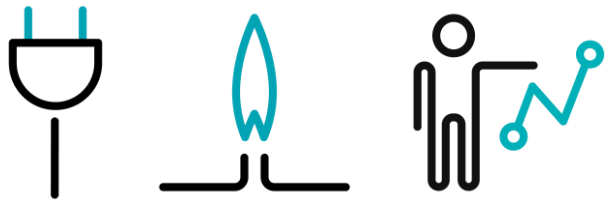
# CREG analysis of 2nd amendment of Core ID CCM

**CREG**

23 May 2023



# 2nd Amendment of Core ID CCM

- Objective: Aligning ROSC and ID CCM processes

→ ROSC Process: Securing the DA outcome (SOGL Article 75)

- ACER Decision 2020 on Core ROSC

  Introduces the concept of one RAO with **costly and non-costly RA to solve all congestions** on all XNEs, i.e. all network elements of 220kV and more, **to minimize redispatching costs**

→ ID CCM: Calculating cross-zonal capacities (CACM Article 20)

- ACER Decision 2019 on Core ID CCM
- ACER Decision 2022 on 1th Amendment of Core ID CCM (trigger: LTA-inclusion)
- Core TSO proposal on 2nd Amendment of Core ID CCM (trigger: ROSC-ID CCM alignment)

# Legal framework

- EU Regulation 2019/943 (hereafter ‘CEP’)
- CACM Guidelines

# Evaluation of proposal

| Proposed amendments | Relevant legal framework | Conditions | Compliance? |
|---|---|---|---|
| Using ROSC common grid model as an input for CC | CACM Article 28 | - 1 Scenario per MTU, best forecast | Yes |
| Using ROSC common grid models AS IS for CC | CACM Article 21 | - Remedial actions in accordance with Article 25<br>- Rules for avoiding undue discrimination<br>- Rules on the adjustment of power flows due to RA | - No<br>- No<br>- No |
| Using only the subset of proposed and agreed Rain ROSC process as input for CC; | CACM Article 25(6)<br>CACM Article 29(4) & 29(7) | - RA to be taken into account in capacity calculation are the same for all CC time-frames, taking into account their technical availabilities<br>- Optimise Cross-zonal capacity using available RA<br>- Applying rules for avoiding undue discrimination<br>- Adjust RAM on CNE or PTDF using available RA | - No<br>- No<br>- No<br>- No |
| Allowing list of CNEs to be extended | CACM Article 29(3)(b) | - Ignore those CNEs that are not significantly influenced by the changes in bidding zone NEP | - No |
| No minimum capacity requirements foreseen | CEP Article 16(8) | - Minimum of 70% of CNEC shall be available for cross-zonal trade | - No |

# Elements identified as Red Flags

- See in comments and track changes in the accompanying document:

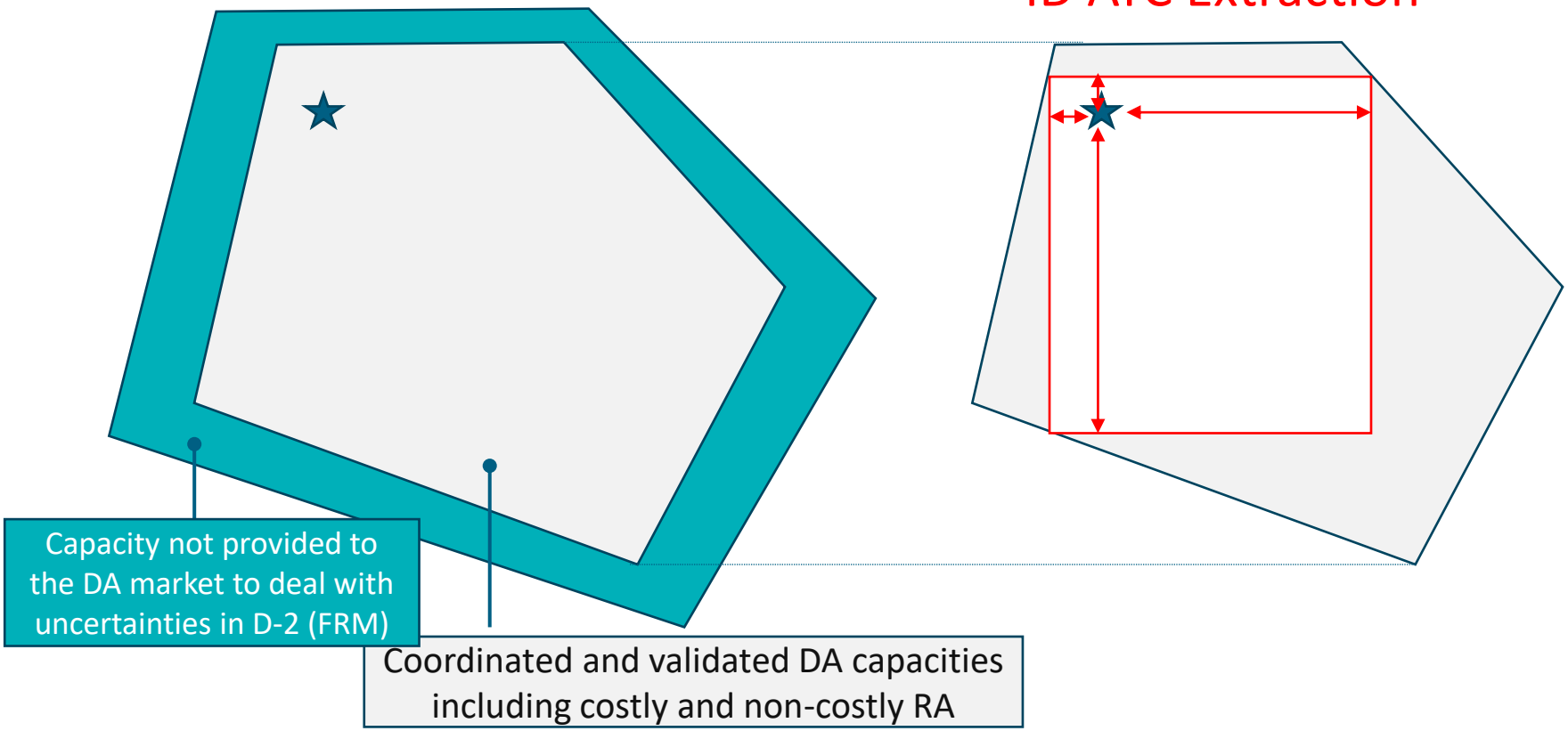
  “2022-03-28_ACER_Core ID CCM AM1_Annex II_TC_2ndamendment creg RedFlags.docx”

# Illustration
# Expected process (1) DA – left overs

- DA flow-based domain

Intraday – DA left overs

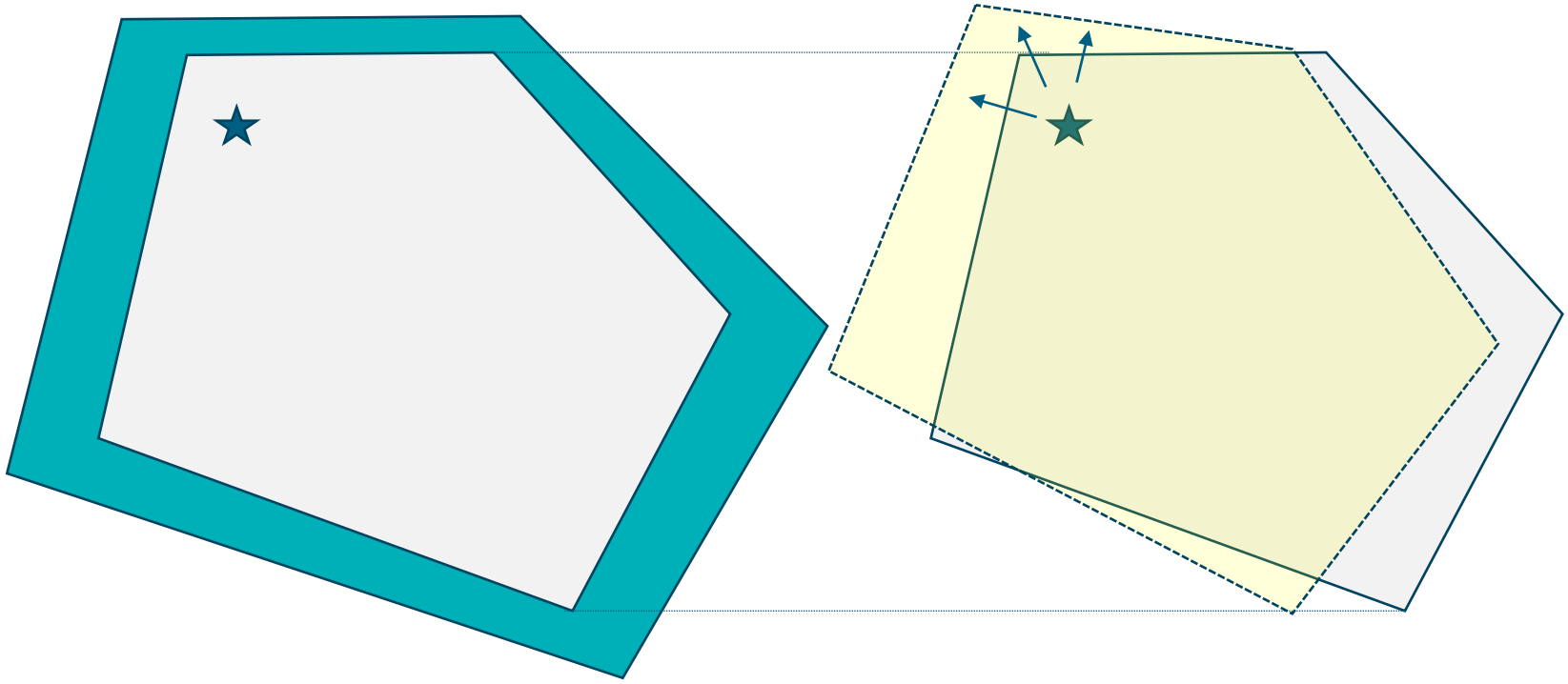
ID ATC Extraction



# Illustration
# Expected process (2) ID recomputation

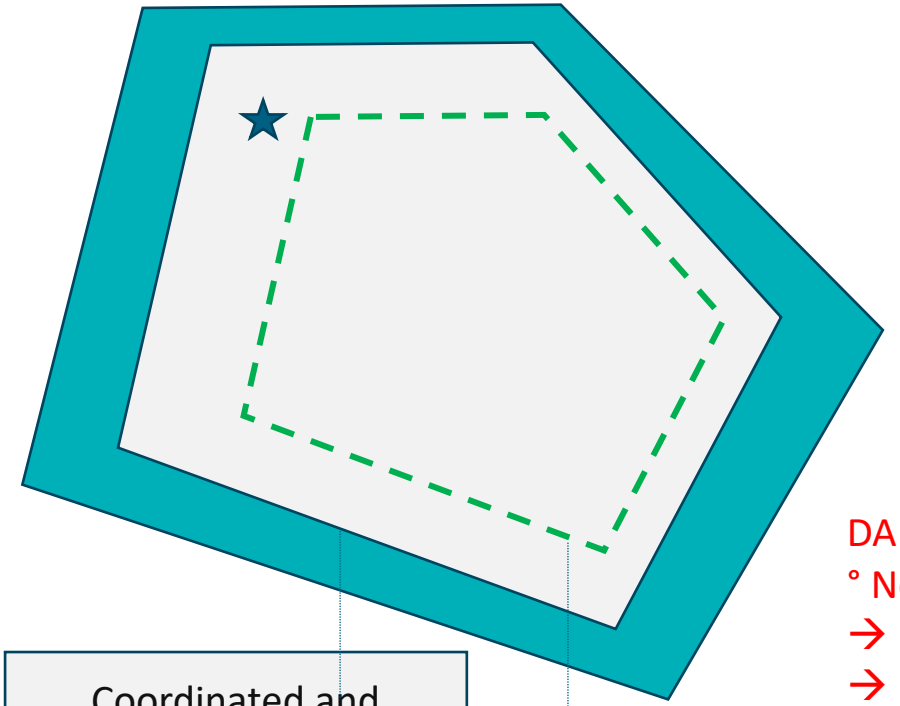
- DA flow-based domain

Recomputation ID Domain
+ Using RA to maximize ID CC



# Illustration
# Core proposal (1) DA left-overs

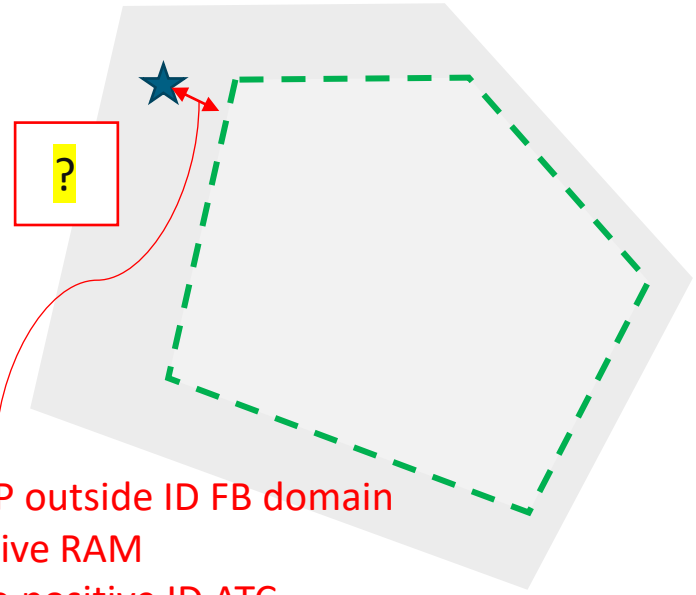
- DA flow-based domain



Coordinated and validated DA capacities including costly and non-costly RA

Capacities without consideration of remedial actions

Removing virtual margins

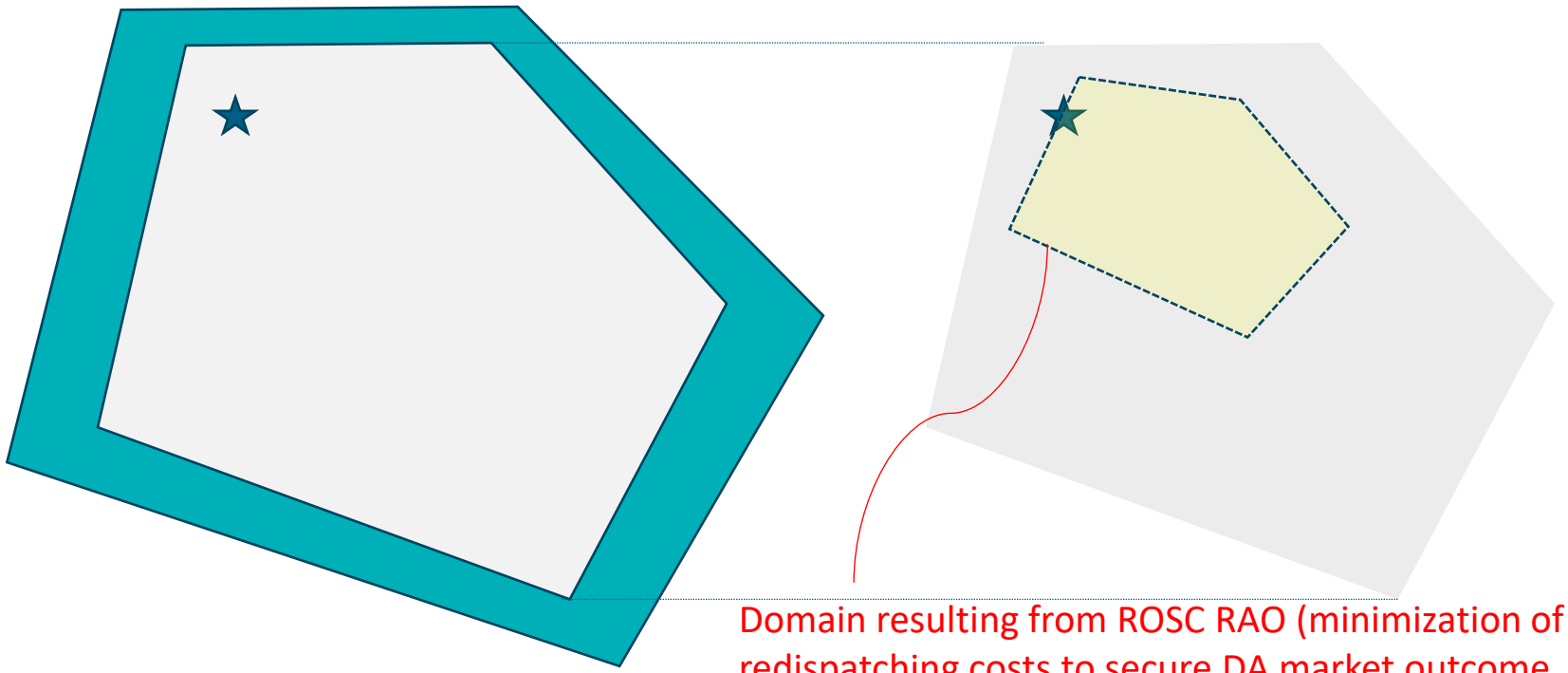



DA MCP outside ID FB domain
° Negative RAM
→ Zero positive ID ATC
→ "Negative ID ATC"

# Illustration
# Core proposal (2) ID recomputation

- DA flow-based domain

Using ROSC CGM vFinal*



Domain resulting from ROSC RAO (minimization of redispatching costs to secure DA market outcome, not maximizing capacities)
→ °Zero positive ID ATC

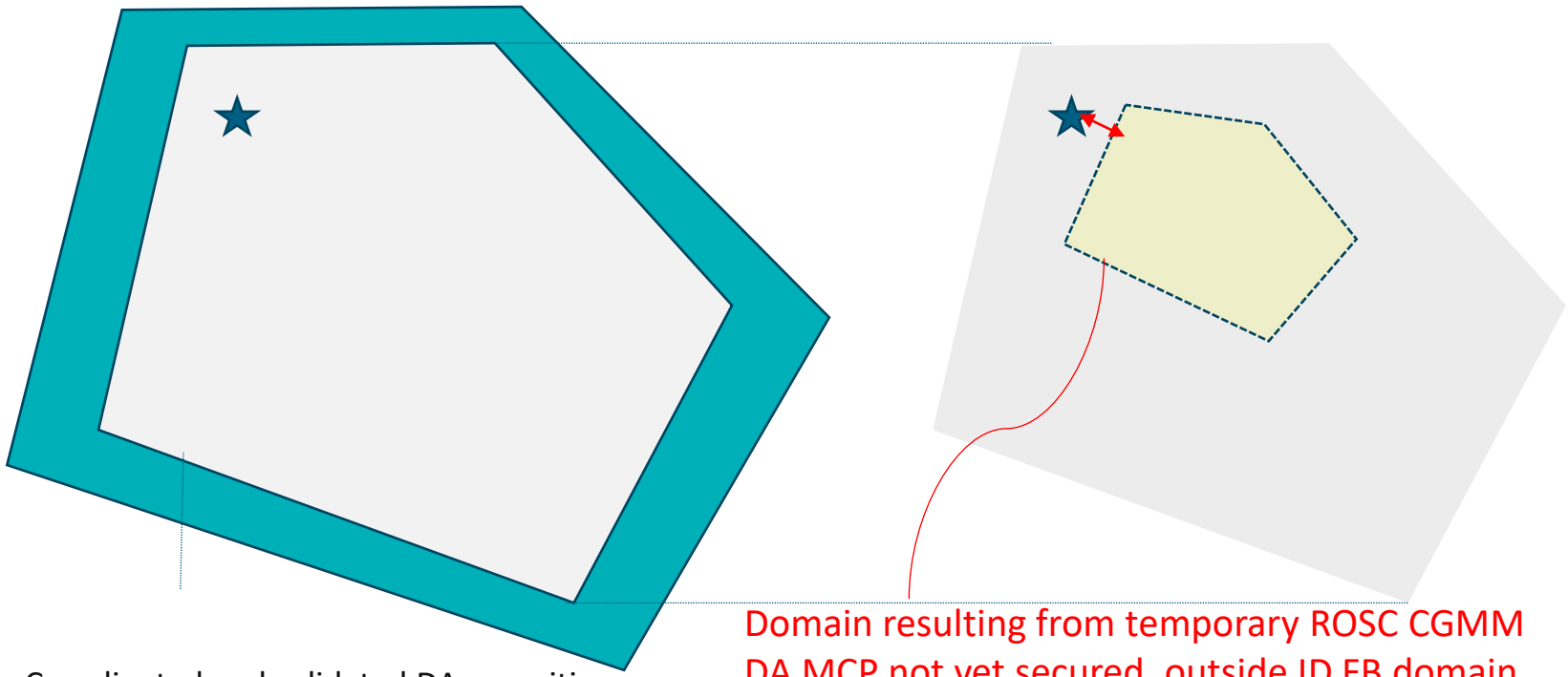
CREG

*Final ROSC CGM contains all costly and non-costly RA to secure DA market outcome

# Illustration
# Core proposal (3) Recomputation actual

- DA flow-based domain

Using ROSC CGM Interim*



Coordinated and validated DA capacities including costly and non-costly RA

Domain resulting from temporary ROSC CGMM
DA MCP not yet secured, outside ID FB domain
→ °Zero positive ID ATC
→ "°Negative ID ATC"

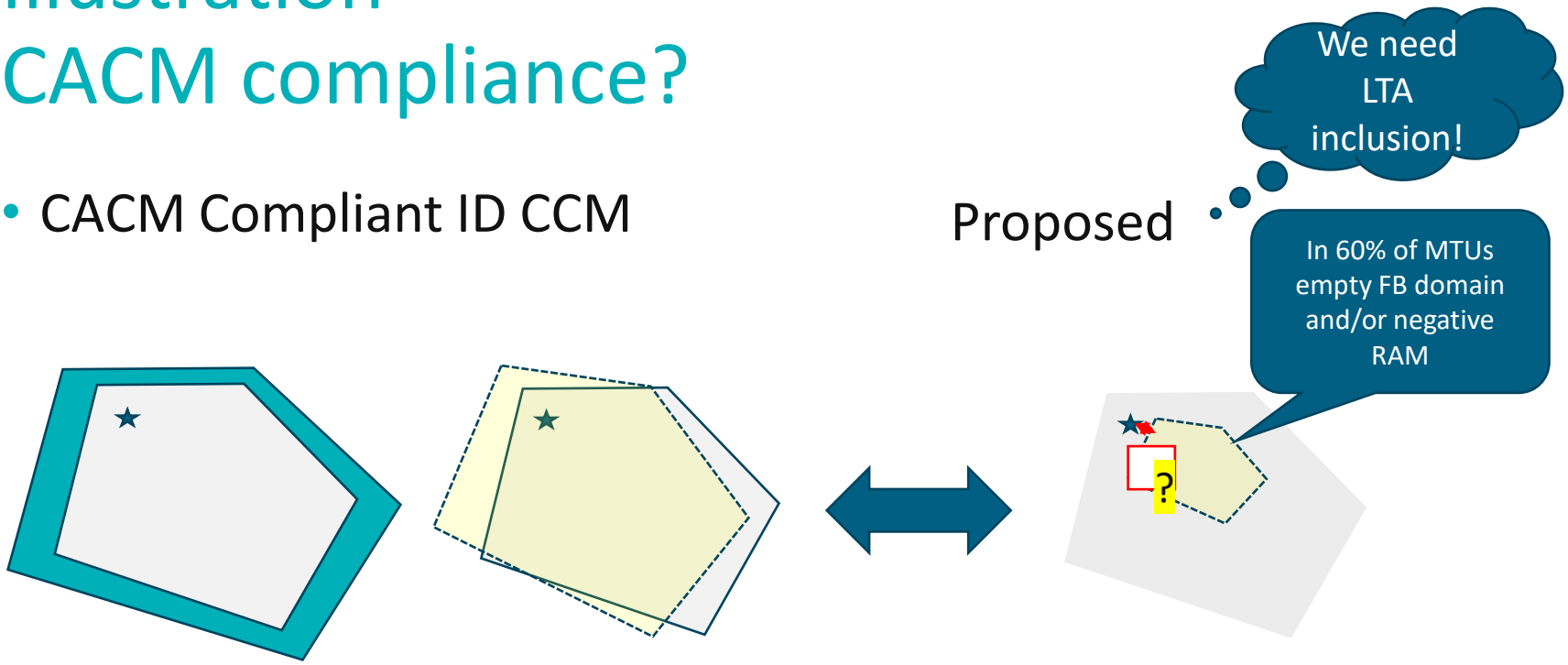
CREG

*Interim ROSC CGM does not contain all costly and non-costly RA to secure DA market outcome, congestions on CNECs and non-CNECs may still exist (°negative RAM)

# Illustration
# CACM compliance?

- CACM Compliant ID CCM

Proposed




Remedial actions taken into account in the intraday capacity calculation are the same as in day-ahead capacity calculation, taking into account their availabilities (CACM Art.25(6))

+

Rules for avoiding undue discrimination (CACM Art.29(b)(iv) / CEP Article 16(8))

+

Optimisation of cross-zonal capacity using available RA taken into account in capacity calculation (CACM Art.29(4))

Capacities based on proposed and agreed RA in interim ROSC CGM = **subset of available RA**!

+

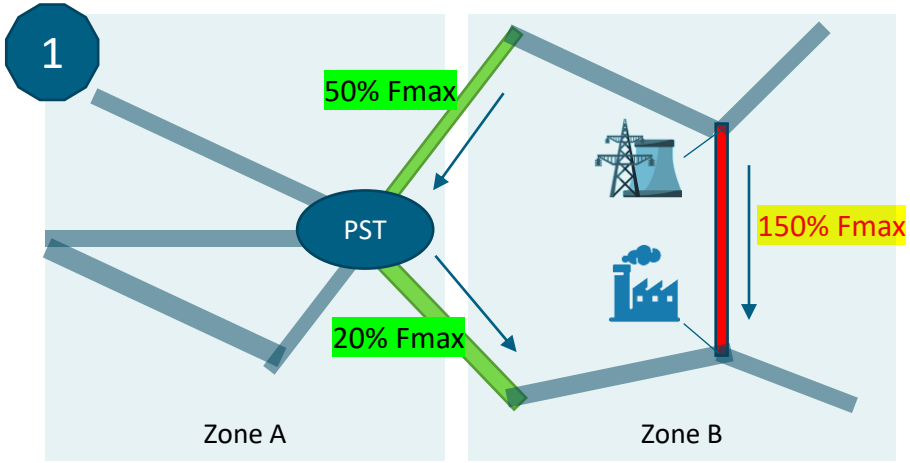
No provisions on 70% for the market

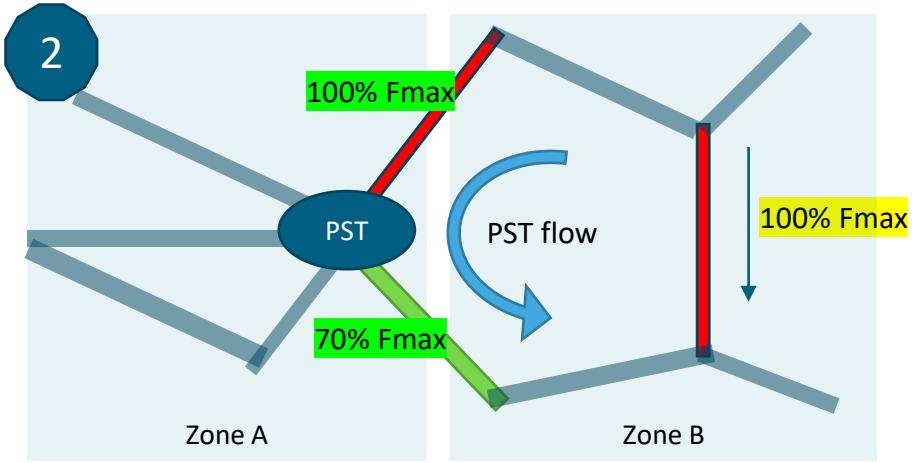
+

No optimisation of cross-zonal capacity

# Impact of the foreseen ROSC-IDCC alignment

Illustration with start of ROSC process with only one single congestion on an internal XNE after DA market clearing




Result DA market clearing

Congestion on internal XNE (non-CNEC)

Still capacity available on CNECs

If virtual margins are not removed, providing DA left-overs on CNECs is at least CEP compliant

Result ROSC Process (simplified illustration!)

Use of PSTs is preferred to the use of internal redispatching, thereby "consuming" capacity on CNECs

Using this ROSC output for extracting intraday capacities is not CEP compliant neither CACM compliant



CREG

Internal congestion is literally pushed to the borders

# Way forward?

1. Continue with ROSC-IDCC alignment, but ensure good quality of initial IGMs, secure initial CGM, change RAO objective function (ensuring 70% on CNECs, maximize intraday capacities around market corner) and include use of countertrading to achieve 70%


Requires an amendment of the ROSC methodology

2. Quit the ROSC-IDCC alignment, provide DA-leftovers without removing AMR, set a floor of 5% RAM, and use ROSC and subsequent ID CROSAs to secure the DA and ID market outcome. Instead of reducing ID ATC capacities, use countertrading if closer to real-time expected available RA are not any longer available.

# Wrap-up (see comments [1])

Considering that:

1. Same set of RA are to be used for the intraday capacity calculation as for day-ahead
2. Available RA are to be coordinated to optimise available capacities.
3. Minimum target for cross-zonal trade, taking into account already allocated capacities, is 70%
4. If available RA are not sufficient to reach the 70% target, countertrading can be used (cfr SWE ID CCM)

CREG raises red flag on:

→ The placeholder for AMR removal : AMR removal is the source of many problems of non-compliance

AMR, if used in day-ahead, must be kept for the intraday timeframe as well

→ The reference to negative RAM and negative ACTs

TSOs shall anticipate that they guarantee firmness of the DA market clearing result

→ Removal of nRAO due to timing issues or inconsistencies with a ROSC methodology as a “free lunch”.

The impact of nRAO could be translated into a default capacity freed up around the DA market corner of 50% of DA FRM

→ Turning XNEs into CNECs in intraday

Set of CNECs shall be the same in DA and in ID, and a raise to 10% should be considered (cfr other CCR)

→ The scope of situations in which IVAs may be applied

IVAs shall be restricted to cases of contingencies (N-1) or forced outages affecting the system security on CNECs + Monitoring requirements maintained



[1] “2022-03-28_ACER_Core ID CCM AM1_Annex II_TC_2ndamendment creg RedFlags.docx”

70% in intraday?

# 70% in intraday?

1. = Providing at least the DA-left overs (i.e. without removing virtual capacities)
2. CACM puts day-ahead and intraday on an equal footing
3. … and so does CEP
4. … and so do other CCRs (see next slides)

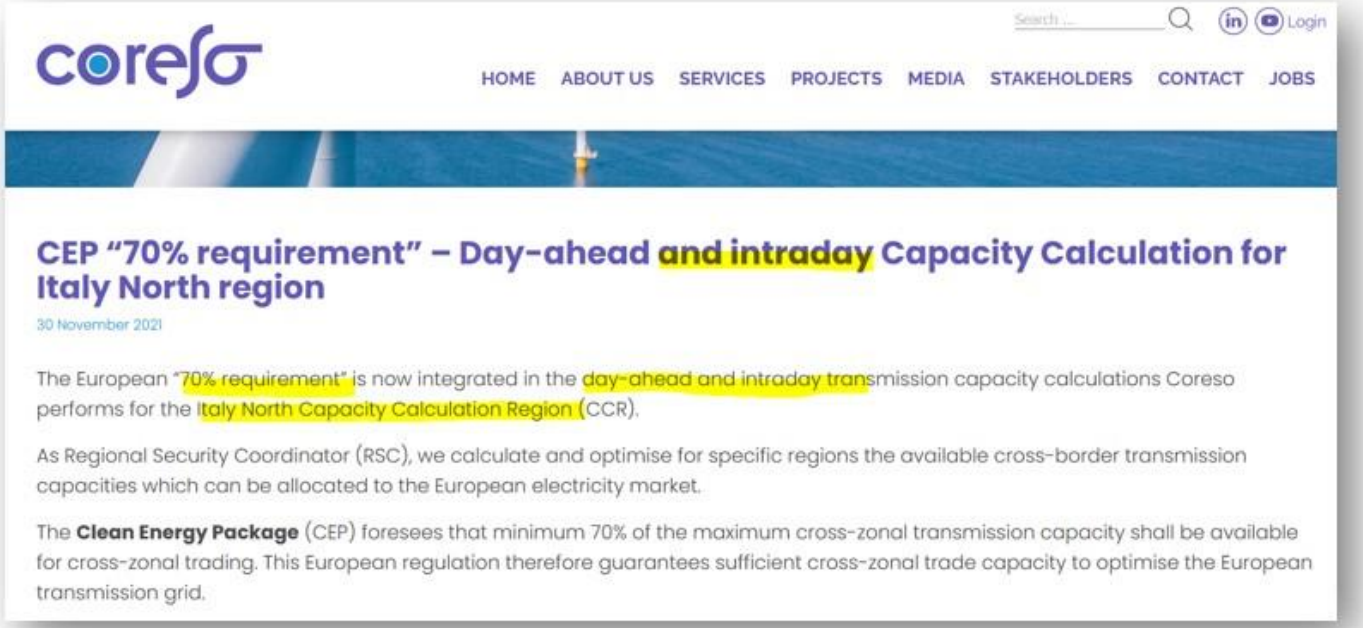
8. Transmission system operators shall not limit the volume of interconnection capacity to be made available to market participants as a means of solving congestion inside their own bidding zone or as a means of managing flows resulting from transactions internal to bidding zones. Without prejudice to the application of the derogations under paragraphs 3 and 9 of this Article and to the application of Article 15(2), this paragraph shall be considered to be complied with where the following minimum levels of available capacity for cross-zonal trade are reached:

(a) for borders using a coordinated net transmission capacity approach, the minimum capacity shall be 70 % of the transmission capacity respecting operational security limits after deduction of contingencies, as determined in accordance with the capacity allocation and congestion management guideline adopted on the basis of Article 18(5) of Regulation (EC) No 714/2009;

(b) for borders using a flow-based approach, the minimum capacity shall be a margin set in the capacity calculation process as available for flows induced by cross-zonal exchange. The margin shall be 70 % of the capacity respecting operational security limits of internal and cross-zonal critical network elements, taking into account contingencies, as determined in accordance with the capacity allocation and congestion management guideline adopted on the basis of Article 18(5) of Regulation (EC) No 714/2009.

The total amount of 30 % can be used for the reliability margins, loop flows and internal flows on each critical network element.

# Italy North region



coreso

Search ... Login

HOME ABOUT US SERVICES PROJECTS MEDIA STAKEHOLDERS CONTACT JOBS

## CEP "70% requirement" – Day-ahead and intraday Capacity Calculation for Italy North region

30 November 2021

The European "70% requirement" is now integrated in the day-ahead and intraday transmission capacity calculations Coreso performs for the Italy North Capacity Calculation Region (CCR).

As Regional Security Coordinator (RSC), we calculate and optimise for specific regions the available cross-border transmission capacities which can be allocated to the European electricity market.

The **Clean Energy Package** (CEP) foresees that minimum 70% of the maximum cross-zonal transmission capacity shall be available for cross-zonal trading. This European regulation therefore guarantees sufficient cross-zonal trade capacity to optimise the European transmission grid.

# SWE

## III. SWE Regulatory Authorities' position

NRAs welcome the significant improvements achieved by the submitted SWE CCCM. In particular, the adjustment process which will take into account costly remedial actions to enlarge the margin of the limiting element will help to achieve the obligation of providing a 70% of cross border capacity to the allocation process.

However, NRAs consider that the methodology devoted to fallback procedures does not fulfill the requirements to monitor the 70% target in the hours where no NTC is obtained by RCC (long term value is provided) or no limiting element is detected due to software failure, divergence or GSLK exhaustion.

Moreover, regarding Article 13:

- the process described might fail to find the real limiting CNEC and result to an irrational capacity values if the PTDF of the original limiting CNEC is very low. The addition of a second power flow computation could solve this issue;
- the minimum values for the CAP CT used in the adjustment process to increase the initial NTC with costly remedial actions when the 70% target is not reached are not defined;
- the TSOs proposal does not sufficiently incentivizes TSOs to do their best effort in the amount of countertrading offered to the market without endangering the operational security of the system.

Because of these specific elements, the NRAs are not able to approve the proposal for common capacity calculation methodology for the day-ahead and intraday market timeframe submitted by the TSOs. Nonetheless, NRAs consider it efficient to directly amend the proposal by exploiting the provision included in Article 5(6) of Regulation 2019/942, about the duty for regulatory authorities to revise terms and conditions and methodologies where necessary, before approving them.

In the process of amending the methodology, the NRAs coordinated with TSOs to explain the amendments and to gather their comments.

CREG