



Intraday allocations at the Belgian borders: an implicit mechanism based on continuous trading and the coupling of markets.

In the event of unforeseen circumstances or new opportunities, ARPs can add imports or exports to their portfolio on the day of transmission, giving them extra ways of managing their balance in real time. Indeed, the interconnected European grid enables market parties to import and export electricity across the borders.

Elia and the neighboring TSOs offer intraday cross-border capacity for the Belgian bidding zone border through the European XBID solution. Market participants can access this XBID solution through the local trading platforms of the designated Nominated Electricity Market Operators (hereafter "NEMOs").

The XBID solution is an intraday solution that at its initial go-live implicitly connects Austria, Belgium, Denmark, Estonia, Finland, France, Germany, Latvia, Lithuania, Norway, The Netherlands, Portugal, Spain and Sweden. Most other European countries are due to take part in following go-live 'waves' of the XBID solution. The first successful cross-border trades took place on the 12 June 2018 for first delivery 13 June 2018.

The mechanism increases the market liquidity when available capacity on the interconnection is sufficient to meet the entire demand.

I. Implicit Intraday allocation mechanism on the Belgian bidding zone borders

After day-ahead activities have closed, an ARP may be faced with unforeseen circumstances or new opportunities, such as a production unit breaking down, a change in the renewables forecast (affecting the level of wind or solar power production), a production unit that was being overhauled returning to service sooner than expected, disruption to a grid user's consumption (breakdown) and so on

Confronted with modifications of this type, the ARP has a number of ways of managing its balance in real time:

- modifying the production units for which it is responsible for (see sheet: "The CIPU contract");
- modifying the offtake of the grid users for which it is responsible;
- exchanging energy with other ARPs on an intraday basis (see sheet "The intraday Hub");
- making additional imports or exports across the Belgian bidding zone borders via intraday market coupling.

The intraday allocations on the Belgian bidding zone borders are organized via an implicit mechanism, based on the continuous trading through the XBID solution. Market participants have access to the XBID solution through the local trading platforms of the designated NEMOs to this European XBID platform. This allows each balance responsible party to adjust its portfolio, and thus its overall balance, to the real time situation.

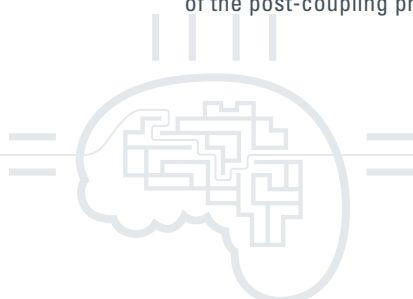
I.1. Implicit allocations

Unlike explicit cross-border transactions, the market player should no longer obtain the intraday capacity at the Belgian inter-connections before making any transactions of purchase/sale of energy. A buyer or seller of electricity automatically has access to the cross-border capacity available and to the other markets by submitting buy/sell orders through the local trading system of the selected designated NEMO. This is why transactions performed via the market coupling mechanism are known as "implicit capacity allocations".

I.2. Trading platform

The European XBID solution for intraday implicit allocation consists of three modules

- the trading module : SOB (Shared order Book) - The trading system is designed to offer trading services to the members continuously. It supports a wide range of energy products and contract types.
- the capacity management module (CMM) - a capacity allocation module which offers the ability to allocate cross border capacity to users continuously, and
- the shipping module (SM) - provides information from trades concluded through the XBID platform to all relevant parties of the post-coupling process.



The cross-border coordination mechanism implemented is based on separate market areas which may be connected to each other subject to capacities being available. The possible amount of transactions concluded between these areas is constrained by the capacity limits on the interconnector.

II. A continuous intraday process organized by gate

II.1. Intraday capacity allocation

The available capacities for the opening of the intraday market are calculated by the TSOs taking into account safety criteria and previous nominations process (see sheet: "Nominations: principles and methods").

The commonly agreed available capacities for the beginning of intraday process are sent by the TSOs to the CMM module which communicates continuously with the SOB module: after each transaction which is closed on SOB through the local trading systems of the designated NEMOs, the available capacity for the intraday is automatically updated in the CMM system. Whenever a transaction is validated, the cross-border capacity decreases in the direction of the transaction and increases in the opposite direction.

Example: Let's assume a situation where 100 MW of capacity is available on the interconnector for both directions on the border Belgium – The Netherlands (BE-NL and NL-BE). If a participant in The Netherlands buys 20 MW to a Belgian participant then it will generate 20 MW of exports from Belgium to The Netherlands. Consequently the available capacity in the direction BE to NL decreases to 80 MW. However, at the same time the capacity in the direction NL to BE increases to 120 MW.

II.2. An intraday market coupled

The implemented cross-border coordination mechanism is based on separate market areas which may be connected to each other, subject to capacities being available at the associated bidding zone borders. The possible amount of transactions concluded between these areas is constrained by the capacity limits on the bidding zone border.

In case all the bidding zone borders capacities are zero, only local bids will be visible to market participants.

II.3. Intraday cross-border nominations

Cross-border trading is continuously possible through the local trading platforms of the designated NEMOs. The concluded transactions by the market participants are sent by the XBID solution towards all parties involved in the post-coupling activities¹. When Elia receives the results from the XBID solution, a verification of the correctness of the received information is done with the neighboring TSOs. If the values are identical, Elia creates the cross-border nominations on behalf of the shipping agent.

The cross-border nominations done on behalf of shipping agents/CCPs should match with the sum of the hub nominations that a particular shipping agent/CCP have created with market parties. (see sheet: "The intraday Hub" for more information)

Each intraday gate follows a strict procedure at the TSO side and only the remaining hours of the day are treated. On their turn, the market parties should nominate against their CCP via a local HUB nomination. There are 24 intraday gates. The table below lists, for each gate, the deadlines for sending capacity requests:

Gate	Gate opening hour (Trade opened at)	Deadline for the receiving of capacity request (Gate closure)	Delivery Period on Day D
00	22h00 (on D-1)	23h00 (on D-1)	00h -> 24h
01	23h00 (on D-1)	24h00 (on D-1)	01h -> 24h
02	24h00	01h00	02h -> 24h
03	01h00	02h00	03h -> 24h
04	02h00	03h00	04h -> 24h
05	03h00	04h00	05h -> 24h
06	04h00	05h00	06h -> 24h
07	05h00	06h00	07h -> 24h
08	06h00	07h00	08h -> 24h
09	07h00	08h00	09h -> 24h
10	08h00	09h00	10h -> 24h
11	09h00	10h00	11h -> 24h

¹ ECC is the shipping agent of EPEX Spot and EPEX Spot Belgium, responsible of cross-border clearing and settlement (including nomination) on behalf of EPEX Spot and EPEX Spot Belgium. Nord Pool has not assigned the task of shipping agent to another entity.

12	10h00	11h00	12h -> 24h
13	11h00	12h00	13h -> 24h
14	12h00	13h00	14h -> 24h
15	13h00	14h00	15h -> 24h
16	14h00	15h00	16h -> 24h
17	15h00	16h00	17h -> 24h
18	16h00	17h00	18h -> 24h
19	17h00	18h00	19h -> 24h
20	18h00	19h00	20h -> 24h
21	19h00	20h00	21h -> 24h
22	20h00	21h00	22h -> 24h
23	21h00	22h00	23h -> 24h

III. Benefits of the allocation mechanism

The intraday allocation mechanism set up on the Belgian bidding zone borders provides the balance responsible parties with extra ways of managing their balance close to real time. It gives among others the following advantages:

- an ARP can find a solution in the event of unforeseen circumstances, or to take advantage of new opportunities: a production unit or an industrial process breaking down, an unexpected fluctuation in consumption, a production unit that was being overhauled returning to service sooner than expected, a change in the wind or solar forecast and so on;
- buyers and sellers that are active in the market coupling mechanism may carry out cross-border exchanges without having to acquire transmission capacity rights. The cross-border nomination is executed by designated NEMOs as in the Day-Ahead Market Coupling;
- market players in the coupling area do not necessarily need to have sites in both market area in order to perform cross-border transactions. Instead, all that a market player has to do is submit an order via its market area's designated NEMOs in order to respond to purchase/sales bids from the other market area.

IV. Contractual basis

To be able to participate to this intraday allocation mechanism on the XBID solution through the local trading platforms of the designated NEMOs and to be able to nominate the transactions to the TSOs, a market participant needs

- on the Belgian hub:
 - to have an ARP-contract concluded with Elia
 - to be a Participant of a local trading system of a designated NEMO
- on the French hub:
 - to have an I/E-contract concluded with RTE
 - to be a Participant of a local trading system of a designated NEMO
- on the Dutch hub:
 - to have an PV-contract concluded with TenneT
 - to be a Participant of a local trading system of a designated NEMO

V. Future developments

The ultimate goal is to roll out the solution compliant with European Single IntraDay Coupling (SIDC) and multi-Nominated Electricity Market Operators specification ("Multiple NEMOs") across the whole of Europe, as specified in the Commission Regulation (EU) 2015/1222 of 24 July 2015 establishing a guideline on Capacity Allocation and Congestion Management (CACM guideline).

The first release of the XBID solution does not cover all the features required for the SIDC as specified in the CACM guideline, e.g. the integration of losses on DC cables, intraday capacity pricing and flow based capacity allocation. These will be introduced in later releases of the XBID-solution.

The intraday international allocation mechanism in 5 key points

- Elia and the European transmission system operators, in association with the designated NEMOs, have set up an implicit capacity allocation mechanism for intraday capacity through the European XBID solution. Market participants access the XBID solution through the local trading systems of the designated NEMOs.
- Energy transfers via the intraday market coupling mechanism are carried out in a single operation: there is no need for prior reservation of cross-border capacity (implicit allocations)
- The implicit allocation of intraday cross-border capacity works with a system of 24 gates. The end of the cross border trading is one hour before the start of the delivery period.
- A buyer or seller of electricity automatically has access to the available cross-border capacity and to the other markets by submitting buy/sell orders on one of the local trading systems of a designated NEMO
- The market coupling mechanism helps to improve market liquidity and to optimize management of the capacity available at the borders.

