanisms as determined by the competent regulatory authority".

Consistent with the above, the TSOs' Proposals state in Article 8 (Costs) that TSOs shall not bear NEMOs costs incurred in carrying out their regulatory responsibilities, unless and until required by a binding decision of the Authority. The rationale for this is two-fold:

1. If TSOs were to bear NEMOs costs of performance of CACM tasks, it would pre-empt, and potentially be inconsistent with, subsequent decisions by the Authority on cost recovery, both on the cost amounts, and the recovery mechanisms.
2. Even if temporary TSO bearing of NEMO costs were eventually consistent with a future Authority decision on cost recovery, it would put the TSOs in a position of having to justify other parties' costs. A more appropriate process would be for the party initially incurring such costs to justify that they have been incurred reasonably, efficiently and proportionately. Such justification however would not then of itself lead to the conclusion that such costs should be passed through to Interconnector TSO(s), with other cost recovery solutions arguably being more appropriate.

While TSOs and NEMOs have individual views of how costs should be shared between each other, all parties strongly shared the same view that an appropriate cost recovery process should be established as soon as reasonably possible, to provide the necessary financial clarity going forwards. TSOs consider that this should be concluded in relation to the historic project and operational costs associated with day ahead and intraday market coupling, as well as within the future CACM-required process.