

| [20.01.2017](#) [04.2018](#)

Amended

Proposal for a Multiple NEMO Arrangement (MNA) in the Bidding Zone Germany/~~Austria~~/Luxembourg (DE/~~AT~~/LU)

Final version with editorial corrections related to the Luxembourg specific shipping examples in paragraph 2.2.5 and 3.4.4

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1 Introduction

~~This~~Due to the splitting of the Bidding Zone DE/AT/LU, this document is the amended common proposal of 50Hertz, Amprion, ~~APG~~, CREOS, TenneT GmbH, TransnetBW (the “TSOs”) to the BNetzA, ~~E-Control~~ and ILR (the “NRAs”) for the involvement of more than one nominated electricity market operator (NEMO) in the Single Day-ahead Coupling (SDC) and Single Intraday Coupling (SIC), including the MRC- and XBID-projects, within the Bidding Zone Germany/~~Austria~~Luxembourg (DE/~~AT~~/LU). With this amended common proposal the TSOs fulfil the obligations of article 45 and 57 of the Guideline on Capacity Allocation and Congestion Management (EU) 2015/1222 (GL CACM) to enable the participation of all current and future NEMOs operating in the Bidding Zone DE/AT/LU ~~in the SDC and the SIC. A request of the NRAs for the amendment of the initial proposal handed over by the TSOs to the NRAs dated April 14th 2016 was received by the TSOs on October 14th, 2016 opening an amendment procedure according to article 9 (12) GL CACM with a target deadline of December 14th, 2016~~LU in the SDC and the SIC.

In line with the GL CACM, this proposal is based on the cooperation with the NEMOs designated in the Bidding Zone DE/AT/LU. The TSOs informed the currently designated NEMOs about the foreseen amendment of the MNA and consulted the contents with them. Documentation thereof is given in an explanatory document.

For the avoidance of any doubt, the capitalised terms used in this document which have not been defined in the glossary (see paragraph 4) shall have the meaning set forth in the GL CACM.

1.1 Background and context

In line with article 4 (NEMOs designation and revocation of the designation) of the GL CACM, several entities have been designated as NEMOs by the NRAs BNetzA, ~~E-Control~~ and ILR in the Bidding Zone DE/AT/LU. At the date of submission of this amended proposal (~~December 14th, 2016~~ April 3rd, 2018) ~~two NEMOs for Day-ahead and two NEMOs for Intraday have been designated by BNetzA and ILR, the situation in the DE/AT/LU Bidding Zone is the following:~~

~~Day-ahead: 3 NEMOs~~

~~Intraday: 3 NEMOs~~

1.2 Legal obligations

1.2.1 Legal obligation to implement Multiple NEMO Arrangements

The following GL CACM-provisions are the legal basis for the MNA for DA and ID within the Bidding Zone DE/AT/LU:

- Article 8: TSOs shall [...] establish cross zonal capacity allocation and other arrangements in accordance with Articles 45 and 57;
- Article 45, 57: TSOs [...] shall develop a proposal for cross-zonal capacity allocation and other necessary arrangements for such Bidding Zones [where more than one

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NEMO is offering trading services] in cooperation with concerned TSOs and NEMOs ... to ensure that the relevant NEMOs ... provide the necessary data and financial coverage for such arrangements.

- *Article 7: NEMOs shall [...] in accordance with Article 45 and 57, coordinate with TSOs to establish arrangements concerning more than one NEMO within a Bidding Zone and perform single day-ahead and/or intraday coupling in line with the approved arrangements.*

The notion "multiple NEMO arrangement" (MNA) in this document refers to the obligations resulting from the articles listed above regarding "cross-zonal capacity allocation and other necessary arrangements".

The legal provisions of article 45 and 57 are comparable; article 45 defines them for the Single Day-ahead Coupling whereas article 57 fixes the same provisions for the Single Intraday Coupling.

1.2.2 Legal obligations related to Clearing, Settlement, Scheduling and Shipping

Article 68 (6) of GL CACM related to the Clearing and Settlement provides guidance in case a Shipping Agent is involved in the exchange of energy between Bidding Zones.

The final scheduled exchange calculation will be in line with the methodologies developed and approved under article 43 (DA) and 56 (ID).

In line with Article 7(1) (g), it is a NEMO-task to act as Central Counter Parties (CCPs) and according to its definition, it is a Central Counter Party's task to organise the exchange of energy resulting from SDC and SIC with other Central Counter Parties or Shipping Agents. In line with Article 8 (2) (l) of GL CACM, it is a TSOs' task to act as Shipping Agents, where so agreed. Nonetheless based on Article 68 (6), a Shipping Agent may act as a Counter Party between different Central Counter parties for the exchange of energy, if the parties concerned conclude a specific agreement to that effect and this task is not performed according to Article 68 (3) by the Central Counter Parties.

The Shipping solution for SDC and SIC ("Preferred Shipping Agent model"), proposed in this MNA, follows Article 7(1) (g). The option, establishing TSOs as Shipping Agents in the Bidding Zone DE/AT/LU, is not taken by the TSOs.

1.3 Compliance of the MNA with the objectives of GL CACM

The proposed Multiple NEMO Arrangement in the Bidding Zone DE/AT/LU contributes to fulfilling the achievement of the objectives of Article 3 of GL CACM. The Regulation aims at:

(a) promoting effective competition in the generation, trading and supply of electricity;

The implementation of the MNA described in this document will enable several NEMOs to operate in the Bidding Zone DE/AT/LU and promote the competition in the generation, trading and supply of energy.

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(c) ensuring operational security;

By choosing a single data exchange point for pre- and post-coupling arrangements additional interfaces are minimized and potential risks of errors are reduced. Apart from that the proposal foresees the possibility for each NEMO to download the Cross Zonal Capacities and Allocation Constraints from a single data exchange point and hence to serve as Back up if the NEMO(s) responsible for the transfer of input and output data at the respective point in time is/are affected by technical issues.

Furthermore, the proposed solution for the Physical Settlement ensures the necessary operational security standards in line with the GL SO.

(d) optimising the calculation and allocation of cross-zonal capacity;

The MNA proposal allows for an efficient consideration of several NEMOs in one Bidding Zone without hampering the capacity calculation and allocation processes.

(e) ensuring fair and non-discriminatory treatment of TSOs, NEMOs, the Agency, regulatory authorities and market participants;

The TSOs consider the proposed solution as a fair, transparent, multiple NEMO arrangement, balancing interests of market parties, NEMOs and TSOs and facilitating NEMO-competition within the Bidding Zone DE/AT/LU. To ensure this during the drafting process the feedback of the NEMOs has been evaluated by the TSOs and taken into account where reasonable.

(f) ensuring and enhancing the transparency and reliability of information;

Using one single data exchange point for the data exchange provides every NEMO with the possibility to have access to cross zonal capacities and allocation constraints which enhances transparency.

(h) respecting the need for a fair and orderly market and fair and orderly price formation;

The MNA is linked to the MCO function carried out jointly by all NEMOs. In this respect the present MNA proposal foresees unrestricted price formation within the Bidding Zone. This requirement, together with the fall back solutions outlined in the document, enable a fair and orderly market and price formation.

(i) creating a level playing field for NEMOs;

In order to ensure a level playing field and non-discriminatory treatment of competitors, a flexible solution for MNA has been developed that ensures a fair and equal treatment of the NEMOs within the operational processes and facilitates their participation in the DA and ID market coupling on equal terms. The proposed solutions are extendible for additional NEMOs.

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1.4 Basics principles valid for single intraday coupling and single day-ahead coupling

1.4.1 NEMO Hub

In each Scheduling Area of the Bidding Zone DE/AT/LU the term NEMO Hub is defined as the NEMO market place in which a given NEMO receives the set of orders submitted by the market participants. A NEMO Hub is therefore defined by the operating NEMO and the Scheduling Area which hosts a balance group of its CCP that constitutes the place of physical fulfilment. A NEMO could operate NEMO Hubs in several Scheduling Areas. Several NEMO Hubs could be operated by different NEMOs in the same Scheduling Area.

1.4.2 Principles of the settlement of energy exchanges via Central Counterparties

Power Exchanges perform an anonymous matching of buy and sell orders without becoming a party of trades themselves. The volumes of all matched buy and sell orders therefore have to be balanced within each market time unit. It is of no significance whether a one-to-one matching of buy and sell orders is performed or even possible. The matching of an order with at least another order does not result in a trade between the bidders; instead a trade is concluded between each bidder and the clearing house(s) of the NEMO Hubs, which steps between the bidders and assumes the counterparty risk for the trade as a CCP.¹ For sake of simplicity one can assume that any bilateral or multilateral trades between market participants are split into trades with the CCP standing in between the parties. Instead of trades between buyers and sellers, trades between buyers and their CCPs and sellers and their CCPs are concluded.

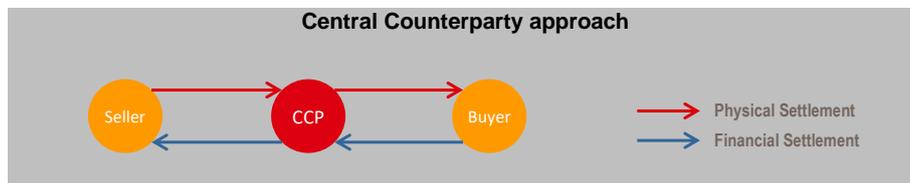


Figure 1: Central Counterparty approach

The settlement of any trade requires the delivery of the good (in this case energy for a particular market time unit) and the transfer of the agreed amount of money.² Trades between market participants and their CCP are always settled within the Scheduling Area of the CCP, which is the place of delivery of a specific NEMO Hub. An accepted bid entitles the market participant to receive the amount of energy by means of an Internal Commercial Trade

¹ In case of an auction like in the Single Day-ahead Coupling, a one-to-one relationship between matched sell and matched buy orders can not necessarily be made and any matched order directly results in a trade with the CCP.

² Throughout this document, the terms delivery, delivering, receiving as well as source and sink refer to the physical part of a transaction (i.e. energy) in the context of shipping and settlement. In contrast, payments are performed in the opposite direction (i.e. from receiving to delivery party).

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Schedule from the CCP's balance group to its own balance group within the same Scheduling Area in exchange of money. An accepted offer obliges the respective market participant to deliver the respective energy by means of an Internal Commercial Trade Schedule from its own balance group to the CCP's balance group within the same Scheduling Area in exchange of money.

1.4.3 Shipping

In case of multiple NEMO Hubs being coupled, the CCPs of all buyers and sellers are not necessarily identical, in such cases additional bilateral trades are conducted between the respective CCPs. The trades between the CCPs are hereafter referred to as Shipping.

Within the scope of this document a CCP is defined per NEMO Hub. For the avoidance of doubt, a trade between two NEMO Hubs being served by the same legal entity acting as CCP is also considered as Shipping, although the financial settlement could probably be omitted in that case or is just a matter of internal accounting respectively. However, the physical settlement generally still involves at least two balance groups, except if one entity is serving more than one NEMO Hub within the same Scheduling Area as a CCP.

1.4.4 Shipping Links / Physical Settlement Links

Between the following Scheduling Areas in ~~Table 1~~ ~~Table 4~~ direct exchange of energy via 1:1 nomination is possible without any capacity restrictions³:

Intra-Zonal Shipping Links	
50Hertz	Amprion
50Hertz	TenneT GmbH
50Hertz	TransnetBW
Amprion⁴	APG
Amprion	TenneT GmbH
Amprion	TransnetBW
APG⁴	TenneT GmbH
APG⁴	TransnetBW
Creos	Amprion
TenneT GmbH	TransnetBW

Table 1: Intra-Zonal Shipping Links

³ 1:1 nomination refers to the nomination of an External Commercial Trade Schedule between two balance groups associated to the same entity identified by identical EIC.

⁴ ~~Intra-Zonal Shipping Links between DE and AT can be closed due to network security reasons.~~

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Between the following cross-zonal Scheduling Areas in [Table 2](#) exchange of energy via 1:1 nomination is possible with capacity restrictions:

Border	Cross-Zonal Shipping Links	
FR-DE/ AT /LU	Amprion	RTE
	TransnetBW	RTE
DE/LU- AT	Amprion	APG
	TenneT GmbH	APG
	TransnetBW	APG
BE-DE/ AT /LU	Creos	Elia
NL-DE/ AT /LU	Amprion	TenneT BV
	TenneT GmbH	TenneT BV
PL-DE/ AT /LU ⁵	50Hertz	PSE
CZ-DE/ AT /LU ⁵	APG	CEPS
	TenneT GmbH	CEPS
	50Hertz	CEPS
HU-DE/ AT /LU ⁵	APG	Mavir
SI-DE/ AT /LU	APG	Eles
IT-DE/ AT /LU	APG	Terna
CH-DE/ AT /LU ⁵	APG	Swissgrid
	Amprion	Swissgrid
	Transnet BW	Swissgrid
DK1-DE/ AT /LU	TenneT GmbH	Energinet.dk
DK2-DE/ AT /LU	50Hertz	Energinet.dk
DE-SE4	Baltic Cable AB	

Table 2: Cross-Zonal Shipping Links

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1.5 Approval requests to BNetzA, E-Control and ILR

The implementation and operation of Multiple NEMO Arrangement in the Bidding Zone DE/~~AT~~/LU needs binding provisions, formally approved by BNetzA, ~~E-Control~~, and ILR.

This document contains descriptive parts needed for the understanding of the specific MNA provisions. Provisions needing formal approval are highlighted with "**Provision**". For these provisions the TSOs ask for formal approval.

⁵ Currently day-ahead market coupling is not implemented on these borders. This has to be taken into account when using the document (e.g. Figure 9).

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2 Single Day-Ahead Coupling

PROVISION SDC_1: Sufficiently high capacity between NEMO Hubs within the Bidding Zone DE/AT/LU for SDC

The NEMOs shall ensure an unrestricted price formation between the NEMO Hubs within the Bidding Zone DE/AT/LU in the Single Day-ahead Coupling taking into account unlimited transmission capacity. "Sufficiently high" means that no restrictions are applied for the exchange via Intra-Zonal Shipping Links.

2.1 Data exchange with the MCO-function

The SDC algorithm is hosted by the Market Coupling Operator (MCO-) function. As TSOs are not directly connected to the MCO-function, input and output data need to be transferred via the NEMO trading systems. Regarding the data exchange for the pre- and post-coupling arrangements, the TSOs suggest to implement a centralised approach: the input and output data will be transferred through one single data exchange point provided and owned by the TSOs. TSOs will specify details of this single data exchange point in the implementation phase. NEMOs shall organize themselves to transfer the input and output data between the single data exchange point and the MCO-function. TSOs shall organize themselves to transfer the input and output data between the single data exchange point and their individual systems. The exchange point shall be accessible to all NEMOs on equal terms.

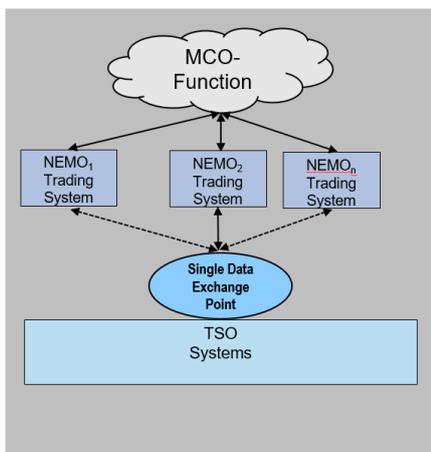


Figure 2: Data exchange for SDC

In normal circumstances, the following general steps shall take place:

- TSOs shall calculate cross-zonal capacities and allocation constraints (if applicable) and send them to the single data exchange point.
- At least one NEMO (the coordinator) shall be in charge of transferring the input and output data of relevance for the TSOs on a given day to the MCO-function. The NEMOs shall organize themselves (main coordinator and its back-up) and inform the

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TSOs subsequently. Should the NEMOs not agree two months after one of the NEMOs declared a date when it 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.

- The coordinator(s) shall retrieve the input data from the single data exchange point and forward them to the MCO-function for a given day.
- The coordinator(s) shall retrieve the output data from the MCO-function and forward them to the single data exchange point (e.g. to allow for the necessary validation of results).
- The TSOs do not assume any liability for data inconsistency at the coordinator(s). In case data inconsistency is caused by a/the TSOs, a/the TSO(s) will be liable.

Details on the different steps as well as back-up circumstances will be specified during the implementation phase.

PROVISION SDC_2: Data exchange with the MCO-function

For the SDC, the data exchanges between TSOs and the MCO function relating to input and output data will be done according to the existing MCO architecture, which is to say that the data will be transferred via the NEMO trading systems of the coordinator(s).

PROVISION SDC_3: One single data exchange point on TSO side

TSO will use one single data exchange point to exchange data with the MCO-function in the pre- and post-coupling phase. The exchange point shall be accessible to all NEMOs on equal terms. Technical details will be specified by TSOs in the implementation phase.

PROVISION SDC_4: Transfer of input and out data of relevance for the TSOs

At least one NEMO shall transfer the input and output data from the TSOs single data exchange point to the MCO-function.

PROVISION SDC_5: Provision of the Net Position by NEMOs

The NEMOs shall provide the net position for each NEMO Hub of each Scheduling Area of the Bidding Zone DE/AT/LU to the TSOs as part of the SDC results.

2.2 Shipping arrangement for day-ahead

2.2.1 General principles

Shipping is a two-part transaction consisting of:

1. **Physical Settlement:** The settlement of energy delivery among CCPs per Market Time Unit based on the Net Positions resulting from the Single Day-Ahead Coupling, this by means of Internal and External Commercial Trade Schedules among the CCPs' and Shipping Agents' Balance Groups in each Scheduling Area.
2. **Financial Settlement:** The settlement of payments in exchange for the exchanged energy among the CCPs based on the Market Clearing Price per Market Time Unit of the receiving CCP's NEMO Hub resulting from the Single Day-Ahead Coupling .

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Distinction of Physical Settlement

With multiple NEMOs operating in the Scheduling Areas of the Bidding Zone DE/AT/LU the Shipping will be performed on different layers. While the Financial Settlement could abstract from these layers, the Physical Settlement has to be distinguished for the following layers:

1. **Intra-Scheduling Area:** Physical settlement between NEMO Hubs within the same Scheduling Area,
2. **Intra-Zonal:** Physical settlement between NEMO Hubs of different Scheduling Areas within the Bidding Zone DE/AT/LU,
3. **Cross-Zonal:** Physical settlement between NEMO Hubs of adjacent Bidding Zones.

The settlement of energy exchanges within each NEMO Hub remains the same irrespectively whether one or more NEMOs are active in the Scheduling Area. With multiple NEMOs today's buy and sell-processes will remain the same:

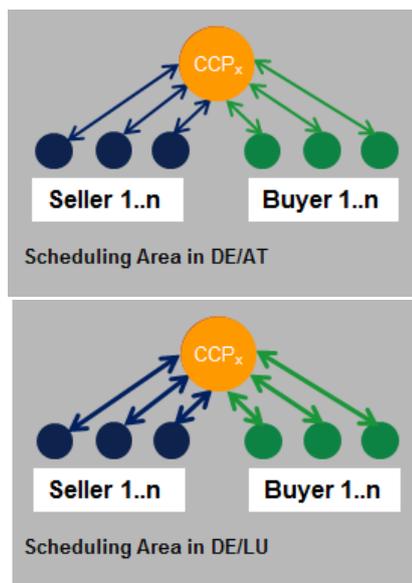


Figure 3: Scheduling Area in DE/ATLU

For the time being, there will be no NEMO being active in LU. The special handling of orders in LU is described below if necessary.

2.2.2 Preferred Shipping Agent model

Within the Bidding Zone DE/AT/LU the designated Shipping approach for the Single Day-Ahead Coupling is the "Preferred Shipping Agent" model. It introduces the Preferred Shipping Agent (pSA) of the delivering CCP acting as an intermediary between two CCPs deliver-

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ing energy in exchange for money. The Shipping between two CCPs is split-up in two transactions: On the one side between the delivering CCP and its pSA and on the other side between the pSA and the receiving CCP. If the delivering CCP performs the pSA task itself, the first transaction is omitted.

The financial and Physical Settlement involves the same parties and their directions are inverted.

The key property of the “Preferred Shipping Agent” model is that the delivering CCP is in charge of and liable for the shipping to the receiving CCP.

The Preferred Shipping Agent model is visualized as following:



Figure 4: Preferred Shipping Agent model

2.2.3 Scheduled Exchange Calculation

Scheduled Exchanges could be either calculated by the NEMOs or the TSOs. This will be decided in the implementation phase.

In case the TSOs intend to calculate Schedules Exchanges resulting from SDC, the algorithm for calculating the Scheduled Exchanges among all counterparties (e.g. External and Internal Commercial Trade Schedules) resulting from Single Day-Ahead Coupling will be developed in accordance with the applicable methodologies for calculating Scheduled Exchanges resulting from Single Day-ahead Coupling, pursuant to Article 43 of the GL CACM.

The sum of all Cross-Zonal schedules of all NEMOs corresponds to the net position of the DE/AT/LU Bidding Zone, up to a certain technical tolerance due to energy rounding.

PROVISION SDC_6: Rounding imbalances

The responsibility for settling rounding imbalances in the context of Article 68 (5) of the GL CACM is linked to the responsibility for calculating the Scheduled Exchanges.

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2.2.4 Intra-Scheduling Area Shipping

The NEMOs operating NEMO Hubs in specific Scheduling Areas of the Bidding Zone DE/AT/LU are responsible to enable Shipping between all NEMO Hubs in this Scheduling Area by means of their CCPs and pSAs.

Fundamentals:

- All CCPs have to designate their individual pSA
- The pSA of the delivering CCP performs the Shipping
- The Physical Settlement requires the following actions
 - An Internal Commercial Trade Schedule from the Balance Group of the delivering CCP to the Balance Group of its pSA within the Scheduling Area
 - An Internal Commercial Trade Schedule from Balance Group of the pSA to the Balance Group of the receiving CCP within the Scheduling Area⁶
- The Financial Settlement requires the following actions
 - A bank transfer from the receiving CCP to the pSA (of the delivering CCP)
 - A bank transfer from the pSA (of the delivering CCP) to the delivering CCP⁷

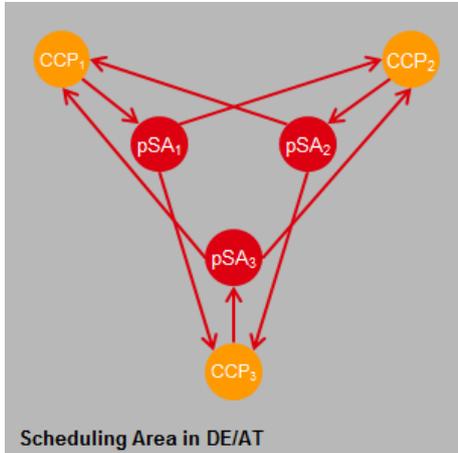
The following figure explains the principle of Physical Settlement for three CCPs and their respective pSAs, however it is extension proof for additional NEMOs.

⁶ If a CCP and its pSA make use of the same balance group both Internal Commercial Trade Schedules are replaced by one Internal Commercial Trade Schedule from the commonly used balance group of the delivering CCP and its pSA to the balance group of the receiving CCP.

⁷ If a CCP and its pSA make use of the same bank account (e.g. being the same legal entity) both bank transfers are replaced by one from the bank account of the receiving CCP to the commonly used bank account of the delivering CCP and its pSA.

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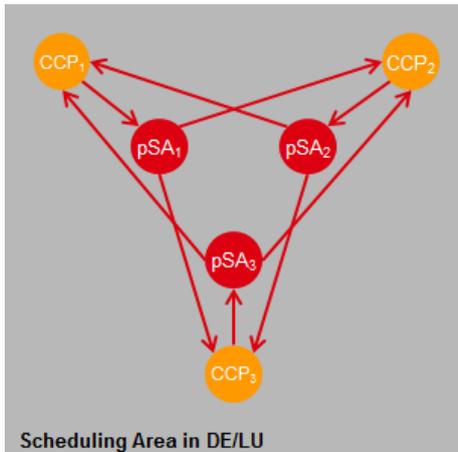
→ Physical Settlement



CCP_i Central Counter Party i



pSA_i Preferred Shipping Agent i



→ Physical Settlement



CCP_i Central Counter Party i



pSA_i Preferred Shipping Agent i

Figure 5: Physical Settlement of Intra-Scheduling Area Shipping in DE/ATLU

The overall Intra-Scheduling Area Shipping (Physical and Financial Settlement) is presented below:

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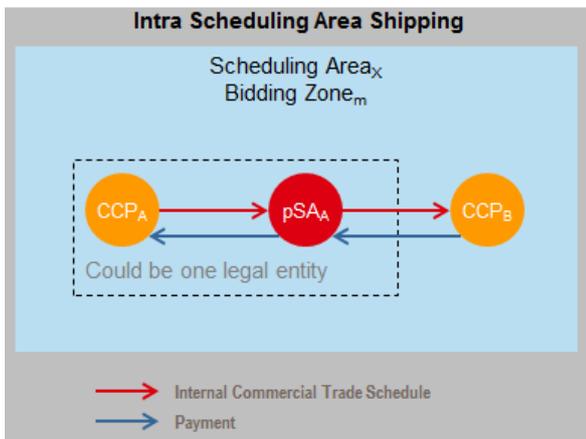


Figure 6: Intra-Scheduling Area Shipping

2.2.5 Intra-Zonal Shipping

The NEMOs operating NEMO Hubs in specific Scheduling Areas of the Bidding Zone DE/AT/LU are responsible to enable Shipping between all NEMO Hubs of the Bidding Zone DE/AT/LU by means of their CCPs and pSAs.

Fundamentals (Items in *italics font* are identical to Intra-Scheduling Area Shipping, items in **bold font** are specific for Intra-Zonal Shipping):

- *All CCPs have to designate their individual pSA*
- *The pSA of the delivering CCP performs the Shipping*
- *The Physical Settlement requires the following actions*
 - *An Internal Commercial Trade Schedule from the Balance Group of the delivering CCP to the Balance Group of its pSA within the **source** Scheduling Area*
 - **An External Commercial Trade Schedule between the Balance Groups of the pSA in both Scheduling Areas by 1:1 Nomination⁸**
 - *An Internal Commercial Trade Schedule from Balance Group of the pSA to the Balance Group of the receiving CCP within the **sink** Scheduling Area*
- *The Financial Settlement requires the following actions*
 - *A bank transfer from the receiving CCP to the pSA (of the delivering CCP)*
 - *A bank transfer from the pSA (of the delivering CCP) to the delivering CCP*

These principles are depicted in the [Figure 7](#) hereafter:

⁸ 1:1 nomination refers to the nomination of an External Commercial Trade Schedule between two balance groups associated to the same entity identified by identical EIC (Energy Identification Code).

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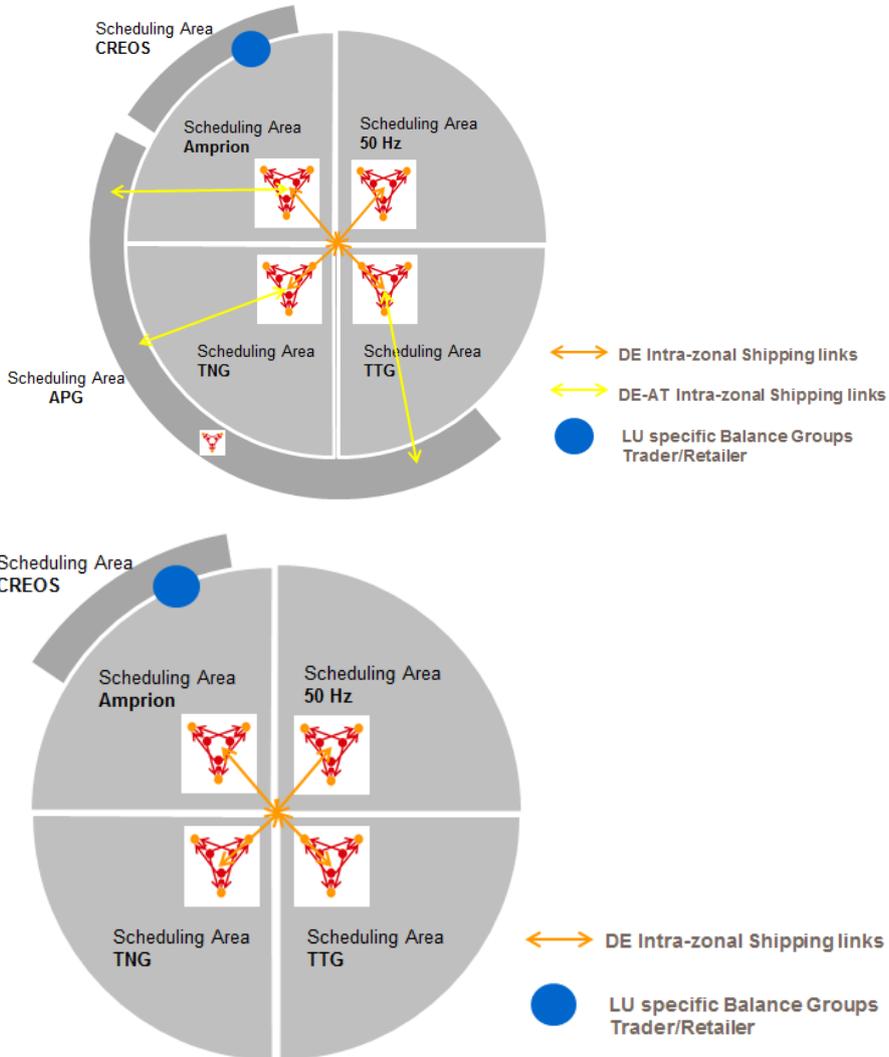


Figure 7: Intra-Zonal Shipping

The logic of Intra-Zonal Shipping Links (identical to the Cross-Zonal ones) is explained in the figure below.

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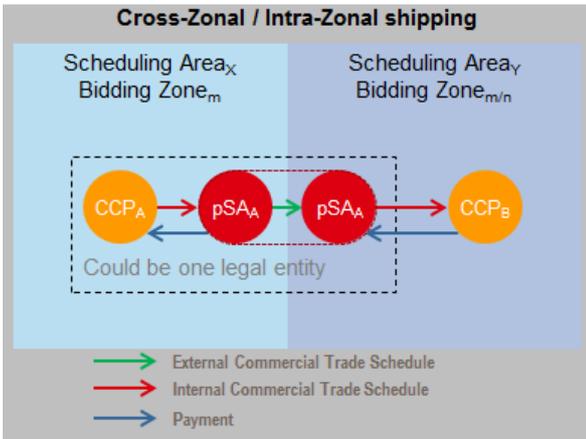


Figure 8: Cross-Zonal / Intra-Zonal shipping

Related to Intra-Zonal Shipping it has to be noted:

- LU-volumes, resulting from Single Day-Ahead Coupling, will be exchanged via a LU specific Balance Groups retailer/trader via external commercial trade schedules between the Balance Groups of each balancing responsible party in Amprion and Creos Scheduling Areas by 1:1 nomination.

Examples for Intra-Zonal Shipping:

- $CCP1 @ APGAmprion \rightarrow pSA1 @ APGAmprion \rightarrow pSA1 @ TNG \rightarrow CCP2 @ TNG$
- $CCP1 @ TTG \rightarrow pSA1 @ TTG \rightarrow pSA1 @ Amprion \rightarrow CCP1 @ Amprion \rightarrow$ Balance Groups(Retailer/Trader) @ Creos⁹

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2.2.6 Cross-Zonal Shipping

The NEMOs operating NEMO Hubs in specific Scheduling Areas of the Bidding Zone DE/AT/LU are responsible to enable Shipping between all NEMO Hubs of the Bidding Zone DE/AT/LU and adjacent Bidding Zones.

For the Bidding Zone DE/AT/LU, Cross-Zonal Shipping becomes relevant for the borders listed in [Table 2Table 2](#), as far as these are operational in the Single Day-ahead Coupling.

⁹ See rectification in paragraph 5.

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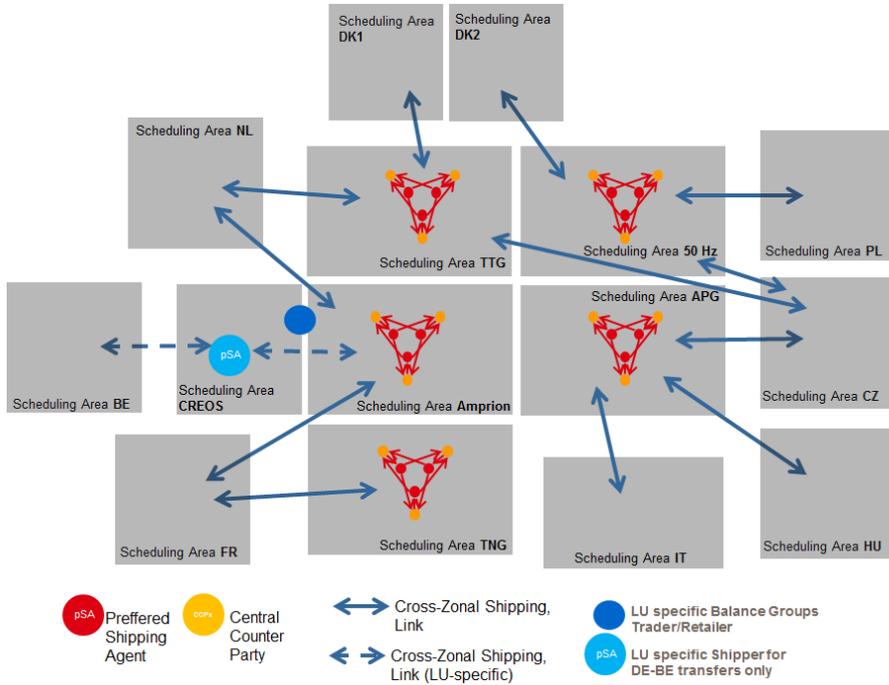
The fundamentals of Intra-Zonal Shipping (bullet points in 2.2.5) remain the same and are also valid for Cross-Zonal Shipping. Furthermore also [Figure 7](#) and [Figure 8](#) apply for Cross-Zonal Shipping.

In case of Cross-Zonal Shipping between two adjacent Bidding Zones for which capacity is allocated implicitly, the delivering CCP shall pay the arithmetic product of the shipped amount of energy at the sink Scheduling Area in MWh and the difference in the Market Clearing Prices of the corresponding NEMO Hubs minus – if applicable – the arithmetic product of the loss and the Market Clearing Price of the NEMO Hub where the loss is accounted (source or sink Scheduling Area) per Market Time Unit to the entity responsible for the distribution of the Congestion Income in exchange for the Transmission Rights granted by the TSOs of the interconnector.

The TSOs jointly operating a Cross-Zonal Shipping Link are responsible to issue a Transmission Right (i.e. Programming Authorization) in favour of the nominating pSA.

These principles of Cross-Zonal Shipping are depicted in the [Figure 9](#) hereafter:

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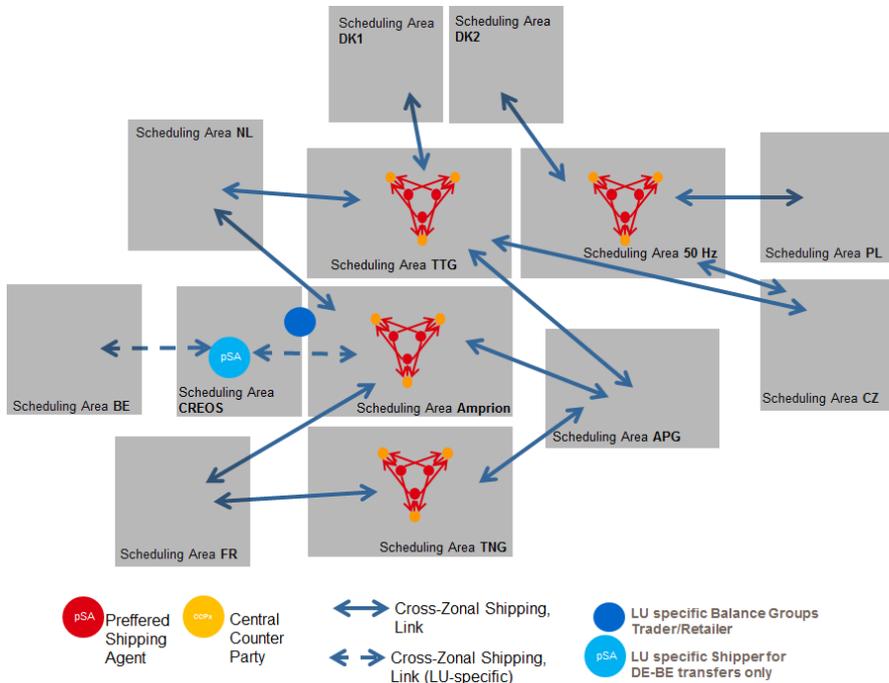


Figure 9: Cross-Zonal Shipping principles

Related to Cross-Zonal Shipping it has to be noted:

- External Commercial Trade Schedules across all/any Bidding Zone Borders require
 - A Cross-Zonal Shipping Link
 - A Transmission Right (i.e. Programming Authorization) in favour of the nominating pSA.
 - A Cross-Zonal process between the adjacent TSOs to validate the consistency of the nominated External Commercial Trade Schedules and the Transmission Right
- LU-specific Cross-Zonal Shipping Link, because of no active NEMO/CCPs in LU

Examples for Physical Settlement from Bidding Zone DE/AT/LU to NL:

- CCP3 @ APGTNG → pSA3 @ APGTNG → pSA3 @ Amprion → pSA3 @ Tennet_NL → CCP2
- CCP3 @ APGTNG → pSA3 @ APGTNG → pSA3 @ TTG → pSA3 @ Tennet_NL → CCP2

The Preferred Shipping Agent model is extendible for additional NEMOs/CCPs in the Bidding Zone DE/AT/LU. It is a harmonized approach within NL, BE, FR, DE, AT, LU and therefore interoperable.

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The regional harmonized approach will be made interoperable in case of specific Central Shipper approaches in line with Article 8 (2) (l) of GL CACM will be applied in other Bidding Zones with SDC (possible candidates: DK, PL, CZ, ~~HU, SI, IT~~). The coordination needed will be processed in the upcoming implementation projects.

PROVISION SDC_7: NEMO obligations for Shipping

NEMOs shall organize and perform Shipping among their CCPs.

The Shipping shall comply with the "Preferred Shipping Agent" model, this introduces the Preferred Shipping Agent (pSA) of the delivering CCP acting as an intermediary between two CCPs delivering energy in exchange for money.

NEMOs, CCPs, pSAs require standard balance group-contracts for Physical Settlement purposes. Due to equal treatment, for shipping between NEMOs no priority for nominations will be applied in case of mismatches except if agreed so by the respective NEMO.

PROVISION SDC_8: The TSOs obligations for facilitating NEMOs' SDC Shipping

TSOs shall apply standard rules and processes related to Physical Settlement, in particular with regard to nomination deadlines.

2.3 Fallback arrangements

This fallback applies in cases one or some of the NEMOs have technical issues to join common/ central SDC processes. In this case of a decoupling of one, more or all DE/~~AT~~/LU NEMO Hubs from the SDC, regardless of whether SDC remains coupled with regard to the other NEMO Hubs partially or fully decoupled on the level of Bidding Zones, the following fallback arrangement shall be applied to the decoupled NEMO Hubs within the Bidding Zone DE/~~AT~~/LU:

- Each NEMO has to be able to match orders of the order books from all its NEMO Hubs in the Bidding Zone DE/~~AT~~/LU, which are decoupled from SDC,
 - resulting in a single Market Clearing Price per Market Time Unit per NEMO applicable for all NEMO Hubs of that NEMO which are decoupled from SDC;
- Individual Net Positions for these NEMO Hubs have to sum up to zero per associated NEMO in each Market Time Unit (i.e no cross-zonal exchanges and no exchanges with other NEMOs).
- Each NEMO has to enable its CCP and pSA to settle the results of the fallback by means of Intra-Zonal Shipping.

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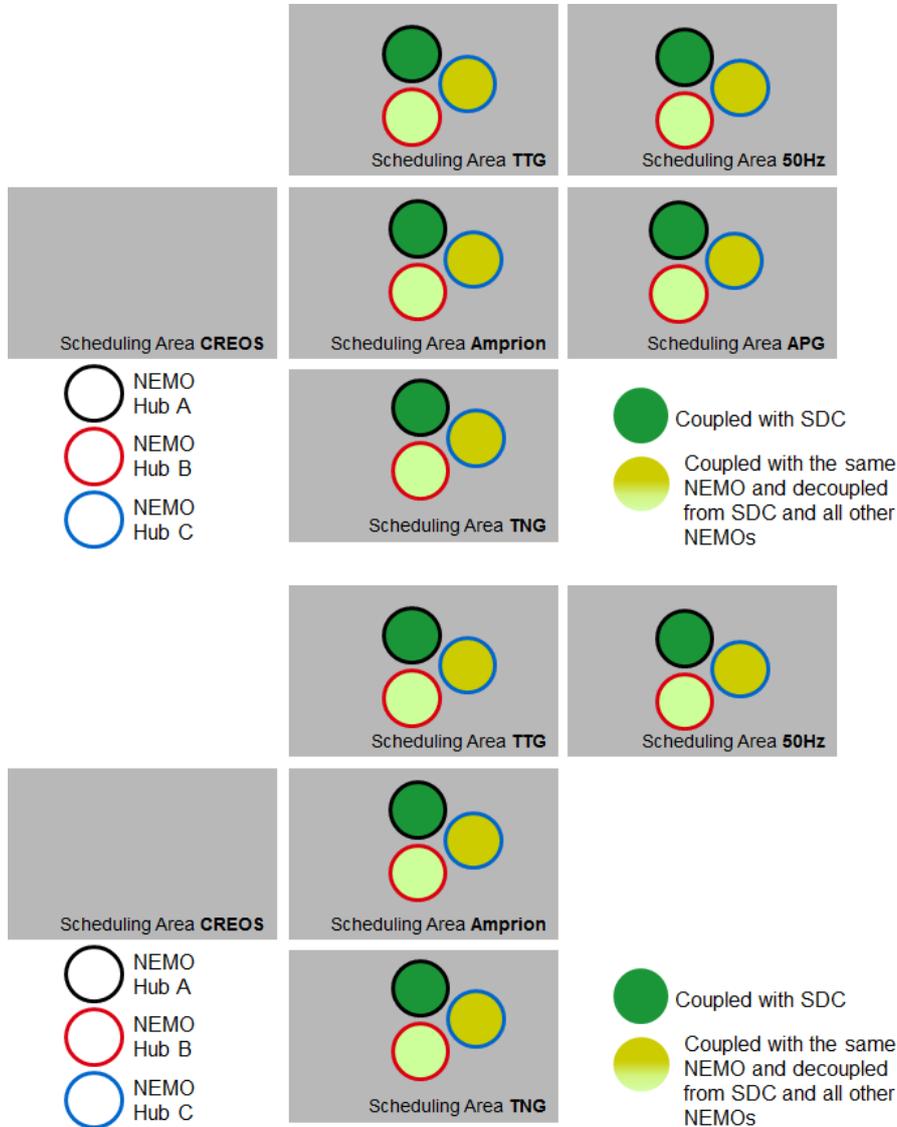


Figure 10: SDC fallback NEMO Hub decoupling

PROVISION SDC_9: Fallback SDC

NEMOs have to implement the local fallback mechanism for SDC as described in this paragraph.

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2.4 Contractual architecture

Pursuant to Article 7 (1) of GL CACM, NEMOs shall in cooperation with TSOs operate the single day-ahead coupling (SDC).

It is acknowledged that all European NEMOs and all European TSOs potentially will conclude a Framework Agreement stipulating the respective rights and obligations regarding the establishment, update and further development of the SDC as well as its operation, which cannot reflect all national MNA aspects.

It is therefore suggested that all NEMOs within the Bidding Zone DE/AT/LU conclude a contract to confirm their commitment to the MNA of DE/AT/LU, the delivery commitment towards each other and towards NEMOs of other Bidding Zones and their cooperation in good faith. In this respect all NEMOs shall grant each other access to their CCP to perform the delivery of energy and to process the respective payments on the basis of equal terms and conditions. However, the establishment of shipping links between CCPs resp. pSAs towards each other might require additional contracts potentially involving respective TSOs.

In the course of establishing, updating or further developing the SDC as well as operating it, the necessity might occur to develop and conclude further contracts and agreements. In case, the Bidding Zone DE/AT/LU is or might be affected, all NEMOs and/or all TSOs in the Bidding Zone DE/AT/LU shall actively contribute to the development of the respective contracts and agreements and each NEMO and/or each TSO shall be a signatory to them.

All contracts and agreements shall be based on the principles of non-discriminatory fair and equal treatment and shall allow for the adherence of further NEMOs and/or further TSOs in case such a necessity occurs.

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3 Single Intraday Coupling (SIC)

3.1 Multiple NEMO Arrangements

The Single Intraday Coupling (SIC) will allow for multiple NEMOs operating intraday markets in the same Bidding Zone and even the same Scheduling Area. The Single Intraday Coupling therefore includes the arrangement for more than one NEMO offering trading services in the same Bidding Zone as required by Article 57 of GL CACM. No separate solution for multiple NEMO arrangements will be needed. Each NEMO has to adhere to the Single Intraday Coupling, for which an adherence procedure is available.

Hence access of new NEMOs can easily be implemented.

Thereby, each NEMO is connected to the interfaces for relevant data exchange, involved in the relevant procedures and included in the respective contracts.

The Single Intraday Coupling and the assumed shipping solution, is described in the following with regard to the Multiple NEMO Arrangements.

3.2 General setup of the Single Intraday Coupling

3.2.1 Coupling of continuous markets

The Single Intraday Coupling couples continuous intraday markets of participating NEMOs (referred to as NEMO Hubs) by matching individual energy bids and offers entered in the order books of the NEMO Hubs with simultaneous consideration of the Cross-Zonal Capacity on a single trade basis. Each trade is a unique pair of matched buy and sell orders.

3.2.2 Shipping Links for SIC

Relevant Shipping Links, also called "Shipping-Interconnectors" in the framework of SIC-implementation and operation, can be found in [Table 1Table 4](#) and [Table 2Table 2](#).

NEMO Hubs of the same Scheduling Area are connected by sufficiently high transmission capacity. Scheduling Areas are connected to each other by Shipping-Interconnectors. Shipping-Interconnectors are declared by TSOs operating adjacent Scheduling Areas having a physical connection. However within Germany, Shipping-Interconnectors also exist between all German TSOs although no direct interconnection-line(s) exist(s) (e.g. between TNG-50Hertz). Shipping-Interconnectors of Scheduling Areas located in the same Bidding Zone are per definition equipped with sufficiently high transmission capacity. Shipping-Interconnectors of Scheduling Areas located in different Bidding Zones are equipped with Cross-Zonal Capacity, calculated and provided by the TSOs of the associated Capacity Calculation Region.

PROVISION SIC_1: Sufficiently high capacity between NEMO Hubs within the Bidding Zone DE/~~AT~~/LU for SIC

The NEMOs shall ensure unrestricted price formation between the NEMO Hubs within the Bidding Zone DE/~~AT~~/LU in the Single Intraday Coupling taking into account unlimited transmission capacity. "Sufficiently high" means that no restrictions are applied for the exchange via Intra-Zonal Shipping Links.

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3.3 Data exchange with the continuous trading matching algorithm

The SIC system provides a central interface for TSOs to provide Cross-Zonal Capacities referred to as Capacity Management Module.

The SIC system provides a central interface for TSO, Scheduled Exchange Calculators and shipping agents to get the allocated capacity and other relevant results referred to as Shipping Module.

3.4 Shipping

3.4.1 Preferred Shipping Agent (pSA) model

The Single Intraday Coupling assumes a Preferred Shipping Agent (pSA) model where the shipping between CCPs is organized among all CCPs by means of Preferred Shipping Agents. Each CCP designates its unique Preferred Shipping Agent, which could be the CCP itself or a separate legal entity. The pSA of the delivering CCP performs the shipping into the balance group of the receiving CCP. In contrast to the Single Day-ahead Coupling, delivering and receiving CCP could be located in remote Scheduling Areas not directly adjacent to each other. In this case, the pSA has to perform the Physical Settlement through the intermediate Scheduling Areas for the entire shipping path. The preferred shipping agent of the receiving CCP is not involved in the shipping. In case the preferred shipping agent of a CCP is a separate legal entity, the preferred shipping agent of the delivering CCP steps between the two CCP and assumes the legal counterparty risk for the shipping. The shipping between the CCPs is split into two transactions¹⁰, with the preferred shipping agent of the delivering CCP standing in between the CCPs. The transaction between the delivering CCP and its preferred Shipping Agent is an internal trade, which is settled like the trades between market participants and their CCP, and remains unaffected by the following distinctions. If the delivering CCP performs the pSA task itself, the transaction between the delivering CCP and its pSA is omitted. The transaction between the pSA and the receiving CCP, which constitute the actual shipping, is a two-part transaction consisting of:

- **Physical settlement:** The settlement of energy delivery among CCPs per Market Time Unit based on the transactions resulting from the Single Intraday Coupling, by means of Internal and External Commercial Trade Schedules among the CCPs' and Shipping Agents' Balance Groups in each Scheduling Area.
- **Financial Settlement:** The settlement of payments in exchange for the exchanged energy among the CCPs based on the value of the transaction resulting from the Single Intraday Coupling by means of wired bank transfer.¹¹

The Physical Settlement is further to be distinguished in

- **Intra-Scheduling Area:** Physical settlement between NEMO Hubs within the same Scheduling Area,

¹⁰ A transaction in the shipping process could be based on a single trade or an aggregation of several trades involving the same pair of CCPs. The aggregation could include the whole intraday market time-frame or dedicated sub-periods. This will be defined by the Single Intraday Coupling project and reflected in the All-TSO Scheduled Exchange Calculation (SEC) methodology. Aggregations per market time unit over the whole market timeframe and all pairs of CCP constitute the CCPs' net positions.

¹¹ The value of transaction is total of the arithmetic products of volume and price of each included trade in case of aggregation of several trades into a transaction.

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- **Intra-Zonal:** Physical settlement between NEMO Hubs of different Scheduling Areas within the Bidding Zone DE/AT/LU,
- **Cross-Zonal:** Physical Settlement between NEMO Hubs of adjacent Bidding Zones.

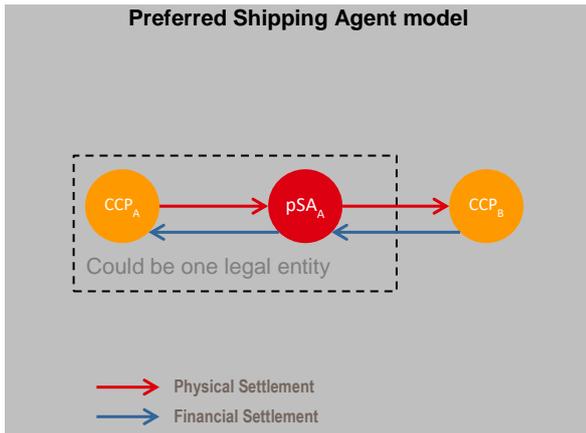


Figure 11: Preferred Shipping Agent model

3.4.2 Scheduled Exchange Calculation

Scheduled Exchanges could be either calculated by the NEMOs or the TSOs. This will be decided in the implementation phase.

In case the TSOs intend to calculate Scheduled Exchanges resulting from SIC, the algorithm for calculating the Scheduled Exchanges (e.g. External and Internal Commercial Trade Schedules) resulting from Single Intraday Coupling will be developed in accordance with the applicable methodologies for calculating Scheduled Exchanges resulting from Intraday Coupling, pursuant to Article 61 of the GL CACM.

Due to mathematical reasons the applicable Scheduled Exchanges might contain imbalances due to rounding, up to a certain technical tolerance.

PROVISION SIC_2: Rounding imbalances

The responsibility for preventing or settling rounding imbalances is linked to the responsibility for calculating the Scheduled Exchanges.

3.4.3 Intra-Scheduling Area shipping

The NEMOs operating NEMO Hubs in specific Scheduling Areas of the Bidding Zone DE/AT/LU are responsible to enable Shipping between all NEMO Hubs in this Scheduling Area by means of their CCPs and pSAs.

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Fundamentals:

- All CCPs have to designate their individual pSA
- The pSA of the delivering CCP performs the Shipping
- The Physical Settlement requires the following actions
 - An Internal Commercial Trade Schedule from the Balance Group of the delivering CCP to the Balance Group of its pSA within the Scheduling Area
 - An Internal Commercial Trade Schedule from Balance Group of the pSA to the Balance Group of the receiving CCP within the Scheduling Area¹²
- The Financial Settlement requires the following actions
 - A bank transfer from the receiving CCP to the pSA (of the delivering CCP)
 - A bank transfer from the pSA (of the delivering CCP) to the delivering CCP¹³

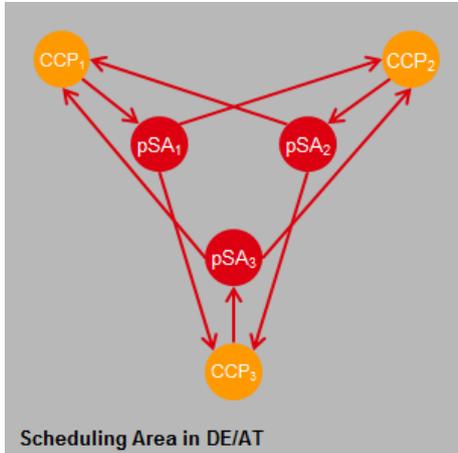
The following figure explains the principle of Physical Settlement for three CCPs and their respective pSAs, however it is extension proof for additional NEMOs.

¹² If a CCP and its pSA make use of the same balance group both Internal Commercial Trade Schedules are replaced by one Internal Commercial Trade Schedule from the commonly used balance group of the delivering CCP and its pSA to the balance group of the receiving CCP.

¹³ If a CCP and its pSA make use of the same bank account (e.g. being the same legal entity) both bank transfers are replaced by one from the bank account of the receiving CCP to the commonly used bank account of the delivering CCP and its pSA.

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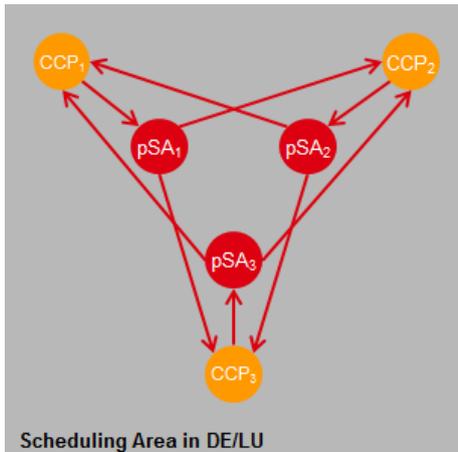
→ Physical Settlement



CCP_i Central Counter Party i



pSA_i Preferred Shipping Agent i



→ Physical Settlement



CCP_i Central Counter Party i



pSA_i Preferred Shipping Agent i

Figure 12: Scheduling Area in DE/ATLU

The overall Intra-Scheduling Area Shipping (Physical and Financial Settlement) is presented below:

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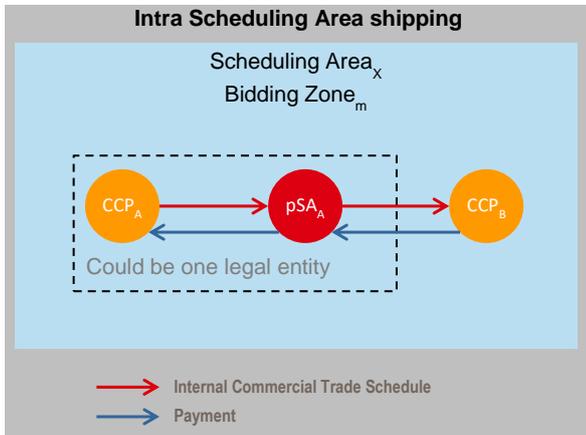


Figure 13: Intra-Scheduling Area shipping

3.4.4 Intra-Zonal shipping

The NEMOs operating NEMO Hubs in specific Scheduling Areas of the Bidding Zone DE/AT/LU are responsible to enable Shipping between all NEMO Hubs of the Bidding Zone DE/AT/LU by means of their CCPs and pSAs.

Fundamentals (Items in *italics font* are identical to Intra-Scheduling Area Shipping, items in **bold font** are specific for Intra-Zonal Shipping):

- *All CCPs have to designate their individual pSA*
- *The pSA of the delivering CCP performs the Shipping*
- *The Physical Settlement requires the following actions*
 - *An Internal Commercial Trade Schedule from the Balance Group of the delivering CCP to the Balance Group of its pSA within the **source** Scheduling Area*
 - **An External Commercial Trade Schedule between the Balance Groups of the pSA in both Scheduling Areas by 1:1 Nomination¹⁴**
 - *An Internal Commercial Trade Schedule from Balance Group of the pSA to the Balance Group of the receiving CCP within the **sink** Scheduling Area*
- *The Financial Settlement requires the following actions*
 - *A bank transfer from the receiving CCP to the pSA (of the delivering CCP)*
 - *A bank transfer from the pSA (of the delivering CCP) to the delivering CCP*

These principles are depicted in the figure hereafter:

¹⁴ 1:1 nomination refers to the nomination of an External Commercial Trade Schedule between two balance groups associated to the same entity identified by identical EIC (Energy Identification Code).

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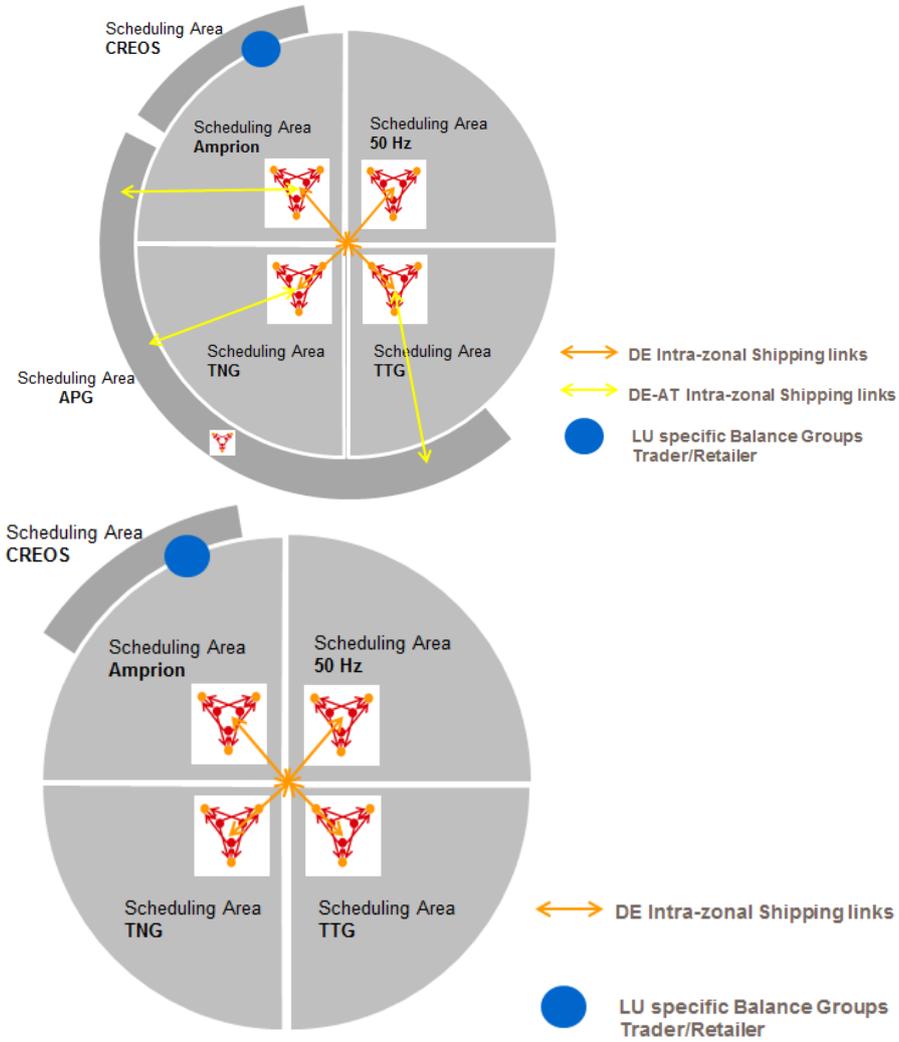


Figure 14: Intra-Zonal Shipping

The logic of Intra-Zonal Shipping Links (identical to the Cross-Zonal ones) is explained in the figure below.

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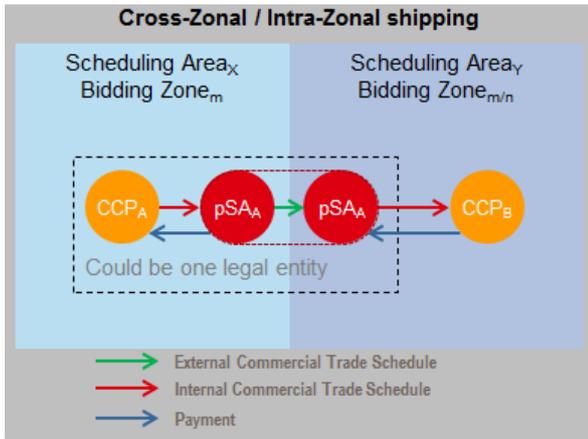


Figure 15: Cross-Zonal / Intra-Zonal shipping

Related to Intra-Zonal Shipping it has to be noted:

- LU-volumes, resulting from Single Intraday Coupling, will be exchanged via a LU specific Balance Groups retailer/trader via external commercial trade schedules between the Balance Groups of each balancing responsible party in Amprion and Creos Scheduling Areas by 1:1 nomination.

Examples for Intra-Zonal Shipping:

- CCP1 @ APGAmprion → pSA1 @ APGAmprion → pSA1 @ TNG → CCP2 @ TNG
- CCP1 @ TTG → pSA1 @ TTG → pSA1 @ Amprion → CCP1 @ Amprion → Balance Groups(Retailer/Trader) @ Creos¹⁵

3.4.5 Cross-Zonal shipping

The NEMOs operating NEMO Hubs in specific Scheduling Areas of the Bidding Zone DE/AT/LU are responsible to enable Shipping between all NEMO Hubs of the Bidding Zone DE/AT/LU and adjacent Bidding Zones. For the Bidding Zone DE/AT/LU, Cross-Zonal Shipping becomes relevant for the borders listed in [Table 2Table-2](#), as far as these are operational in the Single Intraday Coupling:

¹⁵ See rectification in paragraph 5.

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The fundamentals of Intra-Zonal Shipping (bullet points in 3.4.4) remain the same and are also valid for Cross-Zonal Shipping. Furthermore also [Figure 14](#) and [Figure 15](#) apply for Cross-Zonal Shipping.

In case a trade between two NEMO Hubs located in different Bidding Zones has to be settled, the external commercial trade schedule passing the Bidding Zone Border requires a transmission capacity right by means of a rights document according to ECAN standard proving the associated capacity allocation to this trade. The TSOs jointly operating a Cross-Zonal Shipping Link are responsible to issue a Transmission Right (i.e. Programming Authorization) in favour of the nominating pSA.

Since the pSA has to schedule the energy from the source Scheduling Area to the sink Scheduling Area, the scheduling path could pass several Scheduling Areas or even Bidding Zones and therefore require several External Commercial Trade Schedules.

For shipping between two Bidding Zones which are not adjacent to each other, the principle is shown in the following [Figure 16](#):

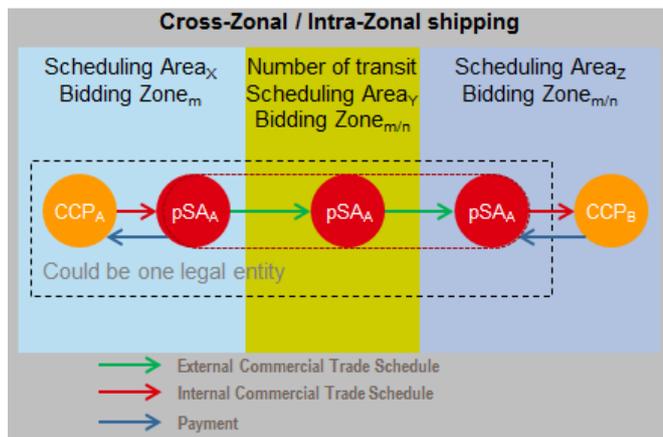
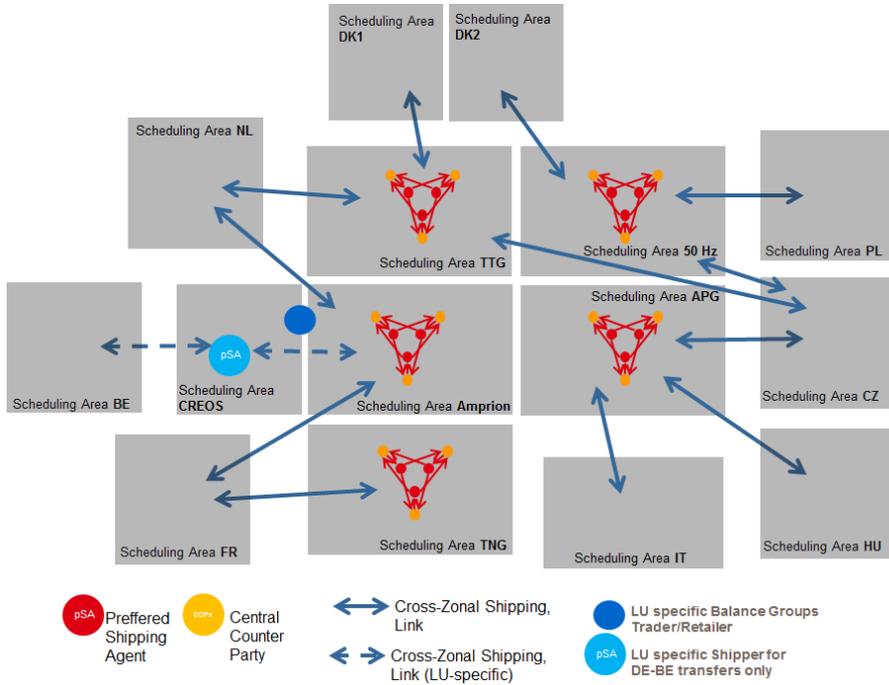


Figure 16: SIC Cross-Zonal shipping, when crossing multiple Scheduling Areas and/or Bidding Zones

These principles of Cross-Zonal Shipping are depicted in the figure hereafter:

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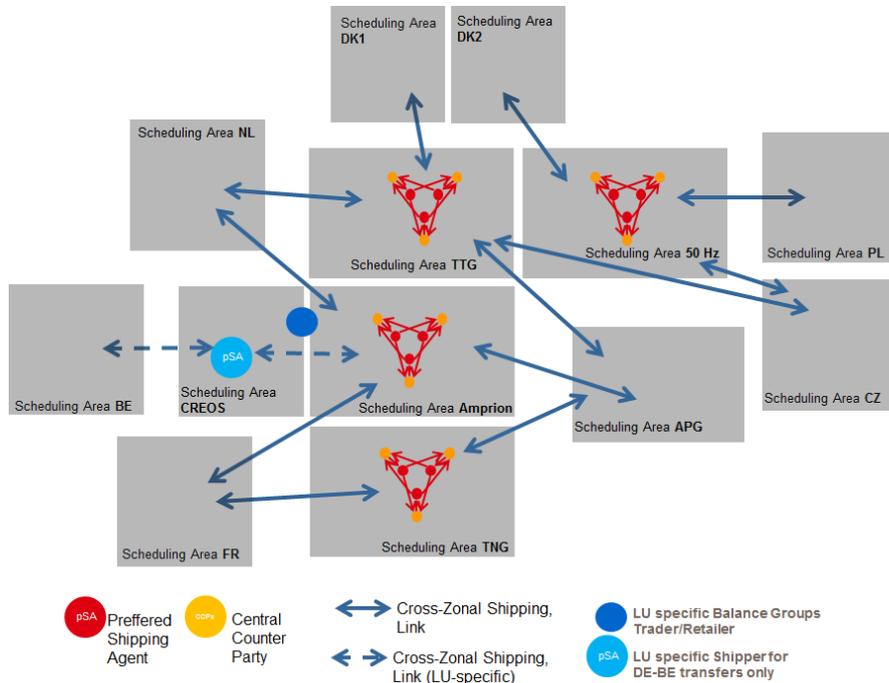


Figure 17: Cross-Zonal Shipping principles

In ~~Figure 17~~ ~~Figure 17~~ all possible Cross-Zonal Shipping links are illustrated, however in SIC an “Leading interconnector concept” will be implemented, means:

Shipping-Interconnectors of Scheduling Areas located in different Bidding Zones are equipped with Cross-Zonal Capacity, calculated and provided by the TSOs of the associated Capacity Calculation Region. If at least two Interconnectors commonly constitute a Bidding Zone Border (e.g. Amprion-TTN & TTG-TTN --> NL-DE/AT/LU) and they share a common value of Cross-Zonal Capacity, the cross-zonal capacity has to be assigned to one of the Shipping-interconnectors while the other Shipping-interconnectors have no transmission capacity.

Related to Cross-Zonal Shipping it has to be noted:

- External Commercial Trade Schedules across Bidding Zone Borders require
 - A Cross-Zonal Shipping Link
 - A Transmission Right (i.e. Programming Authorization) in favour of the nominating pSA.
 - A Cross-Zonal process between the adjacent TSOs to validate the consistency of the nominated External Commercial Trade Schedules and the Transmission Right
- LU-specific Cross-Zonal Shipping Link, because of no active NEMO/CCPs in LU

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Example for Physical Settlement from Bidding Zone DE/~~AT~~/LU to NL:

CCP3 @ [APGTNG](#) → pSA3 @ [APGTNG](#) → pSA3 @ TTG → pSA3 @ Tennet_NL → CCP2

The Preferred Shipping Agent model is extendible for additional NEMOs/CCPs in the Bidding Zone DE/~~AT~~/LU. It is a harmonized approach and therefore interoperable.

The approach will be made interoperable in case of specific Central Shipper approaches in line with Article 8 (2) (l) of GL CACM in other countries. The coordination needed will be processed in the upcoming implementation projects.

Provision SIC.3: NEMO obligations for SIC-Shipping

NEMOs are responsible to ensure the Shipping among their CCPs.

The Shipping shall comply with the “Preferred Shipping Agent” model, which introduces the Preferred Shipping Agent (pSA) of the delivering CCP acting as an intermediary between two CCPs delivering energy in exchange for money.

CCPs and their pSAs require standard balance group contracts for Physical Settlement.

Provision SIC.4: The TSOs obligations for facilitating NEMOs’ SIC-Shipping

TSOs shall apply standard rules and processes related to Physical Settlement, in particular with regard to nomination deadlines.

3.5 Congestion Income

No yet applicable. The SIC consists of continuous markets which only allow for capacity allocation based on the “first-come-first-served” principle. Therefore no price is attached to the allocated capacity and the capacity is allocated free of charge. The intraday capacity pricing methodology according to article 55 GL CACM is still under development.

3.6 Fallback arrangements

This fallback applies in cases one or some of the NEMOs have technical issues to join common/ central SIC processes. In case of a decoupling of one, more or all DE/~~AT~~/LU NEMO Hubs from the SIC, regardless of whether SIC remains coupled with regard to the other NEMO Hub or is partially or fully decoupled on the level of Bidding Zones, the following fallback arrangement shall be applied to the decoupled NEMO Hubs within the Bidding Zone DE/~~AT~~/LU:

- Each NEMO has to be able to match orders of the order books from all its NEMO Hubs in der Bidding Zone DE/~~AT~~/LU, which are decoupled from SIC.
- Individual Net Positions for these NEMO Hubs have to sum up to zero per associated NEMO in each Market Time Unit (i.e no cross-zonal exchanges and no exchanges with other NEMOs).
- Each NEMO has to enable its CCP and pSA to settle the results of the fallback by means of Intra-Zonal Shipping.

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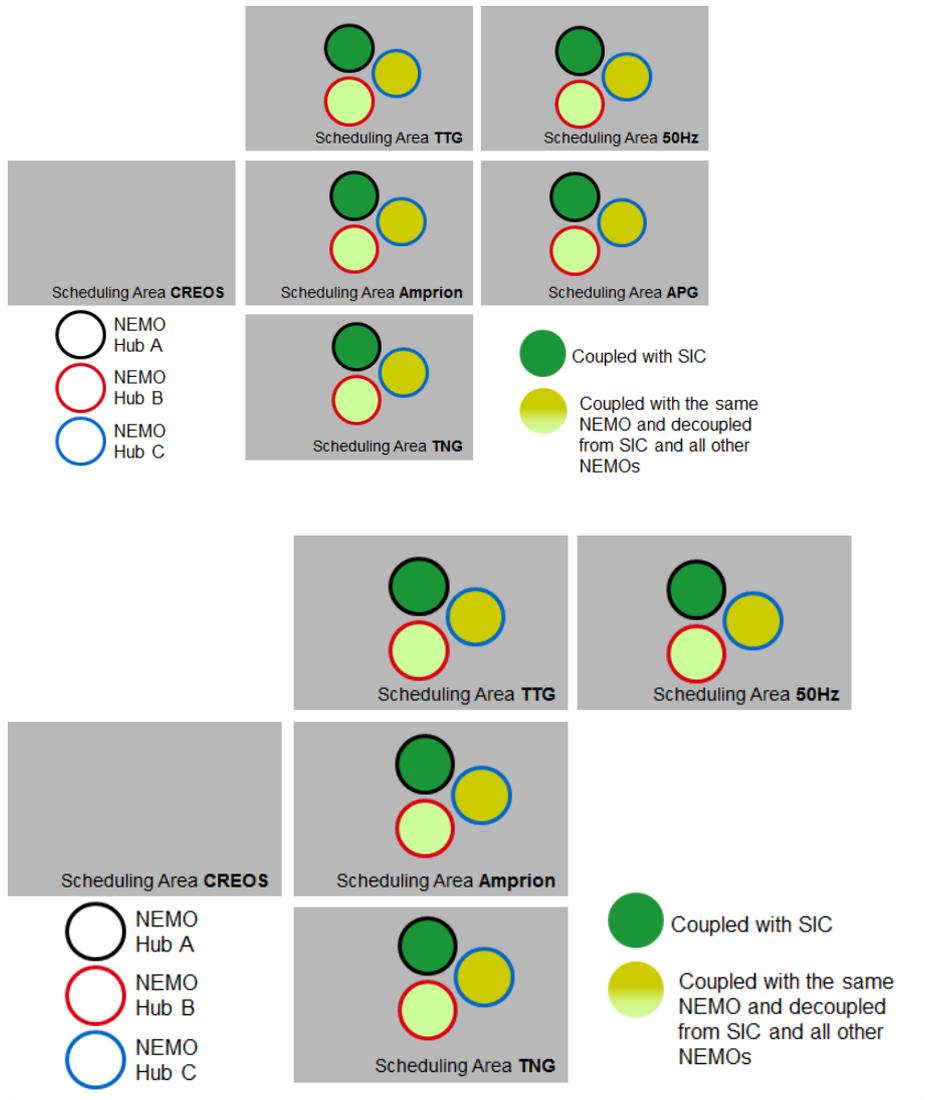


Figure 18: SIC fallback NEMO Hub decoupling

PROVISION SIC_5: Fallback SIC
 NEMOs have to implement the local fallback mechanism for SIC as described in this paragraph.

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3.7 Contractual architecture

Pursuant to Article 7 (1) of GL CACM, NEMOs shall in cooperation with TSOs operate a SIC (single intraday coupling).

It is acknowledged that all European NEMOs and all European TSOs will conclude a Framework Agreement stipulating the respective rights and obligations regarding the establishment, update and further development of the SIC as well as its operation, which cannot reflect all national MNA aspects.

It is however assumed by the TSOs that the pSA model will be prevailing shipping model within the SIC, it is therefore assumed that all NEMOs within the SIC conclude a contract to confirm their commitment to the pSA model, the delivery commitment towards each other and their cooperation in good faith. In this respect all NEMOs shall grant each other access to their CCP to perform the delivery of energy and to process the respective payments on the basis of equal terms and conditions.

However, the establishment of shipping links between CCPs resp. pSAs towards each other might require additional contracts potentially involving respective TSOs.

In the course of establishing, updating or further developing the SIC as well as operating it, the necessity might occur to develop and conclude further contracts and agreements. In case, the Bidding Zone DE/AT/LU is or might be affected, all NEMOs and/or all TSOs in the Bidding Zone DE/AT/LU shall actively contribute to the development of the respective contracts and agreements and each NEMO and/or each TSO shall be a signatory to them.

All contracts and agreements shall be based on the principles of non-discriminatory fair and equal treatment and shall allow for an adherence of further NEMOs and/or further TSOs in case such a necessity occurs.

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4 Glossary

Abbreviation	Full name	Definition
50Hertz	50Hertz Transmission GmbH	
	Aggregated Netted External Schedule	Definition according to the draft of GL SO: 'a schedule representing the netted aggregation of all external TSO schedules and external commercial trade schedules between two Scheduling Areas or between a Scheduling Area and a group of other Scheduling Areas'
Amprion	Amprion GmbH	
APG	Austrian Power Grid AG	
	Article	Refers to article of GL CACM
AT	Austria	
	Bidding zone	Definition according to regulation (EU) 2013/543: 'Bidding Zone' means the largest geographical area within which market participants are able to exchange energy without capacity allocation; In this context the countries: Germany, Austria and Luxembourg (DE/AT/LU) constitute a common Bidding Zone.¹⁶
BEC	Bilateral Exchange Calculation	
BNetzA	Bundesnetzagentur	
CCP	Central Counter Party	has the meaning set forth in Article 2 of the GL CACM.
CMM	Capacity Management Module	has the meaning set forth in Article 2 of the GL CACM.
	cross-border	Refers to the crossing of a Scheduling Area border.
	cross-zonal	Refers to the crossing of a Bidding Zone border.
	Control Area	Definition according to regulation (EU) 2013/543: 'control area' means a coherent part of the interconnected system, operated by a single system

¹⁶ ~~The proposal at hand is based on the current bidding-zone configuration. In case of future changes the MNA has to be amended.~~

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		operator and shall include connected physical loads and/or generation units if any;
DA	Day Ahead	
DE	Germany	
E-Control	Energie-Control Austria	
DK1/2	Denmark West/ Ost	
ECAN	ENTSO-E Capacity Allocation and Nomination	
EIC	Energy Identification Codes	
	External Commercial Trade Schedule	Definition according to the draft of GL SO: 'external commercial trade schedule' means a schedule representing the commercial exchange of electricity between market participants in different Scheduling Areas
GL CACM	Commission Regulation (EU) 2015/1222 of 24 th July 2015 establishing a guideline on capacity allocation and congestion management	
	Internal Commercial Trade Schedule	Definition according the draft of GL SO: 'internal commercial trade schedule' means a schedule representing the commercial exchange of electricity within a Scheduling Area between different market participants
ID	Intraday	
ILR	Institut Luxembourgeois de Régulation	
LU	Luxembourg	
MC	Market Coupling	
MCO	Market Coupling Operator	
MNA	Multiple Nemo Arrangement	The obligations resulting from articles 7, 8, 45 and 57 from GL CACM regarding cross zonal capacity allocation and other necessary arrangements.
MRC	Multi Regional Coupling	
MTU	Market Time Unit	Market time period of 1 hour
NEMO	Nominated Electricity Market Operator	Has the meaning set forth in GL CACM
	Net Position	Definition according GL CACM: 'Net Position' means the netted

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		sum of electricity exports and imports for each market time unit for a Bidding Zone;
NRA	National Regulatory Authority	
pSA	Preferred Shipping Agent	As defined in this document
	MCO function	has the meaning set forth in Article 2 of the GL CACM.
PX	Power Exchange	
	Shipping Agent	has the meaning set forth in Article 2 of the GL CACM.
	Schedule	Definition according to the draft of SO GL: 'schedule' means a reference set of values representing the generation, consumption or exchange of electricity for a given time period
	Scheduling Agent	Refer to article of SO GL
	Scheduling Area	Definition according to the draft of SO GL: 'Scheduling Area' means an area within which the TSOs' obligations regarding scheduling apply due to operational or organisational needs In this context each control area of 50 Hertz, APG, Amprion, CREOS, TenneT, TransnetBW equals a Scheduling Area.
SDC	Single Day-ahead Coupling	has the meaning set forth in Article 2 of the GL CACM.
	Shipping	Physical and Financial Settlement of net positions (SDC) or transactions (SIC) between CCPs
SIC	Single Intraday Coupling	has the meaning set forth in Article 2 of the GL CACM.
SEC	Scheduled Exchange Calculator	has the meaning set forth in Article 2 of the GL CACM.
SM	Shipping Module	
GL SO	Guideline on System Operation	
SOB	Shared Order Book	
TenneT TSO	TenneT TSO GmbH	
TransnetBW	TransnetBW GmbH	
TSO	Transmission System Operator	
XBID	Cross Border Intraday	

Table 3: Glossary

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5 Addendum 13 January 2017: rectification of the examples involving nominations between the Amprion scheduling area and the Creos Scheduling Area

The examples given at the end of paragraph 2.2.5 and paragraph 3.4.4 are rectified as follows:

- "CCP1 @ TTG -> pSA1 @ TTG -> pSA1 @ Amprion -> CCP1 @ Amprion -> Balance Groups(Retailer/Trader) @ Amprion -> Balance Groups(Retailer/Trader) @ Creos"

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