

**DECISION OF THE ITALY NORTH REGULATORY  
AUTHORITIES**

**ON**

**THE COMMON PROVISIONS FOR REGIONAL  
OPERATIONAL SECURITY COORDINATION FOR ITALY  
NORTH CCR IN ACCORDANCE WITH ARTICLE 76 OF  
COMMISSION REGULATION (EU) 2017/1485 OF 2  
AUGUST 2017 ESTABLISHING A GUIDELINE ON  
ELECTRICITY TRANSMISSION SYSTEM OPERATION**

**24 July 2020**

## I. Introduction and legal context

This document elaborates an agreement of the Italy North Regulatory Authorities (hereinafter: IN NRAs), agreed on 24 July 2020 at Italy North Energy Regulators' Regional forum, on the methodology for regional operational security coordination (hereinafter: IN ROSC) developed by the Transmission System Operators of Italy North CCR (hereinafter: IN TSOs), in accordance with Article 76 of Commission Regulation 2017/1485 of 2 August 2017 establishing a guideline on electricity transmission system operation (hereinafter: SOGL)

This agreement of IN NRAs shall provide evidence that a decision on the IN ROSC does not, at this stage, need to be adopted by ACER pursuant to Article 6(8) of SOGL. It is intended to constitute the basis on which IN NRAs will each subsequently issue a national decision to approve the IN ROSC pursuant to Article 6(7) of SOGL.

The legal provisions that lie at the basis of the IN ROSC, and this IN NRAs agreement on the above mentioned methodology, can be found in Articles 4, 6 20, 21, 22, 23, 25, 29, 30, 31, 32, 33, 34, 35, 38, 39, 72, 73 74, 75, 76, 77, 78, of SOGL and in Article 5 of the Regulation (EU) 2019/942 of the European Parliament and of the Council of 5 June 2019 establishing a European Union Agency for the Cooperation of Energy Regulators (recast) (hereinafter: recast ACER Regulation). They are set out here for reference.

### **SOGL**

#### **Article 4**

##### ***Objectives and regulatory aspects***

1. *This Regulation aims at:*
  - (a) *determining common operational security requirements and principles;*
  - (b) *determining common interconnected system operational planning principles;*
  - (c) *(...)*
  - (d) *ensuring the conditions for maintaining operational security throughout the Union;*
  - (e) *(...)*
  - (f) *promoting the coordination of system operation and operational planning;*
  - (g) *ensuring and enhancing the transparency and reliability of information on transmission system operation;*
  - (h) *contributing to the efficient operation and development of the electricity transmission system and electricity sector in the Union.*
2. *When applying this Regulation, Member States, competent authorities, and system operators shall:*
  - (a) *apply the principles of proportionality and non-discrimination;*
  - (b) *ensure transparency;*
  - (c) *apply the principle of optimisation between the highest overall efficiency and lowest total costs for all parties involved;*
  - (d) *ensure TSOs make use of market-based mechanisms as far as possible, to ensure network security and stability;*
  - (e) *respect the responsibility assigned to the relevant TSO in order to ensure system security, including as required by national legislation;*

*[...]*

#### **Article 6**

##### ***Approval of terms and conditions or methodologies of TSOs***

1. *Each regulatory authority shall approve the terms and conditions or methodologies developed by TSOs under paragraphs 2 and 3. The entity designated by the Member State shall approve the terms and conditions or methodologies developed by TSOs under paragraph 4. The designated entity shall be the regulatory authority unless otherwise provided by the Member State.*

2. (...)
3. *The proposals for the following terms and conditions or methodologies shall be subject to approval by all regulatory authorities of the concerned region, on which a Member State may provide an opinion to the concerned regulatory authority:*
  - (a) (...)
  - (b) *common provisions for each capacity calculation region for regional operational security coordination in accordance with Article 76;*

[...]

6. *The proposal for terms and conditions or methodologies shall include a proposed timescale for their implementation and a description of their expected impact on the objectives of this Regulation. Proposals on terms and conditions or methodologies subject to the approval by several or all regulatory authorities shall be submitted to the Agency at the same time that they are submitted to regulatory authorities. Upon request by the competent regulatory authorities, the Agency shall issue an opinion within 3 months on the proposals for terms and conditions or methodologies.*
7. *Where the approval of the terms and conditions or methodologies requires a decision by more than one regulatory authority, the competent regulatory authorities shall consult and closely cooperate and coordinate with each other in order to reach an agreement. Where the Agency issues an opinion, the competent regulatory authorities shall take that opinion into account. Regulatory authorities shall take decisions concerning the submitted terms and conditions or methodologies in accordance with paragraphs (2) and (3), within 6 months following the receipt of the terms and conditions or methodologies by the regulatory authority or, where applicable, by the last regulatory authority concerned.*
8. *Where the regulatory authorities have not been able to reach an agreement within the period referred to in paragraph 7 or upon their joint request, the Agency shall adopt a decision concerning the submitted proposals for terms and conditions or methodologies within 6 months, in accordance with Article 8(1) of Regulation (EC) No 713/2009.*

[...]

## **Article 20**

### **Remedial actions in system operation**

1. *Each TSO shall endeavour to ensure that its transmission system remains in the normal state and shall be responsible for managing operational security violations. To achieve that objective, each TSO shall design, prepare and activate remedial actions taking into account their availability, the time and resources needed for their activation and any conditions external to the transmission system which are relevant for each remedial action.*
2. *The remedial actions used by TSOs in system operation in accordance with paragraph 1 and with Articles 21 to 23 of this Regulation shall be consistent with the remedial actions taken into account in capacity calculation in accordance with Article 25 of Regulation (EU) 2015/1222.*

## **Article 21**

### **Principles and criteria applicable to remedial actions**

1. *Each TSO shall apply the following principles when activating and coordinating remedial actions in accordance with Article 23:*
  - (a) *for operational security violations which do not need to be managed in a coordinated way, a TSO shall design, prepare and activate remedial actions to restore the system to the normal state and to prevent the propagation of the alert or emergency state outside of the TSO's control area from the categories defined in Article 22;*
  - (b) *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 recommendation of a regional security coordinator in accordance with Article 78(4).*

2. *When selecting the appropriate remedial actions, each TSO shall apply the following criteria:*
  - (a) *activate the most effective and economically efficient remedial actions;*
  - (b) *activate remedial actions as close as possible to real-time taking into account the expected time of activation and the urgency of the system operation situation they intend to resolve;*
  - (c) *consider the risks of failures in applying the available remedial actions and their impact on operational security such as:*
    - i) *the risks of failure or short-circuit caused by topology changes;*
    - ii) *the risks of outages caused by active or reactive power changes on power generating modules or demand facilities; and*
    - iii) *the risks of malfunction caused by equipment behaviour;*
  - (d) *give preference to remedial actions which make available the largest cross-zonal capacity for capacity allocation, while satisfying all operational security limits.*

## **Article 22**

### **Categories of remedial actions**

1. *Each TSO shall use the following categories of remedial actions:*
  - (a) *modify the duration of a planned outage or return to service transmission system elements to achieve the operational availability of those transmission system elements;*
  - (b) *actively impact power flows by means of:*
    - i) *tap changes of the power transformers;*
    - ii) *tap changes of the phase-shifting transformers;*
    - iii) *modifying topologies;*
  - (c) *control voltage and manage reactive power by means of:*
    - i) *tap changes of the power transformers;*
    - ii) *switching of the capacitors and reactors;*
    - iii) *switching of the power-electronics-based devices used for voltage and reactive power management;*
    - iv) *(...)*
    - v) *requesting the change of reactive power output or voltage setpoint of the transmission-connected synchronous power generating modules;*
    - vi) *requesting the change of reactive power output of the converters of transmission-connected non-synchronous power generating modules;*
  - (d) *re-calculate day-ahead and intraday cross-zonal capacities in accordance with Regulation (EU) 2015/1222;*
  - (e) *redispatch transmission or distribution-connected system users within the TSO's control area, between two or more TSOs;*
  - (f) *countertrade between two or more bidding zones;*
  - (g) *adjust active power flows through HVDC systems;*
  - [...]*
2. *Where necessary and justified in order to maintain operational security, each TSO may prepare and activate additional remedial actions. [...]*

## **Article 23**

### **Preparation, activation and coordination of remedial actions**

1. *Each TSO shall prepare and activate remedial actions in accordance with the criteria set out in Article 21(2) to prevent the system state from deteriorating on the basis of the following elements:*
  - (a) *(...)*
  - (b) *(...)*
  - (c) *the contingency analysis in operational planning in accordance with Article 72.*
2. *When preparing and activating a remedial action, including redispatching or countertrading pursuant to Articles 25 and 35 of Regulation (EU) 2015/1222, [...], the relevant TSO shall assess, in coordination with the TSOs 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.

[...]

#### **Article 25**

##### **Operational security limits**

1. Each TSO shall specify the operational security limits for each element of its transmission system, taking into account at least the following physical characteristics:
  - (a) voltage limits in accordance with Article 27;
  - (b) short-circuit current limits according to Article 30; and
  - (c) current limits in terms of thermal rating including the transitory admissible overloads.
2. (...)
3. In case of changes of one of its transmission system elements, each TSO shall validate and where necessary update the operational security limits.
4. For each interconnector each TSO shall agree with the neighbouring TSO on common operational security limits in accordance with paragraph 1.

#### **Article 29**

##### **Obligations of all TSOs concerning voltage control and reactive power management in system operation**

1. (...)
2. Each TSO shall take into account in its operational security analysis the voltage values at which transmission-connected SGUs not subject to the requirements of Regulation (EU) 2016/631 or Regulation (EU) 2016/1388 may disconnect.
3. Each TSO shall ensure reactive power reserve, with adequate volume and time response, in order to keep the voltages within its control area and on interconnectors within the ranges set out in Annex II.
4. TSOs interconnected by AC interconnectors shall jointly specify the adequate voltage control regime in order to ensure that the common operational security limits established in accordance with Article 25(4) are respected.
5. (...)
6. Each TSO shall be entitled to use all available transmission-connected reactive power capabilities within its control area for effective reactive power management and maintaining the voltage ranges set out in Tables 1 and 2 of Annex II of this Regulation.

[...]

#### **Article 30**

##### **Short-circuit current**

1. Each TSO shall determine:
  - (a) the maximum short-circuit current at which the rated capability of circuit breakers and other equipment is exceeded; and
  - (b) the minimum short-circuit current for the correct operation of protection equipment.

#### **Article 31**

##### **Short-circuit current calculation and related measures**

2. Each TSO shall perform short-circuit current calculations in order to evaluate the impact of neighbouring TSOs and transmission-connected SGUs and transmission-connected distribution systems including closed distribution systems on the short-circuit current levels in transmission system. (...)
3. While performing short-circuit current calculations, each TSO shall:
  - (a) use the most accurate and high quality available data;
  - (b) take into account international standards; and
  - (c) consider as the basis of the maximum short-circuit current calculation such operational conditions, which provide the highest possible level of short-circuit current, including the short-

*circuit current from other transmission systems and distribution systems including closed distribution systems.*

- 4. Each TSO shall apply operational or other measures to prevent deviation from the maximum and minimum short-circuit current limits referred to in Article 30, at all time-frames and for all protection equipment. If such a deviation occurs, each TSO shall activate remedial actions or apply other measures to ensure that the limits referred to in Article 30 are re-established. A deviation from those limits is allowed only during switching sequences.*

## **Article 32**

### **Power flow limits**

- 1. Each TSO shall maintain power flows within the operational security limits defined when the system is in normal state and after the occurrence of a contingency from the contingency list referred to in Article 33(1).*
- 2. In the (N-1)-situation, in the normal state each TSO shall maintain power flows within the transitory admissible overloads referred to in Article 25(1)(c), having prepared remedial actions to be applied and executed within the time-frame allowed for transitory admissible overloads.*

## **Article 33**

### **Contingency lists**

- 1. Each TSO shall establish a contingency list, including the internal and external contingencies of its observability area, by assessing whether any of those contingencies endangers the operational security of the TSO's control area. The contingency list shall include both ordinary contingencies and exceptional contingencies identified by application of the methodology developed pursuant to Article 75.*
- 2. To establish a contingency list, each TSO shall classify each contingency on the basis of whether it is ordinary, exceptional or out-of-range, taking into account the probability of occurrence and the following principles:  
(a) each TSO shall classify contingencies for its own control area;  
(b) when operational or weather conditions significantly increase the probability of an exceptional contingency, each TSO shall include that exceptional contingency in its contingency list; and  
(c) in order to account for exceptional contingencies with high impact on its own or neighbouring transmission systems, each TSO shall include such exceptional contingencies in its contingency list.*
- 3. (...)*
- 4. Each TSO shall coordinate its contingency analysis in terms of coherent contingency lists at least with the TSOs from its observability area, in accordance with the Article 75.*
- 5. Each TSO shall inform the TSOs in its observability area about the external contingencies included in its contingency list.*
- 6. Each TSO shall inform, sufficiently in advance, the TSOs concerned in its observability area of any intended topological changes on its transmission system elements which are included as external contingencies in the contingency lists of the TSOs concerned.*

*[...]*

### **Article 34 Contingency analysis**

- 1. Each TSO shall perform contingency analysis in its observability area in order to identify the contingencies which endanger or may endanger the operational security of its control area and to identify the remedial actions that may be necessary to address the contingencies, including mitigation of the impact of exceptional contingencies.*
- 2. Each TSO shall ensure that potential violations of the operational security limits in its control area which are identified by the contingency analysis do not endanger the operational security of its transmission system or of interconnected transmission systems.*
- 3. Each TSO shall perform contingency analysis based on the forecast of operational data and on real-time operational data from its observability area. The starting point for the contingency*

*analysis in the N-Situation shall be the relevant topology of the transmission system which shall include planned outages in the operational planning phases.*

#### **Article 35**

##### **Contingency handling**

1. *Each TSO shall assess the risks associated with the contingencies after simulating each contingency from its contingency list and after assessing whether it can maintain its transmission system within the operational security limits in the (N-1) situation.*
2. *When a TSO assesses that the risks associated with a contingency are so significant that it might not be able to prepare and activate remedial actions in a timely manner to prevent non-compliance with the (N-1) criterion or that there is a risk of propagation of a disturbance to the interconnected transmission system, the TSO shall prepare and activate remedial actions to achieve compliance with the (N-1) criterion as soon as possible.*
3. *In case of an (N-1) situation caused by a disturbance, each TSO shall activate a remedial action in order to ensure that the transmission system is restored to a normal state as soon as possible and that this (N-1) situation becomes the new N-Situation.*
4. *A TSO shall not be required to comply with the (N-1) criterion hereinafter situations:*
  - (a) *during switching sequences;*
  - (b) *during the time period required to prepare and activate remedial actions.*
5. *[...]*

#### **Article 38**

##### **Dynamic stability monitoring and assessment**

1. *Each TSO shall monitor the dynamic stability of the transmission system by studies conducted offline in accordance with paragraph 6. Each TSO shall exchange the relevant data for monitoring the dynamic stability of the transmission system with the other TSOs of its synchronous area.*  
*[...]*
6. *In deciding the methods used in the dynamic stability assessment, each TSO shall apply the following rules:*
  - (a) *if, with respect to the contingency list, steady-state limits are reached before stability limits, the TSO shall base the dynamic stability assessment only on the offline stability studies carried out in the longer term operational planning phase;*
  - (b) *if, under planned outage conditions, with respect to the contingency list, steady-state limits and stability limits are close to each other or stability limits are reached before steady-state limits, the TSO shall perform a dynamic stability assessment in the day-ahead operational planning phase while those conditions remain. The TSO shall plan remedial actions to be used in real-time operation if necessary; and*
  - (c) *if the transmission system is in the N-situation with respect to the contingency list and stability limits are reached before steady-state limits, the TSO shall perform a dynamic stability assessment in all phases of operational planning and re-assess the stability limits as soon as possible after a significant change in the N-situation is detected.*

#### **Article 39**

##### **Dynamic stability management**

1. *Where the dynamic stability assessment indicates that there is a violation of stability limits, the TSOs in whose control area the violation has appeared shall design, prepare and activate remedial actions to keep the transmission system stable. Those remedial actions may involve SGUs.*

*[...]*

#### **Article 72**

##### **Operational security analysis in operational planning**

1. *Each TSO shall perform coordinated operational security analyses for at least the following time-frames:*
  - (a) *year-ahead;*
  - (b) *week-ahead, when applicable in accordance with Article 69;*
  - (c) *day-ahead; and*
  - (d) *intraday.*
2. *When performing a coordinated operational security analysis, the TSO shall apply the methodology adopted pursuant to Article 75.*
3. *To perform operational security analyses, each TSO shall, in the N-Situation, simulate each contingency from its contingency list established in accordance with Article 33 and verify that, in the (N-1)-situation, the operational security limits defined in accordance with Article 25 are not exceeded in its control area.*
4. *Each TSO shall perform its operational security analyses using at least the common grid models established in accordance with Articles 67, 68, 70 and, where applicable, 69 and shall take into account the planned outages when carrying out those analyses.*
5. *Each TSO shall share the results of its operational security analysis with at least the TSOs whose elements are included in the TSO's observability area and are affected according to that operational security analysis, in order to allow those TSOs to verify that operational security limits are respected within their control areas.*

#### **Article 73**

##### **Year-ahead up to and including week-ahead operational security analysis**

1. *Each TSO shall perform year-ahead and, where applicable, week-ahead operational security analyses in order to detect at least the following constraints:*
  - (a) *power flows and voltages exceeding operational security limits;*
  - (b) *violations of stability limits of the transmission system identified in accordance with Article 38(2) and (6); and*
  - (c) *violations of short-circuit thresholds of the transmission system.*
2. *When a TSO detects a possible constraint, it shall design remedial actions in accordance with Articles 20 to 23.*  
[...]

#### **Article 74**

##### **Day-ahead, intraday and close to real-time operational security analysis**

1. *Each TSO shall perform day-ahead, intraday and close to real-time operational security analyses to detect possible constraints and prepare and activate the remedial actions with any other concerned TSOs and, if applicable, affected DSOs or SGUs.*
2. *Each TSO shall monitor load and generation forecasts. When those forecasts indicate a significant deviation in load or generation, the TSO shall update its operational security analysis.*
3. (...)

#### **Article 75**

##### **Methodology for coordinating operational security analysis**

1. *By 12 months after entry into force of this Regulation, all TSOs shall jointly develop a proposal for a methodology for coordinating operational security analysis.*  
[...]

#### **Article 76**

##### **Proposal for regional operational security coordination**

1. *By 3 months after the approval of the methodology for coordinating operational security analysis in Article 75(1), 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. 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. The proposal shall determine:*

- (a) conditions and frequency of intraday coordination of operational security analysis and updates to the common grid model by the regional security coordinator;*
  - (b) the methodology for the preparation of remedial actions managed in a coordinated way, considering their cross- border relevance as determined in accordance with Article 35 of Regulation (EU) 2015/1222, taking into account the requirements in Articles 20 to 23 and determining at least:
    - i) the procedure for exchanging the information of the available remedial actions, between relevant TSOs and the regional security coordinator;*
    - ii) the classification of constraints and the remedial actions in accordance with Article 22;*
    - iii) the identification of the most effective and economically efficient remedial actions in case of operational security violations referred to in Article 22;*
    - iv) the preparation and activation of remedial actions in accordance with Article 23(2);*
    - v) the sharing of the costs of remedial actions referred to in Article 22, complementing where necessary the common methodology developed in accordance with Article 74 of Regulation (EU) 2015/1222. As a general principle, costs of non-cross-border relevant congestions shall be borne by the TSO responsible for the given control area and costs of relieving cross-border-relevant congestions shall be covered by TSOs responsible for the control areas in proportion to the aggravating impact of energy exchange between given control areas on the congested grid element.**
- 2. In determining whether congestion have cross-border relevance, the TSOs shall take into account the congestion that would appear in the absence of energy exchanges between control areas.*

## **Article 77**

### **Organisation for regional operational security coordination**

- 1. The proposal of all TSOs of a capacity calculation region for common provisions for regional operational security coordination pursuant to Article 76(1) shall also include common provisions concerning the organisation of regional operational security coordination, including at least:
    - (a) the appointment of the regional security coordinator(s) that will perform the tasks in paragraph 3 for that capacity calculation region;*
    - (b) rules concerning the governance and operation of regional security coordinator(s), ensuring equitable treatment of all member TSOs;*
    - (c) where the TSOs propose to appoint more than one regional security coordinator in accordance with subparagraph (a):
      - i) a proposal for a coherent allocation of the tasks between the regional security coordinators who will be active in that capacity calculation region. The proposal shall take full account of the need to coordinate the different tasks allocated to the regional security coordinators;*
      - ii) an assessment demonstrating that the proposed setup of regional security coordinators and allocation of tasks is efficient, effective and consistent with the regional coordinated capacity calculation established pursuant to Articles 20 and 21 of Regulation (EU) 2015/1222;*
      - iii) an effective coordination and decision making process to resolve conflicting positions between regional security coordinators within the capacity calculation region.***
- 2. When developing the proposal for common provisions concerning the organisation of regional operational security coordination in paragraph 1, the following requirements shall be met:
  - (a) each TSO shall be covered by at least one regional security coordinator;*
  - (b) all TSOs shall ensure that the total number of regional security coordinators across the Union is not higher than six.**

3. *The TSOs of each capacity calculation region shall propose the delegation of the following tasks in accordance with paragraph 1:
  - (a) *regional operational security coordination in accordance with Article 78 in order to support TSOs fulfil their obligations for the [...], day-ahead and intraday time-frames in Article 34(3) and Articles 72 and 74;*

[...]*
4. *In executing its tasks, a regional security coordinator shall take account of data covering at least all capacity calculation regions for which it has been allocated tasks, including the observability areas of all TSOs in those capacity calculation regions..*
5. *All regional security coordinators shall coordinate the execution of their tasks in order to facilitate the fulfilment of the objectives of this Regulation. All regional security coordinators shall ensure the harmonization of processes and, where duplication is not justified by reasons of efficiency or by the need to ensure continuity of service, the creation of joint tools to ensure efficient cooperation and coordination between the regional security coordinators.*

## **Article 78**

### **Regional operational security coordination**

1. *Each TSO shall provide the regional security coordinator with all the information and data required to perform the coordinated regional operational security assessment, including at least:
  - (a) *the updated contingency list, established according to the criteria defined in the methodology for coordinating operational security analysis adopted in accordance with Article 75(1);*
  - (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*
  - (c) *the operational security limits established in accordance with Article 25.**
2. *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.**
3. *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.*
4. *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.*

## Recast ACER Regulation

### Article 5

#### **Tasks of ACER as regards the development and implementation of network codes and guidelines**

[...]

3. *Where one of the following legal acts provides for the development of proposals for terms and conditions or methodologies for the implementation of network codes and guidelines which require the approval of all the regulatory authorities of the region concerned, those regulatory authorities shall agree unanimously on the common terms and conditions or methodologies to be approved by each of those regulatory authorities:*

- (a) a legislative act of the Union adopted under the ordinary legislative procedure;*
- (b) network codes and guidelines that were adopted before 4 July 2019 and subsequent revisions of those network codes and guidelines; or*
- (c) network codes and guidelines adopted as implementing acts pursuant to Article 5 of Regulation (EU) No 182/2011.*

*The proposals referred to in the first subparagraph shall be notified to ACER within one week of their submission to those regulatory authorities. The regulatory authorities may refer the proposals to ACER for approval pursuant to point (b) of the second subparagraph of Article 6(10) and shall do so pursuant to point (a) of the second subparagraph of Article 6(10) where there is no unanimous agreement as referred to in the first subparagraph.*

*The Director or the Board of Regulators, acting on its own initiative or on a proposal from one or more of its members, may require the regulatory authorities of the region concerned to refer the proposal to ACER for approval. Such a request shall be limited to cases in which the regionally agreed proposal would have a tangible impact on the internal energy market or on security of supply beyond the region.*

[...]

6. *Before approving the terms and conditions or methodologies referred to in paragraphs 2 and 3, the regulatory authorities, or, where competent, ACER, shall revise them where necessary, after consulting the ENTSO for Electricity, the ENTSO for Gas or the EU DSO entity, in order to ensure that they are in line with the purpose of the network code or guideline and contribute to market integration, non-discrimination, effective competition and the proper functioning of the market. ACER shall take a decision on the approval within the period specified in the relevant network codes and guidelines. That period shall begin on the day following that on which the proposal was referred to ACER.*

## II. The Italy North TSOs proposal

The IN ROSC was developed by the TSOs and submitted to IN NRAs in accordance with Article 76 of SOGL. The proposal was consulted through the website of ENTSO-E for one month from 18 October 2019 to 18 November 2019, in line with Article 11 of SOGL<sup>1</sup>. The IN ROSC proposal was received by the last Regulatory Authority of the Italy North Capacity Calculation Region on 24 January 2020.

Article 6(7) of SOGL requires IN NRAs to consult and closely cooperate and coordinate with each other in order to reach an agreement and take a decision within six months following receipt of submissions of the last Regulatory Authority concerned. A decision is therefore required by 24 July 2020.

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<sup>1</sup> The public consultation is available on the ENTSO-e website: <https://consultations.entsoe.eu/markets/italy-north-tsos-proposal-sogl-art76/>

The IN ROSC relies on a full coordination among all the TSOs involved in Italian Northern borders: for this reason, the methodology foresees the participation of non-EU TSOs (i.e. Swissgrid) as a technical counterparty on the basis of the same conditions already adopted for the common grid model methodology.

The secured area includes all the XNEs subject to the coordination process: all critical network elements relevant for the capacity calculation process, plus any other elements with a voltage level higher or equal to 220 kV decided by each TSO, are included.

The coordinated regional operational security assessment is run:

- a) in the afternoon D-1 according to the timings reported in the Methodology for Coordinated Security Analysis (hereinafter: CSAm) developed in accordance with Article 75 of SOGL;
- b) three times during day D (reference time are 00.00, 08.00 and 16.00).
- c) Number and timings of the runs in day D are subject to a yearly review.

XRAs are identified according to the provisions included in the CSAm: a qualitative approach is used by default, in case of disagreement among TSOs a quantitative approach is followed, based on a RA influence factor equal to 5%.

XRAs are selected based on the minimum cost criteria and efficiency in terms of the number of actions to be activated: a single optimization for both costly and non-costly remedial actions is run and the resulting XRAs are subject to a final validation by IN TSOs, before being definitely recommended. The proposal sets only quite high principles about the optimization process: details about the so-called scanned elements (i.e. elements different from XNEs that need to be monitored during the optimization) and about the impact of the XRAs on these elements are still under discussion. Some ideas are illustrated in the explanatory note indeed, but no clear position has been expressed so far by IN TSOs.

Recommended remedial actions shall be activated, unless these actions are no longer available for proven technical reasons or new actions are agreed without impacting cross-zonal exchanges.

Besides the coordinated process, an intraday analysis is performed on an hourly basis with the goal to provide IN TSOs with updated information on the status of the network and on potential violations of operational security constraints. This analysis has a monitoring function only: no coordination of remedial actions is envisaged outside the coordinated process at reference times.

A fast activation process is foreseen too: this is used when the regular coordinated process at reference times cannot be performed due to the urgency to adopt corrective measures.

The rules and criteria to identify the XNEs subject to cost sharing and to quantify the costs attributed first to each XNE (mapping) and then to each TSO (sharing) will be included in the methodology developed according to Article 74 of Commission Regulation 2015/1222 of 24 July 2015 establishing a Guideline on Capacity Allocation and Congestion Management (hereinafter: CACM).

The IN ROSC includes also the appointment of the RSC. All the tasks listed in Article 77 of SOGL (security coordination, building of common grid model, outage coordination and short-term adequacy assessment – hereinafter: SOGL coordinated tasks) are delegated to Coreso and TSCnet that act on a rotational base principle, as follows:

- a) Both Coreso and TSCnet will rotate the roles of Leading and Backup RSC over predetermined periods for regional operational security analysis;
- b) Both Coreso and TSCnet will execute the common grid model task on a rotational basis with all the other RSCs delegated for the same task at EU level;
- c) TSCnet will carry the regional outage coordination for the entire Italy North CCR;
- d) Coreso will carry the regional adequacy assessment for the entire Italy North CCR.

Only the main principles for the cooperation and operation of Coreso and TSCnet are given, demanding all the details to the specific rules for operation that will be developed and agreed among RSC(s) and IN TSOs.

The proposal includes a timescale for the implementation (up to 55 months) and a description of the expected impact on the objectives of SOGL, in line with Article 6(6) of SOGL.

### III. The Italy North Regulatory Authorities position

#### NRAs shadow opinion

In December 2019 IN NRAs sent a shadow opinion to IN TSOs addressing a number of issues to be incorporated in the ROSC.

IN TSOs effectively improved the methodology taking into account most of the IN NRAs' comments, but some aspects are still missing or not properly detailed.

The definition of the secured area relies on a process not fully coherent with the CSAm provisions: IN ROSC assumes the secured area composed by all the CNEs relevant for capacity calculation, allowing each TSO to include further elements higher or equal to 220 kV; CSAm, instead, foresees a secured area composed by all the elements above a voltage threshold, allowing each TSO to exclude some elements if not impacted by cross-zonal exchanges.

Details about the optimization process are still missing: IN TSOs provided the general constraints, but the concept of scanned element and constraints on the impact of XRAs on these elements are reported only in the explanatory note since still under discussion.

An assessment of the efficiency of the RSC setup has been provided in the explanatory note as requested, but the governance of the RSC is still not detailed.

More details about the steps of the implementation plan are given, but a simplified approach is not proposed.

#### NRAs position

IN NRAs are satisfied with the single optimization process proposed in the IN ROSC and on the IN TSOs' choice to include all the cost sharing rules and criteria in the methodology to be developed in accordance with Article 74 of CACM.

The overall process for the identification of remedial actions is depicted in a holistic manner, providing a general overview of both costly (i.e. redispatching and countertrading) and non-costly remedial actions. The coherence of this process with the methodology for countertrading and redispatching developed in accordance with Article 35 of CACM (hereinafter: CTRD methodology) and approved by IN NRAs on 17 May 2019 shall nonetheless be assessed: if needed this latter methodology shall be amended to ensure consistency with the IN ROSC.

All the details about the optimization process shall be included in the ROSC: IN NRAs are aware that IN TSOs have requested guidance from IN NRAs, but they are not in a position to issue such guidance at this stage as further and more detailed explanations are required. IN NRAs thus suggest discussing these elements further in the coming months, in order to address this topic in a new version of the IN ROSC to be submitted 12 months after the approval of the current version.

The RSCs are rightly appointed: IN NRAs are fine with the proposed setup (based on a rotational principle) and on the assessment of its efficiency provided in the explanatory note. Governance details (e.g. arbitration process) are still missing and should be provided. Nonetheless IN NRAs are aware that from 1 July 2022 at the latest the RSC framework developed for each CCR according to Article 77 of SOGL will be substituted by the RCC framework established for each system operation region (hereinafter: SOR) according to the Regulation (EU) 2019/943 of the European Parliament

and of the Council of 5 June 2019 on internal market for electricity (in the following: IME Regulation): in particular RCC will be delegated all the SOGL coordinated tasks along with other ones as listed in Article 37 of IME Regulation. Italy North CCR is included in the Central SOR for which Coreso and TSCnet are likely to be established as competent RCCs: details about this establishment, along with the operational arrangements for the execution of the tasks delegated to the RCC, will be defined in the methodology in accordance with Article 35 of IME Regulation (hereinafter: RCC establishment proposal) whose approval is expected in early 2021. IN NRAs deem it necessary to ensure a consistency between what will be written in the RCC establishment proposal and what is included in the IN ROSC: SOGL coordinated tasks are in fact dealt with in both documents and the same provisions shall be included for sake of clarity. An amendment of IN ROSC may thus be required once the RCC establishment proposal is approved.

The implementation timeline of IN ROSC is quite long, lasting up to 55 months. IN NRAs appreciate the details about the different steps and their coherence with the ones foreseen for the CORE CCR. This would allow Coreso and TSCnet (that will be appointed as RSCs and likely as RCCs for both CCRs) to exploit synergies in the implementation hopefully leading to a faster than expected implementation. Nonetheless IN NRAs are concerned that the possibility to develop a simplified approach hasn't been assessed by IN TSOs yet. IN NRAs consider such assessment quite useful in order to check the possibility to achieve a minimum level of coordination before the implementation of the target process and, to this purpose, they would suggest aligning the IN ROSC to the ROSC for CORE CCR that foresees such assessment. Since a decision on the ROSC for CORE CCR is expected by November 2021, an amendment to IN ROSC for the simplified approach could be planned shortly after.

## NRAs amendments

As highlighted in the previous paragraph, there are a number of issues that will require future amendments of the IN ROSC and a potential amendment to the CTRD methodology. IN NRAs deem it necessary to include in the IN ROSC a binding timeline in order for the TSOs to commit to develop and submit such amendments in due time.

For this reason, IN NRAs intend to exploit the provisions of Article 5(6) of recast ACER regulation, requiring regulatory authorities to revise the terms and conditions and methodologies where necessary. Besides, a direct revision by IN NRAs is the most efficient way to proceed in this context: with the approval of the methodology, IN TSOs may, in fact, immediately start the implementation plan of the target process since the first two steps (high level business solution and tenders) are independent of the details of the optimization process and of the RCC setup that will be dealt with in the amendments.

Catching the occasion of this revision, IN NRAs intend to amend also other statements of the IN ROSC in order to improve the clarity of the proposal or to align this methodology with the provisions included in CSAm.

A comprehensive list of the proposed amendments is given below.

Here are the most relevant amendments:

- a) Modification of the definition of the secured area, to align the process with the CSAm provisions: in particular all elements equal or above 220 kV threshold are included in the XNE list and the TSOs have the right to exclude any element that is not a CNE of Italy North CCR and provided the removal is commonly agreed by IN TSOs and technical counterparty; moreover an element identified as XNE in another CCR may be included in the secured area of Italy North CCR only if it is deemed as overlapping XNE according to CSAm;
- b) Introduction of the possibility to involve the RSC(s) in the process to assess the cross-border relevance of new remedial actions in real time;

- c) New provision for the TSOs to communicate to the RSC(s) the new set of remedial actions identified in real time on behalf of the recommended one; this communication is deemed fundamental to ensure a proper level of coordination also with respect to these slight changes of remedial actions;
- d) New provision for the TSOs to avoid, while activating remedial actions in the fast activation process, any aggravation of constraints in control areas of TSOs not directly involved in the process;
- e) Changes to the implementation plan in order:
  - i. to remove the reference to the approval of CTRD methodology (since already approved on 17 May 2019);
  - ii. to include a binding deadline (9 months from approval) for the submission of a future version of the IN ROSC aimed to align the implementation plan of IN ROSC with the one foreseen for CORE CCR (including the assessment of a simplified approach) and to incorporate the provisions on how to take into account the impact of remedial actions on scanned elements in the optimization process;
  - iii. to include a binding deadline (2 years from approval) for the development of a new version of the CTRD methodology, in coherence with the provisions of IN ROSC;
  - iv. to include a binding deadline (6 months from approval of the RCC establishment proposal) to align the IN ROSC to the RCC setup;
  - v. to include a binding deadline (six months after step 2(c) is completed) for the TSOs to provide more details on how they intend to check that the remedial actions resulting from the optimization process are also the most efficient ones in terms of number of actions to be activated; this provision is stated in a general manner in the current version, but more details are expected during the execution of step 2(c) and shall thus be incorporated in the IN ROSC once available;

Here are the minor, mostly editorial, issues:

- a) Removal of the word proposal since the methodology is directly changed by the NRAs and can no longer be considered as a TSOs proposal;
- b) Deletion of the equivalence between XRAs and Cross Border Impacting RAs defined in the CTRD methodology: this should be assessed in the new version of CTRD methodology.
- c) Changes aimed to clarify the wording or to precise some CSAm provisions (e.g. the inclusion of remedial actions in the individual grid model) to avoid any misunderstandings;
- d) Grouping of all the reporting activities under Article 32;

The amendments were scrutinised by IN TSOs that provided the following comments:

- a) using the term voltage level instead of threshold while defining the secured area; accepted in the final version;
- b) modification of the provisions about the involvement of the RSC(s) in the process to assess the cross-border relevance of new remedial actions in real time; TSOs propose either to completely delete the provision or to simply foresee a communication of some remedial actions to the RSC(s); IN NRAs prefer to keep a minimum involvement and thus accept the communication as suggested by IN TSOs;
- c) changes in the timeline for providing the high level business solution (step 2(a)) in order to take into account that some relevant details about how to take into account the impact of remedial actions in the optimization will be defined only at a later stage, following a discussion with NRAs on the topic; IN NRAs acknowledge the request and foresee the completion of step 2(a) by 3 months after the approval of the amendment dealing with the above mentioned impact;
- d) restoration of the provisions about the interim approach that was discussed in the interaction with IN NRAs after the submission of the proposal, but that was not included in the proposal circulated for comments; IN TSOs deem it useful to explore the opportunity to develop such simplified approach; IN NRAs agree with the usefulness of such interim approach: they didn't include the interim approach in the proposal circulated to the TSOs because they would prefer to wait for the

approval of the ROSC for CORE CCR (that includes similar provisions about a interim approach), but they are fine to have these provisions in the methodology to be approved;

- e) recommendation to extend the deadline of 9 months for the amendment of the ROSC related to the impact of remedial actions in the optimization process; the proposed time is too short, since IN TSOs require a proper guidance from NRAs on this topic; IN NRAs acknowledge the situation and grant three more months; the deadline thus becomes 12 months instead than 9 months;
- f) addition of a provision about the number of remedial actions in the Annex describing the optimization function; it's a general provision, pending more sophisticated details to be included in a future amendment due six months after step 2(c) is completed; accepted in the final version.

#### **IV. Conclusions**

IN NRAs have consulted and closely cooperated and coordinated to reach agreement that they amend and adopt the IN ROSC proposal submitted by IN TSOs pursuant to Article 76 of SOGL: the legal basis for the direct amendments by IN NRAs lies on Article 5(6) of recast ACER Regulation. IN NRAs must make their national decisions to approve the IN ROSC, on the basis of this agreement.