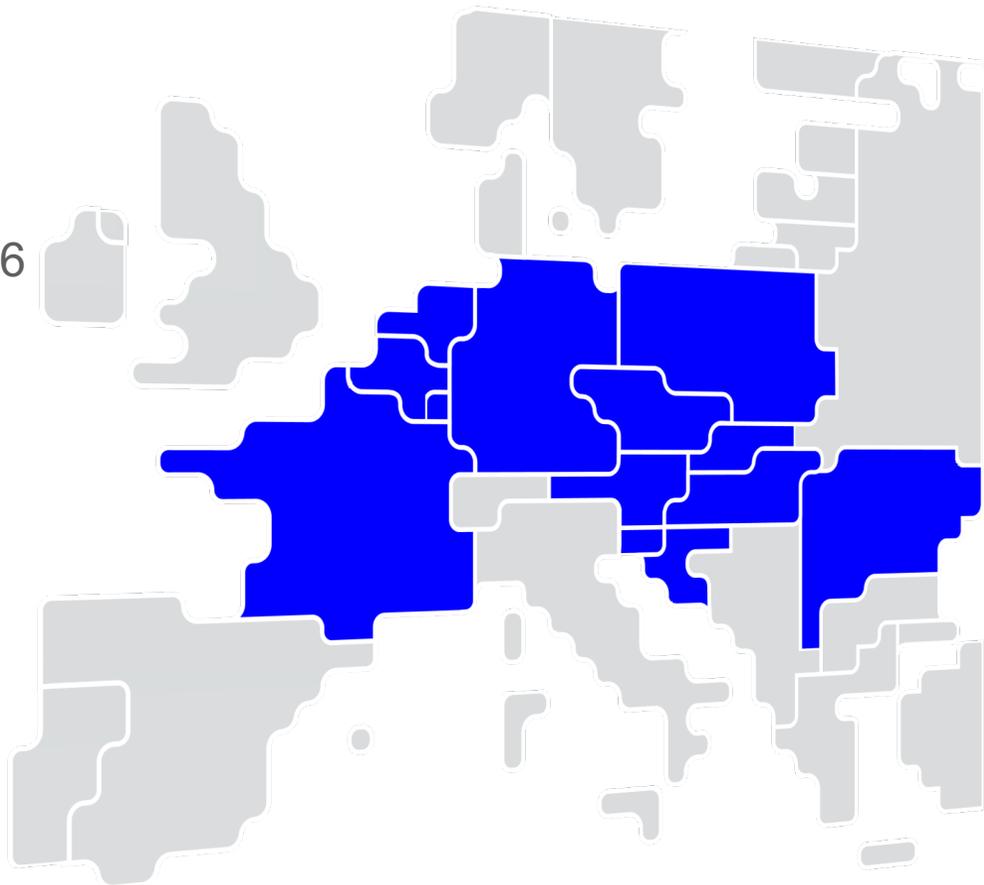




Core Consultative Group meeting

28th of June
10h30 – 16h30 CEST
Munich Airport – Municon K26





	SUBJECT	WHO	TIMING
1	Welcome and introduction	C.PFLANZ	10:30 – 10:40
2	Status update and developments in Core CCR	C.PFLANZ	10:40 – 11:00
3	Core DA & ID FB CCMs <ul style="list-style-type: none"> • Amendment Core CCMs and Explanatory Note • Status & next steps implementation Core DA FB CCM 	C.PFLANZ	11:00 – 11:30
4	RD&CT workshop <ul style="list-style-type: none"> • Introduction & objective • Workshop RD&CT – explanation & input 	C.PFLANZ	11:30 – 12:00
LUNCH (12h00 – 13h00)			
	<ul style="list-style-type: none"> • Discussions (2x 45 minutes, 1x 45 minutes) • Wrap-up 	ALL	13:00 – 16:00
5	AOB & Closure	C.PFLANZ	16:15 – 16:30

PLEASE NOTE: it is only possible for MPs to join the first part of the Core CG meeting via conference call



WELCOME!

Core TSOs welcome all Market Participants, representatives of associations, NRAs and NEMOs to the Core CG meeting in Munich.

Objective for today's meeting:

- Inform CCG participants on the recent developments in the Core CCR, amongst others:
 - Amendment of the Core DA & ID FB CCMs
- Workshop on redispatch & countertrading (CACM 35)

PLEASE NOTE: it is possible to participate via conference call until noon. Due to the interactive character of the RD&CT workshop, no conference call will be facilitated in the afternoon.

2. Update developments Core

C.PFLANZ



Network Code/Guideline		Art.	CCR Obligation*	NC/GL milestone delivery method	
CACM	Day ahead	20.2	• Common Capacity Calculation Methodology for DA	June 2018 (RfA)	→ 04/06: amended CCMs and EN submitted to CERRF
		27.2	• Setting up Coordinated Capacity Calculator	4 months after CCM approval	
	Intraday	20.2	• Common Capacity Calculation Methodology for ID	June 2018 (RfA)	→ 14/02: revised proposal submitted to Core NRAs, on 27/03 escalated to ACER
		27.2	• Setting up Coordinated Capacity Calculator	4 months after CCM approval	
	Re dispatch & Countertrading	35.1	• Proposal for a coordinated RD & CT	March 2018	→ NRAs decision: DE/LU-AT → FTRs options CZ-SK → PTRs UIOSI
		74.1	• Proposal for RD&CT cost sharing	March 2018	
		74.7	• Further harmonize re dispatching and countertrading cost sharing methodologies with other CCRs	Dec 2018	
	General	35.3	• Report assessing the harmonization of coordinated RD&CT	March 2018	→ Work in progress on Core LTCC methodology
44		• Fallback procedures for DA FB MC	May 2017		
		80.4	• Proposal for sharing regional costs (#NEMOs and TSOs cooperating in a region)	2017	
FCA	Long Term	31.3	• Regional design of LTRs in CCRs where LTRs exist	Apr 2017	→
		10.1	• Common Capacity Calculation Methodology for LT	6 months after CCM approval	
		16.1	• Methodology for splitting LT capacities	6 months after CCM approval	
		21.1	• Operational rules for merging the individual grid models	Jun 2018	
		42	• IF PREFERRED by TSOs: alternative coordinated fallback solutions	Jun 2018	
		21.2	• Operational rules for coordinated capacity calculators	Sept 2019	
SOGL	Regional security coordination	76.1	• Proposal for common provisions for regional operational security coordination	3 months after approval method for coordinated operational security analysis	

* The obligations shall take into account all potential bidding zone configuration, amongst others the DE-AT border

* Regulatory procedures can delay some of the deadlines



On 15/03, Core TSOs received a request for amendment (RfA) from the Core Energy Regulators Regional Forum (CERRF) for both the DA and ID FB CCM. The RfAs reflect the position of all Core NRAs.

- The amended proposals and Explanatory Note have been submitted by all Core TSOs within two months following the request from the NRAs, being 04/06/2018 (last receipt of local RfA was on 04/04/2018).
- Core NRAs decision on the amended CCMs is expected latest by August 4th 2018.
- The amended documents can be found enclosed:

Core DA FB CCM
Core ID FB CCM
Explanatory Note

CCMs for DA and ID have been amended

- In line with the Request for Amendment received from Core NRAs
- In line with discussions during meetings with Core NRAs, Core SPoC NRAs, and Core lead NRAs

Explanatory Note

- One Explanatory Note to support both the DA and ID CCM proposal
- Explanatory Note has been improved by keeping only detailed explanations on elements not tackled in the Proposals
- Objectives are to facilitate the readability, and to limit any risk of inconsistency between the Proposal and its Explanatory Note
- A high level process flow with regard to DA FB capacity calculation has been added



Summary of changes made to the Core capacity calculation methodologies:

- Mentioning of, and references to, the “deliverable report” have been removed
- CNEC selection threshold has been fixed at a value of 5%
- Minimum RAM adjustment has been detailed to kick in when the RAM – in a situation without any commercial exchanges in the Core region (F0) – is lower than 20% of the CNEC’s Fmax
- The CNEC selection threshold should be assessed in conjunction with the notion of minimum RAM, that has been introduced
- Remedial action optimization has been detailed
- A reference to further study, and the potential need to adapt the values / methodology accordingly has been added for
 - CNEC selection threshold (study includes a social welfare based analysis)
 - FRM risk level
 - GSK methodology
- A process description has been added to Article 4(6)
- The power factor is set to equal 1, which means that the element is assumed to be loaded only by active power. Any significant deviation from this assumption shall be covered.
- Allocation constraints may be used by Tennet BV, ELIA, and PSE. A detailed description has been added to Annex I of the DA proposal
- The use of FRM values for CNECs and CNEs has been specified for the Core TSOs
- Core TSOs have harmonized their GSK determination methodologies while including some dedicated features to take into account specific production patterns within their grids
- Small zone-to-zone PTDFs, and its potential impact, has been addressed
- Implementation milestones have been added in Appendix 1
- Operational readiness for Advanced Hybrid Coupling has been added



Transparency

- As requested by NRAs and MPs, the **reference to national regulations** is removed
- At least the following data items shall be published in addition to the data items and definitions of Commission Regulation (EU) No 543/2013 on submission and publication of data in electricity markets.:

Publication of data (Article 23 DA CCM)

- Final flow-based parameters shall be published for each MTU, comprising the zone-to-slack PTDFs and the RAM for each “presolved” CNEC;
 - Additionally, the following data items shall be published for each MTU:
 - maximum and minimum net position of each bidding zone;
 - maximum bilateral exchanges between all Core bidding zones
 - The following information may be published:
 - Real names of CNEC and external constraint;
 - CNE EIC code and Contingency EIC code;
 - Detailed breakdown of RAM per CNEC: *F_{max}*, including information if it is based on permanent or temporary limits; *I_{max}*; *F_i*; *FRM*; **AMR**; **LTA margin**; *FAV*.
 - Detailed breakdown of RAM per external constraint: *F_{max}*; *F_i*.
 - **For each RA resulting from the RAO: type of RA; location of RA.**
 - The following information of the D-2 CGM for each market time unit, for each Core bidding zone and each TSO may be published ex-post at D+2: vertical load; production; best forecast of net position.
 - Publication of the static grid model
-
- In line with the outcome of last Core CG (10/04/2018), Core TSOs maintained the content of Article 23(3):
 - *The final, exhaustive and binding list of all publication items, respective templates and the data-access points shall be developed in dedicated workshops with the Core Stakeholders and regulatory authorities. The refinement shall keep at least the transparency level reached in the operational CWE flow-based market coupling. An agreement between Stakeholders, Core regulatory authorities and Core TSOs shall be reached not later than three months before the go-live window as described in Article 25(4).*

3. Core DA & ID FB CCM



Status & next steps implementation Core DA FB CCM

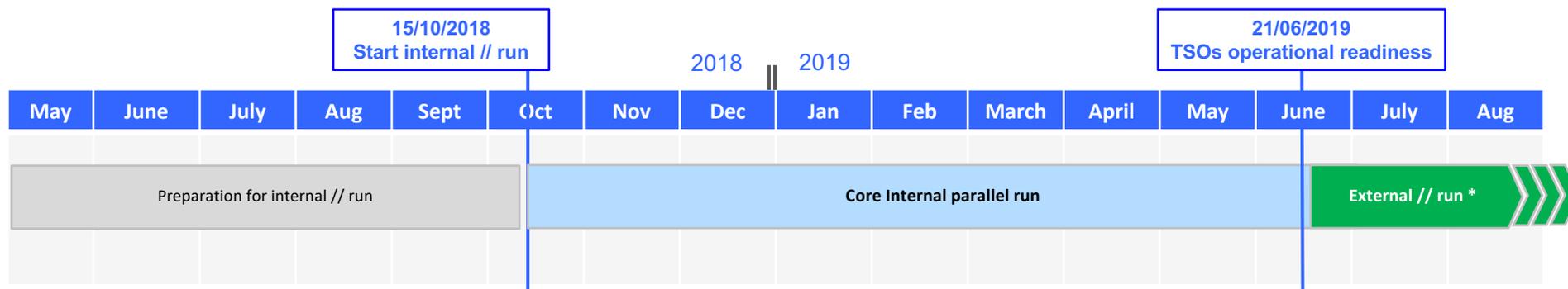
Core TSOs will perform an internal parallel run, starting from October 15th 2018.

- The internal parallel run will use the flow-based capacity calculation methodology as described in the amended DA CCM
- Throughout the internal parallel run, TSOs will further improve their technical readiness toward implementation,

Capacity calculation and market coupling results from the Internal parallel run will be analyzed by TSOs, resulting in conclusions and recommendations on the following methodological elements:

- Maximum zone-zone PTDF criterion for selecting CNECs considered in the capacity calculation process,
 - In DA CCM, this criterion is 5%.
- The percentage of minimum margin to be made available on each CNEC (i.e. AMR),
 - In DA CCM, this percentage is 20%.
- The potential improvements for TSOs' GSK methodologies.

➔ By the end of the internal parallel run, Core TSOs must ensure their operational readiness to start the external parallel run:



*Disclaimer: external parallel run is an activity to be performed jointly with Core NEMOs





As stated during last Core CG, Core TSOs experienced issues in finalizing the CACM Art 35 and 74 methodologies within the time lines set by CACM. More time is required to:

- Meet NRAs and MPS expectations and ensure higher chance of having a compromise and approval of the methodologies
- Ensure consistency with other methodologies → several dependencies, e.g. with SO GL 75 and 76
- Ensure time to discuss many sensitive topics thoroughly considering the impact:
 - CACM Art. 35: Cross-border relevance, resources for redispatching and countertrading, scope of optimization
 - CACM Art. 74: Requester share, prioritization of flows, experimentation results, cross-border relevance
- Allow time to perform quantitative analysis

Core TSOs had two alignment meetings with Core NRAs, ACER and the European Commission on the way forward for the development of the Core RD&CT methodologies. The following was agreed:

- Core TSOs will work on finalization of the proposals for both the RD&CT methodology and cost sharing (CACM Article 35 and 74) by the end of the summer
- **Public consultation** on the RD&CT methodology proposal (CACM Art. 35) **will be launched in September**
- Core TSOs will assess the comments received both from the market (public consultation) and Core NRAs (shadow opinion) and **submit their proposals to Core NRAs by the end of October.**

4. Redispatch & Countertrading



Introduction – objective of today's workshop

In the last CCG meeting, TSOs and MPs acknowledged the importance of having an open discussion between TSOs and market participants on RD&CT.

- It was concluded to schedule a dedicated workshop on RD&CT to facilitate detailed content discussions



Objective of today's workshop on RD&CT:

- **Content discussion on the below topics**
 1. Definition of RD and definition of CT
 2. Resources of RD and resources of CT
 3. Activation in day-ahead & intraday processes
- **Outcome: conclude on a common understanding / definition of the above topics.**



Set-up of the workshop



Round A

- **Group divided in two sub-groups, discuss topic 1 & 2**
 1. Definition of RD and definition of CT
 2. Resources of RD and resources of CT
- **Discussions are facilitated at two different 'tables'**
- **Timing:** 2 discussion rounds of 45 minutes each

→ Outcomes of the discussions are noted down on a flip-over, and presented to the whole group afterwards

Round B

- **Explanation topic 3 – Activation in day-ahead & intraday processes**
 - **Plenary discussion on topic 3**
 - **Timing:** 45 minutes
- Outcomes of the discussion are noted down on a flip-over

4. Redispatch & Countertrading

Input for Discussion round A: definitions of RD and CT



Definition Countertrade

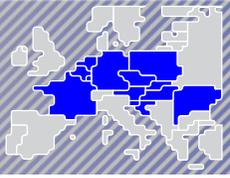
- “Countertrading” means an energy-balanced measure initiated by at least two TSOs in two different bidding zones to relieve a congestion where generation units/loads activated are not localized;
- “Available Countertrading” describes the range of trading possibilities within a bidding zone;
- “Planned Countertrading” is the subset of the total available countertrading potentials required to relieve physical congestions identified in a CGM during a security analysis;
- “Ordered Countertrading” is the share of the planned countertrading that is bindingly ordered by the Requesting and Connecting TSO. In this case the ordered countertrading becomes part of the schedules exchanged between the TSOs and is contained in a CGM during a security analysis.

Definition Redispatch

- “Redispatching” means an energy-balanced measure activated by one or several system operators by altering the generation and/or load pattern in order to change physical flows in the transmission system and relieve a physical congestion;
- “Available Redispatching Potential” describes the range of possible deviations of the generator output from its planned set point without compromising the provision of ancillary services while maintaining its system in normal state respectively without endangering the security of supply of the control area. The available redispatching potential is defined regardless of whether or not the generator is running. It is nominated per generator in the form of planning time series. When possible, demand facilities or aggregated demand facilities participating in demand response can be taken into account with their minimum and maximum power range to be curtailed;
- “Planned Redispatching” is the subset of the total available redispatching potentials required to relieve physical congestions identified in a CGM during a security analysis;
- “Ordered Redispatching” is the share of the planned redispatching that is bindingly ordered by the Requesting and Connecting TSO. In this case the ordered redispatching becomes part of the scheduled exchanges between the generator and the Requesting/Connecting TSO and is contained in a CGM during a security analysis.

4. Redispatch & Countertrading

Input for Discussion round A: resources of RD and CT



Resources of Redispatch

- The resources for redispatching made available to the TSOs which can be precisely localized and integrated in the CGM are:
 - Up and/or down regulation of conventional power plants;
 - Up and/or down regulation of loads (e.g. industry, boiler);
 - Up and/or down regulation of (pump) storage power plants;
 - Up and/or down regulation of battery storages or other storage technologies;
 - Up and/or down regulation of renewable energy sources, such as wind energy, solar energy, biomass power plants,

Resources of Countertrade

- The resources for the TSOs on countertrading are as following, but are not limited to:
 - Having (direct or via a third-party) access to and taking position (direct or via a third-party) in the intraday market in order to buy/sell energy
 - Resources also considered for redispatching;
 - Resources of the Balancing Market

4. Redispatch & Countertrading

Input for Discussion round B: Price information exchange



Price information exchange

- In line with the prescriptions set by Article 35(5) of CACM Regulation, information about prices will be made available in advance by the providers of redispatching and countertrading resources. Once this precondition is fulfilled, TSOs should be able to estimate redispatching and countertrading prices. Each of the Core TSOs shall inform the RSCs when the price is updated prior to the activation
- Regarding redispatching and countertrading:
 - Different pricing mechanisms for redispatching exist in different countries. The main mechanisms are:
 - price related based on bids each for upward regulating and downward regulating;
 - cost based price based on fuels, CO2, opportunity cost, starting cost etc.
 - cost based plus complemented with an additional margin
 - In a price related mechanism the costs are known ex-ante. In a cost related mechanism the full costs are known only ex-post, but indicative prices are determinable.
 - Prior to the coordinated security analysis performed in accordance with the methodology of the Article 76 of the SO GL Regulation, each TSO will declare to the other TSOs of the same CCR and the RSCs at least the indicative prices/costs of the resources available in its control area for redispatching and countertrading if relevant.
 - In case of redispatching, each TSO has to declare the indicative prices/costs of the potential generation or load units, and the time window of its validity.
 - In case of countertrading, each TSO has to declare the indicative prices/costs of the potential trade and the time window of its validity.
- For the optimization and settlement, only the costs related to the activation are taken into account, capacity costs are not considered.

4. Redispatch & Countertrading

Input for Discussion round B: activation process for RD and CT



Activation process for RD and CT in day-ahead & intraday processes

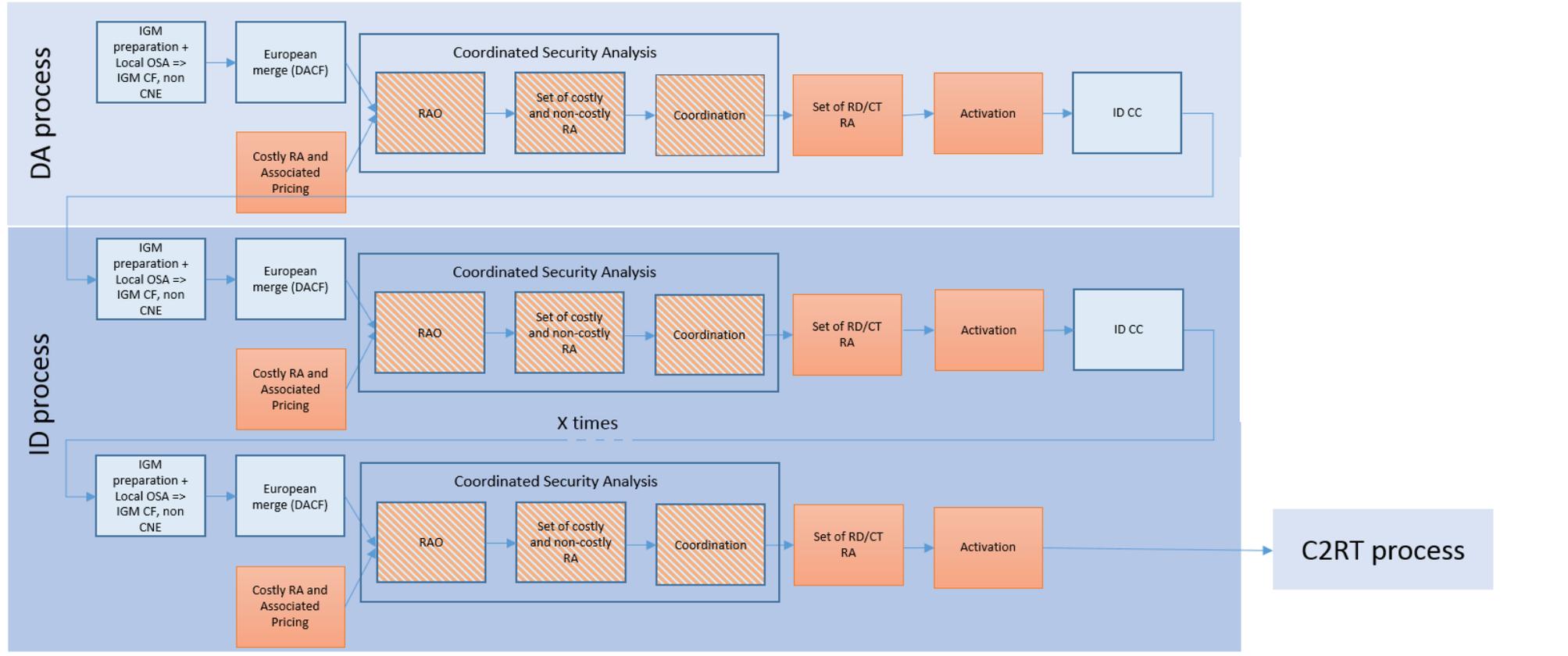
- The Requesting Party asks for the implementation of the planned redispatching and countertrading by the Connecting Parties.
- The Connecting TSOs activate the generation/load adjustment as requested by the coordinating party and provide the schedules required. The planned redispatching and countertrading shall be performed as close as possible to the real time, taking into account the technical characteristics of the generation units and loads activated.
- The Connecting TSOs and if needed Transiting TSOs update cross-border schedules according to predefined scheduling paths.
- The Connecting TSOs update cross-border capacities based on implemented redispatching and countertrading.
- The Connecting TSOs update cross-border nominations based on implemented redispatching and countertrading.

General principles of countertrading and redispatching

- Exchange of available redispatching and countertrading volume and associated pricing as input for the regional Coordinated Security Analysis, as defined in the methodology of article 76 SO GL;
- Detection that redispatching and countertrading is needed by the CSA where all available non costly remedial actions do not relieve all identified congestions;
- Coordination to decide which redispatching and countertrading measures will be applied, based on a set of costly and non-costly Remedial Action proposed by the CSA;
- Activation of redispatching and countertrading;
- Reporting;
- Total cost calculation;
- Cost sharing & Settlement.

4. Redispatch & Countertrading

Input for Discussion round B: regular process



- RAO = Remedial Action Optimization
- DACF = Day Ahead Congestion Forecast
- IGM CF = Individual Grid Model Congestion Forecast
- RA = Remedial Action
- C2RT = Close to real-time
- CNE = Critical Network Element
- OSA = Operational Security Analysis



Wrap-up



Wrap-up: did we meet today's objective for the RD&CT workshop?

Objective:

- Content discussion on:
 1. Definition of RD and definition of CT
 2. Resources of RD and resources of CT
 3. Activation in day-ahead & intraday processes

Outcome:

- Conclude on a common understanding / definition of the above topics.

Actions & next steps:

- *Tbd during the workshop*
- ...



AOB?

Core TSOs thank Market Participants, representatives of associations, NRAs and NEMOs for their participation in today's meeting!

- Minutes of meeting will be published on the dedicated Core pages on the ENTSO-E website