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Greece-Italy TSOs proposal for Coordinated  
Redispatching and Countertrading methodology in  
accordance with Article 35 of Commission Regulation  
(EU) 2015/1222 of 24 July 2015 establishing a guideline  
on capacity allocation and congestion management

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**November 2018**

All Transmission System Operators of the Greece-Italy region taking into account the following,

### Whereas

- (1) Commission Regulation (EU) 2015/1222 establishes a guideline on capacity allocation and congestion management (hereinafter referred to as the “CACM Regulation”), which entered into force on 14 August 2015.
- (2) This document is a common proposal developed by all Transmission System Operators (hereafter referred to as “TSOs”) of the Greece-Italy Capacity Calculation Region (hereafter referred to as “GRIT Region”), as defined in accordance with Article 15(1) of Regulation (EU) 2015/1222 on Capacity Allocation and Congestion Management (the “CACM Regulation”), for the methodology for Coordinated Redispatching and Countertrading (hereafter referred to as “GRIT RD and CT Methodology”). This proposal is required by Article 35(1) of the CACM Regulation.
- (3) This proposal takes into account the TSOs' proposal for a day-ahead and intraday capacity calculation methodology in accordance with Article 20 of the CACM Regulation.
- (4) This proposal takes into account the general principles and goals set in Commission Regulation (EU) 2015/1222 establishing a guideline on capacity allocation and congestion management (hereafter referred to as the “CACM Regulation”).
- (5) Article 35(1) of CACM Regulation requires the proposal on coordinated redispatching and countertrading shall be subject to consultation in accordance with Article 12.
- (6) Article 9 (9) of the CACM Regulation requires that the proposed timescale for the implementation and the expected impact of the GRIT RD and CT Methodology Proposal on the objectives of the CACM Regulation is described. The impact is presented below of this Whereas Section.
- (7) The GRIT RD and CT Methodology Proposal contributes to and does not in any way hinder the achievement of the objectives of Article 3 of the CACM Regulation:

Article 3 (a) of the CACM Regulation aims at promoting effective competition in the generation, trading and supply of electricity. The GRIT RD and CT Methodology Proposal serves the objective of promoting effective competition in the generation, trading and supply of electricity by defining a set of harmonized rules for effectively relieving physical congestion at the minimum cost.

Article 3 (b) of the CACM Regulation aims at ensuring optimal use of the transmission infrastructure. The GRIT RD and CT Methodology Proposal contributes to achieve the objective of ensuring optimal use of the transmission infrastructure by using last available inputs based on the best possible forecast of transmission systems and market results at the time the security monitoring is performed for the detection of Coordinated Redispatching and Countertrading needs.

Article 3 (c) of the CACM Regulation aims at ensuring operational security. The GRIT RD and CT Methodology Proposal contributes to achieve the objective of ensuring operational security by coordinating the Redispatching and Countertrading at regional level to ensure its reliability and effectiveness for all the TSOs.

Article 3 (d) of the CACM Regulation aims at optimizing the calculation and allocation of cross- zonal capacity. The GRIT RD and CT Methodology Proposal contributes to achieve the objective by defining the rules for detecting and activating coordinated Redispatching and Countertrading contributing to ensure the availability and the firmness of the capacity and by integrating the timings of the Coordinated Redispatching and Countertrading process into the timings of the Capacity Calculation process steps for different timeframes.

- (8) Coordinated Countertrading is by definition limited to relieve physical congestions by means of a cross zonal exchange initiated by system operators between two bidding zones. TSOs may also agree on other cross-zonal exchange procedure for reasons other than relieving physical congestions. Such arrangements are not within the scope of this RDCT Methodology Proposal.
  
- (9) In conclusion, the coordinated Redispatching and Countertrading methodology Proposal contributes to the general objectives of the CACM Regulation.

**SUBMIT THE FOLLOWING COORDINATED REDISPATCHING AND COUNTERTRADING METHODOLOGY PROPOSAL TO ALL NATIONAL REGULATORY AUTHORITIES:**

## **Article 1**

### **Subject matter and scope**

The methodology for coordinated redispatching and countertrading as determined in this Proposal is the common proposal of all TSOs of the Greece Italy Region in accordance with Article 35 of the CACM Regulation. The participating TSOs to the coordinated redispatching and countertrading are therefore Terna (Italy) and ADMIE (Greece).

## **Article 2**

### **Definitions and interpretation**

1. For the purposes of the coordinated Redispatching and Countertrading methodology Proposal, the terms used shall have the meaning set forth in Article 2 of Regulation (EC) 714/2009, Article 2 of Regulation (EC) 543/2013, which amends the previous, and Article 2 of Regulation (EC) 2015/1222.
2. In addition, the following definitions shall apply:
  - a) ‘Terna’ is the Italian Transmission System Operator;
  - b) ‘ADMIE’ is the Greek Transmission System Operator;
  - c) ‘Slack node’ means a node of the grid which is chosen as reference;
  - d) ‘Sensitivity of a critical network element to a resource’ means the variation of the flow in one critical network element with a change of 1MW of a resource compensated in the Slack node;
  - e) ‘Power Transfer Distribution Factor’ means the variation of the flow in one critical network element with a change of 1MW in cross-zonal power exchanges of the bidding-zone border considered;
  - f) ‘Security-Constrained Optimal Power Flow (SCOPF) function’ means a function which determines the best operating levels for electric power plants in order to meet demands given throughout a transmission network while respecting the technical limits of the elements of the network and with the objective of minimizing operating cost.
3. In this coordinated redispatching and countertrading methodology Proposal, unless the context requires otherwise:
  - a) the singular indicates the plural and vice versa;
  - b) headings are inserted for convenience only and do not affect the interpretation of this proposal; and
  - c) any reference to legislation, regulations, directives, orders, instruments, codes or any other enactment shall include any modification, extension or re-enactment of it when in force.

## **Article 3**

### **Application of this proposal**

This proposal applies solely to the methodology for coordinated redispatching and countertrading within the Greece Italy Region.

## **Article 4**

### **Area of Common Interest (ACI) and Area of TSO Interest (ATI)**

1. The methodology for coordinated redispatching and countertrading shall include actions of cross-border relevance.
2. The methodology for coordinated redispatching and countertrading shall enable all TSOs of the GRIT region to effectively relieve physical congestion on the elements of cross border relevance of the region, which constitute the Area of Common Interest (ACI) or the Area of TSO Interest (ATI), irrespective of whether the reasons for the physical congestion fall mainly outside their control area or not.
3. The Italian and Greek systems are directly connected only via a HVDC interconnector, while the AC interconnection to the synchronous Continental European takes place via borders electrically far each other. Therefore changes in one system have no relevant effect on the other and the system security of Italian and Greek grids can be monitored separately, being each TSO responsible for its own control area.
4. In the scope of this methodology for coordinated redispatching and countertrading the ACI is defined by evaluating the possible effect of countertrading on its elements. Elements no or lowly affected by countertrading are not considered of cross border relevance and, therefore, are not part of the ACI.
5. The ACI refers to the parts of the grids of each TSO that are influenced by the flow in the HVDC interconnector and which are identified according to the process defined in the day-ahead and intraday capacity calculation methodology for Greece Italy Region ( “Greece-Italy TSOs proposal of common capacity calculation methodology for the day-ahead and intraday market timeframe in accordance with Article 21 of Commission Regulation (EU) 2015/1222 of 24 July 2015 establishing a guideline on capacity allocation and congestion management”).
6. In the scope of this methodology for coordinated redispatching and countertrading the ATI is defined by evaluating the possible effect of redispatching on its elements. Elements no or lowly affected by redispatching are not considered of relevance and, therefore, are not part of the ATI.
7. The ATI refer to the elements of the Italian system which are sensitive to the exchanges between internal Italian bidding zones. In consideration of the fact that Terna use a SCOPF function in order to realize a more optimized and efficient redispatching on all the Italian system, the ATI coincides with the entire Italian transmission network.

## **Article 5**

### **Resources for coordinated redispatching and countertrading**

1. 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.
2. Being the Italian and Greek systems directly connected only via a HVDC interconnector, while the AC interconnection to the synchronous Continental European takes place via borders electrically far each other, 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, being the Countertrading the only action to be taken into account which results in a change in offtake or injection at the connection point of the interconnectors. Therefore:
  - a. redispatching resources are only used by each TSO for internal congestion management;
  - b. each TSO shall not share redispatching resources and operational processes with the counterpart.
3. Each TSO of the GRIT region shall define for each time-frame its resources available for countertrading and their prices. The resources will be defined for two different services:
  - a. Schedule increase 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);
  - b. Schedule increase 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).
4. Depending on the mechanisms and agreements applicable to its control area, each TSO shall provide

capacities and the actual prices of the countertrading resources available in its control area or the best estimations of the incurred costs expected by the TSOs, calculated transparently.

## **Article 6**

### **Overall process for coordinated countertrading**

1. The methodology for coordinated redispatching and countertrading shall enable all TSOs of the GRIT region to effectively relieve physical congestion on the elements of the Area of Common Interest (ACI) and the area of TSO Interest (ATI), irrespective of whether the reasons for the physical congestion fall mainly outside their control area or not.
2. The coordinated countertrading actions shall be decided after all other available and effective non-costly actions (e.g. grid topology variations, coordinated use of PSTs) have been considered and if network elements within the ACI are still congested.
3. The coordinated countertrading actions shall be activated after the following preliminary processes:
  - a. Each TSO monitors the security of its own parts of the ACI and identifies the congested grid elements belonging to the ACI;
  - b. Each TSO identifies and applies its own available non-costly remedial actions for relieving or reducing congestions on the elements of the ACI.
4. The selection of countertrading resources shall be performed with the objective to minimize the overall cost for the TSOs of the GRIT region.

## **Article 7**

### **Overall process for redispatching**

1. The methodology for coordinated redispatching and countertrading shall enable all TSOs of the GRIT region to effectively relieve physical congestion on the elements of the Area of Common Interest (ACI) and the area of TSO Interest (ATI), irrespective of whether the reasons for the physical congestion fall mainly outside their control area or not.
2. Considering the lack of cross-influence between the Italian and Greek systems and considering Article 4.3 Terna may activate redispatching independently from ADMIE.
3. The redispatching actions shall be decided after all other available and effective non-costly actions (e.g. grid topology variations, coordinated use of PSTs) have been considered and if network elements within the ATI are still congested.
4. The redispatching actions shall be activated after the following preliminary processes:
  - a. Terna monitors the security of the ATI and identifies the congested grid;
  - b. Terna identifies and applies its own available non-costly remedial actions for relieving or reducing congestions on the elements of the ATI.
5. The selection of redispatching resources shall be performed with the objective to minimize the overall cost for the Italian system.
6. Terna may perform a continuous real time redispatching via a Security-Constrained Optimal Power Flow (SCOPF) function which would automatically guarantee the security of the ATI at the minimum cost.

## **Article 8**

### **Fast activation process for sudden critical situations**

1. In case of sudden critical situations (due to events such as, but not limited to, an unplanned outage in real time or a relevant forecast error), that lead to overloads on ACI elements and requires fast actions, which cannot be effectively and promptly treated with the Regular process described at Article 6, a Fast Activation process for coordinated redispatching and countertrading will be adopted in order to

cover the time horizon until the Regular process can be applied effectively.

2. The Fast Activation process for coordinated redispatching and countertrading shall also be considered as a fallback in any case the Regular process described at Article 6 could not be properly applied (e.g. missing data, tools failure).
3. The Fast Activation process for coordinated redispatching and countertrading would be activated by a TSO who identifies overloads on ACI elements during the real time security monitoring of its own grid.
4. Before activating the coordinated redispatching and countertrading with the Fast Activation process, the concerned TSO shall consider the available non-costly remedial actions for relieving or reducing congestions on the elements of the ACI.
5. After the available non-costly remedial actions have been considered, the redispatching and countertrading resources needed to be activated to relieve the remaining congestions on the elements of the ACI shall be selected.
6. Considering the application of this process should be very infrequent, being linked to extraordinary and unusual events, and that it must be characterized by fast activation and additional flexibility, a lower degree of optimization is accepted and the resources may be activated without considering their costs.

## **Article 9**

### **Timeframes for coordinated redispatching and countertrading application**

1. The methodology for coordinated redispatching and countertrading shall enable the TSOs to relieve physical congestion in all the time frames of the day of delivery.
2. The process for coordinated redispatching and countertrading shall start for each time frame of a day of delivery as soon as the day-ahead market results for that day are available and it is possible for the TSOs to forecast the physical congestions on the ACI and ATI elements.
3. The process for coordinated redispatching and countertrading shall be repeated during the day of delivery, for the remaining time frames of the same day, when the intraday market results are available and it is possible for the TSOs to forecast the physical congestions on the ACI and ATI elements.
4. Considering there may be inaccuracies in the congestion forecasts and that they should diminish getting closer to the real time they refer to, the TSOs of the GRIT region may decide to postpone the actual activation of the redispatching and countertrading resources, necessary to relieve physical congestion on the elements of the ACI in a time frame, when a subsequent process for coordinated redispatching and countertrading is foreseen for the same time frame.
5. In case a TSO may rely on a SCOPF function, it can decide to leave any redispatching action to this automatic function which would guarantee the relieving of physical congestions at the minimum cost based on the last updated information.
6. All the time frames may be covered by the Fast activation process of Article 8 when the Regular process of Article 6 cannot be applied effectively.

## **Article 10**

### **Total costs calculation**

1. The methodology for coordinated redispatching and countertrading minimize the total expected costs for physical congestion relieving on the elements of the ACI.
2. The total expected costs to be minimized shall be calculated based on the resources declared by the TSOs as defined in Article 5.
3. The actual total costs of the coordinated redispatching and countertrading shall be calculated based on the costs the TSOs of the GRIT region incurred at the activation of the actual resources.

## **Article 11**

### **Publication and Implementation of the coordinated redispatching and countertrading methodology Proposal**

1. The TSOs of GRIT region shall publish the coordinated redispatching and countertrading methodology without undue delay after relevant national regulatory authorities have approved the proposed coordinated redispatching and countertrading methodology or a decision has been taken by the Agency for the Cooperation of Energy Regulators in accordance with Article 9 (10), Article 9 (11) and 9 (12) of the CACM Regulation.
2. The implementation of this RD and CT Methodology is subject to:
  - a. Regulatory approval of this RD and CT Methodology in accordance with Article 9 of the CACM Regulation;
  - b. Regulatory approval of Redispatching and Countertrading Cost Sharing Methodology required by Article 74 of the CACM Regulation in accordance with Article 9 of the CACM Regulation;
  - c. Implementation of the capacity calculation methodology of the GRIT CCR for the day ahead and intraday timeframe.
  - d. Development and implementation of the systems required to support the RD and CT Methodology.
3. The TSOs of GRIT region shall implement the proposed coordinated redispatching and countertrading methodology no later than 12 months after the conditions specified in Article 11.2 letters a to c are fulfilled.

## **Article 12**

### **Language**

1. The reference language for this common capacity calculation Proposal shall be English.
2. For the avoidance of doubt, where TSOs need to translate this methodology Proposal for Coordinated Redispatching and Countertrading into their national language(s), in the event of inconsistencies between the English version published by TSOs in accordance with Article 9 (14) of the CACM Regulation and any version in another language, the relevant TSOs shall be obliged to dispel any inconsistencies by providing a revised translation of this Proposal for Coordinated Redispatching and Countertrading to their relevant national regulatory authorities.