Explanatory Note of the Coordinated Redispatching and Countertrading Cost Sharing methodology for Greece-Italy (GRIT) CCR

Contents

1. Introduction

This document sets out the main principles of a methodology for coordinated redispatching and countertrading cost sharing affecting the borders of the capacity calculation region (CCR) Greece-Italy. The participating TSOs to the coordinated redispatching and countertrading cost sharing are Terna (Italy), ADMIE (Greece).

The proposed methodology follows the Article 74 of the COMMISSION REGULATION (EU) 2015/1222 of 24 July 2015 establishing a guideline on Capacity Allocation and Congestion Management (CACM) requires that:

1. No later than 16 months after the decision on the capacity calculation regions is taken, all the TSOs in each capacity calculation region shall develop a proposal for a 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.

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).

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.

In this light, this paper addresses a proposal of a common methodology for redispatching and countertrading cost sharing to comply with the provisions set by Article 74 of GL CACM.

In detail, this document:

- Provides the principles for a common methodology for coordinated redispatching and countertrading cost sharing which will be sent for approval to National Regulatory Authorities;
- Paves the way to a future pragmatic implementation of the redispatching and countertrading cost sharing processes, which will follow after the approval by the relevant Authorities of the present methodology.

Pricing of redispatching and countertrading shall be based on:

a) prices in the relevant electricity markets for the relevant timeframe; or

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

4. 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 Italian and Greek systems are directly connected only via a DC link, while the AC interconnection to the synchronous Continental European takes place via the two borders electrically far each other. The two Control Areas are practically decoupled and changes in one system have no relevant effect on the other. For these reasons, at the border Italy-Greece, cross border redispatching has no effect[1], being the Countertrading the only action to be taken into account.

2. PRINCIPLE FOR COST SHARING OF COUNTERTRADING COSTS

Cost sharing applied on GRIT CCR is based on "Causer Principle" and "Requester Principle".

Causer principle: One or more TSOs responsible for a bidding zone which are causing one or more violations on network elements of cross border relevance. It is assumed that there are methodologies available to identify the causer and to evaluate its impact on the violated element. A synonymous term is Causing Party or Polluter[2].

Requester principle : a TSO which is facing limit violation, to one or more network elements within its control area, and who activates internal RA(s) or requests external RA(s) to mitigate the violation. In case of a violation on a cross-border tie-line, both TSOs connected to this tie-line are Requesters, even if only one of these TSOs executes a request for an external RA. A synonymous term is Requesting Party.

In particular, below is a better description of these sharing principles is reported:

- Causation Principle: The Causer(s) of the violation(s) has/have to bear the associated costs of the remedial action(s). The causing TSOs are incentivized to invest in their grid infrastructure or optimize their grid operation in order to mitigate overloads in other control areas and therefore the activation of costly remedial actions is reduced. Especially, if the causing TSOs are not located in the bidding zones with the congestion, this principle has the advantage to trigger the notification of the need for a remedial action as soon as it is necessary by the TSO(s) facing security problems without jeopardizing the system with undue delays (as the causer has to bear the costs). By penalizing causers that are not located in the bidding zones with the congestion, the causation principle will also incentivize TSOs to be fully transparent on the costs incurred for RA (according to Article 74(3) of CACM regulation).
- Requester Principle: the Requester(s) of the remedial action(s) has/have to bear the associated costs of the remedial action(s).

  The idea behind the application of the Requester Principle is, to incentivize the Requesting

[1] Redispatching remains useful for the Italian internal bidding zones.
[2] Term "Polluter" as used within ACER recommendation No. 02/2016. There could be more than one Causer.

Party(ies) to invest in its grid infrastructure (e.g. additional lines, PSTs). The investment may lead to fewer overloads in the control area of the Requesting Party(ies).

Being the fact that, concerning Italian and Greek systems, changes/actions in one system have no relevant effect on the other, the Requester party coincides with the Causer party, so that the principle applied can be defined as a Requester and Causer pays principle.

3. Definitions

Detailed definitions and interpretations to be used in the scope of the countertrading and redispatching cost sharing methodology, and the timeframes in which its different processes apply (with different purposes, such as guarantee firmness of capacity, emergency delivery, etc.) are listed in Annex 2.

4. Resources for RDCT

Considering that any redispatching action in one system has practically no effect on the other one, it's agreed that:

- redispatching resources are only used for internal congestion management;
- there is no need to share redispatching operational processes with the counterpart.

For Countertrading between Italy and Greece the TSOs have to declare the resources for the following services:

1. Schedule increase/decrease in the direction Italy to Greece (e.g. increasing the flow in the direction Italy to Greece or decreasing the flow in the direction Greece to Italy);
2. Schedule increase/decrease in the direction Greece to Italy (e.g. increasing the flow in the direction Greece to Italy or decreasing the flow in the direction Italy to Greece).

Each TSO has to specify the available countertrading capacities and their prices. The declared prices must be best estimations of the costs expected by the TSO (e.g average cost for increasing area control balance by * MWh) in accordance with the appropriate mechanisms and agreements applicable to their control areas.

The overall cost will be calculated as the netting between the cost and the incomes borne by the TSOs.

Therefore:

$$COST_{TOT} = COST_A + COST_B$$

Where:

$COST_A$ = cost borne by TSO A in order to apply the countertrading. It could be positive or negative. (income).

$COST_B$ = cost borne by TSO B in order to apply the countertrading. It could be positive or negative.

For example let's consider the following situation in which there are two bidding zones, A and B, and the

flow is going from A to B (A is the exporting country).

Then, let's suppose that TSO in B request to reduce by 100 MW for 1 hour the import flow for internal reason. In this case we have the following situation:

- TSO A reduce the generation. Assuming that the price for reducing the generation is positive 20 €/MWh. The cost borne by TSO A is (-20)*100 = **€ -2000** (income)**.**
- TSO B increase the generation. The price for increasing the generation is 100 €/MWh. TSO B pays 100*100= **€ 10.000**

The final cost to be borne by B (requester) will be the netting result between the amounts above.

In particular, the final cost will be: € -2.000 + € 10.000 = **€ 8.000**.

TSO B receives € 2.000 from TSO A. By the end, TSO B borne the total cost of € 8.000.

5. Dataset and tools

5.1. RDCT resources

The RDCT resources (capacities and prices) made available by each TSO for the other will be declared via ad-hoc files defined for each time frame and using the latest updated information.

Format and content of the files will be defined and detailed during the implementation phase.

These information will be used in order to calculate the overall cost of the remedial action activation.

5.2. Common tool

For the security monitoring, the definition of non-costly RAs and the calculation of the amount of RDCT, considering the independency of the two systems involved, each TSO will use its own tools.

For the calculation of RDCT resources TSOs could implement their own tools.

6. Transparency

The involved parties commit to guarantee the transparency of the calculation of Redispatching and Countertrading costs.

Each TSO must share the criteria it will use to define the prices of its resources. These prices have to be based on the actual market prices and have to reflect the effective costs incurred by the TSOs. In particular, TERNA and ADMIE compute the hourly prices of up and down regulation according to the actual costs incurred by the TSOs for the activation of internal resources.