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Channel TSOs Explanatory note for the methodology for coordinated Redispatching and Countertrading and for the methodology for Redispatching and Countertrading Cost Sharing in accordance with Article 35(1) and Article 74(1) of Commission Regulation (EU) 2015/1222 of 24 July 2015 establishing a guideline on capacity allocation and congestion management

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**23 November 2018**

## TABLE OF CONTENTS

1.	INTRODUCTION.....	3
2.	LEGAL REFERENCE AND REQUIREMENTS.....	4
2.1.	Generalities in the CACM Regulation .....	4
2.2.	Interactions between the CACM and SOGL Regulations.....	4
2.3.	Redispatching and Countertrading Cost Sharing.....	7
3.	DEFINITIONS OF REDISPATCHING AND COUNTERTRADING.....	9
3.1.	Countertrading .....	9
3.2.	Redispatching .....	10
4.	SCOPE AND APPLICATION OF THE CHANNEL RD AND CT METHODOLOGY	11
4.1.	Scope.....	11
4.2.	Application.....	13
5.	COORDINATED REDISPATCHING AND COUNTERTRADING PROCESSES ....	15
5.1.	Timetable overview .....	15
5.2.	Border-specific coordinated Redispatching and Countertrading operational procedures .....	17
5.3.	Process description .....	17
5.4.	Volume information availability and Price information Exchange .....	18
5.5.	Detection.....	18
5.6.	Coordination.....	19
5.7.	Fast Coordination.....	19
5.8.	Activation of coordinated Redispatching and Countertrading.....	20
5.9.	Selection of RD and CT Actions .....	23
6.	COST SHARING PROCESS OF THE COORDINATED REDISPATCHING AND COUNTERTRADING .....	23
6.1.	Total cost calculation.....	23
6.2.	Cost Sharing .....	24
7.	MONITORING.....	25
	ANNEX 1 – RD AND CT ACTIONS.....	26

## 1. INTRODUCTION

The Commission Regulation (EU) 2015/1222 of 24 July 2015 establishing a guideline on Capacity Allocation and Congestion Management (hereafter referred to as “CACM Regulation”) sets out rules to ensure optimal use of the transmission infrastructure, operational security and optimise the calculation and allocation of cross-zonal capacity.

To implement the CACM Regulation, each Capacity Calculation Region (hereafter referred to as “CCRs”) is required to develop a common methodology for coordinated Redispatching and Countertrading as well as a common methodology for cost sharing of coordinated Redispatching and Countertrading. Pursuant to Article 35(1) and Article 74(1) of the CACM Regulation, all TSOs in the Channel CCR have established a proposal for a methodology for coordinated Redispatching and Countertrading (hereafter referred to as “Channel RD and CT Methodology”) and a proposal for a methodology for coordinated Redispatching and Countertrading cost sharing (hereafter referred to as “Channel RD and CT Cost Sharing Methodology”). This document provides additional information and explanations of these two proposals.

The following TSOs are submitting the Channel RD and CT methodology and Channel RD and CT Cost Sharing methodology: RTE, NGESO, NGIC, BritNed Development Ltd, TenneT NL, Nemo Link Ltd and Elia.

In accordance with Article 35(1) of the CACM Regulation, the Channel RD and CT Methodology must be submitted for approval to all national regulatory authorities within the Channel CCR (hereinafter “Channel NRAs”) no later than 16 months after the regulatory approval of capacity calculation regions referred to in Article 15 of the CACM Regulation. In addition, the proposal shall be subject to consultation in accordance with Article 12 of the CACM Regulation.

The Channel RD and CT Methodology was publicly consulted on through the ENTSO-e website between 1 December 2017 and 12 January 2018. The consultation report was annexed to the Channel RD and CT Methodology submitted for approval to Channel NRAs on 16 March 2018.

In accordance with Article 74(1) of the CACM Regulation, the Channel RD and CT Cost Sharing Methodology must be submitted for approval to all Channel NRAs no later than 16 months after the regulatory approval of capacity calculation regions referred to in Article 15 of the CACM Regulation. This Channel RD and CT Cost Sharing Methodology was submitted for approval to Channel NRAs on 16 March 2018.

On 21 September 2018, Channel NRAs requested an amendment to the common methodology for coordinated Redispatching and Countertrading and to the common methodology for redispatching and countertrading cost sharing proposal pursuant to Article 9(12) of Regulation 2015/1222.

On 23 November 2018, Channel TSOs submitted amended versions of the Channel RD and CT Methodology and of the Channel RD and CT Cost Sharing Methodology to Channel NRAs.

## **2. LEGAL REFERENCE AND REQUIREMENTS**

### **2.1. Generalities in the CACM Regulation**

Relevant parts of the preamble of the CACM Regulation are cited here and should be considered to properly interpret the articles stated further below.

No. 10 of the preamble of the CACM Regulation states that TSOs should:

*“use a common set of remedial actions such as countertrading or redispatching to deal with both internal and cross-zonal congestion. In order to facilitate more efficient capacity allocation and to avoid unnecessary curtailments of cross-border capacities, TSOs should coordinate the use of remedial actions in capacity calculation.”*

Followed by no. 12 of the preamble:

*“TSOs should implement coordinated redispatching of cross-border relevance or countertrading at regional level or above regional level. Redispatching of cross-border relevance or countertrading should be coordinated with redispatching or countertrading internal to the control area.”*

### **2.2. Interactions between the CACM and SOGL Regulations**

The basis for the Channel RD and CT Methodology is Article 35 of the CACM Regulation:

*“1. Within 16 months after the regulatory approval on capacity calculation regions referred to in Article 15, all the TSOs in each capacity calculation region shall develop a proposal for a common methodology for coordinated redispatching and countertrading. The proposal shall be subject to consultation in accordance with Article 12.*

*2. The methodology for coordinated redispatching and countertrading shall include actions of cross-border relevance and shall enable all TSOs in each capacity calculation region to effectively relieve physical congestion irrespective of whether the reasons for the physical congestion fall mainly outside their control area or not. The methodology for coordinated redispatching and countertrading shall address the fact that its application may significantly influence flows outside the TSO's control area.*

*3. Each TSO may redispatch all available generation units and loads in accordance with the appropriate mechanisms and agreements applicable to its control area, including interconnectors.*

*By 26 months after the regulatory approval of capacity calculation regions, all TSOs in each capacity calculation region shall develop a report, subject to consultation in accordance with Article 12, assessing the progressive coordination and harmonisation of those mechanisms and agreements and including proposals. The report shall be submitted to their respective regulatory authorities for their assessment. The proposals in the report shall prevent these mechanisms and agreements from distorting the market.*

4. *Each TSO shall abstain from unilateral or uncoordinated redispatching and countertrading measures of cross-border relevance. Each TSO shall coordinate the use of redispatching and countertrading resources taking into account their impact on operational security and economic efficiency.*

5. *The relevant generation units and loads shall give TSOs the prices of redispatching and countertrading before redispatching and countertrading resources are committed.*

*Pricing of redispatching and countertrading shall be based on:*

(a) *prices in the relevant electricity markets for the relevant time-frame; or*

(b) *the cost of redispatching and countertrading resources calculated transparently on the basis of incurred costs.*

6. *Generation units and loads shall ex-ante provide all information necessary for calculating the redispatching and countertrading cost to the relevant TSOs. This information shall be shared between the relevant TSOs for redispatching and countertrading purposes only.”*

The Channel RD and CT Methodology following Article 35 of the CACM Regulation is also interlinked with Article 21 of Commission Regulation (EU) 2017/1485 of 2 August 2017 establishing a guideline on electricity transmission system operation (hereafter referred to as the “SOGI Regulation”) specifying that each TSO shall apply principles when activating and coordinating remedial actions in accordance with Article 23 of the SOGI Regulation:

*“for operational security violations which need to be managed in a coordinated way, a TSO shall design, prepare and activate remedial actions in coordination with other concerned TSOs, following the methodology for the preparation of remedial actions in a coordinated way under Article 76(1)(b) and taking into account the recommendations of a regional security coordinator in accordance with Article 78(4).”*

Further Article 23(2) of SOGI Regulation specifies that:

*“When preparing and activating a remedial action, including redispatching or countertrading pursuant to Article 23 and 35 of Regulation (EU) 2015/1222, or a procedure of a TSO’s system defence plan which affects other TSOs, the relevant TSO shall assess, in coordination with the TSO concerned, the impact of such remedial action or measure within and outside of its control area, in accordance with Article 75(1), Article 76(1)(b) and Article 78(1), (2) and (4) and shall provide the TSOs concerned with the information about this impact.”*

The requirement for TSOs to develop common provisions for operational security coordination on a regional level in Article 76(1) of the SOGI Regulation is also relevant:

*“...all TSOs of each capacity calculation region shall jointly develop a proposal for common provisions for regional operational security coordination, to be applied by the regional security coordinators and the TSOs of the capacity calculation region.”*

Article 76(1) further specifies that:

*“The proposal shall respect the methodologies for coordinating operational security analysis developed in accordance with Article 75(1) and complement where necessary the methodologies developed in accordance with Articles 35 and 74 of Regulation (EU) 2015/1222.”*

Article 78(1) of the SOGL Regulation states also:

*“Each TSO shall provide the regional security coordinator with all the information and data required to perform the coordinated regional operation security assessment, including at least:*

*...(b) the updated list of possible remedial actions, among the categories listed in Article 22, and their anticipated costs provided in accordance with Article 35 of Regulation (EU) 2015/1222 if a remedial action includes redispatching or countertrading, aimed at contributing to relieve any constraint identified in the region; and ...”*

About coordination and role of RSCs, Article 78(2) of the SOGL Regulation specifies that:

*“Each regional security coordinator shall:*

*(a) perform the coordinated regional operational security assessment in accordance with Article 76 on the basis of the common grid models established in accordance with Article 79, the contingency list and the operational security limits provided by each TSOs in paragraph 1. It shall deliver the results of the coordinated regional operational security assessment at least to all TSOs of the capacity calculation region. Where it detects a constraint, it shall recommend to the relevant TSOs the most effective and economically efficient remedial actions and may also recommend remedial actions other than those provided by the TSOs. This recommendation for remedial actions shall be accompanied by explanations as to its rationale;*

*(b) coordinate the preparation of remedial actions with and among TSOs in accordance with Article 76(1)(b), to enable TSOs achieve a coordinated activation of remedial actions in real-time.*

Article 78(3) of the SOGL Regulation explains also that this is the role of the RSCs to coordinate with RSCs of other CCRs:

*“When performing the coordinated regional operational security assessment and identifying the appropriate remedial actions, each regional security coordinator shall coordinate with other regional security coordinators.”*

Lastly, Article 78(4) of the SOGL Regulation provides some rules and guidance in case the TSOs decides not to implement the proposed remedial action:

*“When a TSO receives from the relevant regional security coordinator the results of the coordinated regional operational security assessment with a proposal for a remedial action, it shall evaluate the recommended remedial action for the elements involved in that remedial action and located in its control area. In so doing, it shall apply the provisions of Article 20. The TSO shall decide whether to implement the recommended remedial action. Where it decides not to implement the recommended remedial action, it shall provide an explanation for this decision to the RSC. Where the TSO decides to*

*implement the recommended remedial action, it shall apply this action for the elements located in its control area provided that it is compatible with real-time conditions.”*

The methodologies from the CACM Regulation and the SOGL Regulation are thus highly interlinked. The following chapters provide a description of Channel CCR interpretation and scope of this proposal.

### **2.3. Redispatching and Countertrading Cost Sharing**

The basis for the Channel RD and CT Methodology is Article 74 of the CACM Regulation:

- “1. No later than 16 months after the decision on the capacity calculation regions is taken, all TSOs in each capacity calculation region shall develop a proposal for a common methodology for redispatching and countertrading cost sharing.*
- 2. The redispatching and countertrading cost sharing methodology shall include cost-sharing solutions for actions of cross-border relevance.*
- 3. Redispatching and countertrading costs eligible for cost sharing between relevant TSOs shall be determined in a transparent and auditable manner.*
- 4. The redispatching and countertrading cost sharing methodology shall at least:*
  - (a) determine which costs incurred from using remedial actions, for which costs have been considered in the capacity calculation and where a common framework on the use of such actions has been established, are eligible for sharing between all the TSOs of a capacity calculation region in accordance with the capacity calculation methodology set out in Articles 20 and 21;*
  - (b) define which costs incurred from using redispatching or countertrading to guarantee the firmness of cross-zonal capacity are eligible for sharing between all the TSOs of a capacity calculation region in accordance with the capacity calculation methodology set out in Articles 20 and 21;*
  - (c) set rules for region-wide cost sharing as determined in accordance with points (a) and (b).*
- 5. The methodology developed in accordance with paragraph 1 shall include:*
  - (a) a mechanism to verify the actual need for redispatching or countertrading between the TSOs involved;*
  - (b) an ex post mechanism to monitor the use of remedial actions with costs;*
  - (c) a mechanism to assess the impact of the remedial actions, based on operational security and economic criteria;*
  - (d) a process allowing improvement of the remedial actions;*

*(e) a process allowing monitoring of each capacity calculation region by the competent regulatory authorities.*

*6. The methodology developed in accordance with paragraph 1 shall also:*

*(a) provide incentives to manage congestion, including remedial actions and incentives to invest effectively;*

*(b) be consistent with the responsibilities and liabilities of the TSOs involved;*

*(c) ensure a fair distribution of costs and benefits between the TSOs involved;*

*(d) be consistent with other related mechanisms, including at least:*

*(i) the methodology for sharing congestion income set out in Article 73;*

*(ii) the inter-TSO compensation mechanism, as set out in Article 13 of Regulation (EC) No 714/2009 and Commission Regulation (EU) No 838/2010 (5);*

*(e) facilitate the efficient long-term development and operation of the pan-European interconnected system and the efficient operation of the pan-European electricity market;*

*(f) facilitate adherence to the general principles of congestion management as set out in Article 16 of Regulation (EC) No 714/2009;*

*(g) allow reasonable financial planning;*

*(h) be compatible across the day-ahead and intraday market time-frames; and*

*(i) comply with the principles of transparency and non-discrimination.*

*7. By 31 December 2018, all TSOs of each capacity calculation region shall further harmonise as far as possible between the regions the redispatching and countertrading cost sharing methodologies applied within their respective capacity calculation region.”*

While Articles 74(2), 74(3), 74(4), 74(6) and 74(7) are related to the Redispatching and Countertrading Cost Sharing, Article 74(5) adds some specific requirements about monitoring, reporting and improvement of actual need of Redispatching and Countertrading and its use, impact and improvement of remedial actions within the Channel CCR.



### 3. DEFINITIONS OF REDISPATCHING AND COUNTERTRADING

#### 3.1. Countertrading

According to the Article 2(13) of Commission Regulation (EU) 543/2013 of 14 June 2013 on the submission and publication of data in electricity markets and amending Annex 1 to Regulation (EC) No 714/2009 of the European Parliament and of the Council (hereafter referred to as “Transparency Regulation”), Countertrading has the following definition:

*“countertrading’ means a cross-zonal exchange initiated by system operators between two bidding zones to relieve physical congestion.”*

Countertrading is therefore considered as a measure with the objective of relieving physical congestion between two bidding zones, where the precise generation or load pattern alteration is not pre-defined. This measure consists of a specific cross zonal exchange between the two TSOs (referred to as an “SO-SO trade”) of the two bidding zones and the activation by each TSO of compensation in each bidding zone to restore the balance in their respective control area, where this compensation is independent of the geographical location within the bidding zone.

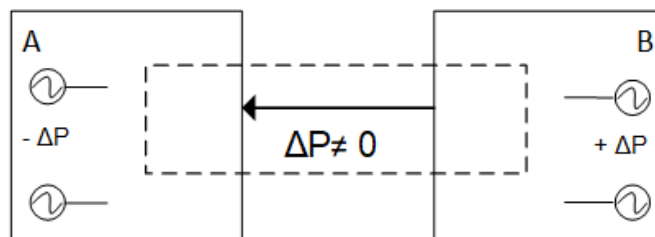


Figure 1 - Example of countertrading between 2 areas in the Channel Region

In the Channel CCR, the cross-zonal exchange is materialised with the change of flow on the HVDC Interconnectors of a Channel bidding zone border. This action relieves effectively the physical congestion. Unlike for AC interconnectors, this change of physical flow will be similar to the value of the SO-SO trade<sup>1</sup>. This SO-SO trade leads to an imbalanced situation in both control areas that must be tackled by compensation actions (defined as “RD and CT Actions” in Article 2 of the Channel RD and CT Methodology) whose value is also identical to the SO-SO trade. In the specific case of Countertrading, these RD and CT Actions might be a market-based solution as the geographical location of these RD and CT Actions does not matter and are totally cross-border independent: the location of the RD and CT Actions in one Control Area has strictly no influence on the other Control Area implied in the Countertrading. Only the cross-zonal exchanges have an impact.

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<sup>1</sup> Not exactly identical, as there is e.g. ramping constraints management which will transform the ‘rectangles’ of commercial trades + SO-SO trades nominations to the Interconnector Reference Program (ICRP shape). However, this ‘shape’ will follow the schedule defined by the nominations, which is different in the case of an AC meshed grid.

### 3.2. Redispatching

Article 2(26) of the Transparency Regulation further clarifies that:

*“Redispatching’ means a 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.”*

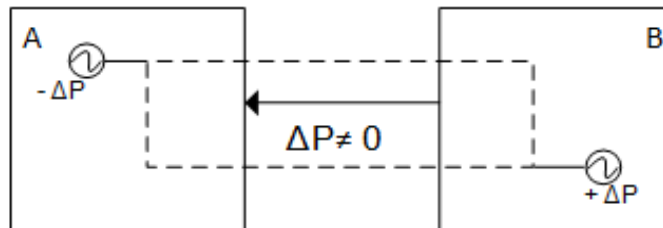


Figure 2 - coordinated Cross-border redispatching between 2 areas

Redispatching is therefore considered as a measure with the objective of relieving physical congestions by altering a generation and/or load pattern. Specifically, this refers to one or several TSO(s) requesting, when congestion appears, specific generators (or specific consumers) to start or increase production (or consumption) and other specific generators (or loads) to stop or reduce production (or consumption) to maintain the network security.

In the Channel CCR, the cross-zonal exchange is materialised with the change of flow on the HVDC Interconnectors of a Channel bidding zone border. This action relieves effectively the physical congestion. Unlike for AC interconnectors, this change of physical flow will be similar to the value of the SO-SO trade. This SO-SO trade leads to an imbalanced situation in both control areas that must be tackled by RD and CT Actions whose value is also identical to the SO-SO trade. The only difference with Countertrading (in the Channel Region) is that in case of coordinated Redispatching on a Channel bidding zone border, the RD and CT action in the Requesting TSO's area is localised. The localisation of the RD and CT Actions in the Assisting TSO's area does not have any influence on the physical congestion in the Requesting TSO's area and is thus not directly a coordinated Redispatching. However, if there is a need for the Assisting TSO to localise precisely the RD and CT Actions to avoid the creation a new congestion in its network, this action will be considered also as Coordinated Redispatching. This is not the case if the localisation of RD and CT Actions in Assisting TSOs network is done only for economic efficiency.

The specific representation of the coordinated Redispatching in the Channel Region is thus represented on the figure 3.

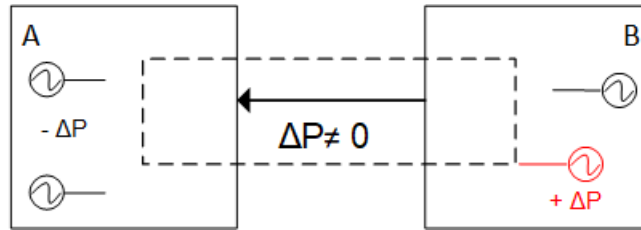


Figure 3 - coordinated Redispatching between 2 bidding zones of the Channel Region. RD and CT Actions is localized only in the area B (where the physical congestion is localized)

In the Channel Region, if a physical congestion should be relieved in the bidding zone of a Channel TSO (Requesting TSO), coordinated Redispatching and Countertrading on HVDC interconnector of the Channel CCR's bidding zone border with another Channel TSO (Assisting TSO) is thus made of<sup>2</sup>:

- Change on flow on the HVDC interconnector via a SO-SO trade;
- RD and CT Actions in the Assisting TSO's area (localised in case of coordinated Redispatching, not localised in case of Countertrading); and
- RD and CT Actions in the Requesting TSO's area (localised in case of coordinated Redispatching, not localised in case of Countertrading).

#### 4. SCOPE AND APPLICATION OF THE CHANNEL RD AND CT METHODOLOGY

This section provides additional information and explanations related to Article 3 "Scope" and Article 4 "General principles for coordinated Redispatching and Countertrading" of the Channel RD and CT Methodology

##### 4.1. Scope

The scope of the Channel RD and CT Methodology is limited to the coordinated Redispatching and Countertrading in the Channel Capacity Calculation Region ("Channel Region"). The Channel Region includes the bidding zone borders FR-GB, NL-GB and BE-GB and are attributed to RTE, NGESO, NGIC, BritNed, TenneT, Nemo Link and Elia<sup>3</sup>.

<sup>2</sup> Article. 3(2) of the Channel RD and CT Methodology

<sup>3</sup> As per Article 10 of the "All TSOs proposal for Capacity Calculation Regions (CCRs )" in accordance with Article 15(1) of the CACM Regulation

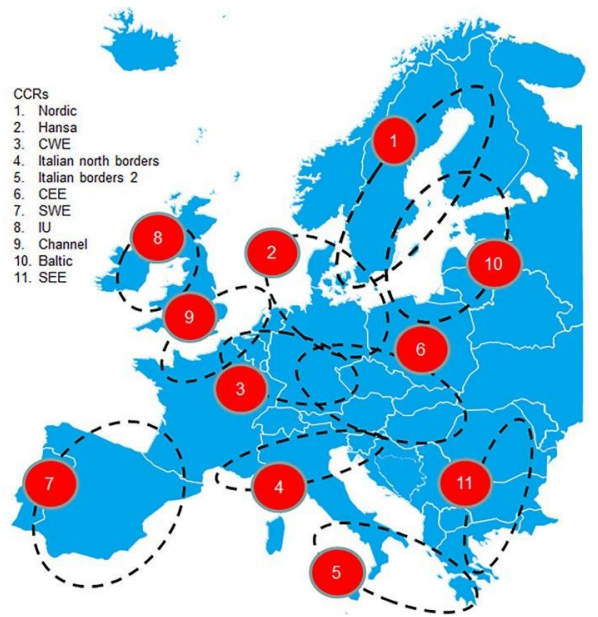


Figure 4 - Channel Region (point 9) in Europe

Redispatching or Countertrading on a particular HVDC Interconnector in the Channel Region can only be applied for solving congestions in the control areas of the TSOs connected to that HVDC Interconnector. The “Onshore” TSOs in the Channel Region belong to multiple CCRs, as shown in Figure 5 below.

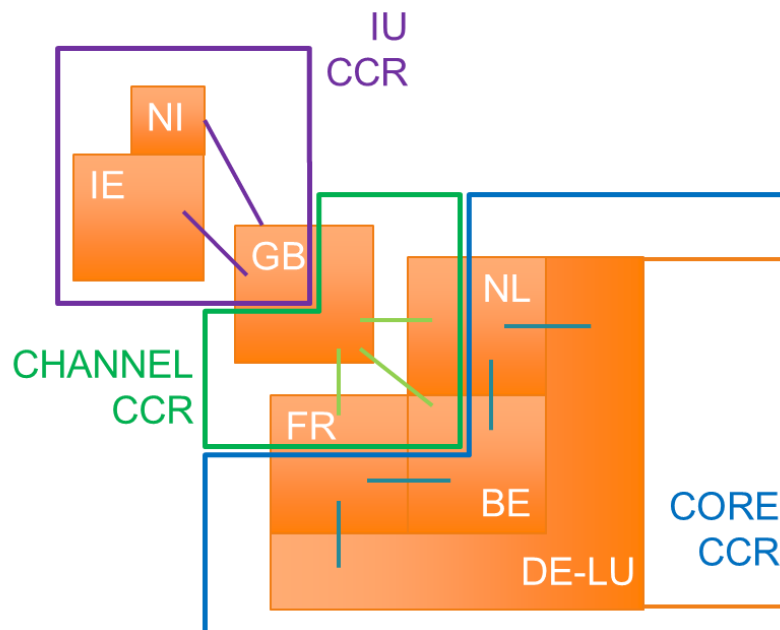


Figure 5 - Channel, IU and CORE CCRs

Methodologies relating to Article 35 and 74 of the CACM Regulation are per CCR and as a result, the Onshore TSOs in the Channel Region will be subject to multiple methodologies relating to Redispatching and Countertrading. If coordinated Redispatching and Countertrading are activated for solving congestion using FR-BE, NL-BE or UK-SEM bidding zone borders, then these actions will fall under the RD and CT methodologies of the Core Region and the IU Region.

Similarly, if TSO(s) are members of both the Core and Channel Region and decide to use cross-border Redispatching/Countertrading (from the Core CCR) as a RD and CT Actions for Channel CCR, this RD and CT Actions should also be aligned with the Core CCR methodologies and the bilateral or multilateral TSOs agreements allowing such exchanges.

Coordination of remedial actions between CCR will be realised through RSCs as required in Article 78(3) of the SOGL Regulation.

In the specific case of coordinated Redispatching or Countertrading, Articles 4(10) and 4(11) of the Channel RD and CT methodology confirm the role of RSCs in the cross-CCR coordination. These articles are explained below with an example (subject to implementation of the regional operational security proposal in accordance with Article 76 of the SOGL Regulation and cross-CCR coordination of RSCs which are not yet proposed nor approved):

- Core RSCs detects a congestion in Belgium in the context of the Core CSA.
- Core RSCs evaluate remedial actions to relieve this congestion, using the remedial actions available for the Core Region.
- In the context of cross-CCR coordination of RSCs, Channel and Core RSCs conclude that using a remedial action of the Channel Region (being a countertrading on Nemo Link) will solve the congestion or at least will significantly relieve this congestion, in a more efficient or economic way than other Core Remedial Actions.
- As a countertrading on Nemo Link is in the scope of the Channel RD and CT Methodology to relieve physical congestion in the Belgian bidding zone (in accordance with Article 3(2) and 4(8) of the RD and CT Methodology), Channel RSCs propose this countertrading to NGESO, Elia and Nemo Link Ltd and initiate the detection process.
- Countertrading is applied on Nemo Link and cost is supported 100% by Elia as Requesting TSO.
- In accordance with Article 4(6) of the Channel RD and CT Cost Sharing Methodology, Elia could recover a part of this cost through the Core RD and CT Cost Sharing Methodology, if relevant.

Finally, internal redispatching in the grid of an onshore Channel TSO is also out of scope of this Channel RD and CT Methodology. For instance, internal redispatching in Belgium won't have any cross-border impact on the National Grid (UK) control area, because of the HVDC specific context on the Channel Region bidding zone borders. However, if this internal redispatching has an impact on RTE Control Area, this internal redispatching should follow the processes that will be defined in the Core CCR coordinated Redispatching and Countertrading Methodologies, because such internal redispatching of cross-border relevance should be coordinated.

## **4.2. Application**

This Channel RD and CT Methodology only applies to physical congestion occurring in the AC grid of the relevant Channel TSOs, which is detected between the Day-ahead Market

Coupling Results and the Interconnector Countertrading Deadline. As defined in Article 2(18) of the CACM Regulation, a physical congestion is:

*“any network situation where forecasted or realised power flows violate the thermal limits of the elements of the grid and voltage stability or the angle stability limits of the power system”.*

The principle of coordinated Redispatching and Countertrading is to resolve physical congestion. This will ensure firmness of cross-border nominations and is to be applied before any curtailment after the Day Ahead Firmness Deadline.

The application of coordinated Redispatching and Countertrading occurs after the Day-Ahead capacity calculation and before, during, or after the Intraday Capacity Calculation. The result of this Intraday Capacity Calculation does not allow for a revised Net Transfer Capacity (NTC) below the Already Allocated Capacity (AAC) which could not be enough to solve the physical congestion. The Channel RD and CT Methodology could allow such a reduction (capping of NTC) to facilitate the countertrading process.

The failure or unplanned outage of a Channel Interconnector or constraints due to technical limits for stable operation of a Channel Interconnector fall outside of this methodology as this does not correspond to a physical congestion. Furthermore, any SO-SO trade initiated by TSOs on a HVDC interconnector of a Channel Bidding zone border for other purposes than relieving physical congestion (for instance, ramping constraint management, Replacement Reserve management (TERRE), Rate of Change of Frequency (ROCOF) management, ...) does not fall under the definition of Countertrading or Redispatching as defined in Transparency Regulation and therefore falls also outside of the scope of this methodology.

A physical congestion on a network element that is significantly impacted by Channel cross-zonal flows (according to the Channel ID/DA CC Methodology) can be relieved by cross-border Redispatching or Countertrading on the HVDC interconnector. Cross-border Redispatching or Countertrading is thus a Remedial Action of cross border relevance for which the cost sharing principles described in the Channel RD and CT Cost Sharing Methodology apply.

In Channel Region, as Redispatching and Countertrading are only done via change of flow over the HVDC interconnector, it is not possible to have uncoordinated RD and CT Actions as per the coordination process described in the Channel RD and CT Methodology.

## 5. COORDINATED REDISPATCHING AND COUNTERTRADING PROCESSES

### 5.1. Timetable overview

Article 5 and the Annex of the Channel RD and CT methodology describes the timeframes associated to the coordination and activation processes. For the sake of clarity, the following table summarises the timings of Period 1 to Period 4 with more details

Timing	Timing description	RD and CT Methodology step	Comments
<b>D-1 9h30 CET</b>	Long Term Gate Closure Time	No RD or CT	
<b>D-1 11h00 CET</b>	Day-ahead Firmness deadline	No RD or CT	
<b>D-1 14h30 CET</b>	SDAC results of day-ahead allocations and nominations are integrated in Nomination Platform and TSOs Systems.	Start of Period 1	Coordinated Redispatching or Countertrading cannot be initiated before SDAC results (and shipper nominations) are integrated in each TSO systems (deadline D-1 14h30). Practically, even if TSOs could detect a physical congestion between 14h30 and 19h00, they will wait the result of CSA to have confirmation from RSC that a RD or CT on a Channel Interconnector is the best Channel RA.
<b>D-1 19h00 CET</b>	Deadline for TSOs to share bilaterally and with Channel RSCs available volumes and prices		Based on current assumption of Methodology that will be defined in accordance with Article 76 of SOGL, merging of IGM files will be done by RSCs at 18h00 while CSA will be initiated at 19h00. Channel RSCs should have the forecast of available volumes and associated prices to propose the most efficient remedial action.
<b>D-1 20h00 CET</b>	Deadline for "Input Data Gathering" phase of the Intraday Capacity Calculation (Exact Timing still to be confirmed in the implementation of the Channel ID CC Methodology)	End of Period 1 Start of Period 2	During Period 1, IGM is updated with the SO-SO trade, allowing this information to be considered in the ID Capacity Calculation Process
<b>D-1 21h30 CET</b>	"Validation" phase of the Intraday Capacity Calculation; (Exact Timing still to be confirmed in the implementation of the Channel ID CC Methodology)	End of Period 2 Start of Period 3	During Period 2, IGM is updated with the SO-SO trade. But this is too late to have it considered in the ID Capacity Calculation Process. If needed, TSOs must reject the ID NTC resulting from

Timing	Timing description	RD and CT Methodology step	Comments
			ID CC and propose an updated one.
<b>XX' before delivery (RSC Coordination Deadline)</b>	RSC Coordination deadline is the last point that Channel RSCs can coordinate Redispatching or Countertrading and the operational security assessment. This deadline (currently estimated between 60 and 120' before real-time) will be determined with the RSCs during the implementation of the Channel RD and CT methodology and the definition and implementation of the methodology for the preparation of remedial actions managed in a coordinate way in accordance with Article 76(1)(b) of SOGL Regulation.	End of Period 3 Start of Period 4	During Period 3, if SDIC is still open for the SO-SO trade concerned period, the NTC should be capped to allow the SO-SO trade to take place and not have the market cancelling the SO-SO trade effect by taking the new available capacity in SDIC due to netting.
<b>55' before delivery (deadline for receiving XBID results)</b>  <i>(Only applicable to borders included in the TERRE project)</i>	Between the reception of the XBID results and the deadline for introducing TERRE inputs (30 minutes before delivery)	During Period 4	During this period, SOs participating in the TERRE project may submit interconnector constraints to the TERRE algorithm to perform countertrading. In such case, the coordination would be done directly between Channel TSOs without the participation of Channel RSCs as explained in Article 10 of the Channel RD and CT methodology
<b>Interconnector deadline</b>	Last limit to introduce a SO-SO trade instruction on RNP (minimum time needed for interconnector Dispatch System to update the Reference Program of the Interconnector based on the RNP nominations)	End of Period 4	During Period 4, the coordination process could exceptionally be done between Channel TSOs without the participation of Channel RSCs as explained in Article 10 of the Channel RD and CT methodology

Here is an example of timeline in the case of a countertrade of 120 minutes between 3h and 5h CET in day D, with a ICRTU of 15 minutes, an Interconnector deadline of 30 minutes before physical delivery and a RSC Deadline of 90 minutes before real-time (example, as RSC deadline is not yet defined).



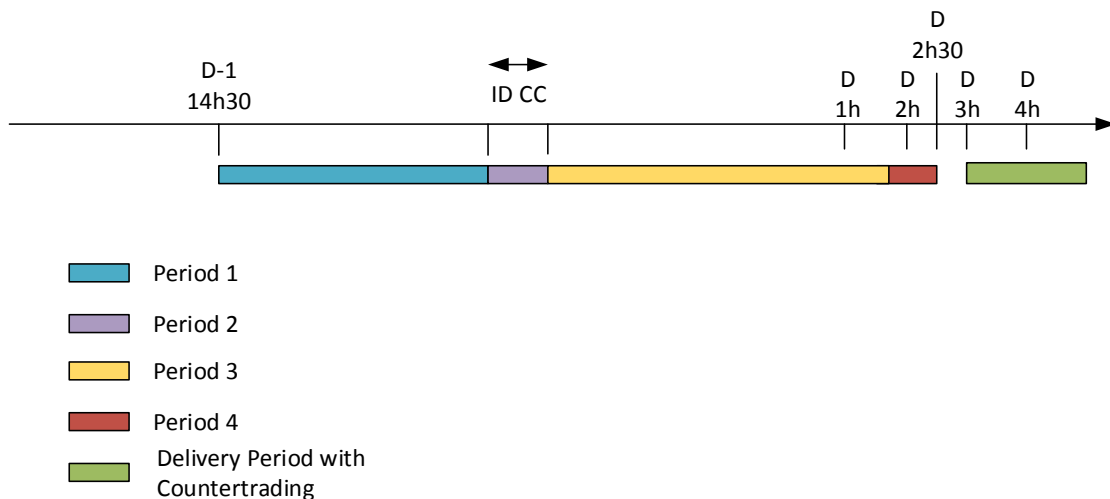


Figure 6 - Timeline for Nemo Link

Note: In the case where more than one ID Capacity Calculation will take place in the Channel region in the future, multiple sequences of Period 1 and Period 2 will follow, with Period 3 beginning after the last ID CC of the day.

## 5.2. Border-specific coordinated Redispatching and Countertrading operational procedures

The border-specific coordinated Redispatching and Countertrading operational procedures (hereafter referred to as “RD and CT Procedures”) are operational procedures implementing the Channel RD and CT Methodology on each bidding zone border of the Channel CCR. They are not part of the methodology and will be written with the Participating TSOs during the implementation phase. They shall be compliant with the principles described in the proposed methodology and will at least detail the following aspects of the methodology:

- Indicative volume exchange and update;
- Indicative price exchange and update;
- Type of RD and CT Actions used in each Control Area;
- Detection and Coordination process between Participating TSOs;
- Final Pricing methodology; and
- Settlement process.

## 5.3. Process description

The Channel RD and CT Methodology is centred on the cooperation of the TSOs in the Channel Region via the RSC. Specific requirements in the SOGL Regulation already require coordination when implementing remedial actions. As coordinated Redispatching and Countertrading are remedial actions with cross-border impact, these are implicitly included in the coordination process.

Coordination is done during different timeframes in relation to different markets as described in the timetable overview section and in Article 5 of the Channel RD and CT Methodology.

#### **5.4. Volume information availability and Price information Exchange**

Firstly, as defined in Article 6 and 7 of the Channel RD and CT Methodology, TSOs shall individually assess the estimation of the available RD and CT Actions volume and provide it, including the estimated costs, to the RSC and the other Channel TSO on the channel bidding-zone Border<sup>4</sup>.

This price and volume information is a non-binding estimation, provided at least once in Day-ahead, after the results of the SDAC and before 19:00 CET. It is to be noted that the TSOs will provide an estimation of the available volume that could be used for coordinated Redispatching and Countertrading on all of its borders, without any specific reservation. This volume availability will be confirmed again during the detection and coordination process or upon specific request of Channel RSCs or Participating TSOs.

The RSC also needs this information, amongst other data such as common grid models, the contingency list and the operational security limits to carry out a coordinated regional operational security assessment. The RSC then delivers the results of the coordinated regional operational security assessment to the Channel TSOs.

#### **5.5. Detection**

The RSC shall, where it detects a physical congestion, recommend to the relevant TSOs the most effective and economically efficient remedial action. This will take place in the frame of the SOGL Art 76 methodology. If the proposed remedial action is coordinated Redispatching or Countertrading over a Channel Interconnector, then the coordination falls under this Channel RD and CT Methodology. This recommendation is the result of coordination across the borders of Channel Region, through coordination of the RSC with other RSCs.

Except in Period 4, if one TSO detects a physical congestion in its bidding zone either caused by the flow on a Channel Interconnector or that could be solved by a change of scheduled flow on a Channel Interconnector, this TSO should inform the RSC and the other Channel TSO linked by this Channel Interconnector. RSC will then perform the analysis and will confirm (or not) the TSO assumption by coming back with a remedial action recommendation.

A TSO can detect a congestion when performing a local security analysis on an IGM or on a CGM (at least three times a day on a CGM but whenever on an IGM), while a RSC can detect a congestion when performing a coordinated security analysis on a CGM (at least three times a day). Close to real-time a RSC can't perform a CSA because there is no time to merge a new CGM for example. Therefore, TSOs have more occasions to detect congestions on their grid. When it happens in phases 1 to 3, TSOs should inform the RSC

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<sup>4</sup> Practically, the exchange between TSOs will be done respectively between NGET and TenneT, NGET and RTE, and NGET and Elia.

who should then recommend an appropriate RA. In phase 4, it is too late to involve RSCs, and TSOs will coordinate the coordinated Redispatching and Countertrading themselves.

Any recommendation received from the RSC for a Countertrading action shall be evaluated by the Participating TSO with regard to the elements involved in that action and located in its control area. The decision-making right on the implementation of countertrading action remains with the TSOs but there shall be a duty to inform and explain the TSOs' decision to the RSC in case the recommendation by the RSC for a particular action is not accepted.

The Requesting TSO (the one facing the physical congestion) can always propose to the Participating TSOs and RSCs to turn the Countertrading into coordinated Redispatching (as explained in Article 3 (2)(c) of the Channel RD and CT Methodology) if the Requesting TSO can select and activate a RD and CT Actions that contributes (together with the change of the flow in the HVDC Interconnector) to the relieving effect on the physical congestion.

The Assisting TSO or the Requesting TSO could also turn Countertrading into coordinated Redispatching if the localization of the RD and CT Actions in their control area could avoid the creation of a new congestion.

## **5.6. Coordination**

The process described above leads to a considerable degree of coordination of redispatching and countertrading, as assessment for needed actions on a regional level will be performed by a third party, the RSC. Thus, this neutral entity will ensure a more efficient dispatching of relevant resources on a regional level in comparison to the current situation, where congestion is relieved bilaterally by involved TSOs.

As a RD and CT Action is considered as making part of the coordinated Redispatching/Countertrading Remedial Action in Channel, the concept of a cross-border impact as defined in the methodologies developed in accordance with Article 75/76 SOGL also apply on them. If a RD and CT Action has a cross border impact as defined in the methodologies developed in accordance with the Article 75 and 76 of the SOGL Regulation, then the RSC must be included in order to analyse the effect of it on the neighbouring control area's element.

## **5.7. Fast Coordination**

Closer to real time there will be less possibilities for regional coordination via the RSC. In order to ensure coordination of unforeseen events causing physical congestions happening after the last relevant coordinated operational security analysis (defining the RSC deadline) and until real time, the TSOs shall coordinate bilaterally with neighbouring TSO(s) to plan and carry out coordinated Countertrading and Redispatching. These TSOs will inform directly impacted TSOs in Channel Region as well as the Channel Region-appointed RSC, taking into account that Congestions in a third TSOs' grid as a result of a Countertrading or the coordinated Redispatching on a Channel Interconnector should be avoided.

## 5.8. Activation of coordinated Redispatching and Countertrading

Once the coordination process amongst the participating TSOs and the RSC is done, the volume of the RD and CT is firm and the SO-SO Trade nomination will be introduced on the Nomination Platform (after NTC update if needed). The prices of the RD and CT Actions are also firm at the end of the coordination process, in the case of a bilaterally agreed model between Participating and Assisting TSO based on the cost of resources available for the RD and CT Actions at that moment in time, in accordance with Article 35(5) of CACM Regulation.

The nominated SO-SO trade shall be included by the TSOs in the forthcoming Individual Grid Model (IGM).

An NTC Reduction will be needed before the SO-SO Trade introduction on the Nomination platform in the case where the SIDC is still open for the delivery period, to avoid market trades worsening the congestion.

Example: 800 MW flow from BE to GB between 10 and 11am on day D. NTC at this time is 1000 MW in both direction. AAC is 800MW and then ATC in direction BE-GB is thus 200MW and ATC in direction GB-BE is 1800MW, after netting

At 2am of Day D, a physical congestion is detected in GB, due to this import flow. During its analysis, the RSC concludes that the maximum import flow on the BE-GB Interconnector (in order to relieve the congestion) is 500MW.

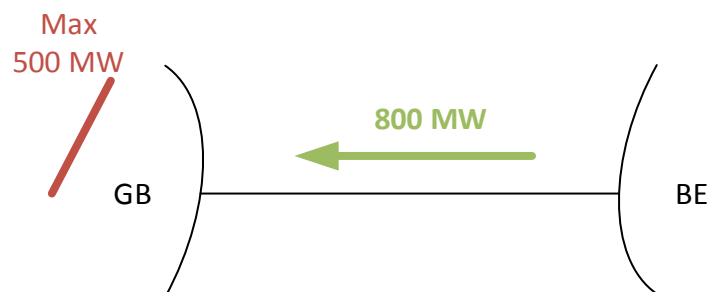


Figure 7 - Countertrading example: congestion in GB

RSC proposes a countertrading proposal of 300MW from NGESO and Elia as remedial action. We are in period 3, after the ID CC. After coordination with Elia and Nemo Link, a countertrading of 300 MW is accepted, Elia and NGESO having respectively the 300 MW down and 300MW up RD and CT Actions. This countertrading would reduce the final flow to 500 MW.

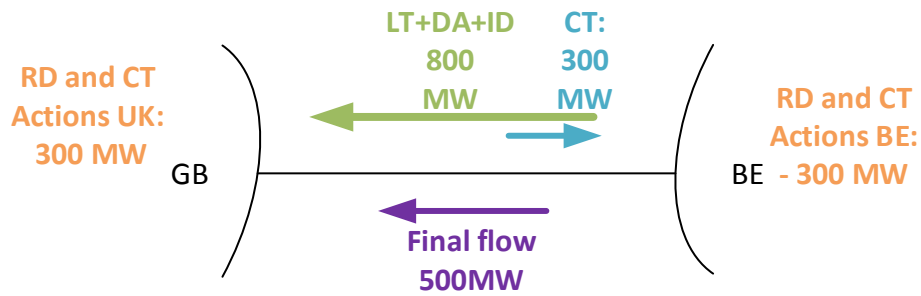


Figure 8 –Countertrading Example: Final flow after 200 MW of countertrading

In this example, the SO-SO trade nominations could be introduced in the Nomination Platform in parallel of SDIC platform. Therefore, for XBID, AAC is still 800 MW because it doesn't know that there is a countertrading of 300 MW.

If this 300MW countertrading is applied without NTC reduction, there is still a risk that the market will use the ATC of 200 MW still available on the BE→GB direction, cancelling the effect of the countertrading.

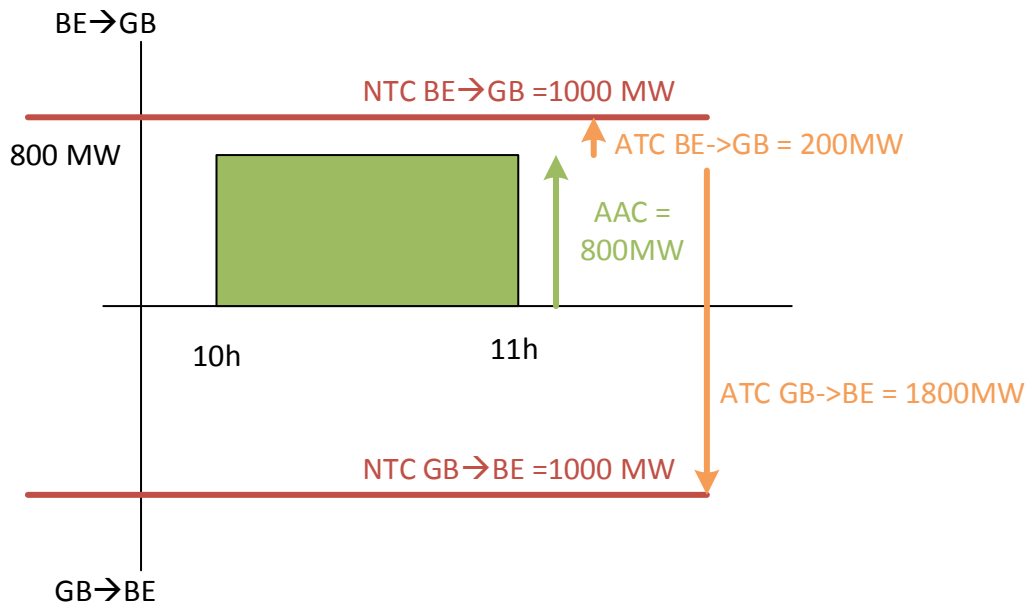


Figure 9 - Countertrading Example: visualisation of AAC, NTC and ATC before SO-SO Trade

This is why the NTC should be reduced to 800MW, in order to have an ATC of 0MW in the direction BE → GB. Similarly, the ATC in the opposite direction is still 1800MW. In order to allow room for the 300MW countertrading, the NTC in opposite direction should be reduced by the amount of the countertrade (new NTC in direction GB→BE = 700 MW = 1000 MW - 300MW), leading to a new ATC in the direction GB→BE of 1500 MW.

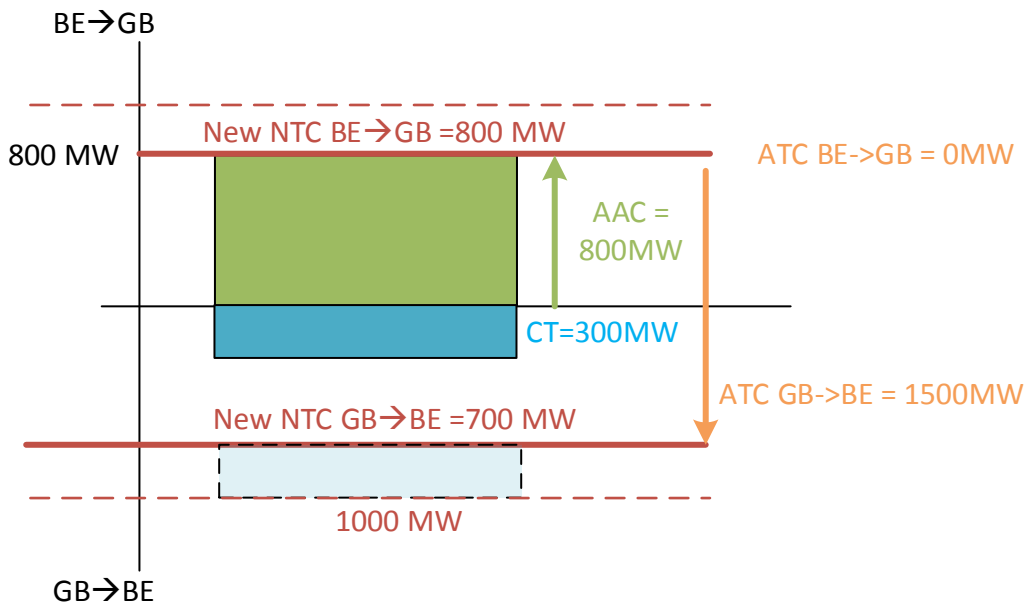


Figure 10 - Countertrading example: New NTC in both direction

Another NTC Reduction strategy could also be implemented: for instance, capping the NTC below the 800 MW AAC to 500 MW and then modifying AAC in XBID to 500 MW to have the same results without having to reduce the NTC in the opposite direction as illustrated in Figure 11 - Countertrading example: other NTC reduction strategy (Capping in the congested direction and update of AAC in XBID).

The exact NTC Reduction process will be designed during the implementation phase of this proposed RD and CT Channel Methodology.

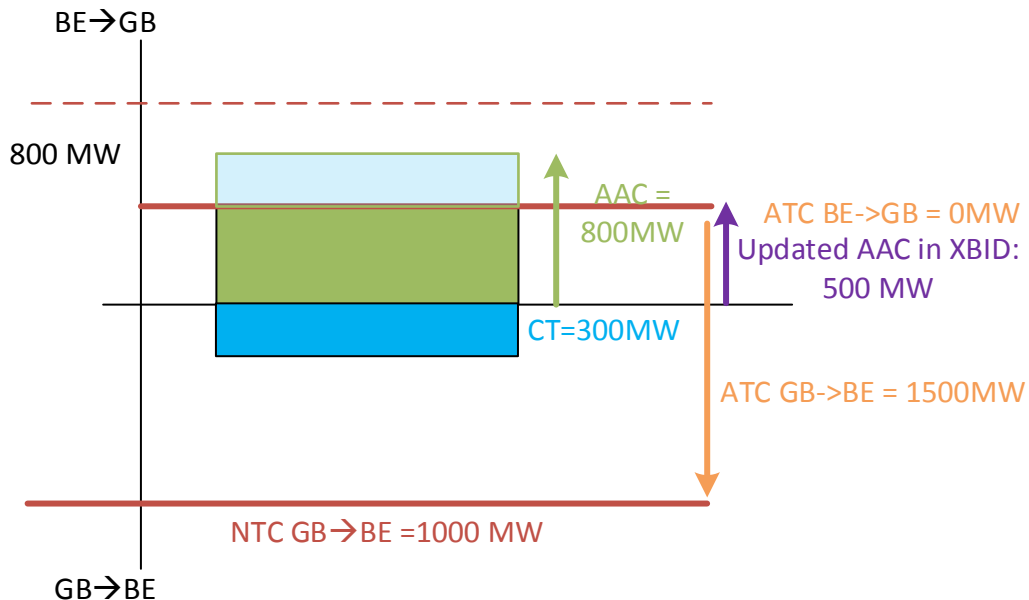


Figure 11 - Countertrading example: other NTC reduction strategy (Capping in the congested direction and update of AAC in XBID)

Once the NTC reduction phase is applied, countertrading could be introduced in the Nomination Platform via a SO-SO trade, and TSOs will prepare the RD and CT Actions.

## **5.9. Selection of RD and CT Actions**

As explained in Article 12(3), the selection of the RD and CT Actions in each control area is the responsibility of the TSO operating each control area and based on local agreements or via a market-based solution applicable to its control area and approved by the national regulatory authority, while ensuring the economic efficiency of the selected RD and CT Actions. The RD and CT Actions must also respect the operational security constraints (in accordance with Article 12 of the Channel RD and CT Methodology).

In the context of Channel Region, the only difference between coordinated Redispatching and Countertrading is that in case of coordinated Redispatching the selection of the RD and CT Actions is localised in the Requesting TSO's Control Area because of the congestion-relieving effect this RD and CT Actions has. In the case of Countertrading, the selection of RD and CT Actions could be market-based as defined in Article 12(4)(a) of the Channel RD and CT Methodology. It could also be a specific selection of RD and CT Actions (in this case, without localisation, and thus based only on economic criteria) and could also be implemented by other local mechanisms or via cross-border Redispatching/Countertrading.

However, in case of coordinated Redispatching, a specific selection of the RD and CT Actions based on their location (rather than only the economic criteria) will be needed. Similarly, even in case of Countertrading, if the activation of some RD and CT Actions selected by the Merit Order will cause operational issue in the Requesting or Assisting TSO, these RD and CT Actions could be discarded.

The process to select these RD and CT Actions will be described in the RD and CT Procedures, considering the rules and agreements applicable in the control area of each Participating TSO.

Annex 1 of this Explanatory Note provides the high-level overview of the expected RD and CT Actions to be used by each onshore Channel TSO when RD and CT Methodology will be implemented. However, as the pool of RD and CT Actions are highly dependent of several local agreements and contracts and that new requirements could change the context of local agreements, this overview represents only the situation at the date of submission of the methodology. To avoid the situation where Channel TSOs need to submit an update of the CT and RD Methodology to Channel NRAs each time there is a change on this section, this Annex 1 is not in the methodology but in the Explanatory Note.

Before the implementation of the RD and CT Methodology, Onshore Channel TSOs will publish the content of this annex on their respective website and will keep it up to date.

## **6. COST SHARING PROCESS OF THE COORDINATED REDISPATCHING AND COUNTERTRADING**

### **6.1. Total cost calculation**

The total cost of a coordinated Redispatching and Countertrading is composed of the following:

- RD and CT Actions cost/revenue in the Control Area of the Requesting TSO
- RD and CT Actions cost/revenue in the Control Area of the Participating TSO

In addition, when calculated and provided by the Assisting TSO, the charges incurred by the Facilitating TSO due to the impact of the SO-SO trade (e.g. additional imbalance, additional interconnector losses, ...) could be added to the total cost of the coordinated Redispatching and Countertrading.

Availability costs (e.g. fixed costs of ex-ante reservation of resources for being available to perform RD and CT Actions) or a. any costs that would have been incurred regardless of the activation of RD and CT Actions by the Requesting TSO is not included in the total cost to be shared. Similarly, if some actions are covered by the Coordinated Redispatching and Countertrading methodology of another Capacity Calculation Region, they should not be shared in the context of this Channel RD and CT Cost Sharing Methodology (for instance, if some RD and CT Actions are XB Redispatching on the BE-FR border, these costs are in the scope of the Core RD and CT Cost Sharing Methodology and not the Channel one).

## 6.2. Cost Sharing

The third “High Level Principle” in the Recommendation of the Agency for the Cooperation of Energy Regulators (ACER) no 02/2016 of 11 November 2016 on the Common Capacity Calculation and Redispatching and Countertrading Cost Sharing Methodologies states that:

*“As a general principle, the costs of remedial actions should be shared based on the ‘polluter-pays principle’, where the unscheduled flows over the overloaded network elements should be identified as ‘polluters’ and they should contribute to the costs in proportion to their contribution to the overload”.*

In the Channel Region, there are no unscheduled flows due to the Interconnectors of the Channel Bidding Zone borders being HVDC, and as such there is no direct “polluter” identified.

The Assisting TSO is requested to help by providing RD and CT Actions to compensate the imbalance of its grid due to the SO-SO trade. The Requesting TSO, who is facing the congestion, should thus logically bears the entire costs of the coordinated Redispatching or Countertrading.

However, in accordance with Article 4(6) of the Channel RD and CT Cost Sharing Methodology, the Requesting TSO could recover a part of this cost through the RD and CT Cost Sharing Methodology of the other CCR to which he belongs if relevant.

For instance, if Elia use a countertrading on Nemo Link on request of a Core RSC (via the Channel RSC and the cross-CCR RSC coordination), or if the physical congestion in Belgium relieved by the countertrading on Nemo Link was caused partially or totally by



unscheduled flows coming from the Core Region, Elia could recover a part of the Countertrading cost through the Core RD and CT Cost Sharing Methodology (under the condition that this specific case of cost recovery of costs incurred with remedial action activated outside of the Core Region is allowed by the Core RD and CT Cost Sharing Methodology).

## 7. MONITORING

Coordinated Redispatching and Countertrading will be reported to the ENTSO-E Transparency Platform (ETP) within one hour after the activation to monitor the use of remedial actions with costs.

In addition, the Requesting TSO will record the justification of its request for coordinated Redispatching or Countertrading, as well as, if any, the reason of rejection provided by the Assisting TSO. The Participating TSOs will also log the final volume of RD or CT, the costs and volumes of the RD and CT Actions, the final impact of the remedial Actions and the forecasted available volume and prices used to take the decision. Each year, before 01 July, they will share this log with other Channel TSOs to review these remedial actions and to improve the operational procedures. Channel TSOs will also share this information with NRAs upon request. An executive summary version, without sensitive information, will be provided by the Channel TSOs on their websites.

As explained in Article 5(4) of the Channel RD and CT Cost Sharing Methodology, the mechanism to verify the actual need for coordinated Redispatching or Countertrading between the TSOs involved exists in the detection and the coordination process mainly by the role played by the Channel RSCs, as defined in Article 76 of the SOGL Regulation.

Finally, the process for allowing monitoring of Channel Region by the competent regulatory authorities, in addition with the other reporting of the Channel RD and CT Methodology, will be effectively done by the monitoring mechanisms described in the Channel DA and ID CC Methodology as explained in:

Article 6(7) Proposed Channel DA and ID CC Methodology:

*A TSO of the Channel Region may decide to keep some of the CNECs which have a cross-zonal flow sensitivity below the threshold, in which case it will justify them to the other TSOs and shall furthermore provide them to the NRAs of the Channel Region for monitoring.*

Article 7(5) Proposed Channel DA and ID CC Methodology:

*Each TSO may apply an operational adjustment before practical implementation of the FRMs into their CNE definition. Each TSO shall submit to the NRAs for monitoring any new value of the FRM for each CNE.*

Article 9(3) Proposed Channel DA and ID CC Methodology:

*The external constraints shall be based on system study and shall be regularly reviewed and, in any case, at least once a year. The concerned TSO shall submit the system study justifying their application to the NRAs of the Channel Region for monitoring.*

## ANNEX 1 – RD AND CT ACTIONS

This table represents the situation at the time of submission of Channel RD and CT Methodology and Channel RD and CT Cost Sharing Methodology.

### Type of RD and CT Actions

Elia	Non-contracted reserves Only in the case where Elia is Requesting TSO and if there is not adequate non-contracted reserves, contracted reserves or cross-border Redispatching/Countertrading with France or Netherlands could be used as RD and CT Actions to restore the balance of Belgian Control area following the change of flow on Nemo Link.
RTE	Offers from the balancing market
TenneT NL	Bids from the national balancing market with a separate bid list for products used for other purposes than balancing (i.e. congestion relieve or inter-TSO support).
NGESO	Bids and offers from the balancing market

### Type of RD and CT Actions considered in the Volume and Price Day-ahead indicative forecast

Elia	Day-ahead forecast for available volume and price will concern only the non-contracted reserves. Forecast will be based on day-ahead schedules nominations of Belgian power units.
RTE	Estimation of the volumes available on the balancing market excluding volumes dedicated to margins. This available RD and CT volume may be shared with other CCRs where RTE is involved. The price of the CT action provided in day-ahead will be an estimation (exact estimation methodology under investigation). The price of the RD action provided in day-ahead will be the price of the available bid.
TenneT NL	To be determined
NGESO	NGESO will use a forecast imbalance volume for the system based on short term historic outturn data and will forecast balancing prices based on short term historic balancing prices.

## Timing for Exchange of price and volume information

Elia	<p>On daily basis by 19:00 CET in day-ahead, ELIA will provide to NGESO and Channel RSCs the forecast of available upward and downward volumes and corresponding prices for the 96 quarters of the next day.</p> <p>Manual update of price/volume forecast possible upon request and during the coordination process.</p>
RTE	<p>On daily basis by 19:00 CET in day-ahead, RTE will provide to NGESO and Channel RSCs the forecast of available upward and downward volumes and corresponding prices for the 96 quarters of the next day.</p> <p>Manual update of price/volume forecast possible upon request and during the coordination process</p>
TenneT NL	To be determined
NGESO	<p>On daily basis by 19:00 CET in day-ahead, NGESO will provide the price and volume forecasts. Manual update of price/volume forecast possible upon request and during the coordination process.</p>

## Possible interactions of RD and CT Actions Pools with other resources or products

Elia	As RD and CT Actions are sourced from non-contracted reserve, availability and prices of such reserves will also be impacted for other actions that Elia could perform through the activation of remaining non-contracted of reserve.
RTE	RD and CT Actions are sourced on the balancing market and as such may have an impact on this market.
TenneT NL	RD and CT Actions within the national balancing markets and although sourced on a separate bid list, actions on these lists could have an influence on each other.
NGESO	RD and CT Actions are sourced on the balancing market and as such may have an impact on this market.

## Actual “firmness” deadlines for price and for the available volume of RD and CT Actions (for market participants)

Elia	For non-contracted reserve, CIPU contract ( <b>Contract for the Injection of Production Units<sup>[1]</sup></b> ) and CIPU procedures defines the deadlines and firmness conditions for market participants under CIPU contracts to contribute in the RD and CT Actions
RTE	Volumes are considered firm once activation is confirmed. Prices for RD actions are firm at the time of activation of the offer while CT prices are firm ex-post (see the balancing market rules for the pricing methodology)
TenneT NL	Volumes and prices are considered firm once activation is confirmed.
NGESO	Volumes and prices are considered firm once countertrade is confirmed.

## Rules for selecting RD and CT Actions

Elia	<p>When Elia is Assisting TSO, Elia will source RD and CT Actions Volume as follows:</p> <ol style="list-style-type: none"> <li>1. NGESO will provide a limit price for the requested RD or CT Volume on Nemo Link.</li> <li>2. Elia will consider the activation of Non-Contracted Reserve (in accordance with national CIPU Contract and Procedures in Belgian Market). Those Non-Contracted Bids will be selected on an economic merit order basis up to the limit price provided by NGESO. Elia might deviate from the economic merit order by disabling the Non-Contracted Bids that, if activated, would create or worsen a congestion.</li> <li>3. Final Redispatching or Countertrading nomination on Nemo Link will be equal to the amount of activated non-contracted reserve found up to the limit price.</li> </ol> <p>When Elia is Requesting TSO, Elia may source RD and CT Actions Volume following the same process as described in the case where Elia is Assisting TSO. In addition, other reserves or Redispatching/Countertrading with TenneT or RTE could be used in last resort if there is not enough volume in the non-contracted reserves pool.</p>
RTE	<p>When RTE is Assisting TSO, RTE will source RD and CT Actions Volume as follows:</p> <ol style="list-style-type: none"> <li>1. RTE will check if the requested volume is available</li> <li>2. If available, RTE will confirm the CT and RD exchange with the Requesting TSO (NGESO)</li> <li>3. RTE will then activate volumes on merit order principle (except where such activation upon merit-order may generate constraints on RTE's network, in which case the following offer upon merit order will be selected) on the balancing market in order to rebalance its position</li> </ol> <p>When RTE is Requesting TSO, RTE will source RD and CT actions volume will follow the same principle as for assisting role. Nevertheless, RTE could select a RD action based on its location if this action is more efficient than a CT action.</p>

<sup>[1]</sup> <http://www.elia.be/en/products-and-services/ancillary-services/production-coordination>

TenneT NL	<p>When TenneT is the Assisting TSO, TenneT will source RD and CT Actions volume as follow:</p> <ol style="list-style-type: none"> <li>1. TenneT will check if the requested volume is available.</li> <li>2. If available, TenneT will confirm the RD and CT Action with the Requesting TSO (NGESO)</li> <li>3. TenneT will then activate volumes on merit order principle (except where such activation upon merit-order may generate constraints on TenneT's network, in which case the following offer upon merit order will be selected) on the balancing market separate bid list in order to rebalance its position.</li> </ol> <p>When TenneT is Requesting TSO, sourcing of RD and CT Actions volume will follow the same principle as for the assisting role. However, TenneT could select a RD action based on its location more specifically if this improves the efficiency of the action.</p>
NGESO	<p>When NGESO is the Assisting TSO, NGESO will source RD and CT Actions volume as follows:</p> <ol style="list-style-type: none"> <li>1. NGESO will check if requested volume is available and will provide a limit price to the Requesting TSO.</li> <li>2. The Requesting TSO will accept or reject the exchange.</li> </ol> <p>When NGESO is the Requesting TSO, NGESO will check if volume is available with Assisting TSO and provide Assisting TSO with limit price. The limit price is determined by comparison with domestic solutions.</p>

### Rules for calculating the costs of RD and CT Actions

Elia	<p>Costs of RD and CT Actions in Elia side is simply the sum of:</p> <ul style="list-style-type: none"> <li>• costs or revenues of activations of non-contracted reserves (or contracted reserves if relevant).</li> <li>• costs or revenues of activations of cross-border Redispatching, Countertrading or reserve sharing with France or Netherlands, if relevant and only if not eligible for cost sharing in the framework of the Core RD and CT cost sharing methodology.</li> </ul>
RTE	<p>Costs of CT actions will be the volume of CT activated multiplied by the imbalance price</p> <p>Costs of RD actions will be the volume of RD activated multiplied by the price of the specific RD action</p>
TenneT NL	<p>Cost of RD and CT Actions in the TenneT area is the net sum of:</p> <ul style="list-style-type: none"> <li>• Costs or revenues of activations of bids.</li> <li>• Costs or revenues of activations of cross-border Redispatching or Countertrading, if relevant.</li> </ul>
NGESO	<ol style="list-style-type: none"> <li>1. NGESO will use a forecast imbalance volume for the system based on short term historic outturn data and will forecast balancing prices based on short term historic balancing prices.</li> <li>2. If there are any forecasted physical congestion that the RD and CT Actions exacerbate then the quoted price will be based only on the activation price of potential units that can alleviate such physical congestion.</li> </ol>

3. If the requested RD and CT Action would increase the size of the largest instantaneous supply or demand loss then:

3.1 The cost of raising inertia to securable levels (if required) will be incorporated into the price.

3.2 the cost of holding additional high, primary and/or secondary frequency response (as defined in the GB Grid Code) will be incorporated into the price.

4. Finally if the RD and CT Action leaves insufficient upwards or downwards active power reserve, then the cost of either synchronising additional units or desynchronising units will be reflected in the Energy Price.