

ID Capacity calculation with DA FB market coupling

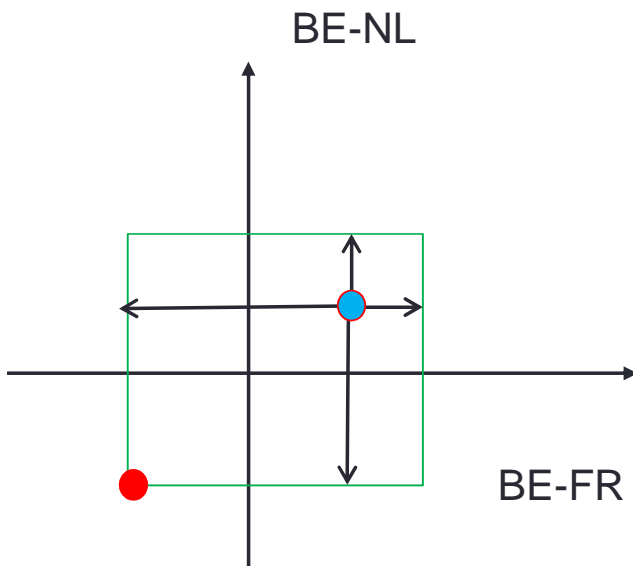
Presentation of the context explaining the evolution of the methodology for ID capacity calculation

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ID ATC before FB go-live

NTC based
approach

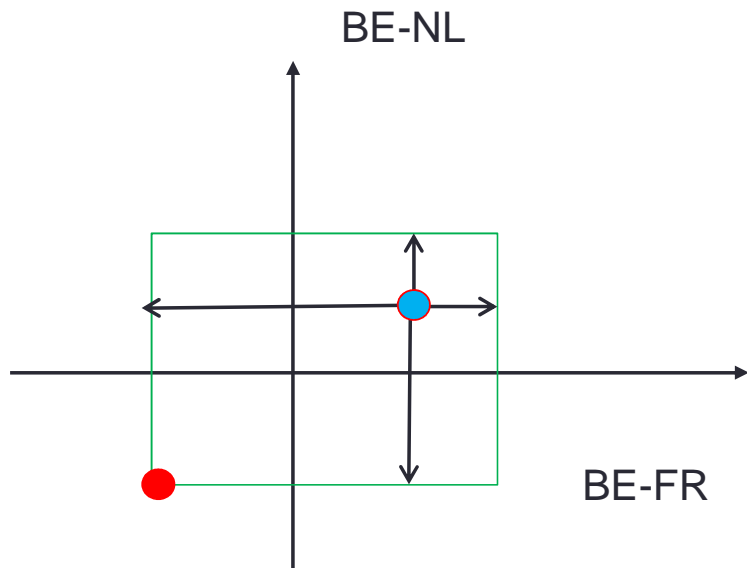


Summary :

- For RTE, TenneT DE, Transnet, ID ATCs are the 'not used D-2 NTCs' after day-ahead allocation
- **TenneT NL, Amprion and ELIA are reassessing NTCs** in DA for intraday :
 - TenneT is reassessing every 4h the ID ATCs for the next 4h depending on the IDCF basecase flows on interconnectors
 - Amprion is assessing ID ATCs once in D-1 based on the DACF flows in interconnectors
- ELIA's reassessment is done based on a NTC calculation on the **DACF**
- Resulting ID ATCs are the **minimum of bilateral matching**
- In case of unforeseen event, leading to critical situation, each TSO has the possibility to **decrease the ID ATCs on his own border(s) up to 0 and ask neighboring TSOs for help** (freezing of ID ATC on their border can be asked without obligation of action). In that specific case, RTE may trigger a computation of ID ATCs for the remaining hours of the day

ID ATC before FB go-live

NTC based
approach



Result of NTC based approach :

- In normal situation, on all CWE borders, the ID ATCs are at least the remaining capacity out of the D-2 NTC after DA market clearing
 - On NL \leftrightarrow DE, an **increase of 100 MW** is possible in intraday, every 4h for the next 4h
 - On NL \leftrightarrow BE, an **increase of 200 MW** is possible in intraday, every 4h for the next 4h
 - On BE \leftrightarrow FR, **an increase up to the D-2 FR NTC** is possible in intraday.
- Other TSOs cannot reject increase
- With NTC based methodology, there is always capacity available on each border, at least in one direction, but
 - there is also possibility that BE import is 0 in intraday. Only if Market uses full BE import capacity in DA (**intuitive**)!
 - Some direction on some border are very often limited (BE-NL or DE-NL)

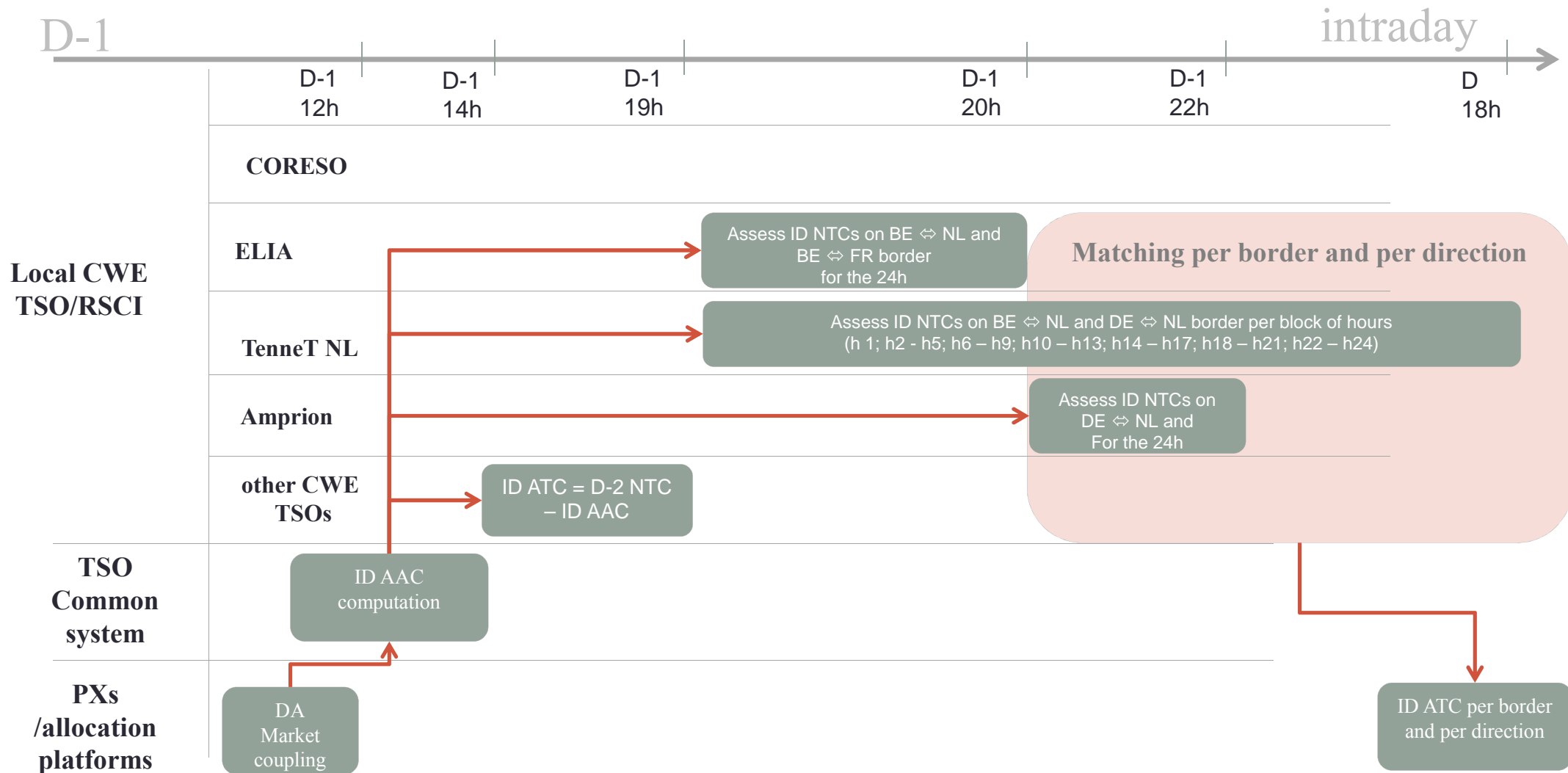
directional border	BEFR	BENL	DEFR	DENL	FRBE	FRDE	NLBE	NLDE	
Min		0	0	-0.1	0	-0.1	-0.1	0	0
% of the time equal to 0		4.23%	37.31%	47.99%	81.43%	7.09%	4.73%	4.91%	0.04%
% of the time lower than 500MW		9.03%	53.66%	55.28%	88.08%	20.37%	7.55%	12.26%	0.08%

ID ATC before FB go-live

Intraday ATC determination and matching time

intraday ATC determination and ATC matching timestamps																														
				D-1		D																								
Day	From	To	Action	23	24	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
D-1	19:30	20:00	Determining and matching ATCs for FR-BE																											
D-1	19:30	20:00	Determining and matching ATCs for BE-FR																											
D-1	19:30	20:00	Determining and matching ATCs for FR-DE																											
D-1	19:30	20:00	Determining and matching ATCs for DE-FR																											
D-1	19:30	20:00	Determining and matching ATCs for NL-BE																											
D-1	21:30	22:00	Determining and matching ATCs for NL-BE																											
D-1	21:45	22:20	Determining and matching ATCs for NL-DE																											
D	1:30	2:00	Determining and matching ATCs for DE-NL-BE																											
D	5:30	6:00	Determining and matching ATCs for DE-NL-BE																											
D	9:30	10:00	Determining and matching ATCs for DE-NL-BE																											
D	13:30	14:00	Determining and matching ATCs for DE-NL-BE																											
D	17:30	18:00	Determining and matching ATCs for DE-NL-BE																											
									applicable market time periods																					

ID ATC before FB go-live

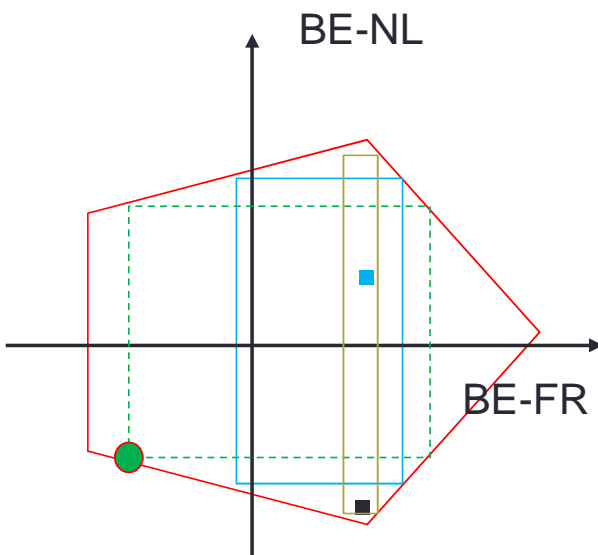


New ID ATC based on Day-Ahead FB domain



With DA FB , NTCs are not relevant anymore !

After DA FB approach



An algorithm has been developed in order to **compute initial ID ATCs out of the DA FB domain** :

This algorithm increase simultaneously and with identical quantity the exchanges on each border till reaching the limit of the domain.

When a limit of the domain is reached, all the exchanges on the border that would lead to overpassing the limit are blocked.

The process goes on for the exchanges on other borders till all exchange possibilities are blocked

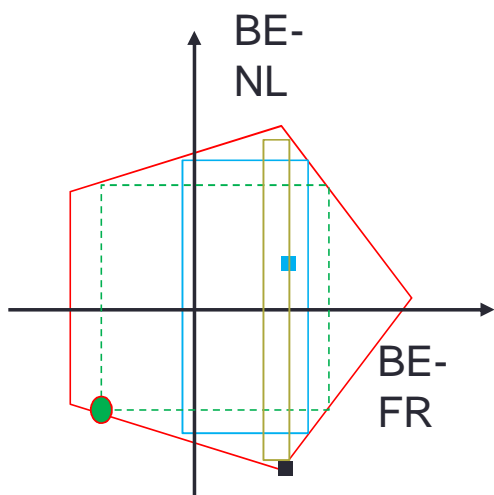
With the current algorithm computing **ID ATC based on DA FB domain**, the **values will depend on the DA clearing point** :

- Capacities could be 0 on both directions of a border
- If market in DA wants to use a direction to the limits and ends in a corner, capacities could also be blocked on (all the) other borders

Exp/imp capacity	Approach	BE imp	BE exp	DE imp	DE exp	FR imp	FR exp	NL imp	NL exp
ATC equal to 0	FB	5.20%	5.04%	0.92%	41.49%	11.22%	1.59%	41.71%	1.86%
ATC lower than 500FB MW		7.62%	8.38%	1.21%	51.72%	14.54%	2.42%	60.57%	3.14%

New ID ATC based on Day-Ahead FB domain

Futur DA FB approach



- FB leads using the system closer to its limits
- **Bilateral increase** is not acceptable anymore without a **common process** allowing
 - Information exchange among TSOs about increase requests
 - Possibility of rejection by other TSOs
- **ID FB domain computation** is the clear **target** to be fully in line with CACM NC
 - FB domain reassessment based on DACF/IDCFs need coordinated/centralized solutions
 - In intraday, time constraints will need **efficient coordination** process. **RSCIs should have an important and central role** in this process
- The development of a more coordinated/centralized process which is the clear target FB IDCC will take several years
- The principle of **NO REGRESSION** has been applied and process allowing application of current bilateral increase/emergency situation has been developed:
A common process to inform and get confirmation/rejection from other TSOs in case of bilateral increase has been developed in IDCC WG and approved by CWE TSO SG. This process is in implementation phase and will be operational for FB Go Live

New ID ATC based on Day-Ahead FB domain

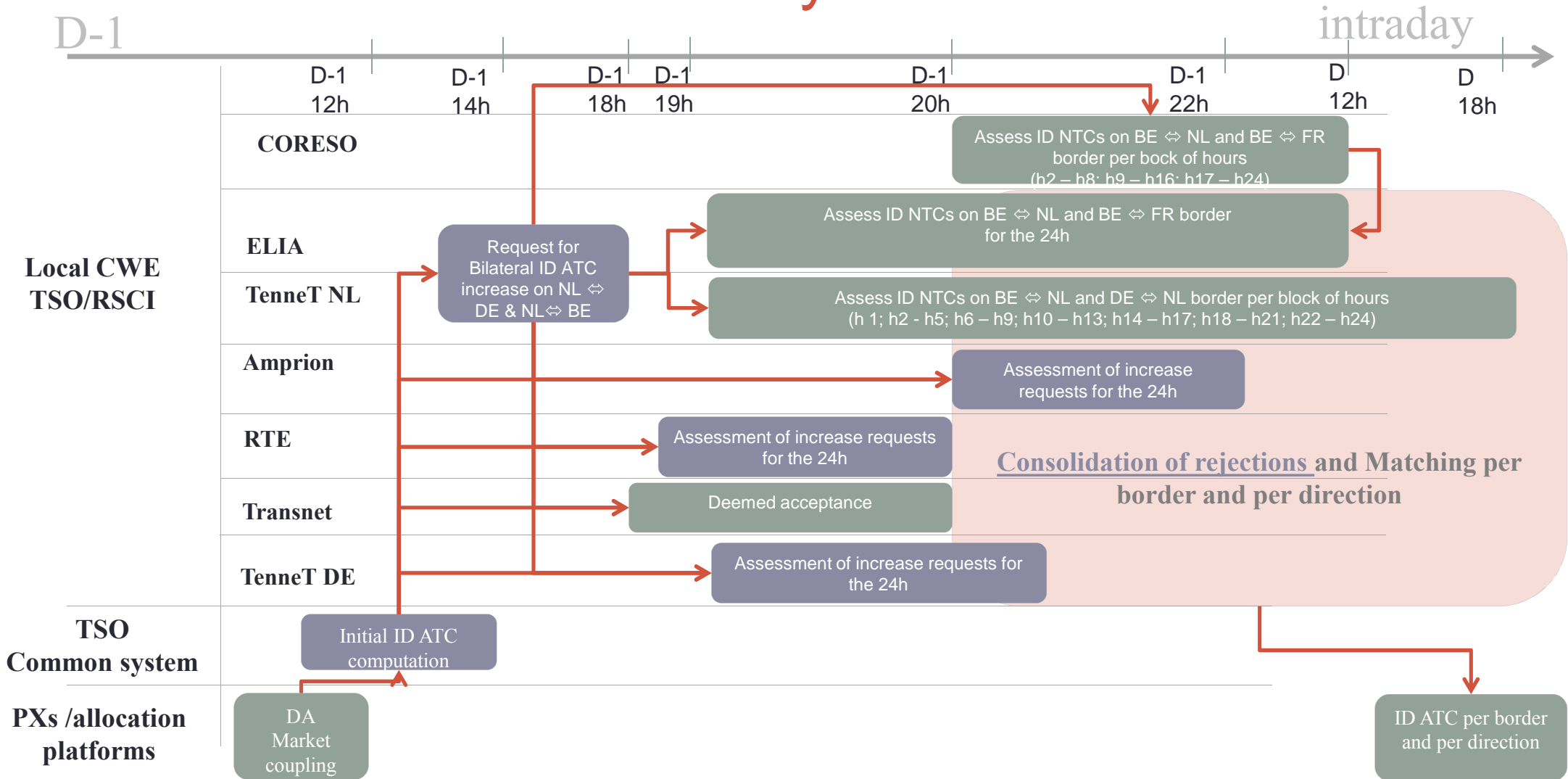
A 3 steps approach has been implemented:

1/ ELIA-TENNET-AMPRION have to **send their request of bilateral increase in D-1** before 18h
Considering the fact that no process/resources exist today in all other TSOs, request can only apply for NL-BE and NL-DE

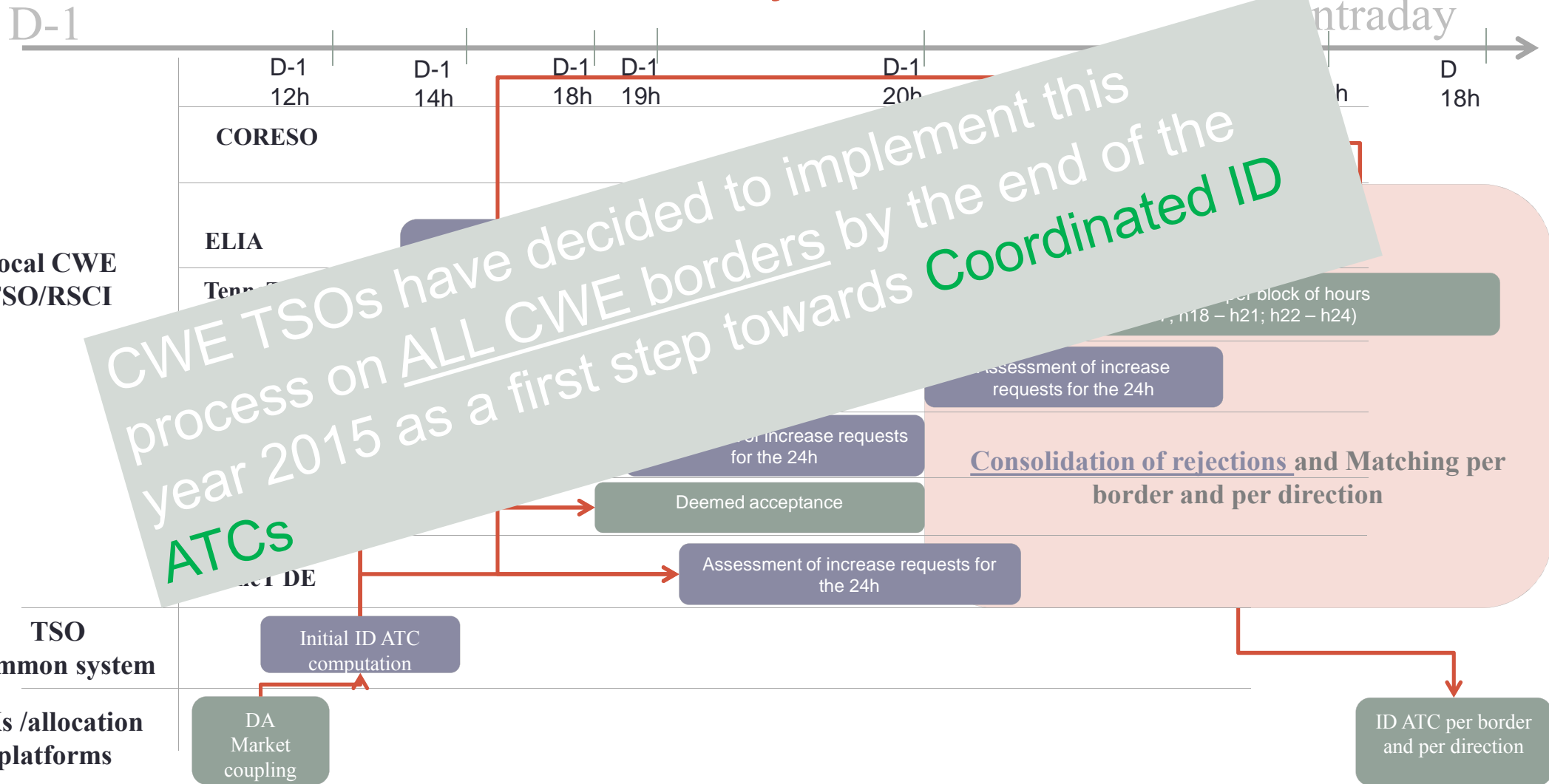
2/ **Confirmation/rejection** of bilateral increase of capacities
Each TSO (including the requesting ones) has the possibility to reject a request before the gate opening of the concerned critical hour. In that case, he will send to the requesting TSO an email with
 The concerned critical hours
 The limiting CBCO(s)
Deemed acceptance principle is applied
Current ID ATC assessment presented before will be applied on ELIA side for this step

3/ **Bilateral matching** of ID ATCS
 At the time of the gate opening, the requesting TSOs will apply the requesting increase only for the hours which were not subject to rejection
 The ID ATCs which will be given to the market on a border are the matching of the values proposed by the cross-border TSOs

New ID ATC based on Day-Ahead FB domain



New ID ATC based on Day-Ahead FB domain



Towards ID FB Target model

- As it is obvious that ID FB will be the target solution, ELIA is already in discussion on one hand with Coreso and RTE and in another hand with other CWE TSOs
 - to define a **common view on the ID FB target model**
 - to design and implement **ASAP evolution** on post DA coupling ID ATC first assessment and intraday reassessment of ID ATCs based on DACF/IDCFs and in line with FB environment which can **improve ID ATCs on BE borders** (intermediate step towards target FB IDCC)
- Agree on **common CWE HLBP** for ID FB target model
- Agree on **common intermediate milestones** towards ID FB target model and implement ASAP
 - See opportunities to still have possible bilateral coordination/improvement, but will be limited or at least difficult to have inter-TSO agreement on this...
- Improve **step by step** the new post DA FB methodology in line with the commonly agreed ID FB target model
 - All evolutions will be done in the FB environment
- More and more **central and leading role for RSCIs** in (intraday) capacity calculation
- Consider possibility to move quicker within Coreso partnership in order to have as soon as possible **benefit for the BE market** in term of ID ATCs

Many thanks for your attention!

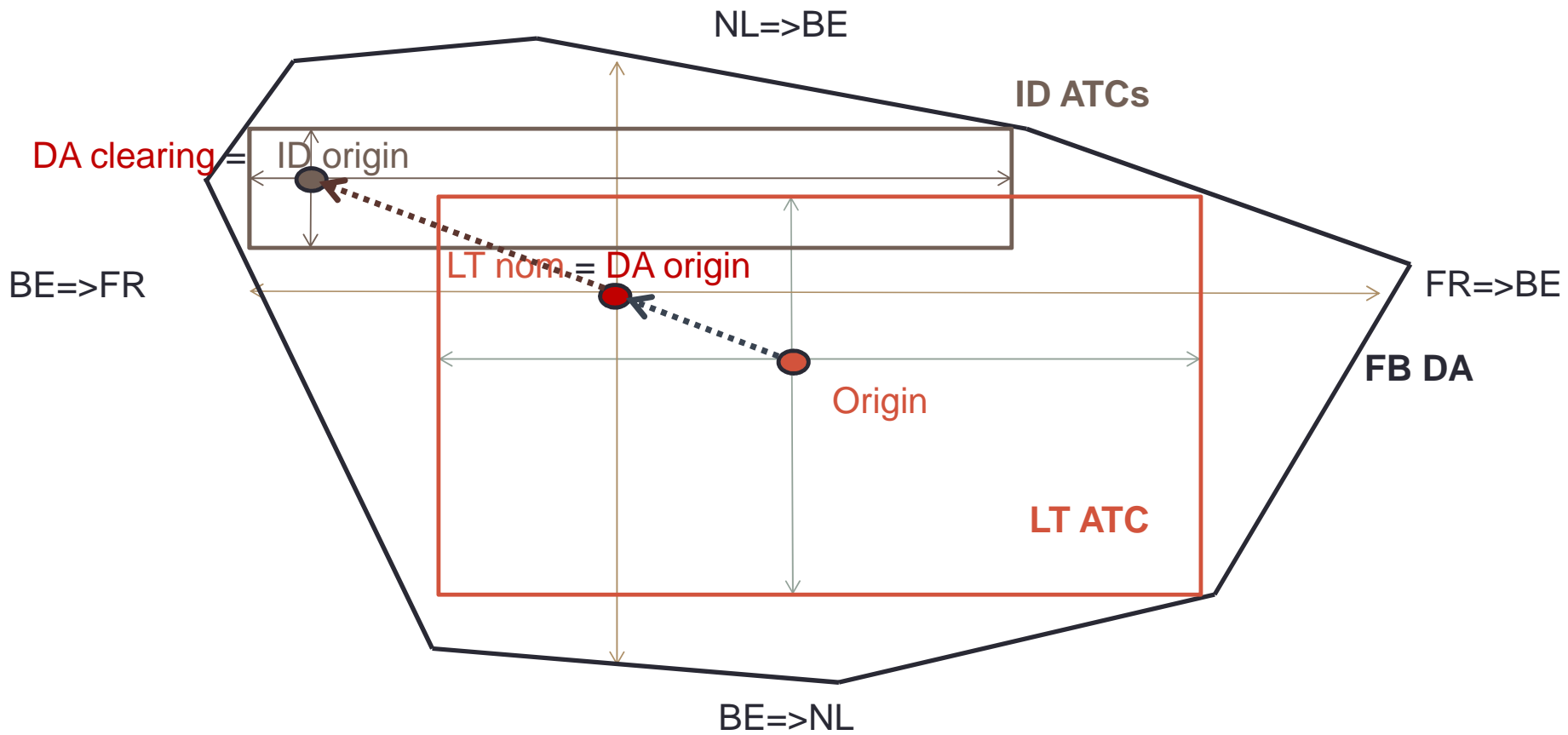
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LT ATC \Rightarrow DA FB \Rightarrow ID ATC



From ID ATC to ID NTC



$$NTC_{ID} = ATC_{ID} + BEC_{DA} + LT_{NOM}$$

