



European Union Agency for the Cooperation
of Energy Regulators

ACER Implementation Monitoring Report

of the Network Code
on Emergency
and Restoration

21 December 2021



ACER

Implementation Monitoring Report

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1. Purpose, scope and data

1.1 Purpose

- 1 This is the first Implementation Monitoring Report ('the Report') presenting the progress towards the implementation of Commission Regulation (EU) 2017/2196 of 24 November 2017, establishing a Network Code on Electricity Emergency and Restoration ('NC ER')¹.
- 2 Article 32(1) of Regulation (EU) 943/2019 requires the European Union Agency for the Cooperation of Energy Regulators ('ACER') to monitor and analyse the implementation of the Network Codes and the Guidelines adopted by the European Commission ('Commission'). Furthermore, ACER shall monitor their effect on the harmonisation of applicable rules aimed at facilitating market integration, as well as on non-discrimination, effective competition and the effective functioning of the market, and report to the Commission.
- 3 The primary purpose of the Report is to fulfil the above-mentioned legal obligation to monitor the implementation of the NC ER. The Report further aims at:
 - identifying potential challenges in implementing the NC ER, and
 - recommending concrete actions and best practices that can lead to a more efficient implementation.
- 4 In the remainder of this Report, all the legal references to articles are to be understood as referring to the NC ER, unless specified otherwise.

1.2 Scope

- 5 In accordance with Article 55, the NC ER entered into force on 18 December 2017. However, Articles 15(5)-(8), 41 and 42(1)-(2) and (5) shall apply from 18 December 2022, pursuant to the second sentence of Article 55. These provisions are thus out of scope of the Report.
- 6 The scope of the Report covers the following areas:
 - Regulatory aspects referred to in Articles 4, 11, 12, 23 and 24;
 - Coordination and consultation referred to in Articles 6, 7, 11 and 23;
 - General provisions of the system defence plan referred to in Articles 6, 12 and 15;
 - General provisions of the restoration plan referred to in Article 24;
 - Suspension and restoration of market activities referred to in Articles 35, 36, 38 and 39;
 - Requirements for the backup control room and essential substations referred to in Article 42;

¹ <https://eur-lex.europa.eu/eli/reg/2017/2196>

- Costs assessment referred to in Article 8;²
- Agreements with Transmission System Operators ('TSOs') of non-EU countries referred to in Article 10;
- Automatic under-frequency control scheme referred to in Article 15.

1.3 Data

- 7 In order to perform the task of monitoring the implementation of the NC ER, ACER has requested 30 National Regulatory Authorities ('NRAs') to fill in a survey. The survey included detailed questions on the implementation of specific and general NC ER provisions related to the areas described above in the Scope section. All the questions and NRA's responses are presented in the Annexes of the Report.
- 8 Table 1 lists all the contacted NRAs³. It can be noted that 27 NRAs are from the EU Member States, whereas 3 are from non-EU countries. In the case of the United Kingdom, the questionnaire was sent to both the Utility Regulator (UR), regulating the electricity, gas, water and sewerage industries in Northern Ireland (UK-NIR), and Ofgem, the independent NRA, regulating the electricity and gas sectors in Great Britain (GB).

Table 1. List of contacted NRAs

National Regulatory Authorities from EU Member States and Norway					
1. E-Control	AT	10. EV	FI	19. PUC	LV
2. CREG	BE	11. CRE	FR	20. REWS	MT
3. EWRC	BG	12. RAE	GR	21. ACM	NL
4. CERA	CY	13. HERA	HR	22. URE	PL
5. ERO	CZ	14. MEKH	HU	23. ERSE	PT
6. BNetzA	DE	15. CRU	IE	24. ANRE	RO
7. DUR	DK	16. ARERA	IT	25. Ei	SE
8. ECA	EE	17. NERC	LT	26. AGEN-RS	SI
9. CNMC	ES	18. ILR	LU	27. RONI	SK
				28. NVE-RME	NO
National Regulatory Authorities from non-EU Countries					
29. Ofgem	GB	30. UR	UK-NIR		

- 9 Moreover, ACER circulated the survey on 26 August 2020 to the ACER Electricity Working Group⁴. By doing so, all the EU NRAs (with the exception of REWS (MT)) received the survey. NVE-RME (NO) has also received the survey on 26 August 2020. The survey was sent to REWS (MT) on 1 February 2021. Finally, the survey was circulated with Ofgem (GB) and UR (UK-NIR) on 30 November 2020.

² The provisions laid down in Article 8 of the NC ER refer to Article 37 of Directive 2009/72/EC. Note this Directive is no longer in force since 31 December 2020 and it has been repealed by Directive (EU) 2019/944. The provisions of Article 37 of Directive 2009/72/EC have been integrated in Article 59 of Directive (EU) 2019/944.

³ The complete list of abbreviation and country codes is in Annex III.

⁴ <https://www.acer.europa.eu/the-agency/organisation-and-bodies/working-groups-and-task-forces>

- 10 The results presented in the Report and the arising conclusions are based on the replies to the questionnaire as provided by the NRAs. Furthermore, NRAs were given the opportunity to amend and update their input to the survey with the cut-off date of 3 December 2021.

1.3.1 Preliminary information concerning Bulgaria, Cyprus, Malta and Norway

- 11 On 16 October 2020, CERA (CY) informed ACER that the NC ER is not applicable in CY based on the provision laid down in Article 2(6)⁵. Based on this communication, ACER excluded CY from all the analysis carried out in this Report.
- 12 As explained in the previous section, the questionnaire was also sent to NVE-RME (NO) as an EEA Member State. Since the NC ER has not been incorporated into the EEA Agreement yet, it is not applicable in NO until then. Hence, NVE-RME did not respond to the questions.
- 13 With regard to BG, ACER highlights that EWRC (BG) did not reply to the survey. ACER reasonably assumes that the status of the implementation of the NC ER in this Member State might be still pending. Despite the lack of communication from BG, this country has been included in the analysis carried out in this Report. For instance, when assessing the average level of implementation of a certain provision, BG is counted in the cluster of countries considered to compute average values.
- 14 The situation reported by REWS (MT) concerning the application of the NC ER in MT requires further clarification as follows.
- 15 A high-level overview of the power system in MT reveals⁶ that there is no TSO in this Member State. A single distribution system serves all electricity consumers. Furthermore, the function of the Distribution System Operator ('DSO') is carried out by the Enemalta, a vertically integrated power utility. The requirements regarding the unbundling of TSOs and DSOs do not apply to MT, which has derogations granted in Articles 43 (on the ownership unbundling of transmission systems and TSOs) and 35 (on the unbundling of DSOs) of Directive (EU) 2019/944⁷.
- 16 Moreover, REWS (MT) explains that the Maltese system qualifies as "small connected system" in accordance with the relevant definition in Article 2(43) of Directive (EU) 2019/944.
- 17 The absence of a TSO, the applicable derogations from Article 35 and 43 of Directive (EU) 2019/944 and the possibility of assessing the Maltese system as a "small connected system", led REWS (MT) to the conclusion that the NC ER is not applicable in MT.
- 18 Nonetheless, REWS (MT) informed ACER that it will ensure that the existing defence and restoration procedures implemented at the DSO level are fully documented. REWS (MT) will also seek the alignment of these procedures with the requirements of the NC ER as far as applicable to the Maltese system for the ultimate benefit of consumers. REWS (MT) was not able to reply to the full set of questions included in the circulated survey.

⁵ As for other NCs, the NC ER does not apply to transmission systems, distribution systems and interconnections, or to parts of the transmission system or distribution systems, of the islands of Member States of which the systems are not operated synchronously with either the Continental Europe, Great Britain, Nordic, Ireland and Northern Ireland or Baltic synchronous areas.

⁶ European Commission's Country Report:
https://ec.europa.eu/energy/sites/ener/files/documents/2014_countryreport_malta.pdf

⁷ Directive (EU) 2019/944 of the European Parliament and of the Council of 5 June 2019 on common rules for the internal market for electricity and amending Directive 2012/27/EU (<https://eur-lex.europa.eu/eli/dir/2019/944>).

2. Conclusions and recommendations

19 In light of the NRAs' replies and analysis performed for the Report, ACER has come to the following conclusions and recommendations:

2.1 The implementation of the NC ER is well on track...

20 Several NRAs reported decision-making issues concerning the proposals referred to in Article 4(2).

21 Concerning Article 6(1) on regional coordination, the vast majority of the NRAs reported that the respective TSOs have ensured the consistency of the corresponding measures in their system defence and restoration plans with the plans of TSOs within their synchronous area and in the plans of neighbouring TSOs belonging to another synchronous area.

22 Concerning Article 7(1), the public consultations on the proposals on regulatory aspects of emergency and restoration referred to in Article 4(2) were generally well conducted in most Member States. However, some NRAs reported that the consultations were not carried out for all the proposals listed in Article 4(2) because not all were submitted.

23 With regard to the consultations with relevant parties (e.g., DSOs, stakeholders, etc.) during the design of the system defence and restoration plans, ACER notes that they have been well conducted in most of the Member States.

24 ACER deems that the implementation of Chapter IV of the NC ER concerning the suspension and restoration of market activities has been duly completed in the vast majority of the Member States. ACER highlights the implementation of different approaches concerning the definition of a time delay prior to the suspension of market activities referred to in Article 36(5).

25 The implementation of Article 42 concerning tools and facilities is well on track among the monitored countries. All the responding NRAs confirmed that Article 42(3) has been duly implemented. Therefore, at least one geographically separate backup control room has been established in each of the monitored countries. Similarly, transfer procedures for moving functions from main control rooms to the backup control rooms have been put in place in accordance with Article 42(4). Moreover, with respect to Article 42(5), most of the NRAs confirmed that the essential substations are operational for at least 24 hours in case of loss of the primary power supply.

26 The implementation of Article 10 regarding agreements with TSOs not bound by the NC ER is also well on track. NRAs of all the Member States where this Article is applicable confirmed the conclusion of relevant agreements.

27 Furthermore, the settings and characteristics of the automatic low frequency demand disconnection schemes are fully compliant with the corresponding provisions of Article 15 in the vast majority of the monitored countries.

2.2 ...but full implementation is still pending.

28 ACER highlights that the situation analysed through the collected answers does not portray a complete and uniform EU-wide implementation of the NC ER.

- 29 The duly EU-wide implementation of the NC ER would guarantee a common set of minimum requirements and principles for the procedures and actions to be carried out specifically in the emergency, blackout and restoration states. Even though each TSO is responsible for maintaining operational security in its control area, the secure and efficient operation of the EU electricity system is a task shared between all the EU TSOs since all national systems are, to a certain extent, interconnected and a disturbance in one control area could affect other.
- 30 Hence, ACER underlines the importance of a correctly and fully implemented NC ER in order to establish technical and organisational measures aiming at preventing the propagation or deterioration of an incident in the national system and to avoid the spread of disturbances and worsening of system states to other control areas. The duly and harmonised implementation of the NC ER helps TSOs to efficiently and quickly restore the system back to normal state after a disturbance.
- 31 Based on the considerations above, ACER recommends NRAs to perform⁸ or promote⁹ an expeditious implementation of the NC ER. For example, although NRAs might not always represent the entities designated by the Member States to approve and implement the proposals referred to in points (a) to (d) and (g) of Article 4(2), it is still the NRAs' duty to ensure that relevant system operators and TSOs comply with the NC ER.
- 32 In particular, ACER urges a prompt implementation of those articles of the NC ER that have already entered into force on 18 December 2017. Moreover, ACER invites the relevant NRAs to ensure a timely and duly complete application of those provisions of the NC ER that will apply from 18 December 2022.
- 33 In particular:
- ACER invites the relevant NRAs to approve and monitor the relevant implementation of the measures laid down in the proposals referred to in Article 4(2).
 - ACER invites the relevant NRAs to ascertain the compliance of the system defence and restoration plans designed by the corresponding TSOs with the NC ER. The analysis demonstrates that, in some Member States, the system defence and restoration plans did not undergo noticeable changes following the entry into force of the NC ER.
 - Concerning Articles 11 and 12, almost 20% of the contacted NRAs (as in Figure 5) stated that the corresponding TSO(s) have not yet implemented the measures of the system defence plan that are to be implemented on the transmission system. Moreover, only 11% of the contacted NRAs reported that the DSOs, significant grid users ('SGUs') and defence service providers implemented the measures notified pursuant to Article 12 (as in Figure 6).
 - Concerning Articles 23 and 24, around 20% of the contacted NRAs (as in Figure 7) stated that the corresponding TSO(s) have not yet implemented the measures of the restoration plan that are to be implemented on the transmission system. Moreover,

⁸ Concerning those Member States where the NRAs are the only entity designated to approve relevant proposals of the NC ER.

⁹ Concerning those Member States where the NRAs is not the entity designated to approve relevant proposals of the NC ER.

only 18% of the contacted NRAs reported that the DSOs, SGUs and defence service providers implemented the measures notified pursuant to Article 24 (as in Figure 11).

- The implementation of Article 8(1) is still largely pending. Only 18% of the contacted NRAs confirmed the complete assessment of the costs borne by system operators subject to network tariff regulation and stemming from the obligations laid down in the NC ER (as in Figure 14).

34 Furthermore, ACER has not received feedback from EWRC (BG), which leads ACER reasonably to assume that the status of the implementation of the NC ER in this Member State might be still pending. ACER invites EWRC (BG) to report about the level of the implementation of the NC ER swiftly.

35 ACER acknowledges REWS' (MT) proactive efforts in ensuring the compliance of the defence and restoration plans in MT with the relevant provisions in the NC ER. However, ACER disagrees with REWS' (MT) opinion deeming the MT as falling outside the scope of the NC ER application.

36 Pursuant to the reasoning expressed by REWS (MT) and summarised¹⁰ in paragraphs (15)-(17) ACER believes that:

- The derogations granted under Article 66 of the Directive (EU) 2019/944 exempt MT from the requirements concerning the unbundling of the TSOs and DSOs. This does not imply, however, that the NC ER is not applicable in MT. Also, the NC ER does not recall any of the above-mentioned derogations as a distinctive element for its application (Article 2).
- The additional derogations¹¹ envisaged by Article 66 of the Directive (EU) 2019/944 and applicable to "small connected systems" should be granted by the European Commission following an application from the Member State. ACER is not aware of such request. Moreover, the possible additional derogations potentially granted to "small connected systems" do not specifically refer to the application of the NC ER. In other words, the assumption that "small connected systems" are not subject to the NC ER due to their small size does not seem to be valid.
- A TSO is not the only entity subject to the obligations stemming from the NC ER. As made explicit in Article 2, the NC ER shall apply to several additional entities¹² which may be present in MT. Hence, the absence of a TSO in MT does not necessarily imply that the provisions in the NC ER do not apply in MT.
- Finally, despite the absence of a TSO in MT, parts of the Maltese network, which is entirely operated by one DSO, reach high-voltage levels (up to 132 kV¹³), which are typical also of transmission systems. Although having DSOs managing high-voltage

¹⁰ The relevant REWS' answer is provided in full in Section 2.1.2 of Annex I.

¹¹ From Articles 7 and 8 and of Chapters IV, V and VI of Directive (EU) 2019/944.

¹² Besides the TSO, Article 2 refers to DSOs, Significant Grid Users (SGUs), defence service providers, restoration service providers, balance responsible parties, balancing service providers, nominated electricity market operators ('NEMO') and other entities designated to execute market functions pursuant to Commission Regulation (EU) 2015/1222 and to Commission Regulation (EU) 2016/1719.

¹³ More information are available on the Enemalta's web site: <https://www.enemalta.com.mt/about-us/our-network/>. Note that Enemalta is the only DSO present in MT.

grids is not a unique situation among EU Member States¹⁴, a TSO is present in all other Member States where such situation is reported. Hence, the DSO in MT is also the only entity operating and responsible for the high-voltage part of the network. From a technical point of view, these peculiar circumstances make this DSO act as a TSO in MT. However, as long as the NC ER explicitly imposes certain obligations to the TSO, it would not be legally sound to assume the DSO's responsibility. Hence, ACER acknowledges the non-applicability claims raised by REWS insofar as they concern TSOs' responsibilities.

- 37 Based on the considerations highlighted in the bullet points above, ACER invites REWS (MT) to ensure that the applicable provisions laid down in the NC ER are duly implemented in MT.

¹⁴ A similar situation is reported in CY, EE, FR, IT, LT and LV. More info are available at https://cdn.eurelectric.org/media/1835/dso_report-web_final-2013-030-0764-01-e-h-D66B0486.pdf

3. Regulatory aspects

3.1 Objectives

38 This section deals with the provisions laid down in Article 4 (with references to further articles), establishing the regulatory aspects of the NC ER. The level of implementation of the following elements is monitored in the continuation of Section 3. In particular:

- Section 3.2: submission and approval of the proposals pursuant to Article 4(2)-(3);
- Section 3.3: the proposals for the terms and conditions to act as defence service provider and as restoration service provider (Article 4(4));
- Section 3.4: the notifications of the system defence plan and the restoration plan (Article 4(5)). When addressing these aspects, it is necessary to refer to Articles 11-12 and Articles 23-24, concerning the system defence plan and restoration plan, respectively;
- Section 3.5: the prior approval by the NRAs¹⁵ of the requirements, terms and conditions or methodologies established or agreed by TSOs, when so provided by the Member State (Article 4(6)); and
- Section 3.6: NRAs' decisions on complaints against a relevant system operator or TSO in relation to their obligations or decisions under the NC ER (Article 4(8)).

39 NRAs' responses in full are included in Section 2 of Annex I.

3.2 Submission and approval of proposals

40 In accordance with Article 4(2), paragraphs (a)-(g), the TSOs are responsible for drafting seven proposals. These are listed below for convenience:

- a) the terms and conditions to act as defence service providers on a contractual basis in accordance with Article 4(4);
- b) the terms and conditions to act as restoration service providers on a contractual basis in accordance with Article 4(4);
- c) the list of SGUs¹⁶ responsible for implementing on their installations the measures that result from mandatory requirements set out in Regulations (EU) 2016/631, (EU) 2016/1388 and (EU) 2016/1447 and/or from national legislation and the list of the measures to be implemented by these SGUs, identified by the TSOs under Article 11(4)(c) and Article 23(4)(c);
- d) the list of High-Priority SGUs¹⁷ referred to in Articles 11(4)(d) and 23(4)(d) or the principles applied to define those and the terms and conditions for disconnecting and

¹⁵ Or another competent entity designated by the Member State, in accordance with Article 4(6).

¹⁶ The Significant Grid Users are the existing and new power generating facility and demand facility deemed by the TSO as significant because of their impact on the transmission system in terms of the security of supply, including provision of ancillary services (<https://eur-lex.europa.eu/legal-content/EN/LSU/?uri=CELEX%3A32017R1485>).

¹⁷ 'high priority significant grid user' means the significant grid user for which special conditions apply for disconnection and re-energisation (definition in accordance with Article 2(3) of the NC ER).

re-energising the high priority SGUs, unless defined by the national legislation of Member State;

- e) the rules for suspension and restoration of market activities in accordance with Article 36(1);
- f) the specific rules for imbalance settlement and settlement of balancing energy in case of suspension of market activities, in accordance with Article 39(1);
- g) the test plan in accordance with Article 43(2).

41 Also, in accordance with Article 4(2), each TSO shall submit the abovementioned proposals to the relevant NRAs. However, a Member State may provide that the proposals referred to in points (a) to (d) and (g) of Article 4(2) may be submitted for approval to an entity other than the NRA¹⁸.

42 ACER has formulated three questions to the contacted NRAs in order to ascertain the status of the implementation of the provisions in Article 4(2)-(3). The outcomes of the collected answers are presented in sections 3.2.1-3.2.3.

3.2.1 Submission of the proposals to an entity other than the regulatory authority

43 ACER inquired the NRAs whether the Member State has provided that the proposals referred to in points (a) to (d) and (g) of Article 4(2) may be submitted for approval to an entity other than the NRA, pursuant to Article 4(3). The overview of NRAs' competences to approve the TSOs' proposals is presented in Figure 1.

¹⁸ In accordance with Article 4(3).

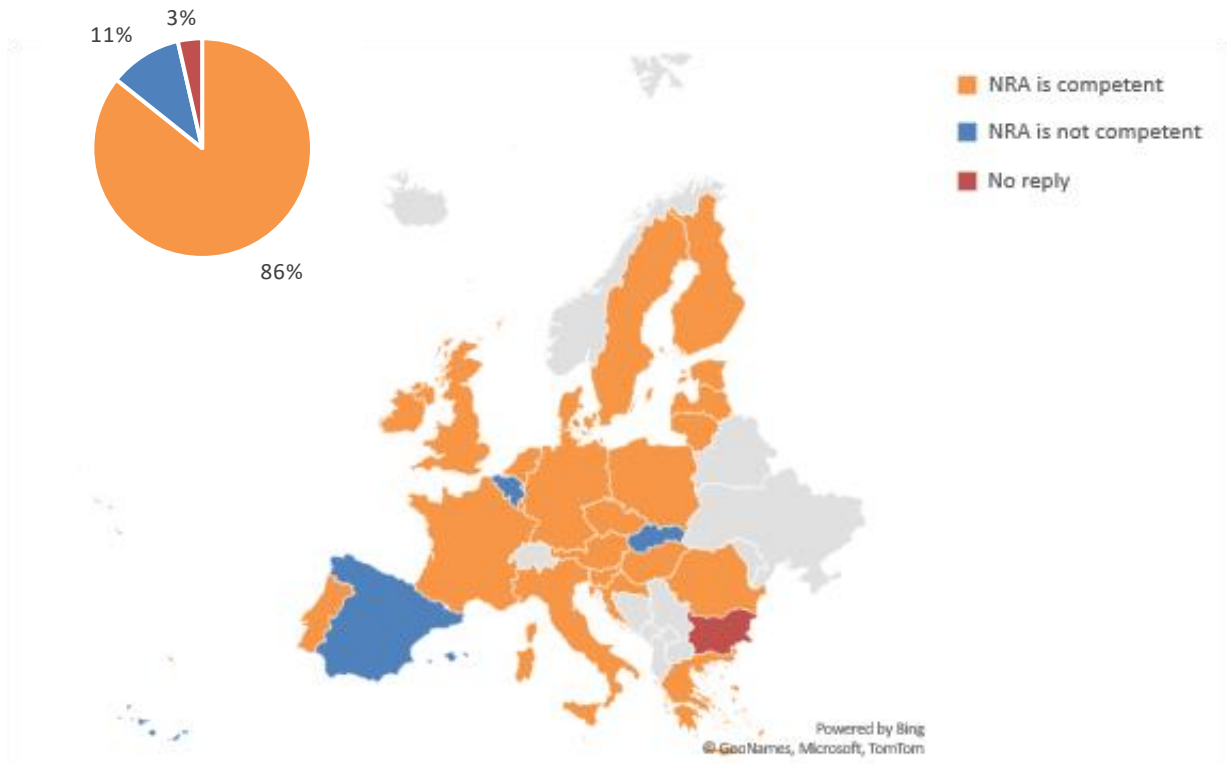


Figure 1. Responsibility of the NRAs regarding the approval of the proposals (Article 4)

44 The NRAs corresponding to the monitored countries coloured in orange¹⁹ are the entities responsible for the approval of the proposals referred to in points (a) to (d) and (g) of Article 4(2). ARERA (IT) reported that the proposal must also be submitted to the relevant ministry. NERC (LT) noted that requirements referred to in paragraphs (a) to (d) and (g) of Article 4(2) are currently implemented through the Minister of Energy's Order and by standard terms and conditions for transmission service agreements approved by NERC. Therefore, proposals are not adopted formally. However, according to NERC, as soon as national legislation is amended, relevant proposals will be submitted to the NRA. ACER infers that the competent entity in LT, responsible for the approval of the proposals referred to in points (a) to (d) and (g) of Article 4(2), is the NRA.

45 The monitored countries in blue²⁰ reported that the proposals referred to in points (a) to (d) and (g) of Article 4(2) may be submitted for approval to an entity other than the NRA (in accordance with Article 4(3)). In particular, CREG (BE) noted that proposals are to be submitted for approval to the Ministry of Energy (after the advice of the regulatory authority). Similarly, RONI (SK) reported that the Ministry of Economy is the competent authority to approve these proposals in the Slovak Republic, in accordance with the Energy Act 251/2012. CNMC (ES) reported that these proposals are to be submitted to the Dirección General de Política Energética y Minas (DGPEM).

46 EWRC (BG) did not answer this question (marked in red).

¹⁹ Representing 24 NRAs i.e., 86% of the responding NRAs.

²⁰ Representing 3 NRAs i.e., 11% of the responding NRAs.

3.2.2 Date of the submission of the proposals for approval

- 47 In the second question concerning the proposals referred to in Article 4(2), ACER invited the NRAs to communicate when the TSOs submitted the proposals. Results are reported in Table 2 for each of the responding NRA. In particular, each cell of Table 2 indicates the date of submission of each of the seven proposals (a)-(g) referred to in Article 4(2).
- 48 In accordance with the relevant provisions in the NC ER, the deadline for TSOs to submit proposals (a)-(f) was 18 December 2018, whereas the deadline for the last proposal (g) was on 18 December 2019. Moreover:
- The cells with green background indicate a timely submission of the proposals i.e., ahead of the relevant deadline or with a minor delay (up to 30 days after the deadline).
 - The cells in yellow highlight the occurrence of major delays (more than 30 days after the deadline) in the submission of the corresponding proposals.
 - The cells in grey refer to situations where the relevant proposals have not been submitted (default option) or need to be re-submitted (specified by text in the cell).
 - The cells in red indicate the lack of information from the corresponding NRA. ACER assumed that the implementation of the corresponding provisions of the NC ER is still pending.
- 49 It is worth mentioning that the dates included in Table 2 correspond to the first submission of the corresponding proposals. This does not necessarily imply that the implementation of the provisions of Article 4(2) is completed. In fact, in some cases, after receiving the initial proposals, NRAs requested TSOs to amend the initial versions and to re-submit the revised proposals. Further information regarding the decisions on the proposals issued by NRAs or designated entities is provided in Section 3.2.3. The overview on the status of the implementation of the proposals referred to in Article 4(2)(a)-(g), integrating both the submission and decision process, is provided in Section 3.2.4.
- 50 Overall, the NRAs have reported a timely submission of most of the proposals concerning Article 4(2)(a)-(g) from the relevant TSOs. Major delays (exceeding 30 days after the deadline) were registered in LT (one proposal submitted with a delay), AT, BE, GR and SI (concerning two proposals), RO (five proposals), and EE, GB and IT (six proposals). No information has been received from the NRA in BG. Finally, other NRAs²¹ confirmed that the relevant TSOs did not submit certain proposals.

²¹ BNetzA (DE), ECA (EE), UR (UK-NIR), RAE (GR), MEKH (HU), CRU (IE), ARERA (IT), PUC (LV), ACM (NL), URE (PL), ANRE (RO), Ei (SE) and AGEN-RS (SI)

Table 2. Submission of proposals referred to in Article 4

	Proposals in Article 4(2) of NC ER						
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
AT	11/12/2018	23/12/2018	05/7/2019	05/7/2019	12/12/2018	12/12/2018	11/12/2019
BE	18/12/2018	18/12/2018	09/10/2019	09/10/2019	18/12/2018	18/12/2018	25/11/2019
BG							
CZ	12/12/2018	12/12/2018	12/12/2018	12/12/2018	12/12/2018	12/12/2018	16/12/2019
DE		18/12/2018			18/12/2018	18/12/2018	17/12/2019
DK	18/12/2018	18/12/2018	18/12/2018	18/12/2018	18/12/2018	18/12/2018	17/12/2019
EE	01/10/2019	01/10/2019	01/10/2019	01/10/2019	31/01/2019	31/01/2019	
ES	18/12/2018	18/12/2018	18/12/2018	18/12/2018	18/12/2018	18/12/2018	18/12/2019
FI	11/12/2018	11/12/2018	18/12/2018	18/12/2018	11/12/2018	11/12/2018	18/12/2019
FR	20/12/2018	20/12/2018	20/12/2018	20/12/2018	20/12/2018	20/12/2018	23/12/2019
GB	20/12/2019	20/12/2019	20/12/2019	20/12/2019	21/01/2020	21/01/2020	20/12/2019
UK-NIR	Dec. 2018	Dec. 2018	Dec. 2018	Dec. 2018	Dec. 2018	Dec. 2018	
GR			Needs separate submission		03/9/2019	09/12/2019	
HR	31/10/2018	31/10/2018	05/12/2018	05/12/2018	21/11/2018	21/11/2018	18/12/2019
HU		18/12/2018	18/12/2018	18/12/2018	18/12/2018	18/12/2018	18/12/2019
IE	18/12/2018	18/12/2018	18/12/2018	18/12/2018	18/12/2018	18/12/2018	
IT	08/2/2019	08/2/2019	08/2/2019	08/2/2019	08/2/2019	08/2/2019	
LT	11/11/2018	11/11/2018	11/11/2018	11/11/2018	18/12/2018	18/12/2018	02/03/2020
LU					21/12/2018	21/12/2018	21/12/2018
LV	18/12/2018	18/12/2018			18/12/2018	18/12/2018	23/3/2019
MT			To be resubmitted			To be resubmitted	
NL	18/12/2018	18/12/2018	18/12/2018	18/12/2018	18/12/2018		17/1/2020
PL		12/12/2018	18/12/2018		18/12/2018	18/12/2018	13/12/2019
PT	17/12/2018	17/12/2018	17/12/2018	17/12/2018	17/12/2018	17/12/2018	17/12/2018
RO	10/11/2020	Mar. 2019	01/10/2020	01/10/2020	26/2/2019	26/2/2019	
SE			18/12/2018	18/12/2018	18/12/2018	18/12/2018	To be resubmitted
SI			17/12/2018	17/12/2018	03/2/2019	03/2/2019	16/12/2019
SK	25/10/2018	25/10/2018	25/10/2018	25/10/2018	14/12/2018	21/11/2018	12/12/2019

- 51 ACER notes below further remarks provided by the NRAs.
- 52 BNetzA (DE) explained that the proposal concerning the terms and conditions to act as a defence service provider on a contractual basis (proposal (a)) was prepared on time. However, in coordination with TSOs, it was decided not to submit it based on the fact that the relevant requirements have already been fulfilled by all grid users via general technical requirements included in the network codes. Based on the information received from BNetzA on proposals (c) and (d), ACER is not able to conclude whether or how SGUs and the high-priority SGUs, referred to in paragraphs (c) and (d) respectively, are identified in DE.
- 53 The Danish TSO has submitted the proposals referred to in Article 4(2)(a)-(f) on time. However, the proposals have been amended and re-submitted on 26 August 2019. DUR (DK) confirmed that the amendment and resubmission of the proposals were pursuant to its formal request.
- 54 A similar situation was reported by CRE (FR). Although RTE, the French TSO, has submitted the proposal (g) with a minor delay, a request for amendment and re-submission was made by CRE (FR) on 17 June 2020. The new proposal (g) was submitted on 18 October 2021.
- 55 Pursuant to the first submission of proposals concerning Article 4(2)(a)-(f) in December 2018, UR (UK-NIR) requested relevant amendments to SONI (the TSO in UK-NIR) in October 2019. A revised version was submitted by SONI to UR in July 2020. After further minor comments, final versions of the proposals have been submitted by SONI on 16 October 2020 and UR reported that its decision is pending. UR communicated that the publication of the approved proposal was due in January 2021. However, the information received by ACER does not mention if these proposals have been published. In addition, UR reported that SONI expects to submit the proposal concerning Article 4(2)(g) in September 2021.
- 56 RAE (GR) confirmed that the proposals referred to in Article 4(2)(a), (b), (d) and (g) had not been submitted yet. Furthermore, the list of SGUs requested by Article 4(2)(c) was submitted as an appendix to the defence plan, and hence, the NRA asked the TSO to re-submit it as a separate proposal. RAE also asked the TSO to amend and submit again the proposal concerning Article 4(2)(e), which was resubmitted on 16 November 2020.
- 57 MEKH (HU) reported that the missing submission of the proposal concerning Article 4(2)(a) is a consequence of the defence services being mandatory in the Hungarian national legislation for the grid users. Hence, a proposal for terms and conditions to act as defence service providers on a contractual basis was not submitted.
- 58 NERC (LT) answered that Article 4(2)(a)-(d) and (g) have been practically implemented, arguing that requirements set in these articles were required by the Lithuanian national legislation. However, NERC confirmed that separate approvals for Article 4(2)(a)-(d) and (g) requirements are not yet accomplished, because changes in national law have not been done yet. NERC reported that it has not yet requested the TSO to submit proposals formally. The NRA's input points out that when future legislative changes are made at the national level to implement the EU Regulation, the TSO is obliged to resubmit revised proposals to NERC for approval in accordance with the requirements of Article 4(2)(a)-(d) and (g). Regarding proposals (e) and (f), NERC requested the TSO to revise the initial proposal. Lithuanian TSO resubmitted final versions on 11 August 2021.
- 59 The answer collected from ILR (LU) revealed that, the TSO has submitted all the proposals of Article 4(2)(e)-(g) and they have been approved. ILR acknowledged that there were no terms and conditions defined for defence service provider nor restoration service provider in

LU, pointing out that these services are provided by neighbouring TSO (Amprion), which operates the common Creos-Amprion Load-Frequency Control area.²² Moreover, ILR considers proposals (c)-(f) as not applicable because there is no identified SGU in LU.

- 60 In LV, the relevant TSO has not submitted the proposals concerning Article 4(2)(c)-(d). As reported by PUC (LV) concerning Article 4(2)(c), the TSO did not identify relevant SGUs, and hence, the list was not submitted. The proposal (d) has not been submitted because the TSO, in cooperation with Ministry of Economics, agreed that the high priority status cannot be granted to any grid user.
- 61 The Maltese NRA (REWS) reported that there is no TSO in MT since the country's electricity system is a small peripheral one²³. It led the NRA to further conclusions regarding the general applicability of specific provisions of the NC ER, as discussed in Section 2.2. REWS confirmed that it would endeavour to align the existing defence and restoration procedures with the requirements of the NC ER. Nevertheless, REWS did not report the submission of any proposal referred to in Article 4(2)(a)-(g).
- 62 The proposal concerning Article 4(2)(f) has not been submitted in NL. ACM (NL) reported that the provisions in this Article have already been implemented in the national regulation through the implementation of Article 18 of the Commission Regulation (EU) 2017/2195 establishing a guideline on electricity balancing. According to the national legislation, market parties are responsible for their imbalances regardless of the system state.
- 63 The Polish TSO has not submitted a proposal concerning Article 4(2)(a). However, URE (PL) reported that the terms and conditions to act as a defence service provider were established in the national legal framework as well as on a contractual basis. URE (PL) highlighted that all services secured by the TSO (and relevant to the system defence plan) are used not only in emergency states but are also of use in normal state. The NRA noted that these services will be assessed in accordance with the rules set out in the Commission Regulation (EU) 2017/1485 of 2 August 2017 establishing a guideline on electricity transmission system operation. Based on the information received, ACER is not able to ascertain the level of the implementation of Article 4(2)(a) in PL.
- 64 Furthermore, URE (PL) reported that the missing submission of the proposal concerning Article 4(2)(d) is due to the fact that all possible SGUs are already included in the proposal referred to in Article 4(2)(c). However, it is not clear whether all the SGUs referred to in Article 4(2)(c) are also high-priority SGUs in accordance with Article 4(2)(d).
- 65 ANRE (RO) communicated that technical requirements concerning proposal referred to in Article 4(2)(a) had been submitted. Terms and conditions referred to in Article 4(2)(b) are still discussed while the proposal had been submitted for prequalification. ANRE highlighted that part of the proposals regarding contractual frameworks had not been submitted yet. Similarly, proposal (g) has not been submitted by the TSO yet.
- 66 Ei (SE) reported that the proposals concerning Article 4(2)(a)-(b) were submitted on time but they are not applicable in SE. Although Ei (SE) did not provide further information concerning the non-applicability of the proposals, ACER may infer that this is due to the fact that defence and restoration services are not established on a contractual basis in SE, in accordance with

²² Creos is the TSO in LU.

²³ Which qualifies as a "small interconnected system" under Directive 2019/944.

Article 4(4)²⁴. It is worth noting that the proposals for Article 4(2)(e)-(f) have been revised and then resubmitted to Ei (SE) on 30 September 2019. In its answer, Ei (SE) has not reported whether the NRA requested such revision. Concerning proposal by the TSO referred to in Article 4(2)(g), Ei requested specific amendments to the proposal and awaits its resubmission.

67 Finally, AGEN-RS (SI) reported that the proposals concerning Article 4(2)(a)-(b) have not been submitted by the Slovenian TSO since contractual frameworks for both defence service providers and restoration service providers are not present in SI.

3.2.3 Decision on the proposals

68 Pursuant to Article 4(3), the NRA or, where applicable, the entity designated by the Member State, shall reach a decision on the proposals referred to in Article 4(2) within six months from the date of submission by the TSO.

69 ACER inquired the NRAs whether the decisions concerning the received proposals were issued. If so, NRAs, were asked to provide the date(s) of decision and relevant web link to such decisions. Moreover, ACER also sought further details concerning possible requests for amendments and subsequent approvals.

70 A summary of the results is presented in Table 3. More details, e.g., the exact dates of decisions, the relevant web link etc., are available in Annex I. For each of the seven proposals, as referred to in Article 4(2)(a)-(g):

- The cells in dark green indicate that a relevant decision has been issued within the six-months timeline envisaged in Article 4(3) or with a minor delay (less than 30 days after the deadline);
- The cells in light green indicate the late issue of a relevant decision (more than 30 days after the six-months deadline);
- The cells in yellow refer to situations where decisions have not been issued yet, although corresponding proposals have been submitted (as illustrated in Table 2)²⁵;
- The cells in grey indicate that the relevant TSOs have not submitted the corresponding proposal. Therefore, the NRA is not able to issue a decision;
- The cells in red indicate the lack of relevant communication from the NRA;
- The cells in white indicate that the TSO submitted the proposal and the NRA decided not to establish specific provisions (i.e., defence service provider or restoration service provider were not established on a contractual basis) or that the after consultation with the NRA, TSO decided not to submit the proposal.

²⁴ The terms and conditions to act as defence service provider and as restoration service provider shall be established either in the national legal framework or on a contractual basis. If established on a contractual basis, each TSO shall develop by 18 December 2018 a proposal for the relevant terms and conditions.

²⁵ Note that a late or a missing decision can be the result of one or more rounds of requests for amendments raised by the NRAs or, where applicable, the designated entities, which lead TSOs to revise and resubmit their proposals and wait for a decision.

Table 3. Status of proposals submitted in accordance with Article 4

	Proposals in Article 4(2)						
	a	b	c	d	e	f	g
AT							
BE							
BG							
CZ							
DE							
DK							
EE							
ES							
FI							
FR							
GB							
UK-NIR							
GR							
HR							
HU							
IE							
IT							
LT							
LU							
LV							
MT							
NL							
PL							
PT							
RO							
SE							
SI							
SK							

- 71 ACER notes below further remarks provided by the NRAs.
- 72 E-Control (AT), CREG (BE) and ERO (CZ)²⁶ issued relevant decisions within the envisaged deadlines. However, with respect to the decision on Article 4(2)(a), CREG (BE) concluded that, currently, there are no system defence services in accordance with NC ER²⁷. For this reason, the establishment of relevant terms and conditions specified in Article 4(2)(a) is not required. As soon as these services will be deemed as necessary, the Belgian TSO will need to submit relevant terms and conditions to CREG for approval.
- 73 BNetzA (DE) reported that the four submitted proposals – (b), (e), (f) and (g) – were approved with delays.
- 74 DUR (DK) reported that the proposals referred to in Article 4(2)(a)-(f) were approved on 15 January 2021, while the test plan proposed in accordance with Article 4(2)(g) has been approved on 14 January 2021. All decisions were made with a delay.
- 75 ECA (EE) reported that the Competition Authority had issued a single decision with a delay on 1 September 2020 concerning proposals referred to in Article 4(2)(a)-(d)²⁸. With regard to the approval of the proposals (a) and (b), ECA (EE) reported that the Competition Authority had not decided to establish terms and conditions for operating as a provider of defence and restoration services²⁹. Furthermore, it approved proposals (c) and (d); however, ECA stressed that in accordance with the relevant TSO's proposal, no priority network users had been identified in the Estonian electricity system.
- 76 CNMC (ES) reported that the relevant regulatory authority (DGPEM) requested minor changes in the proposals concerning Article 4(2)(a)-(d) in June 2019. It also noted that these proposals have not been approved yet. Proposal (g) also awaits the issue of a decision, while approval was granted only to the proposals (e) and (f), both with a delay.
- 77 CRE (FR) reported that after its request for amendment of proposal referred to in Article 4(2)(g), the TSO resubmitted it on 18 October 2021. CRE approved the proposal on 28 October 2021.
- 78 Ofgem (GB) reported that all the submitted proposals are still pending approval. A similar situation was also reported by UR (UK-NIR), where the NRA expects to issue relevant decisions soon.
- 79 RAE (GR) confirmed the approval of the proposal referred to in Article 4(2)(f) by a decision from 4 August 2020 (with a delay). RAE also requested some amendments to proposal (e), which has been approved on 31 December 2020 following TSO's resubmission. Further decisions on other proposals could not be issued since these proposals have not been submitted yet (as illustrated in Table 2).

²⁶ It is worth noting that, on 1 April 2020, ERO (CZ) re-approved the proposal concerning Article 4(2)(d), following the re-submission from the relevant TSO on 6 December 2019. This was due to an update of the list high priority SGUs.

²⁷ ACER's interpretation: CREG (BE) considers that, since there are no defence service providers on a contractual basis, establishing terms and conditions pursuant to Article 4(2) is not necessary.

²⁸ Another decision has been issued on 17 September 2019 by the Competition Authority concerning proposals (e) and (f).

²⁹ Further details are in §40(5) of the Electricity Market Act in EE.

- 80 HERA (HR) reported that all the submitted proposals were approved. All the decisions, however, were issued with a delay. MEKH (HU) approved proposals related to Article 4(2)(b) and (d) on 11 October 2019 and Article 4(2)(e)-(f) on 9 September 2019. The NRA reported that a decision on the proposal (g) is still pending, while no information was provided concerning proposal (c).
- 81 CRU (IE) reported that proposals (a)-(f) which were submitted by the relevant TSO, have been rejected by means of a decision issued on 2 September 2019. CRU had requested the TSO to revise and resubmit the proposals. On 10 February 2021, CRU (IE) approved revised proposals.
- 82 ARERA (IT) reported approval of all the submitted proposals (as in Table 2). All the decisions, however, were issued with a delay. ARERA also noted that the TSO's proposal refers to a decision of the NRA to define some details about the settlement rules in case of market suspension.
- 83 NERC (LT) informed that Article 4(2) points (a) to (d) and (g) have been practically implemented, because requirements set in these paragraphs are required by the Lithuanian national legislation. However, ACER cannot ascertain whether the implementation of Article 4(2)(a)-(d) and (g) in LT has been conducted in compliance with the NC ER. When answering this question, NRAs were not asked to confirm the compliance with the NC ER. Concerning proposals referred to in paragraphs (e) and (f) of the same article, NERC approved them within six-month deadline.
- 84 ILR (LU) reported that the proposals (e), (f) and (g) were approved on 20 September 2021, whereas proposals (a)-(d) were considered as not applicable in LU (see further details in Section 3.2.2).
- 85 REWS (MT) reported that the proposals had not been submitted yet (as in Table 2). It highlighted that the DSO has just started to work on formalising the existing defence and restoration procedures and the NRA will ensure that these are in line with the requirements of the NC ER, as far as applicable in the Maltese context.
- 86 ACM (NL) reported that all the submitted proposals (as in Table 2) are still pending approval. This situation is due to the Dutch national electricity code (*Netcode elektriciteit*) being currently under revision in order to implement the relevant provisions of the NC ER. It is worth pointing out that the proposals were submitted by the relevant TSO³⁰. Pursuant to these submissions, ACM has requested specific amendments to the proposals by addressing a letter to the TSO on 6 June 2019. In reaction to ACM's request, the Dutch TSO has submitted amended proposals on 12 September 2019. Final decision is expected in December 2021. More details can be found in the NRA's response presented in full in Section 2.1.3 of Annex I.
- 87 URE (PL) reported the approval of all the submitted proposals (as in Table 2). The decision on the proposal (g) was issued with a delay.
- 88 ERSE (PT) reported that all the submitted proposals (as in Table 2) are still pending approval. The NRA noted that the revision of national codes addressing the matters laid

³⁰ As indicated in Table 2 of this Report, 18 December 2018 is the date of submission of the proposals (a)-(e) of Article 4(2). The date of submission of the proposal referred to in Article 4(2)(g) is 17 January 2020. The proposal (f) has not been submitted by the TSO in NL.

down in Article 4(2) had already been scheduled, but the COVID-19 pandemic caused delays in such a revision.

- 89 ANRE (RO) communicated that technical requirements concerning the proposals referred to in Article 4(2)(a) and (b) had been approved, but the NRA awaits another part of those proposals (i.e., contractual framework) to be submitted by the TSO. Furthermore, ANRE requested some amendments to proposals (e) and (f) in August 2020, which are still pending approval. The NRA awaits the submission of the TSO proposal (g).
- 90 Ei (SE) reported that the proposal (g) had not been approved yet, while all the remaining, submitted proposals (as in Table 2) had been approved (proposals (e) and (f) with a delay).
- 91 AGEN-RS (SI) reported approval of all the submitted proposals (as in Table 2). Decisions pertaining to the proposals (c)-(f) were issued with a delay.

3.2.4 High-level summary on the implementation of Article 4(2)

- 92 Table 2 and Table 3 focused on the status of the implementation of Article 4(2), considering each NRA separately. This approach is particularly practical in monitoring the actual situation in a given country, e.g., assessing potential delays in the implementation process. However, the information and data provided in these tables may not effectively depict the status of the implementation at a broader European level.
- 93 Hence, Figure 2 aims to provide a high-level summary of the overall status of the implementation of the proposals (a) to (g) of Article 4(2) from a broader European perspective. To this end, each of the proposals of Article 4(2) is evaluated separately.

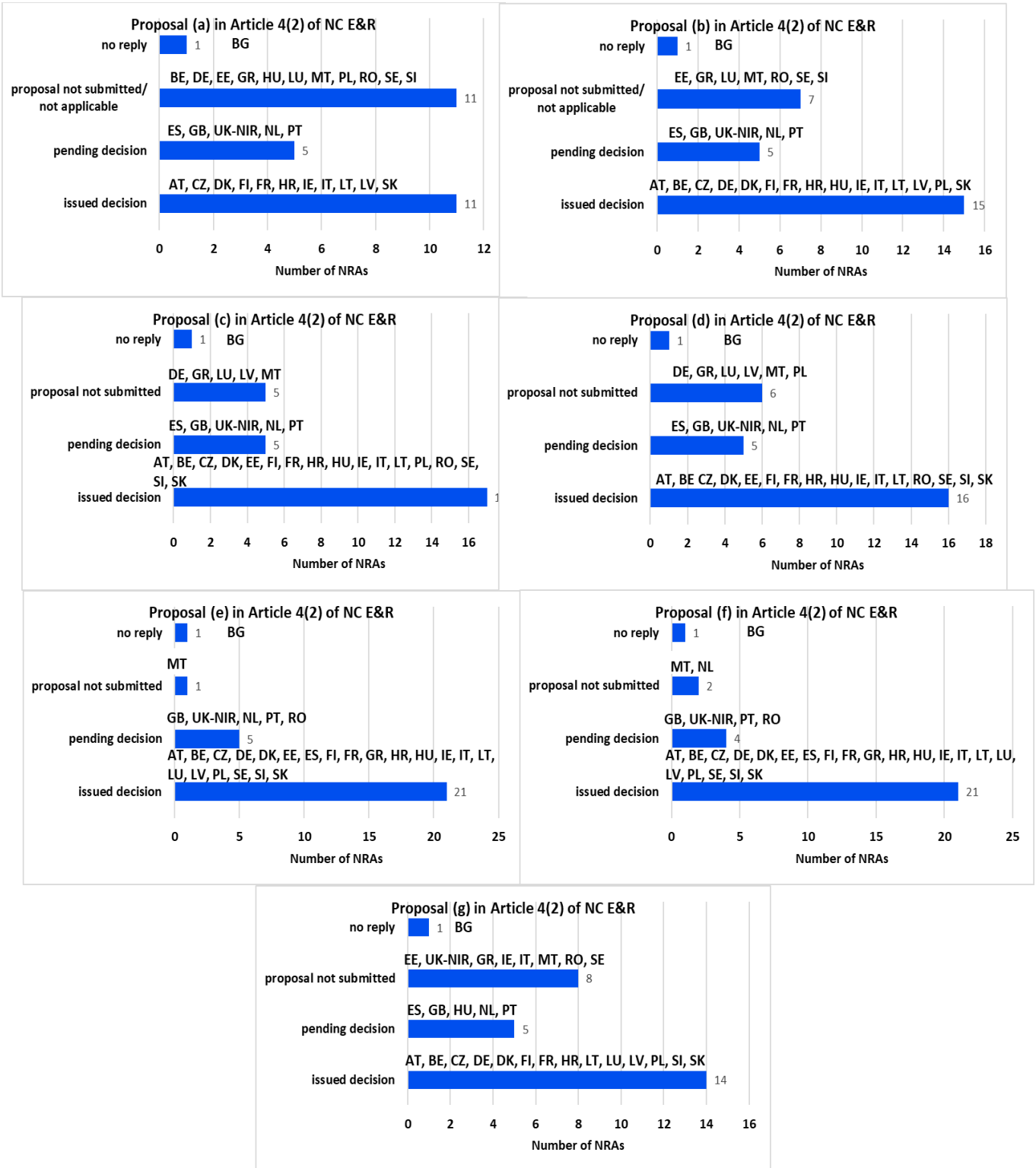


Figure 2. Status of the proposals' approval process by proposal

3.3 Terms and conditions

- 94 In accordance with Article 4(4), the terms and conditions to act as a defence service provider and a restoration service provider shall be established either in the national legal framework or on a contractual basis.
- 95 ACER inquired the NRAs to confirm whether these terms and conditions were established in their national legal framework or on a contractual basis. The analysis of the collected answers is in Sections 3.3.1 and 3.3.2 concerning the terms and conditions to act as a defence service provider or as a restoration service provider, respectively.

3.3.1 Terms and Conditions to act as a defence service provider

- 96 Figure 3 graphically summarises the answers collected from the NRAs. On the one hand, nine NRAs³¹ reported that these terms and conditions are established in their national legal framework (blue areas in Figure 3). On the other hand, E-control (AT),³² EV (FI), HERA (HR), NERC (LT) and ANRE (RO) confirmed that the relevant terms and conditions are established on a contractual basis (orange areas in Figure 3). Seven NRAs³³ stated that these terms are established in both the national legal framework and contracts (areas filled with an orange and blue pattern in Figure 3).
- 97 Finally, two NRAs (CREG (BE) and BNetzA (DE)) reported particular cases of not establishing frameworks for defence service providers. CREG did not approve applicable terms and conditions as there are no system defence services in BE at this stage. Based on BNetzA input, ACER understands that all grid users in DE shall fulfil specific technical requirements laid down in the national grid code. It remains unclear whether those grid users act as defence service providers,³⁴ i.e., whether they have a legal obligation to act accordingly and whether meeting technical requirements corresponds to contributing to the system defence plan's measures. Nevertheless, BNetzA directly stated that no framework for defence service providers was established. Therefore, since the implementation status in these two Member States cannot be ascertained, ACER cannot assign those two Member States to any of the categories mentioned above (grey colour on the map).

³¹ ERO (CZ), DUR (DK), ECU (EE), CNMC (ES), MEKH (HU), ACM (NL), Ei (SE), AGEN-RS (SI) and RONI (SK).

³² It is worth noting that the answer from E-Control (AT) referred twice to the restoration service provides. ACER believes that it was a typo and decided to group AT with the monitored countries where terms and conditions to act defence service providers are established on a contractual basis. This conclusion is consistent with the information provided by E-Control (AT) and included in Table 2 and Table 3.

³³ CRE (FR), Ofgem (GB), UR (UK-NIR), ARERA (IT), PUC (LV), URE (PL) and ERSE (PT).

³⁴ In accordance with Article 3(1).

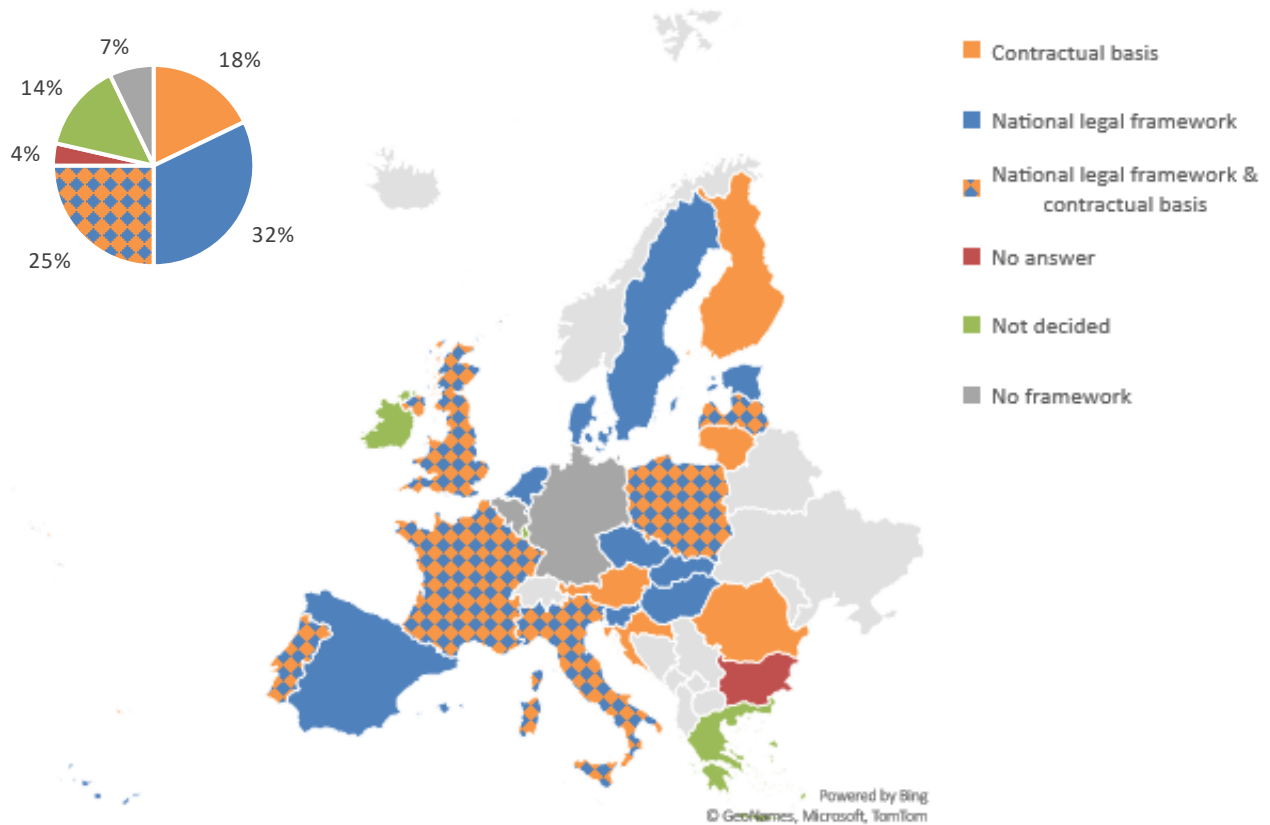


Figure 3. Type of framework for the terms and conditions to act as defence service provider

- 98 A final decision is still pending in GR, IE, LU and MT (green area in Figure 3). In particular, given the small size of the system in Malta³⁵, REWS (MT) reported that it was not deemed necessary to set specific terms and conditions within the national framework or on a contractual basis.
- 99 Finally, the EWRC (BG) did not provide any answer (red colour).

3.3.2 Terms and Conditions to act as a restoration service provider

- 100 Figure 4 graphically summarises the answers collected from the NRAs. On the one hand, five NRAs³⁶ confirmed that the relevant terms and conditions are established in their national legal framework (blue areas in Figure 4). On the other hand, nine NRAs³⁷ confirmed that these terms and conditions are established on a contractual basis (orange areas in Figure 4).

³⁵ Which is operated by one DSO.

³⁶ ERO (CZ), ECU (EE), CRE (FR), Ei (SE) and AGEN-RS (SI).

³⁷ E-Control (AT), CREG (BE), DUR (DK), EV (FI), HERA (HR), MEKH (HU), NERC (LT), ANRE (RO) and RONI (SK).

Eight NRAs³⁸ reported that the terms and conditions to act as a restoration service provider are established in both the national legal framework and on a contractual basis (areas filled with an orange and blue pattern in Figure 4).

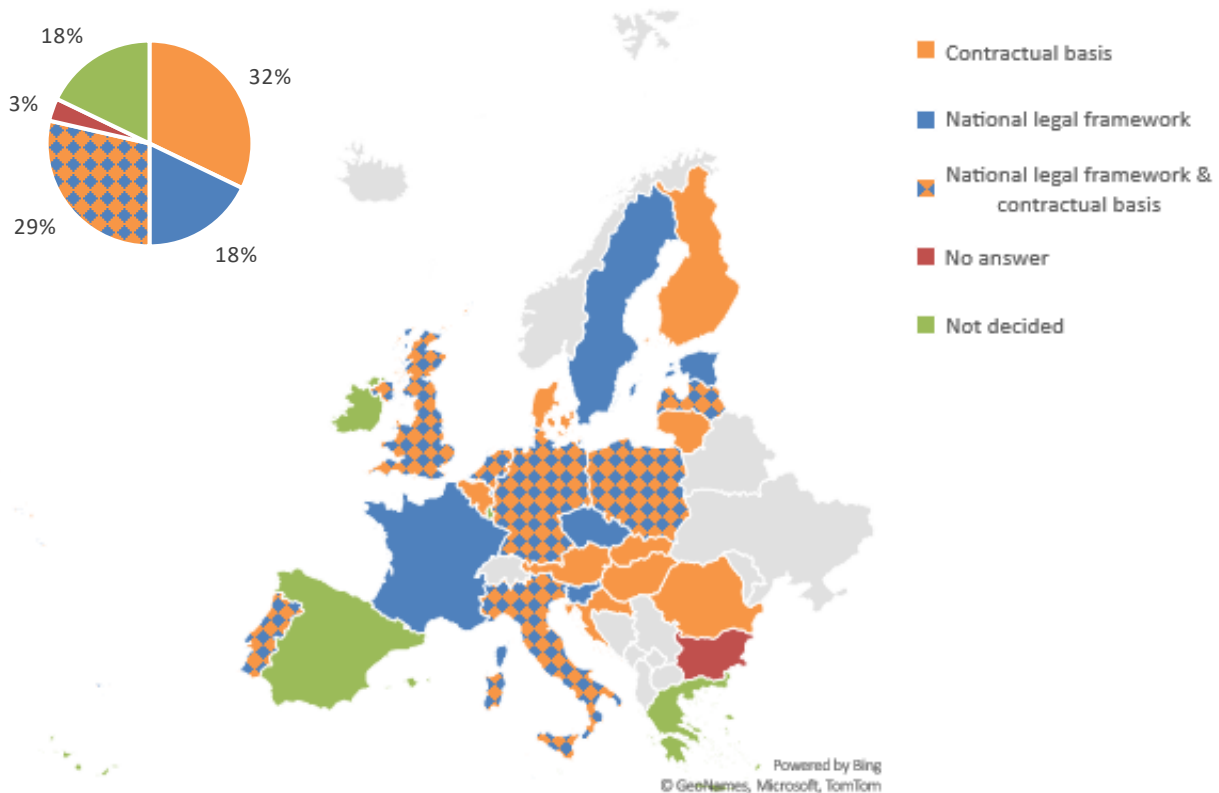


Figure 4. Type of framework for the terms and conditions to act as restoration service provider

- 101 A final decision is still pending in five Member States³⁹ (green area in Figure 4). REWS (MT) confirmed that the establishment of terms and conditions to act as a restoration service provider did not seem necessary due to the same reasons provided concerning the establishment of the terms and conditions to act as a defence service provider.
- 102 Finally, the EWRC (BG) did not provide any answer (red colour).

3.4 Notifications

- 103 Pursuant to Article 4(5), each TSO shall notify the NRA, or the entity designated by the Member State, of the system defence plan designed pursuant to Article 11 and the restoration plan designed pursuant to Article 23.

3.4.1 Notification of the system defence plan

- 104 ACER asked the NRAs to specify the date and the procedure of the notification of the system defence plan, whether the TSO notified at least the elements referred to in Article 4(5)(a)-

³⁸ BNetzA (DE), Ofgem (GB), UR (UK-NIR), ARERA (IT), PUC (LV), ACM (NL), URE (PL) and ERSE (PT).

³⁹ GR, ES, IE, LU and MT.

(d), and the compliance with the deadlines set out pursuant to Article 12 for the implementation of the measures.

105 Nine NRAs⁴⁰ reported that the corresponding TSOs fulfilled the obligations mentioned above in a timely manner. BNetzA (DE) explained that since the implementation of the system defence plan in accordance with the NC ER did not require the introduction/implementation of new measures, formal notification in accordance with Article 4(5) had not been made. Similarly, CNMC (ES), CRE (FR), UR (UK-NIR), MEKH (HU), PUC (LV) and ILR (LU) and URE (PL) specified that the relevant measures were already in force.

106 TSOs corresponding to three other NRAs⁴¹ did not respect the deadlines envisaged for the notification. Remarkable delays have been reported by RAE (GR) and ARERA (IT); ACER could not infer the level of implementation of Article 4(5) concerning the system defence plan in BE and EE since the answers provided by CREG (BE) and ECA (EE) are not fully clear.

107 Moreover, nine NRAs⁴² reported that the notification was carried out by the corresponding TSOs within the deadline set in Article 4(5). However, the compliance with the deadlines in Article 12 has not been univocally clarified. DUR (DK) claims that the deadline pursuant to Article 12 is set to follow that of Article 55 without providing further clarifications. CRU (IE) explained that the system defence plan was rejected because it did not contain the necessary details. After the plan's resubmission, CRU did not raise further concerns.. According to ACM (NL), the concerned parties have come to an agreement and the TSO will publish a public version of the system- and defence plan on its website shortly after the publication of the ACM decision. The answer provided by ERSE (PT) does not allow ACER to infer whether respective TSO complied with deadlines for the implementation set in Article 12, while Ei (SE) did not provide any information regarding implementation nor the inclusion of elements referred to in Article 4(5)(a)-(d). AGEN-RS (SI) reported that the process is still ongoing. RONI (SK) pointed out that it had not officially announced the implementation and did not provide further details.

108 ILR (LU) indicated that the notification had been done informally and the corresponding TSO is to submit the notification officially.

109 Finally, MEKH (HU) did not indicate whether the elements referred to in Article 4(5)(a)-(d) were notified. ANRE (RO) stated that the system defence plan had not been notified yet. Moreover, REWS (MT) reported that it does not consider the abovementioned obligations applicable in MT. ACER deems this claim justified, given the wording of Article 4(5). Furthermore, the NRA reported that the DSO is currently carrying out further investigation to evaluate the fitness of the measures of the defence plan implemented in MT and the corresponding provisions in the NC ER.

3.4.2 Notification of the restoration plan

110 ACER asked the NRAs to specify the date and the procedure of the notification of the restoration plan, whether the TSO notified at least the elements referred to in Article 4(5)(a)-(d), and the compliance with the deadlines set out pursuant to Article 24 for the implementation of the measures.

⁴⁰ E-Control (AT), ERO (CZ), BNetzA (DE), CNMC (ES), EV (FI), CRE (FR), HERA (HR), NERC (LT) and PUC (LV).

⁴¹ ECA (EE), Ofgem (GB), UR (UK-NIR).

⁴² DUR (DK), MEKH (HU), CRU (IE), ACM (NL), URE (PL), ERSE (PT), Ei (SE), AGEN-RS (SI) and RONI (SK).

- 111 The analysis of the collected answers concerning restoration plans showed that only eight Member States⁴³ fulfilled the legal requirements laid down in Article 4(5), i.e., notification within the deadline (or minor delays) of, at least, the elements in Article 4(5)(a)-(d), and implementation of these measures within the deadline. BNetzA (DE) explained that, since the implementation of the restoration defence plan in accordance with the NC ER did not require the introduction/implementation of new measures, formal notification in accordance with Article 4(5) has not been made.
- 112 Similarly, CNMC (ES), CRE (FR), UR (UK-NIR), MEKH (HU), PUC (LV) and URE (PL) specified that the relevant provisions were already in force. CNMC (ES) clarified that the set of implemented measures does not include those measures established in Articles 41, 42(1), (2) and (5), which shall apply from December 2022 onwards. It also noted that the terms and conditions to act as restoration service providers have not been approved yet.
- 113 Some TSOs did not meet the deadlines for the notification to their respective NRAs (in EE, GB, LU and UK-NIR). Responses provided by ARERA (IT) and CREG (BE) lead ACER to conclude the presence of similar issues concerning notification of the restoration plan as noted in Section 3.4.1.
- 114 Moreover, seven NRAs⁴⁴ reported that the notification was done within the deadline by the TSO, but did not confirm the implementation of the measures. DUR (DK) claims that the deadline pursuant to Article 24 is set to follow that of Article 55 without providing further clarifications. CRU (IE) explained that the plan was rejected because it did not contain the necessary detail. After the plan's resubmission, CRU did not raise further concerns. According to ACM (NL), the concerned parties have come to an agreement and the TSO will publish a public version of the restoration plan on its website shortly after the publication of the ACM decision. ERSE (PT) did not reply whether the elements referred to in Article 4(5)(a)-(d) have been notified. Furthermore, ERSE did not confirm the compliance with the implementation deadlines set out pursuant to Article 24. Ei (SE) did not provide any information regarding the implementation or the inclusion of elements referred to in Article 4(5)(a)-(d). RONI (SK) pointed out that it had not officially announced implementation and did not provide further details.
- 115 Finally, MEKH (HU) did not indicate whether the elements referred to in Article 4(5)(a)-(d) were notified. RAE (GR) and ANRE (RO) stated that the TSO had not notified complete restoration plan yet. REWS (MT) reported that it does not consider the abovementioned obligations applicable in MT. ACER deems this claim justified, given the wording of Article 24. Furthermore, the NRA reported that the DSO is currently carrying out further investigation to evaluate the fitness of the measures of the restoration plan implemented in MT and the corresponding provisions in the NC ER.

3.5 Prior approval requirement

- 116 Member States may require, under the conditions laid down in Article 4(6), a prior approval by the NRA, the entity designated by the Member State or other competent authorities of the Member State of the requirements, terms and conditions or methodologies that are not subject to approval in accordance with Article 4(2) and that are specified, established or agreed by the TSO.

⁴³ E-Control (AT), ERO (CZ), BNetzA (DE), EV (FI), CRE (FR), HERA (HR), NERC (LT) and PUC (LV).

⁴⁴ DUR (DK), CRU (IE), ACM (NL), ERSE (PT), Ei (SE), AGEN-RS (SI) and RONI (SK).

- 117 In relation to this provision, ACER asked the NRAs to specify if the Member State has required such prior approval and, if so, to specify the requirements, terms and conditions or methodologies, providing the references (e.g. web link) to the relevant approval(s).
- 118 Ofgem (GB) reported that the documents required by Article 4(2) have been submitted to the regulatory authority and are pending approval. Ofgem also provided a link with the list of all the associated documents pending approval, including the methodologies. In BE, approvals from the Ministry of Energy require the advice of CREG (BE).
- 119 None of the other NRAs that answered this question reported that their corresponding Member State applied Article 4(6). CNMC (ES) reported that it has no information in relation to this question.

3.6 Complaints about decisions

- 120 Pursuant to Article 4(8), any party can raise a complaint against a relevant system operator or TSO in relation to that relevant system operator's or TSO's obligations or decisions under the NC ER and may refer the complaint to the NRA which, acting as dispute settlement authority, shall issue a decision within two months after the receipt of the complaint.
- 121 Hence, ACER inquired whether NRAs have issued any decision following the receipt of a complaint pursuant to Article 4(8). None of the NRAs reported the issue of relevant decisions. NRA from BG did not answer the question.

3.7 High-level summary

- 122 ACER aimed to monitor the level of the implementation of the regulatory aspects laid down in Article 4 and with references to Article 11 and Article 23.
- 123 Overall, the conducted analysis revealed that the implementation of Article 4 is still pending. Several NRAs confirmed the submission from the relevant TSOs of the proposals in Article 4(2). However, the approval and/or the consequent actual implementation of the measures laid down in these proposals may not have been reached or completed yet.
- 124 In addition, ACER understands that the fundamental structure of the system defence plans or restoration plans in some Member States has not remarkably changed after the entry into force of the NC ER. This follows from the consideration that the definition, validation and maintenance of these plans have been fundamental tasks of TSOs for decades.
- 125 ACER, therefore, acknowledges the justifications provided by some NRAs with regard to TSOs not submitting⁴⁵ certain proposals or notifications. However, based on the responses provided by the NRAs, ACER does not have enough information to ascertain whether the structures and measures of the system defence and restoration plans that have not undergone major changes after the entry into force of the NC ER fully comply with the EU Regulation.

⁴⁵ Or with remarkable delay.

4. Coordination and consultation

4.1 Objectives

- 126 Under Article 6, TSOs are obliged to ensure minimum levels of coordination with other TSOs in the design and review of defence and restoration plans. Moreover, Article 7 requires TSOs to carry out public consultations before approving some of the proposals referred to in Article 4(2).
- 127 In particular, Article 6 defines the procedures that each TSO shall comply with in order to implement coordination at regional level i.e., with other TSOs within its synchronous area and with neighbouring TSOs belonging to another synchronous area. This coordination concerns the design of the TSO's system defence plan pursuant to Article 11 and its restoration plan pursuant to Article 23 or when reviewing TSO's system defence plan pursuant to Article 50 and its restoration plan pursuant to Article 51.
- 128 Furthermore, Article 7 establishes that each TSO shall consult stakeholders, including the competent authorities of each Member State, on proposals subject to approval in accordance with paragraphs (a), (b), (e), (f) and (g) of Article 4(2).
- 129 In this context, ACER included eight questions in the survey that was circulated with the NRAs:
- a) The first question aims to monitor the compliance with the regional coordination procedure laid down in Article 6(1);
 - b) The second question deals with the submission of the measures of the system defence and restoration plans to the relevant Regional Security Coordinator(s) (RSC(s)), in accordance with Article 6(3);
 - c) The third, fourth and fifth questions concern the technical report that the RSC(s) must develop after receiving the abovementioned measures at point b), in accordance with Article 6(3) and (4);
 - d) The sixth, seventh and eighth questions focus on the consultation procedures pursuant to Article 7, and in accordance with Article 11 concerning the design of the system defence plan and Article 23 with respect to the design of the restoration plan.
- 130 The implementation of the provisions concerning the coordination and consultation procedures are analysed in the continuation of this Section, while the NRAs' responses in full are included in Section 3 of Annex I.

4.2 Regional coordination concerning the system defence and restoration plans

- 131 Article 6(1) stipulates that when designing and reviewing the system defence and restoration plans, each TSO shall ensure consistency with the corresponding measures in the plans of the TSOs within the same synchronous area and with neighbouring TSOs belonging to other synchronous areas.
- 132 ACER asked the NRAs to explain how such regional coordination has been implemented by the respective TSOs.

133 Almost all NRAs that answered this question confirmed that this consistency was attained through bilateral and/or multilateral discussions, contacts, agreements, exchanges between experts, coordination processes, consultations, meetings and/or checks, as well as with the Synchronous Area Framework Agreement when applicable. Nevertheless, REWS (MT) reported that a consultation regarding the implementation of NC ER (and thus cornering the defence and restorations plans) has not taken place.

4.3 Submission of the measures in Article 6(1) by the TSO to the RSC(s)

134 Pursuant to Article 6(3), by 18 December 2018, each TSO shall transmit the measures listed in Article 6(1) to the relevant RSC(s). ACER asked NRAs to report whether and when the respective TSOs had submitted the measures listed in Article 6(1) to the relevant RSC(s), in order to check the compliance with the deadline set in Article 6(3) and with other steps of the process detailed in Article 6(4) (outlined in Table 4 below).

Table 4. Process of regional coordination, in accordance with Article 6

Step	When	By	To / With	Legal basis
1 - Submission of the measures	By 18 December 2018	Each TSO	To RSCs	Article 6(3)
2 - Drafting of a technical report	Within three months after the submission	RSCs	With the assistance of relevant TSOs	Article 6(3)
3 - First report from RSC(s) to the TSOs	Without delay, after the report is completed	RSCs	To the relevant TSOs	Article 6(4)
4 - First report from TSOs to NRAs	Without delay, after the report is received	Each TSO	To the relevant NRA and ENTSO-e	Article 6(4)

135 The analysis of the compliance with the first step in Table 4 is provided in this section. The analysis of the following three steps in Table 4 is provided in Sections 4.4.1-4.4.3.

136 The analysis of the answers collected from the NRAs showed that only the TSOs in DK, FI, GB and LV met the deadline set in Article 6(3) when submitting the measures listed in Article 6(1) to the relevant RSCs.

137 REWS (MT) stated that this provision is not applicable in its jurisdiction, as there is no TSO in MT and the system operator does not cooperate with any RSC. ACER deems that as far as TSO's obligations are concerned, this claim finds justification in the legal provisions. ECA (EE) did not reply to this question.

138 Finally, the remaining NRAs reported that the respective TSOs did not meet the deadline, since the submission occurred several months after the deadline, 18 December 2018.

4.4 Technical report referred to in Article 6(3) and (4)

- 139 Pursuant to Articles 6(3) and (4), the RSC(s) shall produce a technical report on the consistency of the measures received from the TSOs and referred to in paragraphs (1) and (2) of the same Article. This report must be produced within three months from the submission of the measures by the TSOs to the RSC(s) (step 2 of Table 4).
- 140 Once the report is completed, the RSC(s) must transmit the report without delay to all the TSOs involved (step 3 of Table 4). The TSOs shall in turn transmit it to the NRAs, as well as to ENTSO-E (step 4 of Table 4).
- 141 The analysis of the collected answers is provided in Sections 4.4.1-4.4.3.

4.4.1 Drafting of a technical report

- 142 Eight NRAs⁴⁶ confirmed that a technical report was produced by relevant RSC(s) within the three-month deadline established in Article 6(3).
- 143 Ei (SE) stated that the report was produced in September 2019. However, it was not possible to ascertain whether the three-month deadline has been respected since the NRA did not provide ACER with a specific date concerning the previous step in Table 4 (i.e. the submission of the measures by the TSO).
- 144 Finally, REWS (MT) repeated the same answer reported in Section 4.3. ECA (EE) did not reply to this question.
- 145 The RSC(s) relevant to the remaining NRAs did not meet the deadline, since the NRAs reported that the production of the report occurred later than the envisaged three-month deadline provided by the Article 6(3).

4.4.2 First report from RSC(s) to the TSOs

- 146 ACER asked the NRAs when the relevant RSC(s) transmitted the technical report referred to in Article 6(3) to the involved TSOs, i.e., Step 3 in Table 4.
- 147 Fifteen NRAs⁴⁷ confirmed that the report was transmitted to all the TSOs involved with no major delay (i.e. less than one month after it was produced). ACER was not able to assess the answer from Ei (SE) – the Swedish NRA confirmed that the technical report was transmitted to the involved TSO but did not provide any date. The compliance with the relevant provision in the NC ER is therefore subject to further confirmation from Ei.
- 148 Although ERO (CZ) and RONI (SK) confirmed that the technical report was produced in accordance with the envisaged timeline (Step 2 in Table 4), the report was then transmitted to all the TSOs involved several months after it was produced (Step 3 in Table 4).
- 149 REWS (MT) repeated the same answer reported in Section 4.3. ECA (EE) did not reply to this question.

⁴⁶ CREG (BE), ERO (CZ), CRE (FR), RAE (GR), MEKH (HU), CRU (IE), ARERA (IT) and RONI (SK).

⁴⁷ E-Control (AT), BNetzA (DE), DUR (DK), EV (FI), CRE (FR), Ofgem (GB), UR (UK-NIR), RAE (GR), HERA (HR), MEKH (HU), CRU (IE), PUC (LV), ACM (NL), ERSE (PT) and AGEN-RS (SI).

150 Finally, the RSC(s) referring to the TSOs of the remaining NRAs did not meet the deadline, since the corresponding NRAs reported that the transmission of the report occurred with considerable delays (i.e., over 30 days).

4.4.3 First report from TSOs to NRAs

151 Pursuant to the fourth and last step in Table 4 and in accordance with Article 6(4), a TSO shall transmit the technical report⁴⁸ received from the RSC(s) to the relevant NRAs, as well as to ENTSO-E.

152 Only four NRAs (CREG (BE), ERO (CZ), BNetzA (DE) and HERA (HR)) reported that the respective TSOs submitted the technical reports without major delays (i.e. less than 30 days after the report was received by the TSOs). In the case of AT, E-Control confirmed that the report was transmitted to the TSOs on January 2020, while the TSOs submitted it to the regulatory authority on 28 February 2020.

153 Ei (SE) specified that the technical report was received in December 2020, one year after the production of the report (Step 2). Due to the lack of clarity in the previous relevant answers from Ei (SE), ACER cannot infer whether there was a delay in the transmission of the report by the RSC(s) to the TSOs (Step 3) and/or in the submission of it by the TSOs to the relevant regulatory authority (Step 4).

154 Also, ECA (EE) replied that the technical report was received on 5th March 2020. However, the lack of answers to the previous questions prevent ACER from assessing where (i.e. steps 2-4) the compliance with the provisions in Article 6(3)-(4) has not been ensured.

155 Moreover, RAE (GR) replied that that the technical report has not been received yet.

156 REWS (MT) reported that the provisions in Article 6 should not apply in MT. ACER deems that, as far as TSO's obligations are concerned, this claim is justified under this Article.

157 Finally, The TSOs corresponding to the remaining NRAs submitted the report with major delays (i.e. over 30 days).

4.5 Public consultations

4.5.1 Public consultation on the proposals referred in Article 4(2)

158 Pursuant to Article 7(1), the relevant TSOs shall consult stakeholders, including the competent authorities of each Member State, on proposals subject to approval in accordance with points (a), (b), (e), (f) and (g) of Article 4(2). The consultation shall last for a period of not less than one month.

159 ACER asked the NRAs when the relevant TSOs have conducted the consultation, whether it has lasted at least one month, and to provide a reference to the call for public consultation (e.g. a web link).

The collected answers are summarised in the form of the table below (

⁴⁸ referred to in Article 6(3).

160 Table 5):

- A cell in green indicates that public consultations on a specific proposal referred to in Article 4(2) have been carried out;
- The use of yellow means that the public consultation has not been carried out because the corresponding proposal was not submitted (compare with Section 3.2.2 of this Report);
- Cells in red refer to the lack of a public consultation on a certain proposal despite the corresponding proposal having been submitted.

Table 5. Public consultations on proposals referred to in Article 4(2)

	Public consultation – proposals referred to in Article 4(2)				
	a	b	e	f	g
AT					
BE					
CZ					
DE					
DK					
EE					
ES					
FI					
FR					
GB					
UK-NIR					
GR				No web link	
HR					
HU		No web link	No web link	No web link	No web link
IE					
IT					
LT					
LU					
LV					
MT					
NL	No web link	No web link	No web link		No web link
PL					
PT					
RO					
SE					
SI					
SK					

- 161 Among the 27 responding NRAs, seven⁴⁹ confirmed that the consultation for every proposal subject to approval in accordance with points (a), (b), (e), (f) and (g) of Article 4(2) was conducted in accordance with the provisions laid down in Article 7(1).
- 162 Twelve other NRAs⁵⁰ indicated that consultations were held in relation to all the proposals under Article 4(2) that were actually submitted by the respective TSOs (those submissions are summarised in Table 2).
- 163 CREG (BE) reported that consultations on the proposals in accordance with points (b), (e), (f) and (g) of Article 4(2) were carried out and provided links to the websites. Concerning the proposal referred to in Article 4(2)(a), ACER understands that the Belgian TSO submitted it to the NRA without carrying out the public consultation. CREG explained that the lack of consultation was due to the fact that terms and conditions to act as a defence service provider are not applicable in BE. However, ACER notes that the TSO should have preceded the formal submission of the proposal with a public consultation in accordance with Article 7(1), in order to include stakeholders' views in the draft proposal prior to its submission. A similar situation was reported by RONI (SK).
- 164 NERC (LT) reported that relevant public consultations for proposals for Article 4(2) (e) and (f) requirements were performed. Public consultations for other implementation documents of Article 4(2) requirements were not performed according to ER NC requirements.
- 165 Moreover, REWS (MT) reported that no consultations had taken place in MT, pursuant to the lack of submitted proposals.
- 166 Finally, the implementation of Article 7(1) is also outstanding in some other Member States.⁵¹ The corresponding NRAs reported that stakeholders mentioned in Article 7(1) were consulted only on some proposals subject to approval in accordance with Article 4(2).

4.5.2 Consultation with stakeholders during the design of the system defence plan

- 167 Pursuant to Article 11(1), each TSO shall design a system defence plan in consultation with the relevant DSOs, SGUs, national regulatory authorities, or entities referred to in Article 4(3), neighbouring TSOs and the other TSOs in its synchronous area. Hence, ACER asked the NRAs whether (and how) the TSOs conducted this consultation.
- 168 The analysis of the answers revealed that all the NRAs, with the exemption of RAE (GR), NERC (LT) and REWS (MT), confirmed that the respective TSOs carried out the relevant consultation by means of agreements, working groups, coordination processes, meetings, webinars, workshops and communications, as well as with the Synchronous Area Framework Agreement when applicable.
- 169 NERC (LT) reported that the consultation was not conducted since some provisions were already in place before the entry into force of the NC ER and other provisions have not been implemented yet.
- 170 Moreover, RAE (GR) stated that the implementation of this provision is in progress.

⁴⁹ E-Control (AT), ERO (CZ), DUR (DK), CNMC (ES), EV (FI), CRE (FR) and HERA (HR).

⁵⁰ BNetzA (DE), ECA (EE), UR (UK-NIR), RAE (GR), MEKH (HU), CRU (IE), ILR (LU), ARERA (IT), ACM (NL), URE (PL), Ei (SE) and AGEN-RS (SI).

⁵¹ BE, GB, LV, PT, RO and SK.

171 Finally, REWS (MT) replied that this obligation is not applicable in MT. ACER deems this claim justified, given the wording of Article 11(1).

4.5.3 Consultation with stakeholders during the design of the restoration plan

172 Pursuant to Article 23(1), each TSO shall design a restoration plan in consultation with the relevant DSOs, SGUs, national regulatory authorities, or entities referred to in Article 4(3), neighbouring TSOs and the other TSOs in its synchronous area. ACER asked the NRAs whether (and how) the TSOs conducted this consultation.

173 All 27 NRAs that answered this question, with the exception of BNetzA (DE), CNMC (ES), RAE (GR), NERC (LT) and REWS (MT), reported that the respective TSOs consulted those stakeholders as per Article 23(1) with agreements, working groups, coordination processes, consultations, meetings, webinars, workshops and communications, as well as with the Synchronous Area Framework Agreement when applicable.

174 BNetzA (DE) reported that, in its view, there was no need for consultation of the restoration plan. Nevertheless, bilateral contracts with black start unit operators are agreed and measures/procedures with relevant parties are permanently discussed and adjusted at technical expert's level. NERC (LT) reported that the consultation was not conducted since some provisions were already in place before the entry into force of the NC ER and other provisions have not been implemented yet. Similarly, CNMC (ES) stated that the restoration plan was already designed and implemented before the entry into force of NC ER, but the terms and conditions to act as a restoration service provider have not been approved yet.

175 Also, RAE (GR) reported that the implementation of this provision is in progress. REWS (MT) noted that this obligation is not applicable in MT. ACER deems this claim justified, given the wording of Article 23(1).

4.6 High-level summary

176 ACER reached the following conclusions regarding the implementation of the provisions on coordination and consultation⁵²:

- a) All TSOs have ensured the consistency of the measures in their system defence and restoration plans with the corresponding measures in the plans of TSOs within their synchronous area and in the plans of neighbouring TSOs belonging to another synchronous area.
- b) Only the TSOs in DK, FI, GB and LV met the deadline for the submission of the measures in Article 6(1) to the relevant RSCs, in accordance with Article 6(3).
- c) Only the RSC(s) of FR, GR, HU, IE and IT TSOs' complied with the deadlines concerning the drafting of a technical report and transmit it to the relevant TSOs, in accordance with Article 6(3) and (4).
- d) Although the public consultations on the proposals referred to in Article 4(2) were overall well-conducted according to Article 7(1), some NRAs reported that the consultations did not cover all proposals.
- e) The consultation with relevant parties during the design of the system defence and restoration plans has been well conducted in most of the Member States. Only RAE

⁵² Articles 6, 7, 11(1) and 23(1).

(GR), NERC (LT), REWS (MT) noted that the relevant TSOs did not conduct the corresponding consultations during the design of both plans (system defence and restoration). Similarly, the Spanish TSO did not conduct the consultation during the design of the restoration plan.

- f) Moreover, ECA (EE) did not reply to three questions related to the coordination process, so it was not possible to determine the level of implementation of the relevant articles of the NC ER. Finally, REWS (MT) claimed the non-applicability of the provisions discussed in this Section.

5. General provisions of the system defence plan

5.1 Objectives

- 177 Chapter II of the NC ER looks into system defence plans and requirements on the design and implementation of such plans. In order to monitor the compliance of the system defence plan implemented at national level with the relevant EU regulation, ACER included eight questions in the NRAs' survey:
- a) In accordance with Article 6(5), the first question aims to monitor when a TSO has agreed with all other TSOs of each capacity calculation region on a threshold above which the impact of actions of one or more TSOs in the emergency, blackout or restoration states is considered significant for other TSOs within the capacity calculation region;
 - b) The second question relates to the implementation of those measures of the TSO's system defence plan that are to be implemented in the transmission system, in accordance with Article 12(1);
 - c) The third, fourth, fifth and sixth questions concern the notifications of the system defence plan and the measures to be implemented in the respective installations, in accordance with Article 12(2)-(5);
 - d) The seventh question relates to the implementation of the measures notified which are to be implemented on the respective installations, in accordance with Article 12(6);
 - e) The eight question focuses on the submission of the report containing a detailed explanation of the rationale, implementation and impact of the measures to be implemented in the transmission system, in accordance with Article 15(9).
- 178 The implementation of the general provisions concerning the system defence plan is analysed in the continuation of this Section, while the NRAs' responses in full are included in Section 4 of Annex I.

5.2 Threshold on the impact of actions of TSOs

- 179 As provided in Article 6(5), all TSOs of each Capacity Calculation Region (CCR) shall agree on a threshold above which the impact of actions of one or more TSOs in the emergency, blackout or restoration states is considered significant for other TSOs within the capacity calculation region. In relation to this provision, ACER asked NRAs when the TSO had agreed with all other TSOs of each CCR on such threshold.
- 180 The analysis of the answers by most of the NRAs shows that the TSOs did not complete the implementation of Article 6(5). Some NRAs confirmed that the status of the implementation is still pending.⁵³ Other NRAs referred to the decision reached during the 59th meeting of the System Operation Committee in February 2020.⁵⁴ The committee decided to recommend

⁵³ DUR (DK), RAE (GR), ILR (LU), PUC (LV), ANRE (RO) and RONI (SK).

⁵⁴ CREG (BE), ERO (CZ), CNMC (ES), CRE (FR), HERA (HR), ARERA (IT), ACM (NL), URE (PL) and AGEN-RS (SI).

the TSOs of each CCR to consider the threshold put forward during the meeting when deciding on the threshold required by Article 6(5). More information is available in the minutes of the above-mentioned meeting⁵⁵. Although it stands out as an important contribution towards establishing common thresholds referred to in Article 6(5), the outcome of the meeting only represents a recommendation and formal decisions from TSOs need to be made.

181 BNetzA (DE), Ofgem (GB) and CRU (IE) also replied that the threshold was not defined. BNetzA reported that it was agreed between RG CE TSOs (acknowledged in SOC) that it is not possible to define such a common threshold. The NRA pointed out that the influence on neighbouring TSOs depends on several factors and has to be assessed in the individual situation.

182 In the case of GB, Ofgem reported that, since the GB system represents one single synchronous area, the provision in Article 6(5) is not applicable. ACER points out that the provision in Article 6(5) refers to an agreement between TSOs in the same CCR. Following the withdrawal of the United Kingdom from the EU, the former Channel and IU CCRs no longer constitute CCR in the meaning of Article 15 of the Commission Regulation (EU) 2015/1222 which had been recognised in ACER Decision 04-2021 on the Determination of Capacity Calculation Regions.⁵⁶ According to this decision, IE and UK-NIR are not part of any CCR as well, and hence, Article 6(5) is not applicable to them. CRU (IE) noted it as the reason, for a threshold not to be established.

183 E-Control (AT) stated that the Inter TSO Agreements had been established 10 to 15 years ago and evaluated within the timeframe of the NC ER implementation. However, based on this answer, ACER could not ascertain whether all TSOs in the relevant CCR (including Austrian TSO) agreed on a threshold referred to in Article 6(5).

184 Also, NERC (LT) replied that the relevant TSO submitted to the NRA the Regional Operational Security Coordination (ROSC)'s proposal pursuant to Article 76, 77 of Commission Regulation 2017/1485. Moreover, NERC claims that the submitted proposal fulfils the requirements set out in Article 6(5). On 27 May 2021 TSOs of Baltic CCR have commonly agreed on default thresholds required in Article 6(5), according to ENTSO-E System Operations Committee Proposal which was introduced in document "Choice of threshold for significant impact of actions in E&R".

185 Finally, ECA (EE) reported the existence of relevant agreements with BRELL,⁵⁷ while REWS (MT) reported that MT is not a part of any CCR.

5.3 Implementation of the measures of the system defence plan

186 Pursuant to Article 12(1), each TSO shall implement by 18 December 2019 those measures of its system defence plan that pertain to the transmission system. ACER inquired the NRAs regarding the level of implementation of these measures. Figure 5 provides a graphical summary of the collected answers and of the relevant status of the implementation of Article 12(1).

⁵⁵ https://eepublicdownloads.entsoe.eu/clean-documents/SOC%20documents/meetings/200212_SOC_Minutes_vFinal.pdf

⁵⁶ https://acer.europa.eu/sites/default/files/documents/Individual%20Decisions/ACER%20Decision%2004-2021%20on%20the%20CCR_0.pdf

⁵⁷ <https://tyndp.entsoe.eu/2016/insight-reports/baltic-synchronisation/>

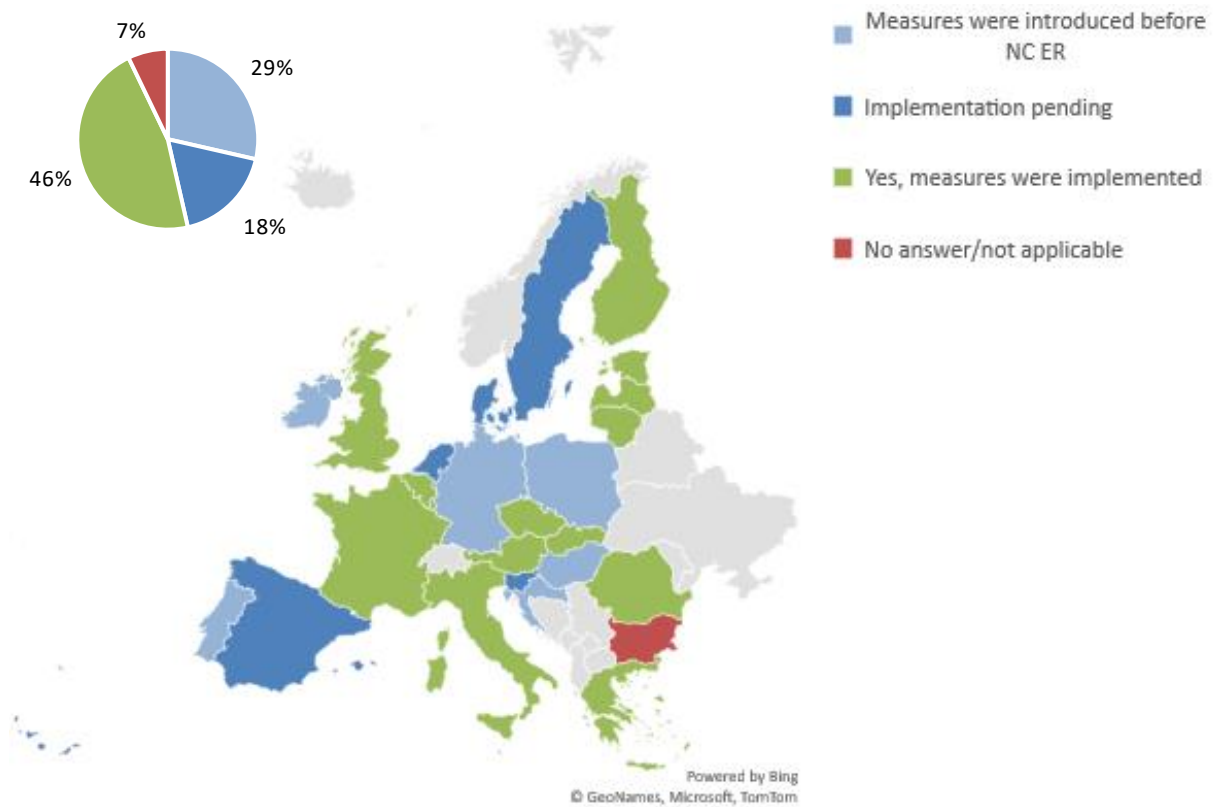


Figure 5. Implementation status of the system defence plan measures

187 The analysis of the answers demonstrated that the TSOs corresponding to five NRAs⁵⁸ (18% of the contacted NRAs) have not yet implemented all the relevant measures (dark blue areas). In particular, DUR (DK) mentioned that the implementation of some measures is pending, while CNMC (ES) indicated that the implementation of the new automatic under-frequency control scheme is still outstanding. ACM (NL) confirmed that not all of the certain provisions have been approved yet. AGEN-RS (SI) reported that the automatic scheme against voltage collapse has been almost implemented (not yet completed). ACER deems that the implementation is outstanding in IE, NL and SI until all relevant provisions have been implemented.

188 Upcoming revisions were mentioned by Ei (SE). Particularly, Ei indicated that the instruction to ensure reporting to the NRA in the event of manual load shedding is to be updated. Based on the information provided by these six NRAs, ACER can ascertain that implementation of the defence plans in these Member States is still pending.

189 Moreover, BG did not answer the question, which leads ACER reasonably to assume that the measures of the system defence plan in this Member State might be still pending (red areas).

190 REWS (MT) claimed that the provisions of Article 12(1) are not applicable to MT. ACER deems that, due to the lack of TSO in MT, this claim is justified (red area in the Figure 5).

191 The remaining 21 NRAs (approximately 75% of all the contacted NRAs enumerated in Table 1, excluding CERA (CY) and NVE-RME (NO)) confirmed that the TSOs implemented the

⁵⁸ DUR (DK), CNMC (ES), ACM (NL), Ei (SE) and AGEN-RS (SI).

measures of their system defence plans that are to be implemented on the transmission system. Although 14 of those NRAs indicated that the implementation followed the adoption of the NC ER (green areas in Figure 5), seven other respondents⁵⁹ reported that the measures in the defence plan and relevant to the transmission system were already implemented prior to the adoption of NC ER (light blue areas). These six NRAs did not report any changes or additions to the existing national provisions.

192 However, ACER cannot ascertain whether the implementation of the measures of the system defence plans concerning the transmission systems has been conducted in compliance with the NC ER. When answering this question, NRAs were not asked to confirm the compliance with the NC ER.

5.4 Notification of the measures

5.4.1 Notification of the system defence plan by the TSOs

193 In accordance with Article 12(2), by 18 December 2018 each TSO shall notify the transmission-connected DSOs of the measures, including the deadlines for implementation, which are to be implemented. ACER asked the NRAs to provide references regarding the notification.

194 RAE (GR) and PUC (LV) reported that their respective TSOs have not proceeded with the notification of the abovementioned measures to the transmission-connected DSOs.

195 However, RAE (GR) reported that, although some measures were implemented in the past, additional measures, related to the high penetration of renewables, are still being implemented. A similar situation was also reported by PUC (LV) – Latvian TSO will proceed with the notification after having implemented the measures relevant to the manual demand disconnection procedure.

196 Ofgem (GB), CRU (IE) and NERC (LT) reported that the measures have been implemented as required and TSOs did not need to notify transmission connected DSOs. For instance, in GB, the DSOs were aware of the relevant measures through the Grid Code Modification GC0127 and were able to contribute to the consultation on the system defence plan. CRU noted that the system defence plan had not required the implementation of additional measures, and thus, notification was not needed.

197 BNetzA (DE) and ERSE (PT) pointed out that that the measures contained in the defence plan were already implemented prior to the adoption of NC ER and did not clarify whether a formal notification occurred or not. BNetzA specified that national standards apply for manual and automatic measures and confirmed that both measures were subject to consultation between TSOs and DSOs.

198 Furthermore, REWS (MT) noted that there is no TSO in MT, and hence, the obligation is not applicable in its view, which is deemed justified by ACER. ECA (EE) did not reply to this question.

199 Finally, the remaining NRAs confirmed that the measures were notified, however TSOs from BE, IT, NL, RO and SI did not meet the deadline for notification, whereas UR (UK-NIR) did not report the date of notification.

⁵⁹ BNetzA (DE), HERA (HR), MEKH (HU), CRU (IE), URE (PL), ERSE (PT) and UR (UK-NIR).

5.4.2 Notification of the measures to be implemented

- 200 Pursuant to Article 12(3), by 18 December 2018, each TSO should have notified the SGUs or the defence service providers directly connected to its transmission system of the measures which are to be implemented on their installations, including the deadlines for the implementation. Moreover, Article 12(4) requires the DSOs connected to the distribution systems to be notified, when so provided for in national legislation.
- 201 Concerning these provisions, ACER inquired the NRAs regarding the dates of the notifications. In doing so, ACER aimed to monitor the implementation of Articles 12(3) and 12(4), respectively.
- 202 With respect to the notification to the SGUs or defence service providers in accordance with Article 12(3), UR (UK-NIR), RAE (GR) and PUC (LV) reported that the corresponding TSOs did not proceed with the notifications.
- 203 MEKH (HU) reported that the notifications did not take place arguing that there were no relevant measures to be implemented.
- 204 NERC (LT) informed that system defence plans were implemented before adopting ER NC so there was no need to notify the SGUs or the defence service providers directly connected to its transmission system regarding the measures which are to be implemented on their installations, including the deadlines for the implementation.
- 205 E-Control (AT), BNetzA (DE), CNMC (ES) and Ofgem (GB) stated that, since SGUs were already aware of these measures, the notification was deemed as unnecessary. ILR (LU) reported that there are no SGUs in Luxembourg.
- 206 It is worth noting that in case of the TSO corresponding to ERSE (PT) the notification was done one year after the deadline, while CREG (BE), CRU (IE) and ANRE (RO) reported a delay of over 18 months. ECA (EE) did not specify the date of notification, and thus, ACER is unable to assess compliance with the deadline.
- 207 Similarly, the answer submitted by Ei (SE) refers to the limited frequency sensitive mode – underfrequency ('LFSM-U') and limited frequency sensitive mode – overfrequency ('LFSM-O') only. Therefore, ACER infers that the TSO in SE did not notify SGUs or the defence service providers directly connected to its transmission system of all the measures which are to be implemented in their installations.
- 208 REWS (MT) reported that the documentation concerning the formalisation of the defence procedures will be communicated to the two local independent producers and the Italian TSO.
- 209 The remaining NRAs reported that the notification was done within the deadline.
- 210 Concerning the notification in accordance with Article 12(4), six NRAs (CNMC (ES), RAE (GR), MEKH (HU), CRU (IE), PUC (LV), REWS (MT)) reported that such notification is not applicable in their national legal framework.
- 211 UR (UK-NIR) reported that this notification did not occur yet, while HERA (HR) explained that the task concerning Article 12(4) was delegated to the DSO. ILR (LU), ERSE (PT) and AGEN-SI (SI) stated that there are no SGUs connected to the distribution system in their networks, therefore a notification is not needed. E-Control (AT), BNetzA (DE), Ofgem (GB)

and NERC (LT) stated that, since the SGUs were already aware of these measures, there was no need for notification.

- 212 DUR (DK) reported that although relevant SGUs were notified, it cannot confirm whether DSOs were informed about this notification. ARERA (IT) confirmed that DSOs had been notified only on the under-frequency disconnection plan through automatic load reducers.
- 213 Finally, based on the answers received from ECA (EE) and Ei (SE), ACER could not infer whether the relevant notifications were properly carried out in EE, LT and SE.
- 214 The remaining NRAs reported that the notification was done within a deadline⁶⁰, however, in the case of ERO (CZ), it was done by the DSO instead of the TSO.

5.4.3 Notification of the system defence plan by the DSOs

- 215 As laid down in Article 12(5), if the TSO notifies the DSOs in accordance with Article 12(2), the DSOs shall in turn notify the SGUs, the defence service providers and the DSOs connected to their distribution system of the measures of the system defence plan that they have to implement on their respective installations, including the deadline for their implementation.
- 216 ACER inquired the NRAs about the application of Article 12(5) by the respective DSOs. Four NRAs (ERO (CZ), ACM (NL), ANRE (RO)⁶¹ and RONI (SK)) replied that the respective DSOs applied Article 12(5) by notifying the SGUs, the defence service providers and the DSOs connected to their distribution systems. Besides, E-Control (AT), BNetzA (DE), CRE (FR) and Ofgem (GB) stated that, since the SGUs were already aware of these measures, further notification was unnecessary. MEKH (HU) noted that no measures were implemented and therefore, ACER infers that the notification did not need to be performed. Similarly, CRU (IE) also reported that there are no measures to be implemented.
- 217 REWS (MT) claimed that this provision of the NC ER is not applicable as there is no TSO in MT. Given the wording of Article 12(5), this view is deemed justified by ACER.
- 218 Non-applicability had also been raised by CNMC (ES), ARERA (IT) and Ei (SE) without further elaboration on the reasons. CREG (BE) and ECA (EE) did not reply to this question, while the answer provided by EV (FI) has not allowed to ascertain whether this notification has been carried out in FI.
- 219 ERSE (PT), ILR (LU) and AGEN-RS (SI) explained that there was no need to notify, as no distribution-connected SGU was identified in their respective Member State. In those instances, ACER deems that DSOs complied with the provision of Article 12(5). PUC (LV) reported that DSO, SGUs and defence service providers are not involved in the implementation of the system defence plan and were not notified. This answer, however, lacks clarity which prevents ACER to assess whether Latvian implementation process is on track.
- 220 As to the rest of NRAs, they did not report the notification of the system defence plan by the DSOs, and the provided answers do not allow ACER to confirm the due implementation of Article 12(5).

⁶⁰ With the exception of BE and RO. CREG (BE) reported that relevant SGUs were informed in June 2020, while ANRE (RO) indicated that notification had been made in March 2021.

⁶¹ ANRE (RO) highlighted that to assure transparency of the process, all SGUs were notified by the TSO and NRA.

5.5 Implementation of the notified measures

- 221 Pursuant to Article 12(6), the measures notified in accordance with the provisions of the same Article shall be implemented no later than 12 months from the date of notification by the notified DSO, SGU and defence service provider. Moreover, after the implementation of the measures, they shall send a confirmation of the implementation to the notifying system operator and/or TSO and maintain the measures implemented on its installations.
- 222 ACER inquired the NRAs whether each notified DSO, SGU and defence service provider implemented, in accordance with Article 12(6), the measures that were notified, as well as if such implementation was then notified to the relevant system operator or TSO. A graphical overview of the answers received is presented below (Figure 6).

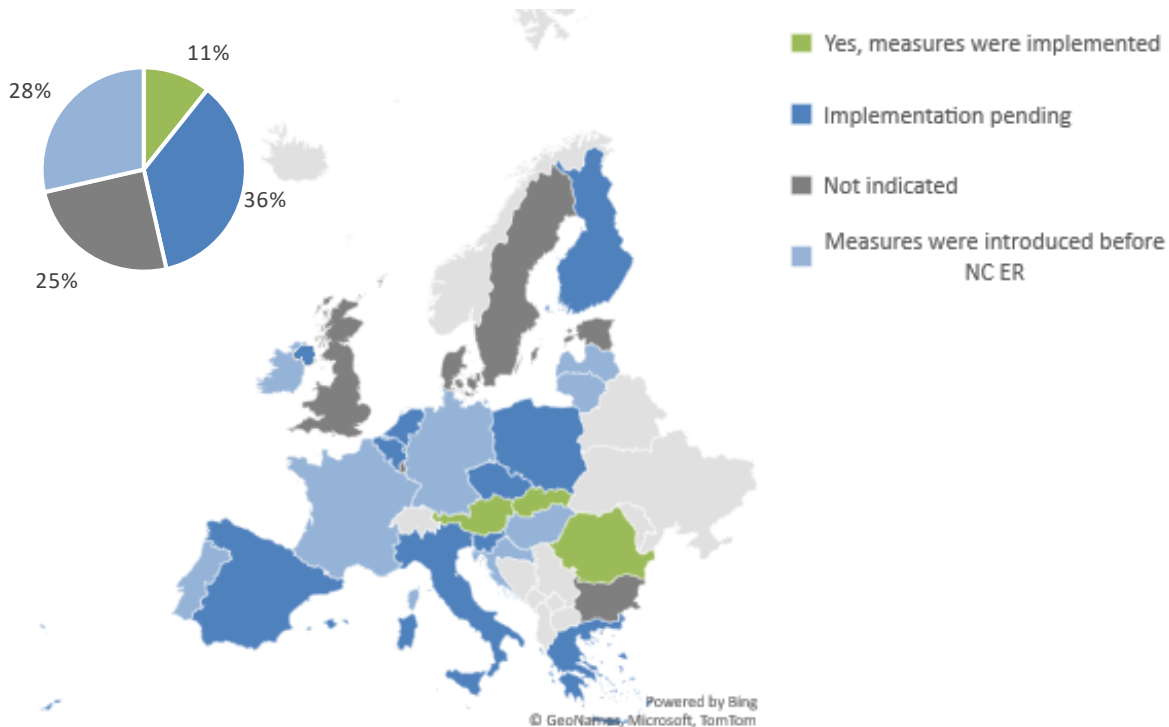


Figure 6. DSOs, SGUs and defence service providers implementing the notified measures

- 223 Based on the collected answers, only E-Control (AT), ANRE (RO) and RONI (SK) confirmed the implementation of the measures and the notification of such implementation to the corresponding notifying system operator or TSO (green areas in Figure 6).
- 224 Moreover, BNetzA (DE), CRE (FR), HERA (HR), MEKH (HU), CRU (IE), NERC (LT), PUC (LV) and ERSE (PT) stated that, since these measures were already in place, the application of Article 12(6) was not necessary (light blue areas in Figure 6).
- 225 The answers provided by CREG (BE), CNMC (ES), EV (FI), RAE (GR), ACM (NL), ARERA (IT), URE (PL) and UR (UK-NIR) indicate that the implementation of these measures is still ongoing in their respective Member State. Similarly, the answers of ERO (CZ) and AGEN-RS (SI) demonstrated that not all the parties notified the implementation.
- 226 ILR (LU) reported that there is no SGU identified in Luxembourg, and hence, it claimed that Article 12(6) is not applicable in LU. However, ILR did not indicate whether the respective

DSOs implemented the measures (grey colour in Figure 6). Since in MT no defence plan was implemented, REWS (MT) claimed that the notification obligation is not applicable.

227 It was not possible to infer whether the implementation and notification were carried out in SE based on the answers received from Ei (SE). Similarly, based on the replies from DUR (DK) and Ofgem (GB) ACER cannot ascertain whether relevant parties within those jurisdictions implemented the notified measures. EWRC (BG) and ECA (EE) did not reply to this question. These six Member States are marked in grey.

5.6 Submission of the report concerning the automatic under frequency control scheme

228 Article 15(9) requires that in case the scheme for the automatic low-frequency demand disconnection of the system defence plan includes netted demand disconnection based on frequency gradient, the TSO shall submit a report containing a detailed explanation of the rationale, implementation and impact of such scheme, within 30 days of the implementation.

229 ACER asked the NRAs whether this report had been submitted by the TSOs. All NRAs, with the exception of ARERA (IT) and RAE (GR), responded that this report had not been submitted because the scheme for automatic low-frequency demand disconnection is not based on the frequency gradient.

230 ARERA (IT) reported that all the information justifying the activation based on frequency gradient is included in the proposals sent on 8 February 2019. ARERA indicated that the deadline was met, since the frequency gradient disconnection plan has been in place for years in IT, while the proposal of 8 February 2019 did not bring any substantial change. RAE (GR) reported that ENTSO-E granted an extension until end of 2020 to submit this report.

231 ECA (EE) did not reply to this question.

5.7 High-level summary

232 ACER monitored the implementation of Articles 6, 12 and 15 of the Chapter II of the NC ER, which deal with the implementation of the system defence plan.

233 Taking into account the analysis in the previous sections, ACER deems that the implementation of all the provisions in Article 6(5) is still pending in most of the monitored countries.

234 Furthermore, the implementation of the system defence plan to the transmission system is on track, since such implementation is outstanding only in five Member States⁶².

235 The relevant implementation and notifications with respect to the measures of the system defence plan have not been carried out in accordance with in Article 12 in most of the monitored countries. Two of the main reasons are the absence of SGUs in certain Member States and the fact that many entities (e.g. SGUs, distribution-connected DSOs etc.) were already aware of the measures since they contributed to their definition. Hence, some NRAs claimed that a formal notification was not needed.

⁶² HU, NL, PL, SE and SI.

- 236 Most of the TSOs duly carried out the notifications in accordance with Article 12, since only three NRAs (UR (UK-NIR), RAE (GR) and PUC (LV)) reported that some or all the measures were not notified.
- 237 Nonetheless, most of the DSOs did not notify the measures of the system defence plan in accordance with Article 12(5).⁶³ Only four NRAs (ERO (CZ), ACM (NL), ANRE (RO) and RONI (SK)) reported that SGUs, defence service providers and DSOs connected to their distribution systems were notified by the DSOs. As explained above, some NRAs⁶⁴ confirmed that the notification was not done because those parties were already aware of the adopted measures.
- 238 Similarly, the implementation of the notified measures by the DSOs, SGU and defence service providers, as well as the notification of this implementation to the corresponding notifying system operator or TSO, was only accomplished in AT, RO and SK. In any case, some NRAs⁶⁵ confirmed that the notification was not done because, in their view, there was no need to do so.
- 239 In relation to the implementation of Article 15(9), most NRAs confirmed that the scheme for automatic low frequency demand disconnection of the system defence plan based on frequency gradient is not in use, with the exception of ARERA (IT) and RAE (GR).
- 240 In addition, the implementation of the provisions related to the system defence plan in EE cannot be fully assessed since ECA (EE) did not reply to all the relevant questions in the survey. Finally, REWS (MT) claimed that the system defence plan in accordance with the NC ER has not been formally implemented.

⁶³ It should be noted that in some cases (e.g., in IT) the notification by DSO is not applicable since the TSOs directly notify the providers.

⁶⁴ E-Control (AT), BNetzA (DE), CRE (FR), CRU (IE), Ofgem (GB) and ERSE (PT).

⁶⁵ BNetzA (DE), CRE (FR), HERA (HR), MEKH (HU), CRU (IE), PUC (LV) and ERSE (PT).

6. General provisions of the restoration plan

6.1 Objectives

242 Article 24 deals with the implementation of the restoration plan, establishing the measures of the restoration plan that are to be implemented on the transmission system. Moreover, it presents the notifications to be carried out by the TSOs and DSOs concerning the implementation of the restoration plan.

243 ACER included six questions in the NRAs' questionnaire concerning the general provisions of the restoration plan:

- The first question relates to the implementation of those measures of the TSO's restoration plan that are to be implemented on the transmission system, in accordance with Article 24(1);
- The second, third, fourth and fifth questions concern the notifications of restoration plan and the measures to be implemented on the respective installations, in accordance with Article 24(2)-(5);
- The sixth question relates to the implementation of the measures notified which are to be implemented on the respective installations, in accordance with Article 24(6);

244 The implementation of the general provisions concerning the restoration plan is analysed in the continuation of this Section, while the NRAs' responses in full are included in Section 5 of Annex I.

6.2 Implementation of measures of the restoration plan

245 Pursuant Article 24(1), each TSO shall implement the measures of its restoration plan that pertains to the transmission system by 18 December 2019. In relation to this provision, ACER asked the NRAs if the TSO implemented these measures. The collected answers are presented in Figure 7.

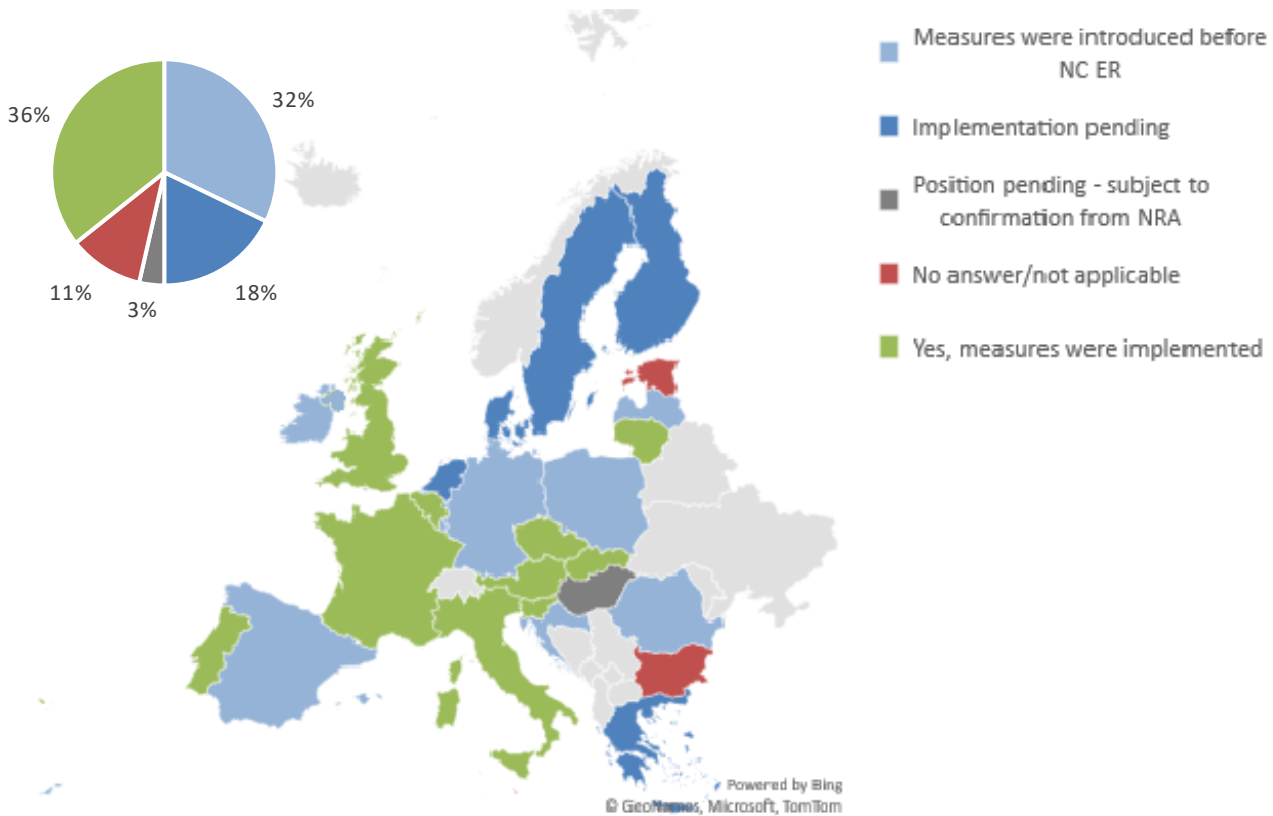


Figure 7. Implementation status of the restoration plan measures

- 246 The analysis of the answers from five NRAs⁶⁶ (18% of the contacted NRAs) demonstrated that their respective TSOs have not implemented all the relevant measures yet (dark blue areas). In particular, DUR (DK) and EV (FI) reported that the implementation of some measures is still in progress. RAE (GR) noted that the restoration plan is under study, while ACM (NL) confirmed that not all of the provisions have been approved yet. Additionally, Ei (SE) indicated that the implementation process is ongoing with the support system not being fully operational.
- 247 BG, EE and MT (11% of the contacted NRAs) are shown in Figure 7 in red. In particular, BG and EE did not answer the question, whereas REWS (MT) claimed that the provisions in Article 24(1) is not applicable to MT. REWS' view is deemed justified by ACER, given the lack of a TSO in MT.
- 248 MEKH (HU) answered that diesel generators have been established in the substations that are identified as essential for restoration plan procedures. However, ACER cannot infer whether, with this measure, the Hungarian TSO has implemented all measures referred to in Article 24(1). Hence, further clarification from the NRA would be necessary. For this reason, HU is shown in grey on the map in Figure 7.
- 249 The remaining 19 NRAs (approximately 68% of all the contacted NRAs) reported that the respective TSOs implemented the measures of their restoration plans that are to be implemented on the transmission system. Although ten of those NRAs indicated that the implementation followed the adoption of the NC ER (green areas in Figure 7), nine other

⁶⁶ DUR (DK), EV (FI), RAE (GR), ACM (NL) and Ei (SE).

respondents⁶⁷ reported that the measures in the restoration plan and relevant to the transmission system were already implemented prior to the adoption of the NC ER (light blue areas). These nine NRAs did not report any changes or additions to the existing national provisions, with the exception of ANRE (RO) that confirmed an ongoing review procedure.

250 However, ACER cannot ascertain whether the implementation of the measures of the restoration plans concerning the transmission systems has been conducted in compliance with the NC ER..

6.3 Notification of the measures

6.3.1 Notification of the restoration plan by the TSO

251 Pursuant to Article 24(2), each TSO shall notify the transmission connected DSOs, by 18 December 2019, of the measures, including the deadlines for implementation, which are to be implemented on the installations at points (a)-(d) of Article 24(2). ACER inquired the NRAs concerning the notification from TSOs to the transmission connected DSOs.

252 Among the collected answers, only MEKH (HU) and PUC (LV) confirmed that the respective TSOs had not notified the implementation of the relevant measures yet. Six NRAs⁶⁸ reported that there is no need to notify the implementation of the measures in accordance with Article 24(2) because the measures were already in place or because the DSOs are already aware of the implementation.

253 REWS (MT) claimed that Article 24(2) does not apply since there is no TSO in MT, which is deemed justified by ACER. ECA (EE) did not reply to this question.

254 UR (UK-NIR) and RAE (GR) confirmed that the notification was accomplished without specifying the date. It is therefore not possible to infer whether any delay occurred.

255 CREG (BE), ARERA (IT) and ANRE (RO) reported that respective TSOs notified of the restoration plan with delays exceeding 3 months.

256 The remaining NRAs reported that the notification was accomplished within the deadline.

6.3.2 Notification of measures to be implemented

257 In accordance with Article 24(3), each TSO shall notify the SGUs identified pursuant to Article 23(4) and restoration service providers directly connected to its transmission system, by 18 December 2018, of the measures that are to be implemented on their installations. Article 24(4) also includes the DSOs connected to the distribution systems to be notified, when so provided for in national legislation.

258 ACER asked NRAs two different questions about the dates of the notifications from the TSOs, aiming at monitoring the implementation of Articles 24(3) and 24(4), respectively.

259 Concerning the notifications pursuant to Article 24(3), an overview of NRAs' answers is presented in Figure 8 8.

⁶⁷ BNetzA (DE), CNMC (ES), HERA (HR), CRU (IE), ILR (LU), PUC (LV), URE (PL), ANRE (RO) and UR (UK-NIR).

⁶⁸ BNetzA (DE), Ofgem (GB), CRU (IE), NERC (LT), ILR (LU) and ERSE (PT).

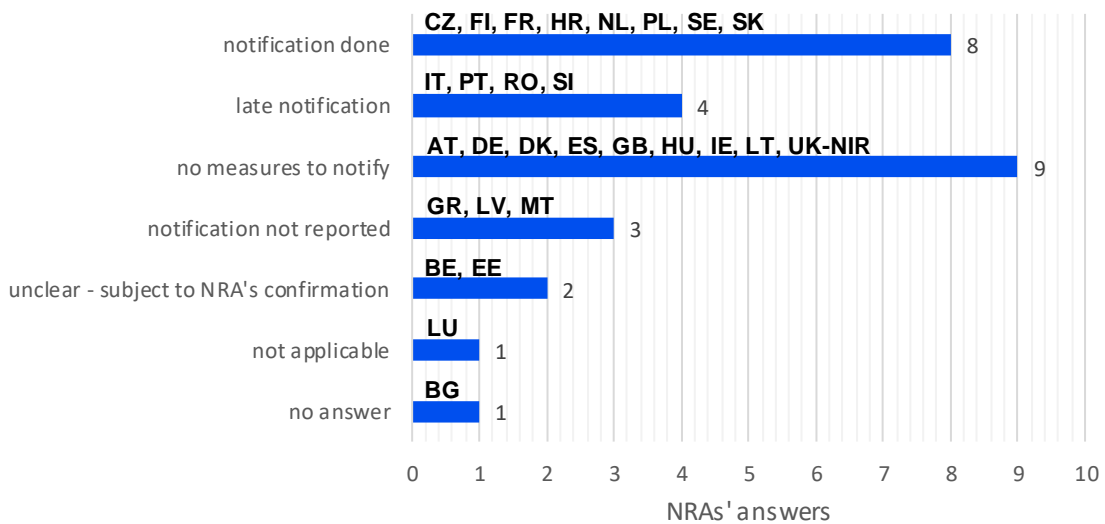


Figure 8. TSO notification to SGUs and restoration service providers directly connected to its transmission system of the measures that are to be implemented on their installations, including the deadlines for implementation

- 260 RAE (GR) and PUC (LV) reported that this notification was not carried out. ILR (LU) clarified that there is no SGU identified in Luxembourg, which is the reason of the reported lack of notification. Similarly, REWS (MT) noted that no SGUs or restoration providers have been specifically identified and that no contract for restoration services was concluded in MT.
- 261 BNetzA (DE), CNMC (ES), Ofgem (GB), NERC (LT) stated that, since SGUs were already aware of these measures, there was no need for notification. DUR (DK), CRU (IE), UR (UK-NIR) and MEKH (HU) reported that there are no relevant measures to be implemented, and therefore, the corresponding TSOs did not carry out the notifications.
- 262 The answers received from CREG (BE) and ECA (EE) are not clear enough for ACER to ascertain the level of implementation of Article 24(3). In fact, when answering the question, CREG (BE) referred to the notification concerning a different Article (i.e. Article 11(4)) which is not pertinent to this question. ECA (EE) referred to a consultation with SGUs but it remains unclear whether this represented the notification of the measures under the monitored Article.
- 263 The remaining NRAs reported that the notification of SGUs and restoration service providers by TSOs was carried out on time, with the exception of ARERA (IT), ERSE (PT), ANRE (RO) and AGEN-RS (SI), where the relevant notifications were carried out after the deadline with three-month delay indicated by ARERA, 10-month delay reported by AGEN-RS and over 12-month delay in PT and RO.
- 264 Concerning the notification to the SGUs, restoration service provider or DSO in accordance with Article 24(4), NRAs' replies are graphically summarised in Figure 9.
- 265 Ten NRAs⁶⁹ reported that the national legislation does not provide the obligation stipulated in Article 24(4). UR (UK-NIR) reported that this notification was not carried out. ILR (LU) reported that national legislation does not provide for the notification in question. AGEN-RS

⁶⁹ BNetzA (DE), DUR (DK), CNMC (ES), EV (FI), RAE (GR), MEKH (HU), ILR (LU), PUC (LV), REWS (MT) and Ei (SE).

(SI) highlighted that there are no SGUs at distribution level, implying the lack of relevant notifications.

266 E-Control (AT), Ofgem (GB), CRU (IE) and ERSE (PT) stated that, since the SGUs were already aware of these measures, there was no need for notification. The remaining NRAs confirmed that the notification was carried out, however in the case of ERO (CZ), HERA (HR) and ACM (NL), it was performed by the DSO instead of the TSO.

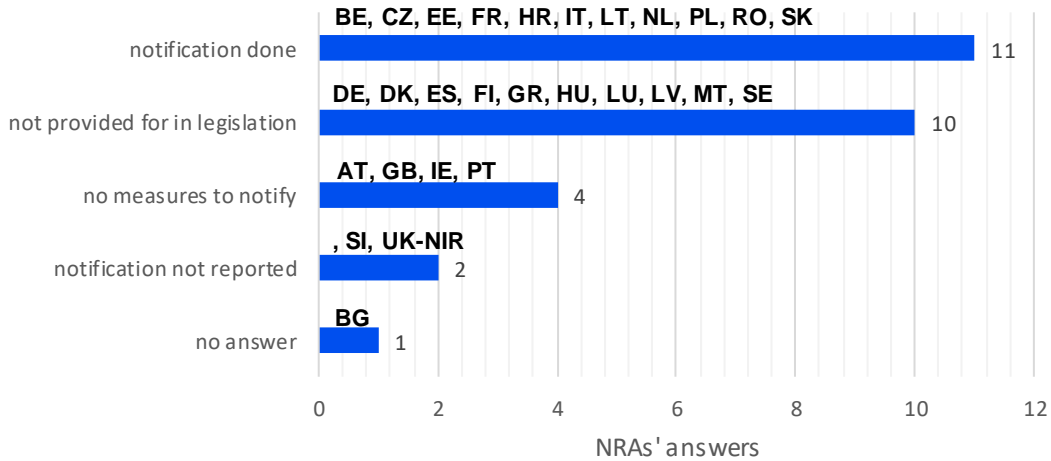


Figure 9. TSO notification to SGUs, restoration service providers and DSOs connected to distribution systems of the measures which are to be implemented on their installations

6.3.3 Notification of the restoration plan by the DSOs

267 Pursuant to Article 24(5), if the TSO notifies the DSOs in accordance with Article 24(2), the DSOs shall, in turn, notify the SGUs, the restoration service provider and the DSOs connected to their distribution system of the measures of the restoration plan which they have to implement on their installations, including the deadline for such implementation.

268 ACER inquired the NRAs if the respective DSOs implemented this provision. The collected answers are illustrated in Figure 10. The analysis revealed that the DSOs corresponding to ERO (CZ), CRU (IE), Ei (SE) and RONI (SK) (14% of the contacted NRAs) notified the SGUs, the restoration service providers and the DSOs connected to their distribution systems. Relevant Member States were marked in green in Figure 10.

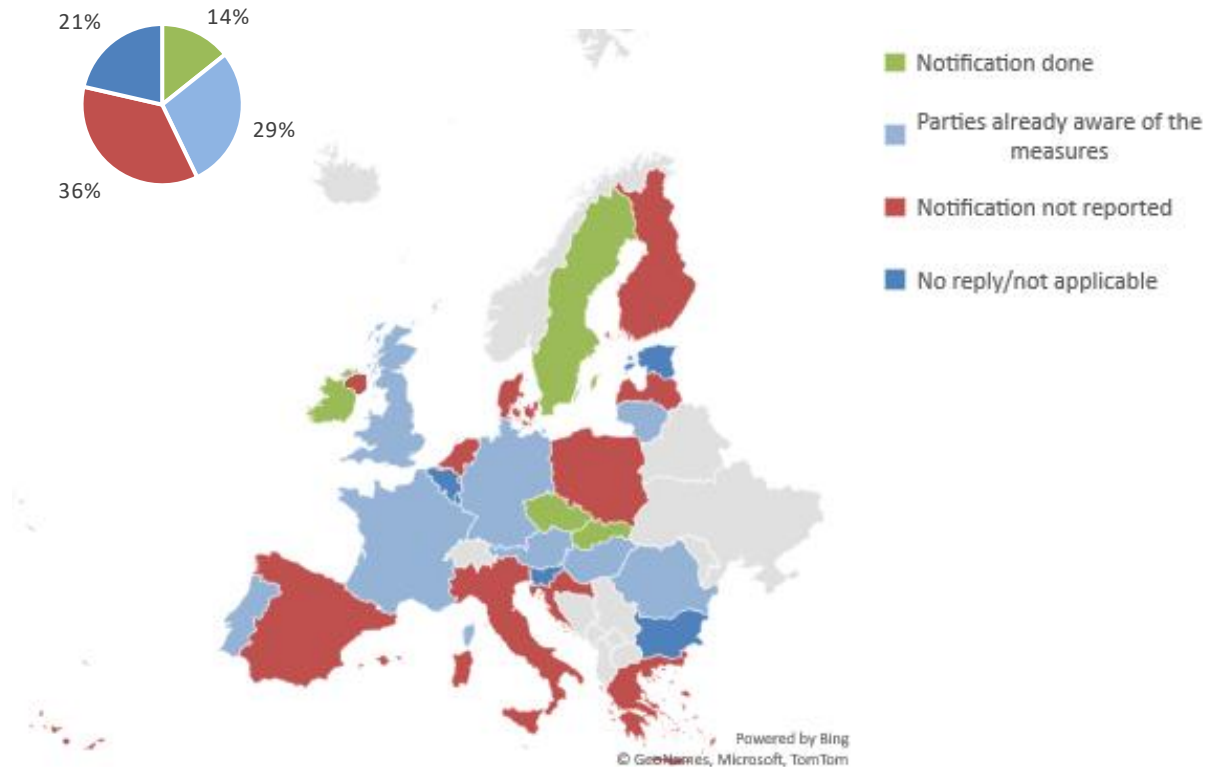


Figure 10. DSOs notification of the restoration plans

- 269 Furthermore, E-Control (AT), CRE (FR), Ofgem (GB), NERC (LT) and ERSE (PT) reported that, since the SGUs were already aware of these measures, there was no need for notification. Similarly, BNetzA (DE), MEKH (HU) and ANRE (RO) reported that there are no measures to notify. The corresponding Member States are marked in light blue (Figure 10).
- 270 PUC (LV) argued that SGUs, restoration service providers and the DSOs connected to the distribution system are not involved in the implementation of the system defence plan. Therefore, the implementation procedure was not performed in LV (red areas in Figure 10). In addition, the EV (FI) answer prevented ACER to infer whether the relevant notification was carried out in FI (red colour).
- 271 REWS (MT) claimed that the monitored provision is not applicable in MT, which is deemed justified by ACER, given the wording of Article 24(5). Five other NRAs (CNMC (ES), ARERA (IT), ILR (LU), URE (PL) and AGEN-RS (SI)) claimed non-applicability. ILR and AGEN-RS supported this statement with the fact that the entities mentioned in Article 24(5) were not identified in their Member States. ACER deems this justification valid. However, the claim made by CNMC, ARERA and URE has not been further explained. The corresponding Member States (with the exception of ES, IT and PL) can be identified in blue (Figure 10). The same colour was also applied to mark BE, BG and EE as no replies were sent by the respective NRAs.
- 272 The remaining NRAs⁷⁰ did not report the notification of the restoration plan by the DSOs, and the provided answers do not allow ACER to confirm the due implementation of Article 24(5) (red areas in Figure 10).

⁷⁰ DUR (DK), UR (UK-NIR), RAE (GR) HERA (HR) and ACM (NL).

6.4 Implementation of the notified measures

273 Pursuant to Article 24(6), the measures notified in accordance with the provisions of the same Article shall be implemented no later than 12 months from the notification of the concerned TSO by the notified DSOs, SGUs and restoration service providers. Moreover, after the implementation of the measures, the recipients of the notifications shall send a confirmation of the implementation to the notifying system operator and/or TSO and maintain the measures implemented on their installations.

274 ACER asked the NRAs if each notified DSO, SGU and restoration service provider implemented the measures notified, as well as if they notified this implementation to the relevant system operator or TSO. A graphical overview of the collected answers is shown in Figure 11.

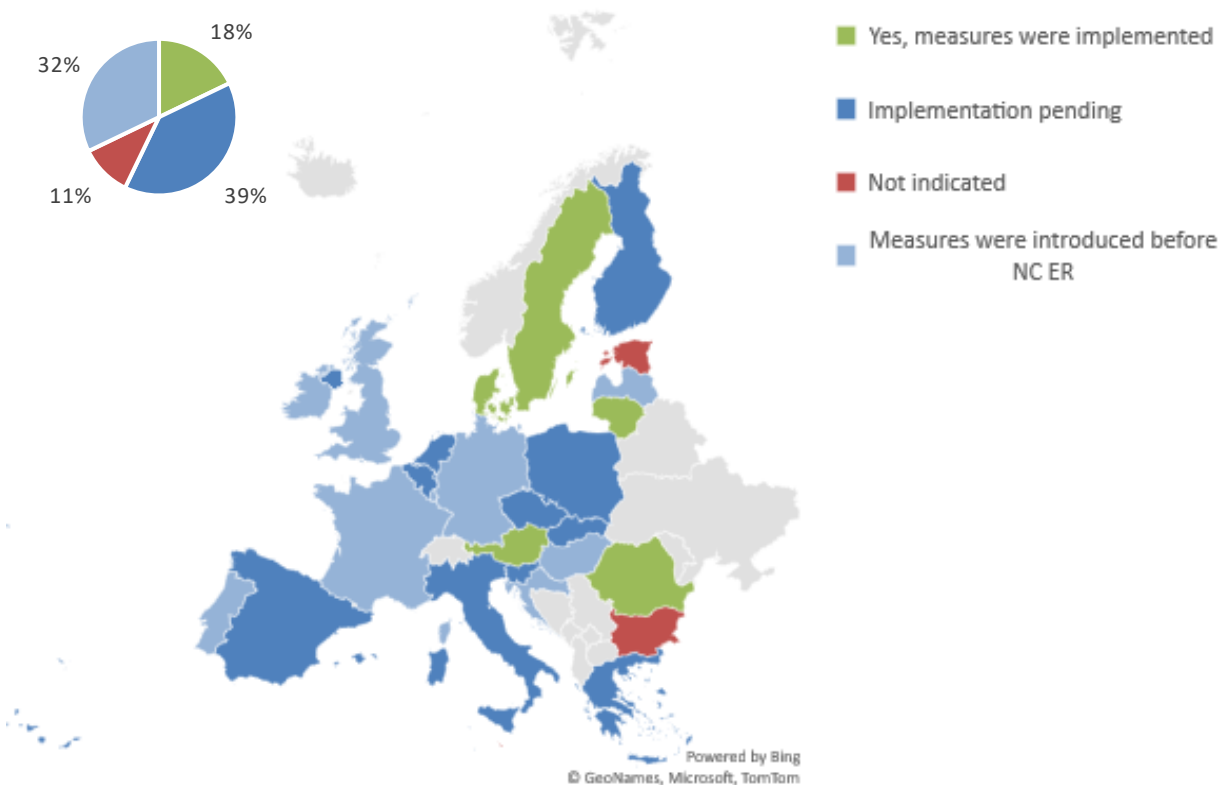


Figure 11. DSOs, SGUs and restoration service providers implementing the notified measures

275 From the answers received, only E-Control (AT), DUR (DK), NERC (LT), ANRE (RO) and Ei (SE) confirmed the implementation of the measures and the notification of this implementation to the corresponding notifying system operator or TSO (green areas in Figure 11).

276 Moreover, nine NRAs⁷¹ stated that, since these measures were already in place, there was no need to proceed with a separate implementation process (light blue areas in Figure 11).

277 Furthermore, answers by CREG (BE), CNMC (ES), ACM (NL) and URE (PL) revealed that the implementation of some measures is still ongoing in their respective Member States. Similarly, the answers provided by ERO (CZ) and AGEN-RS (SI) demonstrated that not all

⁷¹ BNetzA (DE), CRE (FR), Ofgem (GB), HERA (HR), MEKH (HU), CRU (IE), ILR (LU), PUC (LV) and ERSE (PT).

the parties notified the implementation. UR (UK-NIR) reported that it awaits a final confirmation concerning that matter. These are all marked in dark blue in Figure 11.

- 278 ECA (EE) as well as EWRC (BG) did not reply to this question; REWS (MT) claimed that the monitored provision does not apply in MT, which is deemed justified by ACER, given the wording of paragraph (6) (red areas in Figure 11).
- 279 The remaining NRAs did not confirm that the implementation of the measures notified was done in line with the provisions of Article 24(6).

6.5 High-level summary

- 280 The implementation of Article 24(1) is, overall, satisfactory in most Member States. Nevertheless, the implementation of the restoration plan is still pending in five Member States, as reported by NRAs.⁷²
- 281 Compliance with the obligation to notify certain grid users and operators pursuant to Article 24(2)-(5) is slightly less satisfactory since several NRAs reported the lack of notification from system operators to the relevant recipients (e.g., DSOs, SGUs, etc.). The lack of notification was often considered by NRAs as justified since system operators assumed the recipients to be already aware of the relevant measures.⁷³
- 282 It is worth noting that the implementation of the provisions related to the restoration plan in EE cannot be assessed since ECA (EE) did not reply to the questions related to the general provisions of the restoration plan that ACER included in the NRAs' questionnaire.
- 283 Finally, REWS (MT) reported that most of the provisions related to Articles monitored in Section 6 do not apply in MT which is deemed justified by ACER, since there is no TSO in MT.

⁷² DUR (DK), EV (FI), RAE (GR), ACM (NL) and Ei (SE).

⁷³ It should be noted that in some cases (e.g., in IT) the notification by DSO is not applicable since the TSOs directly notify the providers.

7. Suspension and restoration of market activities

7.1 Objectives

284 Articles 35 and 36 lay down the procedures and the rules for a TSO that decides to suspend one or more market activities indicated in Article 35(2). Moreover, Article 37 explains the procedures to be followed in order to restore the activities previously suspended.

285 In the circulated survey, ACER posed six questions about suspension and restoration of market activities to NRAs:

- a) The first and second questions relates to the catalogue of circumstances under which the TSO is allowed to temporarily suspend market activities as well as to the range of market activities that may be suspended;
- b) The third question concerns Article 36(5) and inquires NRAs about the time delay for each parameter defined pursuant to Article 36(4) to be respected prior to starting the procedure for suspension of market activities;
- c) The fourth question deals with the occurred approval from NRAs and publication from TSOs of the rules concerning Article 39(1);
- d) The fifth question regards the communication procedure that, pursuant to Article 38, shall be included in the rules for suspension and restoration of market activities developed by each TSO;
- e) The sixth and last question aims to determine whether TSOs applied the third paragraph of Article 39(1).

286 The implementation of the provisions concerning the suspension and restoration of market activities is analysed in the continuation of this Section, while the NRAs' responses in full are included in Section 6 of Annex I.

7.2 Temporary suspension of market activities by the TSO

287 ACER inquired the NRAs whether the respective TSOs are allowed, by means of national legislation, to temporarily suspend market activities under other circumstances than those specified in Article 35(1). The answers collected by the NRAs are presented in Figure 12.

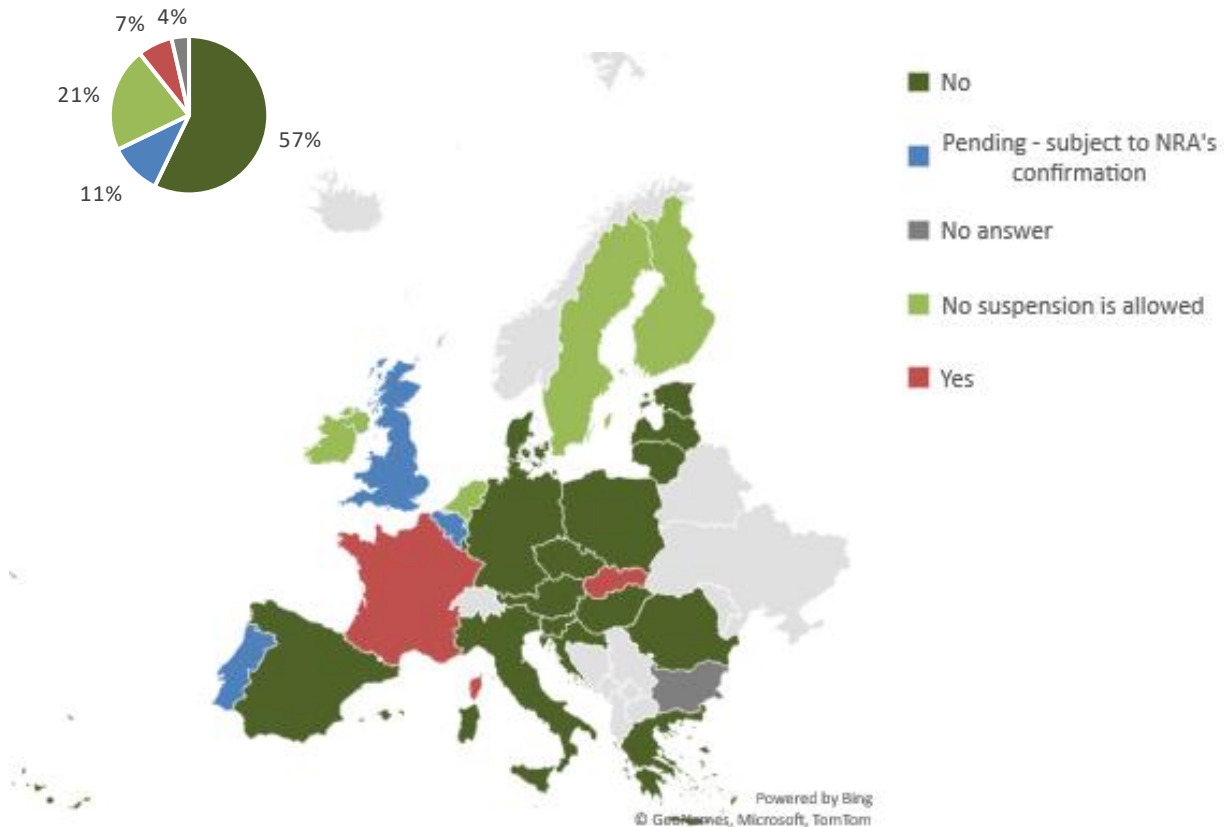


Figure 12. TSOs allowed to temporarily suspend market activities under circumstances other than those specified in Article 35

- 288 CRE (FR) highlighted that the French TSO may suspend market activities in situations when the TSO is unable to maintain the system balance. RONI (SK) mentions a range of circumstances broader than those envisaged in Article 35(1), laying down the exhaustive catalogue of situations entitling the TSO to suspend market activities. For these reasons, FR and SK are marked in red in Figure 12.
- 289 The NRAs of Member States in dark green in Figure 12 (approximately 57% of contacted NRAs) implemented the rules pursuant to Article 36(2), allowing temporary suspensions of one or more market activities solely under the circumstances provided in Article 35(1).
- 290 Three NRAs – (CREG (BE), Ofgem (GB) and ERSE (PT)) – are still awaiting the rules to be drafted by the TSOs or to adopt them formally (blue areas in Figure 12). However, ACER cannot ascertain whether the TSOs in the above-mentioned countries will eventually be allowed to suspend one or more market activities due to further circumstances, additional to those in Article 35(1).
- 291 The NRAs from BG did not answer the question (grey area in Figure 12).
- 292 Regardless of the provisions established in Article 35(1), EV (FI), UR (UK-NIR), CRU (IE), ACM (NL)⁷⁴ and EI (SE) highlighted that the respective TSOs could not suspend, under any circumstance, the market activities; similarly, REWS (MT) noted that the local system

⁷⁴ ACM (NL) highlighted that the final approval by the relevant regulatory authority is still pending.

operator could not proceed with the suspension of market activities (light green areas in Figure 12).

293 Furthermore, ACER asked NRAs whether respective TSOs are allowed to temporarily suspend market activities as in Article 35(2)(f) and thus whether the catalogue of those market activities that may be suspended remains open.

294 Most of the NRAs confirmed that the range of market activities is explicitly specified. However, six NRAs⁷⁵ reported that their respective TSO might suspend other relevant market activities, the suspension of which is deemed necessary. CREG (BE), Ofgem (GB) and ERSE (PT) indicated that the implementation is pending, and hence, the issue has not been decided yet.

7.3 Time delay prior to the suspension of market activities

295 In accordance with Article 36(5), the rules for suspension and restoration of market activities shall define a time delay to be respected for each parameter defined pursuant to Article 36(4) prior to starting the procedure for suspension of market activities.

296 ACER inquired the NRAs about the selected time delay for each parameter defined pursuant to Article 36(4). The collected answers are illustrated in Figure 13.

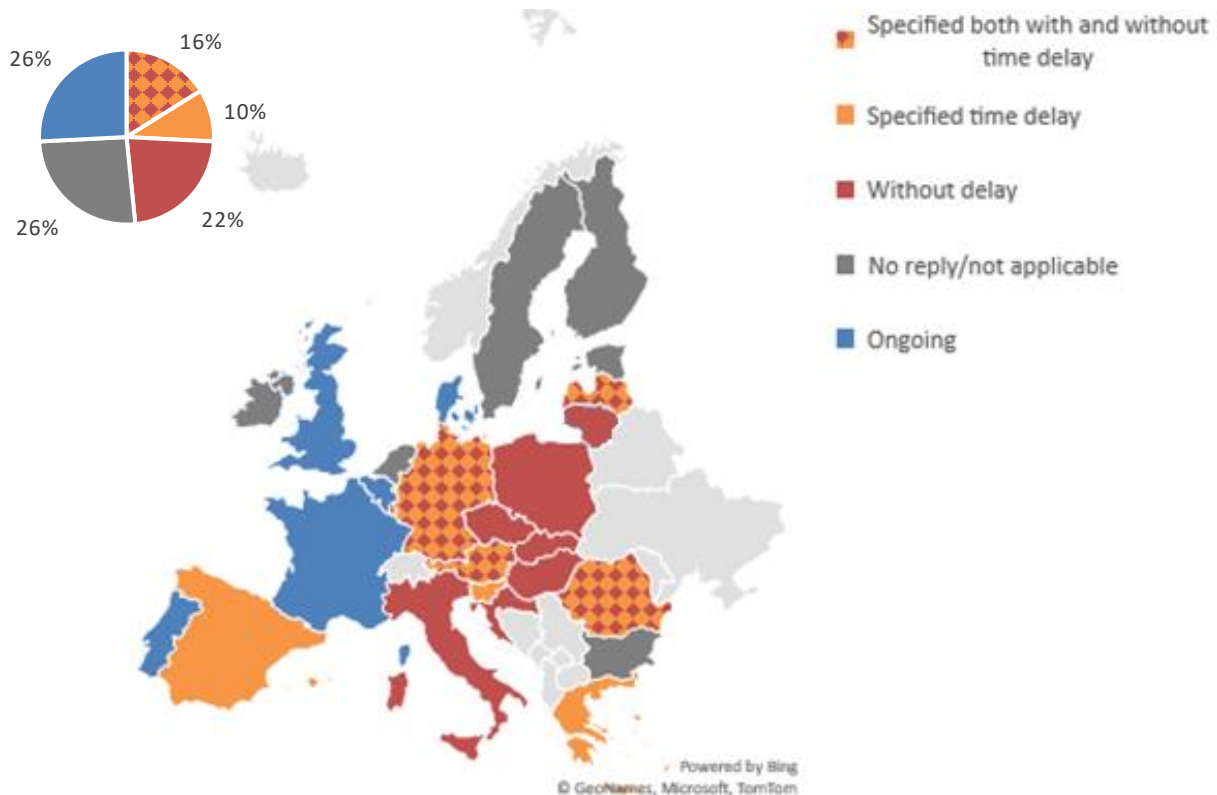


Figure 13. Definition of the time delay prior to the suspension

297 CNMC (ES) and AGEN-RS (SI) confirmed that specific time delays had been put in place. CNMC (ES) replied that market activities may be suspended if a failure of communication tool lasts longer than 30 minutes and when the transmission grid is in the restoration state.

⁷⁵ DUR (DK), RAE (GR), HERA (HR), PUC (LV), URE (PL) and RONI (SK).

(orange colour in Figure 13). However, CNMC (ES) did not indicate a delay for other parameters defined in accordance with Article 36(4). AGEN-RS noted that the 30-minutes time delay applies in SI, without specifying circumstances where this delay applies. Therefore, both situations do not allow ACER to ascertain whether Article 36(5) has been fully implemented in ES and SI.

298 RAE (GR) indicated that time delay before the start of the market suspension procedure depends on the market activity that will be suspended and the alarm state of the system. In any case, the necessary action shall be taken no later than 30 minutes (orange area on the map).

299 ERO (CZ), HERA (HR), MEKH (HU), ARERA (IT), NERC (LT), URE (PL), RONI (SK) reported that no time delay had been specified in national legislation (red areas in Figure 13). The answers from these NRAs imply that the TSO, depending on the situation, should suspend market activities “without delay” or “in the earliest possible time”. The inputs received (except for URE (PL)) do not indicate attempts to categorise those situations and relate them to a specific time delay.

300 Five NRAs (E-Control (AT), BNetzA (DE), ILR (LU), PUC (LV) and ANRE (RO)) reported that their respective TSOs may suspend market activities with a specified time delay or without one, depending on the particular provisions of national legal framework (areas in red-orange pattern).

301 E-control (AT) reported that, under the current rules, the TSO could start the procedure for suspension of market activities, without any time delay, only with respect to the parameters in Article 36(4)(b) and (c).

BNetzA (DE) and ILR (LU) highlighted different criteria and corresponding time delays, which enable the TSOs to suspend the market activities. For manual load shedding and certain frequency deviations (+/- 0.8 Hz), 15 minutes of time delay was indicated. When market players can no longer adequately carry out their activities and in case of a failure of communication tools, a 30-minutes delay applies. Other circumstances may trigger suspension of market activities without time delay. For further reference, please see BNetzA’s answer in Annex I, Section 6.2.

302 PUC (LV) listed specific circumstances under which the TSO can decide to suspend market activities. Two of them are related to particular time spans (complete lack of voltage for at least 3 minutes and unavailability of the communication tools necessary for process of the market operation for more than 30 minutes), while others set technical thresholds (e.g., the volume of electricity generation is 75% lower than the planned in the frequency control zone of the transmission system operator, and the frequency is in the range from 49.0 to 48.0 Hz). For more details, please see PUC’s answer in Annex I, Section 6.2.

303 ANRE (RO) pointed out that under the applicable rules, a 30-minute time delay is applicable only with respect to the parameter referred to in Article 36(4)(e). For blackout and restoration states the suspension of the market activities can begin immediately when the conditions are met. In contrast, time delays for other parameters have not been specified.

304 ECA (EE) replied that the TSO shall not suspend certain market activities (Article 35(2)(a)), without referring to the time delays applicable to the remaining activities listed in Article 35(2)(b)-(f). Due to the lack of a relevant response, ACER cannot infer whether Article 36(5) has been duly implemented (grey area in Figure 13).

305 The definition of time delays for the suspension of the market activities has not been carried out in those Member States where the TSO (or local system operator in the case of MT) is not allowed to suspend the market activities. Hence, Article 36(5) is not applicable (grey areas).

306 The remaining NRAs reported that the definition of the time delays in Article 36(5) is still pending (blue areas in Figure 13).

7.4 Publication of the rules by the TSO

307 As envisaged in Article 39(1), each TSO shall develop a proposal for rules for imbalance settlement and settlement of balancing capacity and balancing energy which shall be applicable for imbalance settlement periods during which the market activities were suspended. The TSO may propose the same rules it applies for normal operations.

308 In addition, the TSO shall publish these rules on its website following their approval by the relevant regulatory authority in accordance with Article 59 of Directive (EU) 2019/944.

309 This provision has been implemented in most Member States⁷⁶ where TSOs may exercise power to suspend market activities. The answers provided by the respective NRAs include links to the website with adopted rules with some exceptions⁷⁷. Four respondents (CREG (BE), DUR (DK), ERSE (PT) and ANRE (RO)) reported that the rules were not yet adopted in their respective Member States.

310 Answers outlining the implementation status concerning publication of the rules for imbalance settlement as well as provisions described in the following sections (7.5 and 7.6) are summarized in the table below (Table 6). A cell in green indicates that certain provisions were duly implemented. Yellow is used for cases where the implementation process is ongoing. Cells in red refer to the lack of NRA's answer. Cells in grey indicate that specific provisions do not apply to the Member State. Specifically, for the rightmost column, green colour indicates that the issue had been decided in a respective Member State while a 'delegation' label in the rightmost cell is used for cases where TSO's tasks were delegated to third parties in accordance with Article 39(1).

⁷⁶ AT, CZ, DE, EE, ES, FR, GB, GR, HR, HU, IT, LU, LV, PL, SI and SK.

⁷⁷ No links from HERA (HR) and ILR (LU); also, the link provided by RONI (SK) does not direct to any relevant content.

Table 6. Implementation status of specific provisions on suspension and restoration

	Rules for suspension and restoration of market activities		
	Imbalance settlement rules publication	Communication procedure	Delegation of TSO tasks
AT			delegation
BE			
BG			
CZ			delegation
DE			
DK			
EE			
ES			
FI			
FR			
GB			delegation
UK-NIR			
GR			
HR	no web link		
HU			
IE			
IT			
LT			
LU	no web link		
LV			
MT			
NL			
PL			
PT			
RO			
SE			
SI			delegation
SK			

7.5 Communication procedures

- 311 In accordance with Article 38, the rules for suspension and restoration of market activities developed pursuant to Article 36 shall also contain a communication procedure detailing the tasks and actions expected from each party in its different roles during the suspension and restoration of market activities.
- 312 The majority of the NRAs⁷⁸ confirmed the effective implementation of the above-mentioned provision. The implementation monitoring activities have shown that in three Member States (BE, PT and RO) the final versions of the communication procedures were not published. In the case reported by DUR (DK), ACER is not able to infer whether Article 38 was duly implemented or not.
- 313 Conversely, the TSOs that are not allowed to suspend the market activities did not develop nor publish communication procedures referred to in Article 38.
- 314 Collected answers are presented in the form of a table above (Table 6).

7.6 Delegation of TSO tasks to third parties

- 315 As recalled in Section 7.4, each TSO was required to develop a proposal for rules for imbalance settlement and settlement of balancing capacity and balancing energy. In accordance with the third paragraph of Article 39(1), a TSO may delegate its tasks related to the rules mentioned above to one or more third parties, provided that the third party can carry out the respective function at least as effectively as the TSO.
- 316 Also, a Member State or, where applicable, an NRA may assign those tasks to one or more third parties provided that the third party can carry out the respective function at least as effectively as the TSO.
- 317 Only a few NRAs⁷⁹ reported the triggering of such delegating option. AGEN-RS (SI) provided a reference to the Slovenian Energy Law that provides the Market Operator Company Borzen d.o.o. the right to carry out the imbalance settlement in accordance with Article 39(1).
- 318 E-Control (AT) pointed out that the calculation of settlement prices is assigned by national law to APCS Power Clearing and Settlement AG. The Austrian TSO established the specific rules for settlement in case of suspension of market activities. E-Control (AT) authorized those rules, and APCS enforces them with the market participants.
- 319 A specific condition is highlighted by ERO (CZ). The Czech Energy Act stipulates that the market operator OTE a.s. is responsible for calculating and settling the imbalance system. Nonetheless, ERO remarked that the third paragraph of Article 39(1) had not been applied in CZ without explaining the reasoning behind this statement.
- 320 Ofgem (GB) specified that apart from the TSO, the Balancing System Operator (BSSCo) is involved in the process. The answer provided by Ofgem does not, however, detail the differences (if any) in the responsibilities and roles between the TSO and the BSSCo.

⁷⁸ E-Control (AT), ERO (CZ), BNetzA (DE), ECA (EE), CNMC (ES), CRE (FR), Ofgem (GB), RAE (GR), HERA (HR), MEKH (HU), ARERA (IT), NERC (LT), ILR (LU), PUC (LV), URE (PL), AGEN-RS (SI) and RONI (SK).

⁷⁹ E-Control (AT), ERO (CZ), Ofgem (GB) and AGEN-RS (SI).

- 321 ANRE (RO) reported that the settlement tasks shall be carried out by a third party named SC OPCOM SA. However, formal adoption of relevant rules is pending.
- 322 As in previous sections, three NRAs (CREG (BE) and ERSE (PT)) reported that the development of the relevant rules is still pending. The replies from the other NRAs reported that the provisions in the third paragraph of Article 39(1) have not been applied.
- 323 Collected answers are presented in the form of a table above (Table 6).

7.7 High-level summary

- 324 The analysis performed in the previous sections demonstrated an advanced status of the implementation of the monitored provisions concerning the suspension of the market activities.
- 325 Only two NRAs (CRE (FR) and RONI (SK)) reported that, according to their national regulations, TSOs might suspend market activities under other circumstances than those indicated in Article 35(1). Other NRAs declared that the circumstances under which suspension is allowed in their Member States adhere to the conditions laid down in Article 35(1).
- 326 A slightly less advanced implementation can be reported concerning the definition of time delays to be respected for each parameter defined pursuant to Article 35(4) prior to starting the procedure for suspension of market activities. Seven NRAs⁸⁰ acknowledged the absence of time delays to be respected prior to starting the procedure for suspension of market activities, meaning that TSOs can exercise the suspension immediately or 'in the earliest possible time'. Five other NRAs⁸¹ confirmed that no time delay applies in certain circumstances.
- 327 The implementation of the provisions in Article 38 presents the same level of advancement. Most of the NRAs notified that the procedures are already included in the rules for suspension and restoration. Three NRAs⁸² instead reported that the adoption of communication procedures is ongoing.
- 328 Concerning the rules for settlement in case of suspension of market activities, the analysis above shows that in most Member States where TSOs are allowed to suspend market activities, those rules are already adopted and published on the websites of the respective TSOs.
- 329 Moreover, a few NRAs is still awaiting TSOs' inputs (CREG (BE), NERC (LT)) or are currently updating the national codes (ERSE (PT) and, partially, Ofgem (GB)). Therefore, the rules concerning the suspension and restoration are not yet formally adopted in the respective Member States.
- 330 Finally, five NRAs⁸³ reported that the respective TSOs are not entitled to suspend market activities under any circumstances. It is worth pointing out that provisions on suspension of

⁸⁰ ERO (CZ), HERA (HR), MEKH (HU), ARERA (IT), NERC (LT), URE (PL), RONI (SK)

⁸¹ E-Control (AT), BNetzA (DE), ILR (LU), PUC (LV) and ANRE (RO).

⁸² CREG (BE), ERSE (PT) and ANRE (RO).

⁸³ EV (FI), UR (UK-NIR), CRU (IE), ACM (NL), EI (SE). Note that ACM is yet to issue the final approval.

market activities in accordance with Article 35 do not oblige the TSOs to temporarily suspend one or more market activities.

8. Requirements for the backup control room and essential substations

8.1 Objectives

- 331 Article 42(1) deals with the critical tools and facilities⁸⁴ that need to be made available by each TSO for at least 24 hours in case of loss of primary power supply.
- 332 ACER's relevant monitoring activity focused on the requirements for the backup control room (two questions concerning Article 42(3)-(4)) and on the requirements concerning substations identified as essential for the restoration plan procedures pursuant to Article 23(4) (e).
- 333 The implementation of the provisions concerning tools and facilities is analysed in the continuation of this Section, while the NRAs' responses in full are included in Section 7 of Annex I.

8.2 Backup control room

8.2.1 Geographically separate backup control room

- 334 Pursuant to Article 42(3), each TSO shall have at least one geographically separate backup control room. The latter shall include at least the critical tools and facilities referred to in Article 24 of Regulation (EU) 2017/1485. Each TSO shall arrange a backup power supply for its backup control room for at least 24 hours in case of loss of primary power supply.
- 335 ACER inquired the NRAs if the TSO established this backup control fulfilling the relevant requirements in accordance with Article 42(3).
- 336 All the answering NRAs⁸⁵ confirmed that the establishment of a geographically separate backup control room had been established in their respective countries.

8.2.2 Moving the functions from the main control room to the backup control room

- 337 According to Article 42(4), TSOs shall prepare a transfer procedure for moving functions from the main control room to the backup control room as quickly as possible, and in any case, in a maximum time of three hours. The procedure shall include the operation of the system during the transfer.
- 338 ACER inquired the NRAs if the TSO had actually prepared the procedures relevant to such transfer.
- 339 All but two NRAs answered that the preparation of a transfer procedure for moving functions from the main control room to the backup control room as quickly as possible had been duly established.
- 340 REWS (MT) answered that there is no specific procedure in place since the main control room and the backup control room are geographically close and the staff in the main control

⁸⁴ Referred to in Article 24 of Regulation (EU) 2017/1485.

⁸⁵ I.e., excluding the NRA from BG.

room would simply move to the backup control room. Finally, the NRAs from EE and BG did not reply to this question.

8.3 Essential substations provision

- 341 Article 42(5) establishes that the substations identified as essential for the restoration plan procedures pursuant to Article 23(4) shall be operational in case of loss of primary power supply for at least 24 hours. For substations in the synchronous area IE and LV, the duration of operation in case of loss of primary power supply may be lower than 24 hours and shall be approved by the regulatory authority or other competent authority of the Member State, on a proposal by the TSO.
- 342 ACER inquired the NRAs about the implementation of Article 42(5). Moreover, ACER specifically asked CRU (IE) and PUC (LV) if their respective TSOs proposed to reduce the duration of operation of the relevant essential substation under 24 hours in their respective Member State.
- 343 Concerning the specific cases of IE and LV, only CRU (IE) confirmed that its TSO proposed to reduce the duration of operation of the 'black start stations' to 12 hours. PUC (LV) reported that the relevant requirement in LV envisages 24 hours.
- 344 E-Control (AT) reported that this provision is not applicable in AT without providing any further explanation. ECA (EE) highlighted that the above-mentioned substations are operational only for 12 hours, without adding justifications for not meeting the 24 hours minimum threshold envisaged in Article 42(5).
- 345 REWS (MT) reported that all the primary substations are equipped with battery back-up and standby generators, and thus, all can be used for restoration. Their role in restoration will be detailed in the restoration plan. However, the NRA did not mention whether the relevant substation can meet the 24 hours minimum threshold envisaged in Article 42(5).
- 346 The analysis of the answers collected from seven NRAs (CREG (BE), BNetzA (DE), CNMC (ES), CRE (FR), Ofgem (GB), HERA (HR), ACM (NL)) demonstrated that not all the substations identified as essential for the restoration plan currently comply with the requirements of Article 42(5). RAE (GR) reported that the issue is still under consideration.
- 347 Nonetheless, these NRAs confirmed that the situation is expected to improve towards full compliance with the relevant Article. In fact, it is worth noting that Article 42(5) will apply from 18 December 2022 onwards as envisaged in Article 55.
- 348 The remaining NRAs reported the implementation of the provisions in Article 42(5).⁸⁶

8.4 High-level summary

- 349 The implementation of Article 42 is well on track among the monitored countries. All the responding NRAs confirmed that Article 42(3) had been duly implemented. Therefore, at least one geographically separate backup control room has been established in each of the monitoring counties.

⁸⁶ ANRE (RO) replied that all substations from national electrical system can be operational using diesel generators for 24 hours.

- 350 The same advanced level of implementation is reached with Article 42(4). Outstanding situations have been detected with respect to REWS (MT) and ECA (EE) - the latter did not answer the question circulated by ACER.
- 351 Moreover, with respect to Article 42(5), most of the NRAs confirmed that the essential substations are operational for at least 24 hours in case of loss of the primary power supply. NRAs from BE, DE, ES, FR, GB, GR, HR and NL reported that this implementation is still ongoing in their countries. However, the monitoring activity revealed a positive picture since the requirements set in Article 42(5) will apply from 18 December 2022 onwards.
- 352 E-Control (AT) reported that Article 42(5) is not applicable in AT without providing ACER with relevant motivations. ECA (EE) remarked that the substations in EE are operational for 12 hours only and did not provide supporting explanations.

9. Costs

9.1 Objectives

353 Article 8 deals with the recovery of costs borne by system operators subject to network tariff regulation and stemming from the obligations laid down in the NC ER. In this context, ACER included three questions in the NRAs' survey:

- a) The first question aims to monitor whether the regulatory authorities assessed the costs incurred by system operators subject to network tariff regulation and stemming from the obligations laid down in the NC ER;
- b) The second question serves to ascertain whether the system operators provided the information necessary to facilitate the assessment of the incurred costs within a deadline set in Article 8(2), if so applicable;
- c) The third question concerns the availability of remuneration schemes for defence service providers and/or restoration service providers, which are subject to a non-contractual basis.

354 The implementation of the provisions concerning the recovery of costs is analysed in the continuation of this Section, while the NRAs' responses in full are included in Section 8 of Annex I.

9.2 Costs borne by the system operators

355 Pursuant to Article 8(1), the NRAs shall assess the costs borne by system operators subject to network tariff regulation and stemming from the obligations laid down in the NC ER. ACER inquired the NRAs whether they have proceeded with the assessment of the above-mentioned costs. The collected answers are graphically presented in Figure 14.

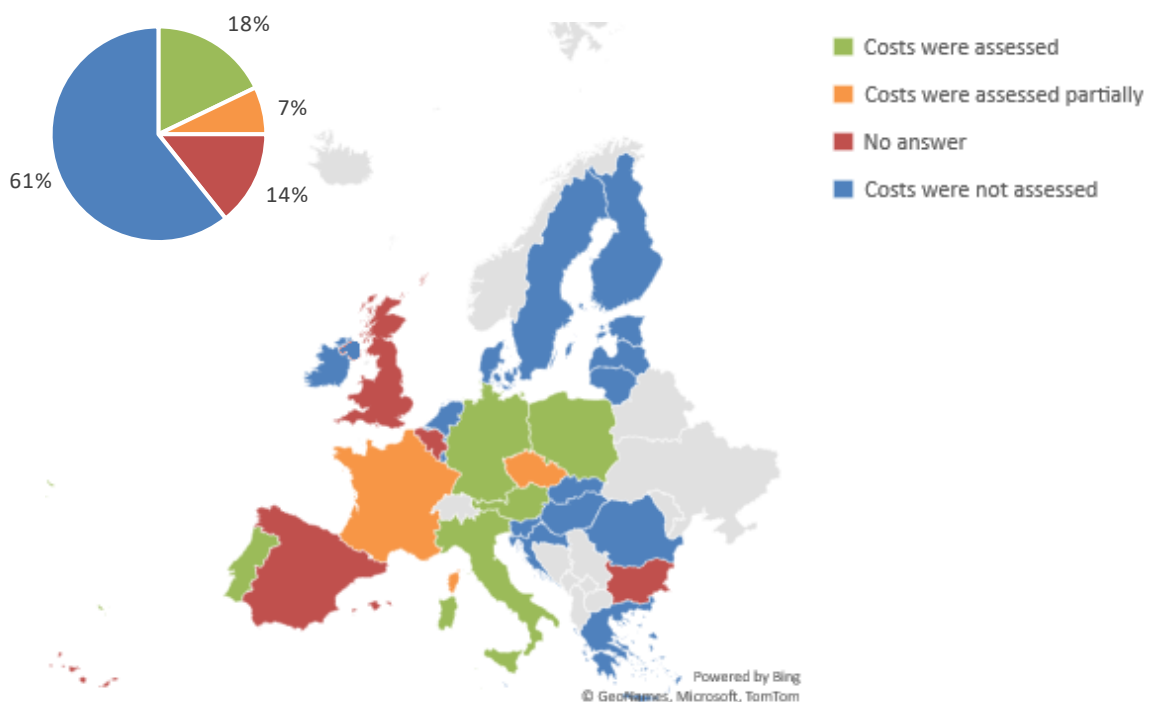


Figure 14. NRA assessment of costs borne by system operators subject to network tariff regulation

- 356 Only five NRAs (E-Control (AT), BNetzA (DE), ARERA (IT), URE (PL) and ERSE (PT)) confirmed that these costs had been duly assessed (green areas in Figure 14).
- 357 ERO (CZ) and CRE (FR) reported that the evaluation of the costs is ongoing (orange areas in Figure 14).
- 358 CNMC (ES) has not provided ACER with relevant information. Similarly, CREG (BE), Ofgem (GB), as well as the NRA from BG, did not reply to this question (red areas in Figure 14).
- 359 Finally, the remaining NRAs⁸⁷ (blue areas in Figure 14) answered that the cost assessment had not been carried out. In particular, ANRE (RO) reported that since costs mentioned in Article 8(1) were not identified, they cannot be assessed.

9.3 Information necessary for cost assessment

- 360 Pursuant to Article 8(2), system operators subject to network tariff regulation (stemming from the obligations laid down in the NC ER) shall, if requested by the relevant NRA and within three months after receiving such request, provide the information necessary to facilitate the assessment of the costs incurred.
- 361 ACER inquired the NRAs whether the system operators provided the information necessary to facilitate the assessment of the costs incurred in accordance with the deadline set in Article 8(2).
- 362 Only five NRAs (E-Control (AT), BNetzA (DE), ARERA (IT), URE (PL) and ERSE (PT)) confirmed that the system operators provided the information necessary to carry out the cost assessment.
- 363 CRE (FR) reported that the assessment is ongoing only in respect to those provisions of the NC ER which will apply from 18 December 2022. Concerning other costs, the assessment is done.
- 364 The remaining NRAs reported that relevant information has not been requested. CNMC (ES) has not provided ACER with relevant information. Similarly, CREG (BE), ECA (EE) as well as the NRA from BG did not reply to this question.

9.4 Remuneration scheme

- 365 Concerning the recovery of costs in accordance with Article 8, ACER inquired the NRAs whether there is any type of remuneration scheme for defence service providers and/or restoration service providers which are subject to a non-contractual basis available in their country. If so, ACER requested the NRAs to confirm if the remuneration scheme includes the cost faced by the defence service providers and/or restoration service providers for compliance testing and review.
- 366 Figure 15 graphically summarises the collected answers. Only four NRAs (CRU (IE), ARERA (IT), NERC (LT) and PUC (LV)) confirmed the existence of a remuneration scheme for the

⁸⁷ In total, 17 NRAs confirmed that the cost assessment was not carried out. Compared to all the contacted NRAs indicated in Table 1 in Section 1.2 it amounts to 59%.

specific types of defence service providers and/or restoration service providers, which are subject to a non-contractual basis (blue areas in Figure 15). Detailed information on the remuneration scheme in place in IE, IT, LT and LV are in Section 8.3 of Annex I of this Report.

367 CNMC (ES) has not provided ACER with relevant information, whereas CREG (BE) and ECA (EE) did not reply to this question (red areas in Figure 15).

368 Finally, the remaining NRAs did not confirm the presence of such a remuneration scheme in their countries (green areas in Figure 15).

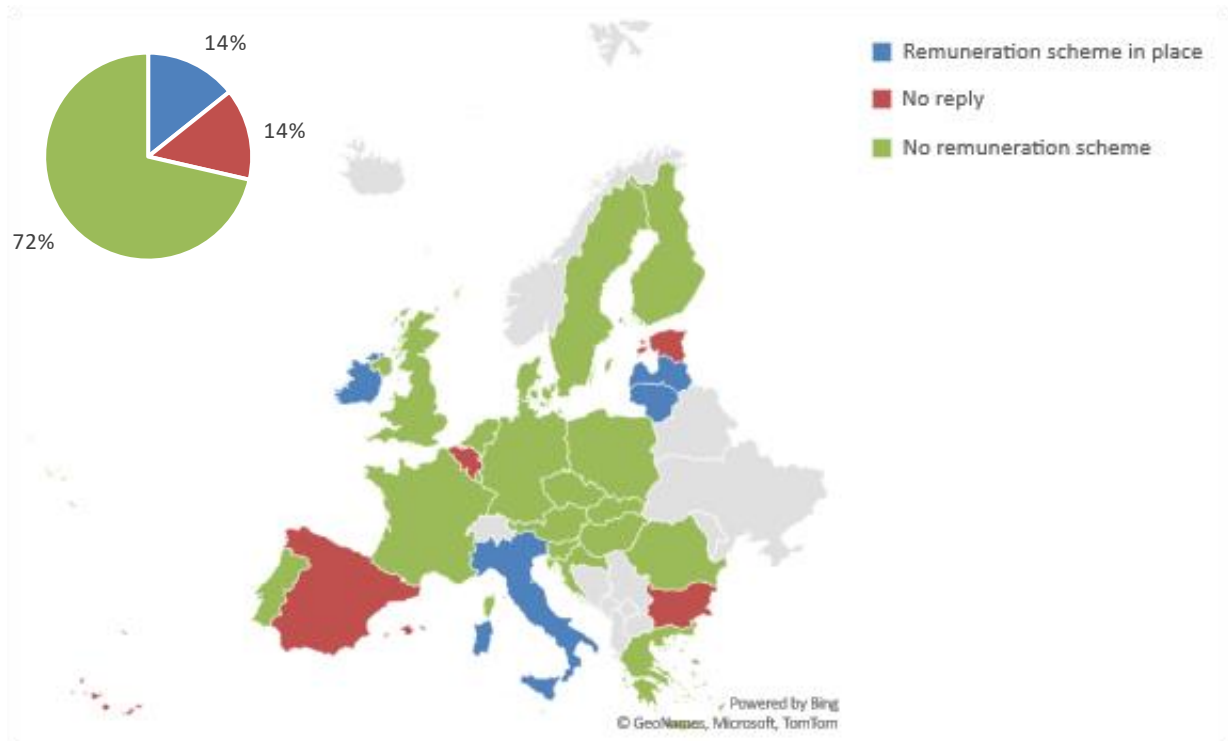


Figure 15. Remuneration scheme for defence service providers and/or restoration service providers which are subject to a non-contractual basis available in the Member State

9.5 High-level summary

369 The monitoring activities in Section 9 demonstrated that only five NRAs (E-Control (AT), BNetzA (DE), ARERA (IT), URE (PL) and ERSE (PT)) assessed the costs borne by system operators subject to network tariff regulation and stemming from the obligations laid down in the NC ER. These NRAs confirmed that the corresponding TSOs provided them with the information necessary to facilitate the assessment of the costs incurred in accordance with the deadline set in Article 8(2).

370 ERO (CZ) and CRE (FR) reported that the costs were assessed partially and that the evaluation process is ongoing.

371 Finally, only four NRAs (CRU (IE), ARERA (IT), NERC (LT) and PUC (LV)) confirmed the existence of a remuneration scheme for the specific types of defence service providers and/or restoration service providers which are subject to a non-contractual basis.

10. Agreement with third-country TSOs

10.1 Objectives

- 372 In accordance with Article 10, all Union TSOs shall endeavour to set up agreements with TSOs not bound by the NC ER. ACER included one question in the survey that was circulated with the NRAs concerning the establishment of these agreements.
- 373 The implementation of the provisions concerning these agreements is analysed in the continuation of this Section, while the NRAs' responses in full are included in Section 9 of Annex I.

10.2 Adoption of relevant agreement with third countries TSOs

- 374 Pursuant to Article 10, where a synchronous area encompasses both Union and third-country TSOs, all Union TSOs in that synchronous area shall endeavour to conclude with the third country TSOs not bound by the NC ER an agreement setting the basis for their cooperation.
- 375 It is worth noting that this Article may not apply to all the Union TSOs. In fact, Article 10 applies only to TSOs that are part of the same synchronous areas with third-countries' TSOs.
- 376 Moreover, Article 10 sets the deadline to reach an agreement on 18 June 2019.
- 377 ACER inquired the NRAs if the respective TSO concluded the relevant agreement with third countries TSOs. Figure 16 graphically summarises the collected answers.

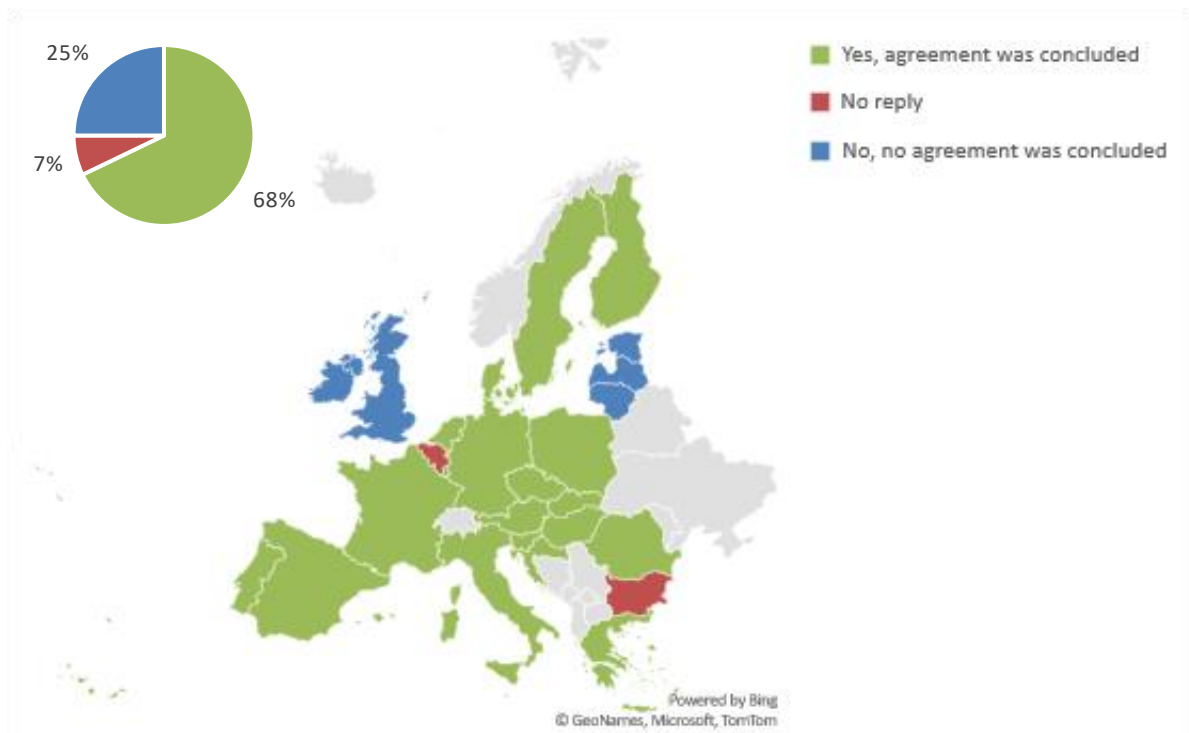


Figure 16. TSOs reaching the agreements relevant to Article 10 with third-country TSOs

- 378 Thirteen NRAs⁸⁸ confirmed, on behalf of the TSOs, the establishment of the abovementioned agreement (green areas in Figure 16). Among them, four NRAs (EV (FI), MEKH (HU), Ei (SE) and RONI (SK)) reported that the envisaged deadline was not respected (i.e., the agreement was reached more than 30 days after the deadline). Detailed information on the agreements and the relevant synchronous areas are in Section 9 of Annex I.
- 379 Although ERO (CZ), DUR (DK), CNMC (ES), RAE (GR), ILR (LU) and ERSE (PT) did not indicate any concluded agreement, ACER infers that since their respective TSOs are among EU parties of the Synchronous Area Framework Agreement for Regional Group Continental Europe⁸⁹, agreement with third-country TSOs has been reached.
- 380 CREG (BE), as well as the NRA from BG, did not provide any answer (red areas in Figure 16).
- 381 Other NRAs (ECA (EE), Ofgem (GB), CRU (IE), NERC (LT), PUC (LV), REWS (MT) and UR (UK-NIR)) reported that the agreement has not been reached (blue areas in Figure 16). However, by the deadline to reach a relevant agreement, synchronous areas corresponding to those NRAs did not encompass third-country TSOs, and hence, fall outside the scope of Article 10.
- 382 Finally, Ofgem (GB) reported that the establishment of such agreement was previously not applicable to GB. However, since the UK has left the EU and is now a third country, the GB TSO shall need to put in place cooperation arrangements with Union TSOs (expected to be part of the broader agreement).

10.3 High-level summary

- 383 The implementation of Article 10 is well on track since all the NRAs referring to Member States where this Article is applicable reached a relevant agreement.
- 384 It is worth noting that Article 10 requires that, where a synchronous area encompasses both Union and third-country TSOs, all Union TSOs in that synchronous area shall endeavour to conclude an agreement with the third-country TSOs not bound by the NC ER.

⁸⁸ E-Control (AT), BNetzA (DE), EV (FI), CRE (FR), HERA (HR), MEKH (HU), ARERA (IT), ACM (NL), URE (PL), ANRE (RO), Ei (SE), AGREN-RS (SI) and RONI (SK).

⁸⁹ List of the Synchronous Area Framework Agreement for Regional Group Continental Europe parties is available at: <https://www.entsoe.eu/publications/system-operations-reports/#continental-europe-synchronous-area-framework-agreement>

11. Automatic under-frequency control scheme

11.1 Objectives

- 386 The automatic under-frequency control scheme constitutes one of the key measures of the system defence plan. The relevant requirements for the implementation of such a scheme are provided in Article 15.
- 387 Pursuant to Article 15(1), the scheme for the automatic control of under-frequency of the system defence plan shall include a scheme for the automatic low frequency demand disconnection and the settings of the limited frequency sensitive mode-under-frequency in the TSO load frequency control (LFC) area.
- 388 Furthermore, as stipulated in Article 15(5), each TSO shall design the scheme for the automatic low frequency demand disconnection in accordance with the parameters for shedding load in real-time laid down in the Annex of the NC ER. In particular,
- I. The scheme shall include the disconnection of demand at different frequencies, from a 'starting mandatory level' to a 'final mandatory level', within an implementation range whilst respecting a minimum number and maximum size of steps.
 - II. The implementation range shall define the maximum admissible deviation of netted demand to be disconnected from the target netted demand to be disconnected at a given frequency, calculated through a linear interpolation between starting and final mandatory levels.
 - III. The implementation range shall not allow the disconnection of less netted demand than the amount of netted demand to be disconnected at the starting mandatory level.
 - IV. A step cannot be considered as such if no netted demand is disconnected when this step is reached.
- 389 The parameters defining the characteristics of the low frequency demand disconnection scheme in the Annex of the NC ER are reported in Table 7. Note that the values of the parameters may vary among the four synchronous areas (SAs).

Table 7. Parameters required for automatic under-frequency control schemes

Parameter	Values SA Continental Europe	Values SA Nordic	Values SA Great Britain	Values SA Ireland	Unit
Demand disconnection starting mandatory level (frequency)	49	48.7 - 48.8	48.8	48.85	Hz
Demand disconnection starting mandatory	5	5	5	6	<i>% of the Total Load at national level</i>

level (demand to be disconnected)					
Demand disconnection final mandatory level (frequency)	48	48	48	48.5	Hz
Demand disconnection final mandatory level (cumulative demand to be disconnected)	45	30	50	60	% of the Total Load at national level
Implementation range	± 7	± 10	± 10	± 7	% of the Total Load at national level for a given frequency
Minimum number of steps to reach the final mandatory level	6	2	4	6	Number of steps
Maximum Demand disconnection for each step	10	15	10	12	% of the Total Load at national level for a given step

390 The implementation of the provisions concerning the automatic low frequency demand disconnection scheme is analysed in the continuation of this section, while the NRAs' responses in full are included in Section 10 of Annex I.

11.2 Schemes for automatic under-frequency control

391 ACER requested the NRAs to provide all the relevant values of the frequency thresholds and the corresponding demand disconnection levels that have been implemented in each monitored country. All the collected values are reported in Table 8 for each of the responding NRAs.

392 In turn, ACER has compared the collected values and characteristics with the envelopes and intervals defined in Article 15 (recalled in Table 7) in order to ascertain the compliance of the national implementation of the automatic under-frequency control scheme with the EU provisions.

393 The results of this comparative analysis are graphically presented in Table 8. The cells with green background indicate adherence to the parameters laid down in the NC ER. Cells in red highlight a mismatch between the implemented parameter and the corresponding reference value in the NC ER. Cells in grey imply that the NRA did not provide ACER with the requested information.

- 394 Based on the collected results, ACER included in the last row of Table 8 a numerical indicator of the average⁹⁰ compliance of each relevant parameter in each column⁹¹ with the corresponding values laid down in the NC ER. The so-called Average Compliance Index (ACI) is expressed in percent units, and it is calculated by dividing the number of the cells in green⁹² over 26, which accounts for all the monitored countries excluding EE, LT, LV since Article 15 does not apply in these Member States.
- 395 DUR (DK) provided two different sets of values concerning the parameters in Table 8. The first applies in the east-side of the Danish system (DK-E), the second refers to the west-side (DK-W). In accordance with this clarification, two rows in Table 8 refer to DK and both concur to the calculation of the average compliance of the relevant parameters.

⁹⁰ Among the monitored countries.

⁹¹ With the exception of the two leftmost columns, which indicate the monitored country and synchronous area.

⁹² For the purpose of the calculation, following a conservative approach, the cells in yellow are considered as the red ones since full compliance cannot be univocally ascertained.

Table 8. Scheme for automatic low frequency demand disconnection

SA		Demand disconnection starting mandatory level: Frequency	Demand disconnection starting mandatory level: Demand to be disconnected	Demand disconnection final mandatory level: Frequency	Demand disconnection final mandatory level: Cumulative Demand to be disconnected	Minimum number of steps to reach the final mandatory level	Maximum Demand disconnection for each step
Continental Europe	AT	49 Hz	≥7%	48 Hz	45%	6	7.6%
	BE	49 Hz	~6%	48 Hz	~46%	10	6%
	BG						
	CZ	49 Hz	10%	48 Hz	50%	6	10%
	DE	49 Hz	5-10%	48.1 Hz	38%-52%	10	7%-10%
	DK-W	49.0 Hz	8%	48 Hz	48%	6	8%
	ES						
	FR	49 Hz	5%	48 Hz	45%	6	8%
	GR						
	HR	49 Hz	5%	48 Hz	50%	6	10%
	HU	49 Hz	6%	48 Hz	46%	6	8%
	IT	49 Hz	7%	48.1 Hz	49.9%	8	7%
	LU	49 Hz	5.71%	48 Hz	43.25%	8	6.29%
	MT	49 Hz	11%	48.1 Hz	55%	8	11%
	NL	49 Hz	7.5%	48.0 Hz	45%	6	7.5%
	PL	49 Hz	10%	48.0 Hz	50%	6	10%
	PT	49 Hz	6.7%	48.0 Hz	42.96%	6	9.7%
	RO	49 Hz	8%	48 Hz	52%	6	10%
	SI	49 Hz	10%	48.1 Hz	55%	6	10%
SK	49 Hz	10%	48 Hz	50%	6	10%	
Nordic	DK-E	48.8 Hz	5%	48 Hz	25%	5	5%
	FI	48.8 Hz	5%	48 Hz	25%	5	5%
	SE	48.8 Hz	>5%	48 Hz	>21%	5	>5%
GB	GB	48.8 Hz	4%	47.8 Hz	56%	9	15%
Ireland	IE	48.85 Hz	10%	48.5 Hz	60%	8	12%
	UK-NIR	48.85 Hz	6%	48.5 Hz	60%	8	12%
ACI		88.5%	84.6%	73.1%	88.5%	88.5%	80.8%

- 396 In the following, the results summarised in Table 8 are elaborated. Particularly, the compliance of the settings of the low frequency demand disconnection scheme against the corresponding values in Table 7 is investigated.
- 397 Concerning the *demand disconnection starting mandatory level – frequency* (third column in Table 8), the frequency values implemented in all the countries that provided answers are compliant with the thresholds indicated in the NC ER (based on the applicable SA). The relevant ACI, which also includes the missing answers from BG reaches 88.5%.
- 398 The ACI concerning the *demand disconnection starting mandatory level: demand to be disconnected* (fourth column in Table 8) reaches 84.6%% as the non-compliance is verified only in one monitored country. Ofgem (GB) informed of the implementation of the value lower than the one laid down in the NC ER for the corresponding parameter.
- 399 The ACI concerning the *demand disconnection final mandatory level: frequency* (fifth column in Table 8) is at 73.1%. Only very minor mismatches between the implemented value and the reference value are registered in DE, IT, MT and SI. In these four Member States, the frequency at which the final mandatory disconnection step takes place is at 48.1 Hz, slightly above the reference threshold of 48 Hz. Conversely, it is worth noting that the value reported by Ofgem (GB), 47.8 Hz, is below the reference threshold of 48.0 Hz in the SA Great Britain. ACER does not flag it as non-compliant since the GB settings are in accordance with Article 15(8)⁹³.
- 400 The ACI concerning the *Demand disconnection final mandatory level: Cumulative Demand to be disconnected* (sixth column in Table 8) reaches 88.5% as the compliance is attained in all of the monitored countries.
- 401 The ACI concerning the *minimum number of steps to reach the final mandatory level* (seventh column in Table 8) also reaches a satisfactory level of 88.5%. All the replying NRAs reported compliance with the NC ER.
- 402 Finally, the ACI concerning the *maximum demand disconnection for each step* (eighth column in Table 8) is at 80.8%. Non-compliant situations were reported in GB and MT. Ofgem (GB) and E-Control (AT) did not provide explicit numerical values for the *maximum demand disconnection for each step*. However, based on the information about the structure of the low frequency demand disconnection scheme provided by the NRAs, ACER was able to back-calculate the requested parameter.
- 403 In the following, the results in Table 8 are evaluated “horizontally” in order to highlight the degree of compliance with provisions of the NC ER in each of the monitored country.
- 404 To this end, Figure 17 shows how many of the six implemented parameters in Table 8 comply with the requirements laid down in the NC ER.
- 405 The full compliance, i.e., all the six parameters comply with the values established in the NC ER, is reached in the majority of the monitored countries, amounting to almost 60% of all the answers (green areas in Figure 17). Only three NRAs (BNetzA (DE), ARERA (IT) and AGEN-RS (SI)) reported that the compliance is attained in five parameters (blue areas in Figure 17), while in other two countries (GB and MT), only four parameters are aligned with the NC ER provisions. Finally, Article 15 is not applicable in EE, LT and LV, whereas no

⁹³ A TSO may include in the scheme for automatic low frequency demand disconnection of its system defence plan additional steps for netted demand disconnection below the final mandatory level of demand disconnection set out in the Annex of the NC ER.

communication was received from ES, BG and GR. In Figure 17, these seven countries are marked in red.

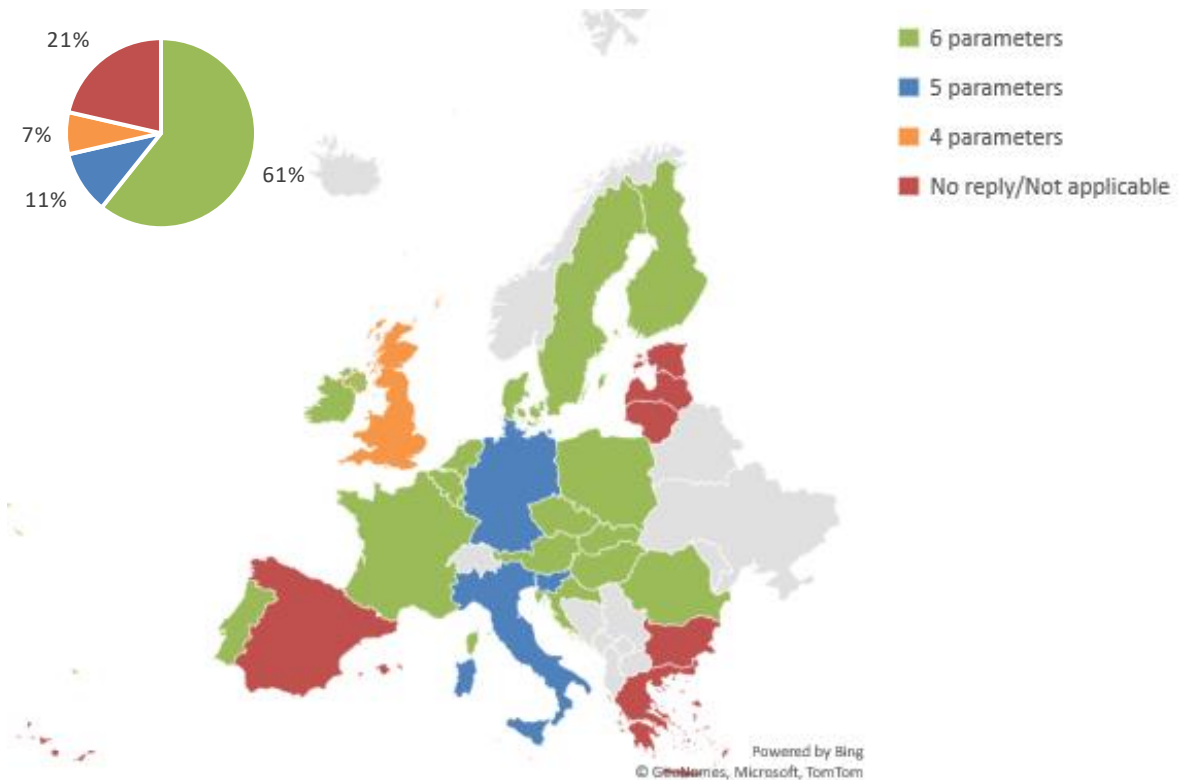


Figure 17. Compliance with Article 15

- 406 Furthermore, NRAs were inquired about the date of implementation of the abovementioned automatic low frequency demand disconnection schemes. The analysis of the collected answers is offered in Figure 18.
- 407 ARERA (IT) and UR (UK-NIR) reported that the automatic low frequency demand disconnection schemes were already implemented before the entry into force of the NC ER and subject to periodical checks. 12 NRAs, corresponding to the set of monitored countries in the second from the top bar in Figure 18, highlighted that the implementation of Article 15 has been carried out in the interval 2017 and 2021. Six other NRAs envisage the possibility to reach a complete implementation of this Article by the end of 2022, i.e., when Article 15(5)-(8) will become binding. In accordance with Article 55, it must be noted that Article 15(5)-(8) applies from 18 December 2022 onwards.
- 408 Finally, the remaining NRAs did not answer the question. Once again, it is worth noting that Article 15 is not applicable in the Baltic Member States, pursuant to Article 2(8).

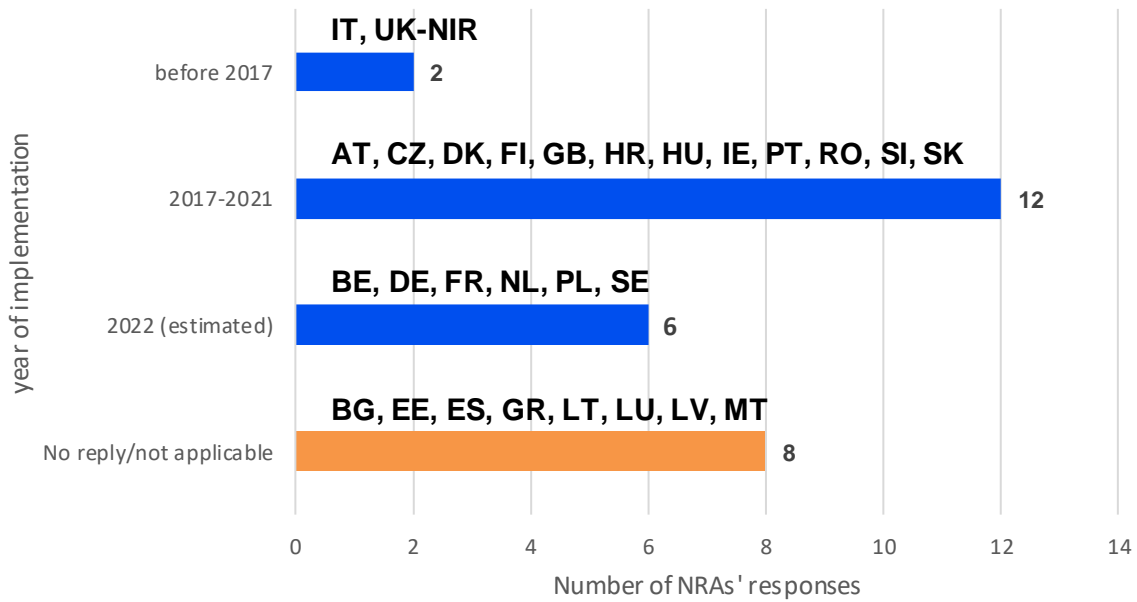


Figure 18. Implementation of the automatic under-frequency control scheme

11.3 Frequency gradient

409 Article 15(8) establishes that the scheme for the automatic low frequency demand disconnection of the system defence plan may provide for netted demand disconnection based on frequency gradient provided that is activated only:

- a) when the frequency deviation is higher than the maximum steady state frequency deviation and the frequency gradient is higher than the one produced by the reference incident;
- b) until the frequency reaches the frequency of the demand disconnection starting mandatory level.

410 In addition to the conditions (a) and (b) above, the netted demand disconnection based on frequency gradient must comply with the requirements in the Annex of the NC ER and must be necessary and justified in order to maintain efficiently the operational security.

411 ACER inquired the NRAs about the application of Article 15(8) and the consequent implementation of frequency gradient-based demand disconnections.

412 The only NRA that reported the triggering of Article 15(8) is ARERA (IT). The activation of first four steps of the Italian automatic low frequency demand disconnection scheme is subject to the following conditions in the respective order:

- Step 1: 49.3 Hz and -0.3 Hz/s (cumulative) OR 49.0 Hz
- Step 2: 49.2 Hz and -0.6 Hz/s (cumulative) OR 48.9 Hz
- Step 3: 49.1 Hz and -0.9 Hz/s (cumulative) OR 48.8 Hz
- Step 4: 49.1 Hz and -1.2 Hz/s (cumulative) OR 48.7 Hz

413 For instance, the first step of the scheme will trigger if the measured frequency reaches 49.0 Hz. However, the first step could also trigger for values of frequencies which are still above 49 Hz (and lower than 49.3 Hz) if the frequency gradient is lower (in negative values) than – 0.3 Hz/s. Similarly, the other steps (up to the fourth) of the scheme would be activated following the same structural conditions, although they are characterised by different numerical values.

414 In accordance with Article 15(8)(a)(ii), the netted demand disconnection is maintained until the frequency reaches the frequency of the demand disconnection starting mandatory level.

415 Four NRAs (CNMS (ES), RAE (GR), HERA (HR), REWS (MT)) did not reply to this question.

11.4 System protection schemes

416 ACER inquired the NRAs whether Article 15(11) has been implemented in their country. In accordance with this provision, each TSO shall be entitled to implement additional system protection schemes that are triggered by a frequency smaller or equal to the frequency of the final mandatory level of demand disconnection and which aim at a faster restoration process. The TSO shall ensure that such additional schemes do not further deteriorate frequency.

417 Five NRAs (E-Control (AT), HERA (HR), ARERA (IT), NERC (LT) and RONI (SK)) confirmed that additional system protection schemes had been implemented in their Member States. The frequency levels triggering these schemes are extracted from the relevant NRAs' answers and presented in Table 9.

Table 9. Frequency levels triggering additional system protection schemes

	AT	HR	IT	LT	SK
Triggering frequency level [Hz]	49.8 - 45	47.5	no information	49.6	49.8 - 50.2

418 The analysis of the answers provided by NERC (LT) and RONI (SK) demonstrated that the protection schemes mentioned by the two NRAs should not be referred to Article 15(11) simply because this Article indicates schemes that are triggered by a frequency smaller or equal to the frequency of the final mandatory level of demand disconnection. The triggering frequencies reported by NERC (LT) and RONI (SK) and included in Table 9 are significantly above the frequency of the final mandatory level of demand disconnection envisaged in those Member States.

419 Moreover, both the schemes described by the two NRAs refer to pump-hydro storage units and thus should be analysed with respect to Article 15(3)-(4). These provisions point at storage units and envisage a triggering that is prior to the activation of the defence plans in Article 15(5).

420 E-Control (AT) reported that additional protection schemes concern generators, pump hydro units and other storage units. The Austrian TSO activates the schemes when frequency lies in a wide interval 49.8 Hz - 45 Hz, which includes, at the same time, all the frequency thresholds relevant to Article 15(3), 15(5) and 15(11).

- 421 HERA (HR) reported that the power plants can be disconnected from the grid when frequency reaches 47.5 Hz. Although the NRA specifies this as a protection scheme relevant to Article 15(11), ACER believes that it represents the minimum connection requirements for Power Generating Modules under the scope of application of Commission Regulation (EU) 2016/631 (Article 13(1)(b)).
- 422 ARERA (IT) reported that a controlled islanding protection scheme is implemented on some generation and industrial loads, in order to maintain operation and support a faster restoration process. However, ARERA did not provide the relevant frequency thresholds. Without this information, ACER cannot ascertain whether these protection schemes are implemented in accordance with Article 15(11).
- 423 Ofgem (GB) noted that there is no additional system protection scheme in place. However, it also mentioned that the only exception to this would be where a commercial arrangement is in place or on a site-specific basis which has been agreed bilaterally.
- 424 CNMC (ES), RAE (GR) and REWS (MT) did not reply to this question, and hence, ACER is unable to infer whether additional system protection schemes in accordance with Article 15(11) have been implemented in their respective Member States.

11.5 High-level summary

- 425 The settings and characteristics of the automatic low frequency demand disconnection scheme are fully compliant with the corresponding provisions in Article 15 in the vast majority of the monitored countries.
- 426 All the monitored countries have automatic low frequency demand disconnection schemes in place. In addition, in most of the cases, these are based on thresholds and characteristics that are compliant with the provision of the NC ER.
- 427 Since Article 15(5)-(8) will apply only after 18 December 2022, ACER invites the NRAs to work with the relevant TSOs towards a revision of the automatic low frequency demand disconnection schemes aiming at guaranteeing full compliance with the provisions and parameters in the NC ER.
- 428 Only one NRA (ARERA (IT)) reported that the national defence plan provides for netted demand disconnection that is also based on the frequency gradient which is not compulsory in accordance with Article 15(8). However, if this article is applied, obligations (a)-(c) in Article 15(8) shall then be respected.

Annex I: NRAs' responses to the questionnaire

1. Overview

- 1 This annex includes the responses in full received from the NRAs to each question of the survey on the implementation monitoring of the NC ER. Text in red font is added by ACER for the sole purpose of clarification.

2. Regulatory aspects

2.1 Proposals

2.1.1 Submission of the proposals to an entity other than the regulatory authority

- 2 **Q.1.1. Concerning Article 4(3), has the Member State provided that the proposals referred to in points (a) to (d) and (g) of Article 4(2) may be submitted for approval to an entity other than the regulatory authority? If so, specify the designated relevant entity and provide any clarification details.**

3 Table 1: Submission of the proposals

MS	Answer
AT	No
BE	<i>Yes, in BE proposals are submitted to the MoE for approval (after advice of NRA CREG)</i>
BG	
CZ	<i>This provision wasn't applied.</i>
DE	No
DK	No
EE	No
ES	<i>The proposals referred to in points (a) to (d) and (g) of Article 4(2) were submitted to DGPEM.</i>
FI	No.
FR	<i>CRE is competent.</i>
GB	<i>In GB all the information was submitted to the National Regulatory Authority, which in GB is Ofgem. A link to these documents is attached below.</i> <i>https://www.nationalgrideso.com/industry-information/codes/european-network-codes/other-enc-documents</i> <i>The documents have not been submitted to any other entity for approval.</i>

UK-NIR	<i>Within Northern Ireland (NI) submissions were made to Utility Regulator (UR) as the NI regulatory authority by SONI the NI TSO.</i>
GR	<i>The NRA (RAE) is the relevant entity.</i>
HR	<i>It didn't, NRA approved the documents.</i>
HU	<i>No, MAVIR has submitted its proposals for approval to the regulatory authority.</i>
IE	<i>No, these documents can only be submitted to the Commission for Regulation of Utilities (CRU).</i>
IT	<i>Since all the above-mentioned proposals are included in the national grid code, they shall be sent to both the National Regulatory Authority and the Minister according to the Italian national framework</i>
LT	<p><i>Practically.</i></p> <p><i>Before the approval of NC ER regulation, Article 4(2) points (a) to (d) and (g) have been practically implemented, because requirements set in these articles was required by the Lithuanian national legislation.</i></p> <p><i>Currently, requirements regarding Article 4(2)(c), (d) are historically set by the Order of the Minister of Energy and by TSO.</i></p> <p><i>Requirements regarding Article 4(2) (a), (b), (g) are fully implemented on contractual basis (transmission service agreement). Please note, that standard terms and conditions for transmission service agreement are approved by NERC. Therefore, proposals are not adopted formally.</i></p> <p><i>NERC with its resolution ruled that Article 4(2) points (c), (d) and (g) are not fully implemented, because according with ER NC Article 4 TSO should submit separate proposals. Therefore, NERC obliged TSO to submit proposals to the NERC for approval in accordance with Article 4(2) points (c), (d) and (g) when appropriate legislative changes are made at national level and the provisions of NC ER regulation and national legislation are aligned.</i></p> <p><i>Reference:</i></p> <p><i>https://www.vert.lt/Docs/nutarimas_2019_03E-462.pdf#search=03E%2D462</i></p> <p><i>https://www.vert.lt/en/Pages/Updates/2020/2020-August_September/NERC-network-code-on-electricity-emergency-and-restoration-is-implemented-by-Lithuanian-TSO.aspx;</i></p> <p><i>https://www.regula.lt/Docs/nutarimas_2020_03E-789.pdf;</i></p> <p><i>https://www.regula.lt/Docs/nutarimas_2020_03E-790.pdf .</i></p>
LU	<i>No</i>
LV	<i>Proposals must be submitted only to national regulatory authority (hereinafter – NRA).</i>
MT	<i>The Member State did not provide for the proposals in this sense.</i>
NL	<i>No. The proposal has been submitted to the national regulatory authority (ACM)</i>
PL	<i>No</i>
PT	<i>No. The regulatory authority is responsible for the approval.</i>
RO	<i>No</i>
SE	<i>No.</i>
SI	<i>No.</i>
SK	<i>In the conditions of the Slovak Republic, the Energy Act and Amendments to Certain Acts 251/2012 was designated as the relevant body for the above-mentioned tasks - the</i>

Ministry of Economy of the Slovak Republic for Article 4 (2) a), b), c), d) and g).
Regulatory Office for Network Industries is responsible for Article 4 (2) e) and f).

2.1.2 Date of the submission of the proposal for approval

- 4 **Q.1.2. Concerning Article 4(2), when has the relevant TSO submitted the proposals listed in Article 4(2)(a)-(g) to the relevant regulatory authority ? Please specify the dates of submission of all the proposals, individually.**

5 Table 2: date of submission

MS	Answer
AT	<p>Article 4(2)(a): 11 December 2018</p> <p>Article 4(2)(b): 23 December 2018</p> <p>Article 4(2)(c): 5 July 2019</p> <p>Article 4(2)(d): 5 July 2019</p> <p>Article 4(2)(e): 12 December 2018</p> <p>Article 4(2)(f): 12 December 2018</p> <p>Article 4(2)(g): 11 December 2019</p>
BE	<p>Submission for 1st time:</p> <p>(a) 18/12/2018</p> <p>(b) 18/12/2018</p> <p>(c) 9/10/2019</p> <p>(d) 9/10/2019</p> <p>(e) 18/12/2019</p> <p>(f) 18/12/2019</p> <p>(g) 25/11/2019</p>
BG	
CZ	<i>See Figure 1 of the Annex II</i>
DE	<p>4(2)(a): just in time but after coordination with BNetzA not submitted, no defence service providers implemented, requirements fulfilled via general technical requirements (grid codes) by all grid users.</p> <p>4(2)(b): submission on December 18th 2018</p> <p>4(2)(c): just in time but after coordination with BNetzA not submitted, no new/additional measures necessary, requirements fulfilled via general technical requirements (grid codes) by all relevant grid users.</p> <p>4(2)(d): just in time but after coordination with BNetzA not submitted, no new/additional measures necessary, requirements fulfilled via general technical requirements (grid codes) by all relevant grid users.</p>

	<p>4(2)(e): submission on December 18th 2018 4(2)(f): submission on December 18th 2018 4(2)(g): submission on December 17th 2019</p>
DK	<p>The Danish TSO submitted a proposal covering article 4(2)(a)-(f) on the 18. December 2018. The proposal was amended (and resubmitted) by the TSO on the 26. august 2019.</p> <p>The testplan in accordance with article 4(2)(g) was submitted on the 17. December 2019.</p> <p><i>Update provided by DUR (DK):</i></p> <p>DUR hereby confirms the amendment and resubmission of the proposal was pursuant to a formal request from DUR.</p>
EE	<p>a) 01.10.2019 b) 01.10.2019 c) 01.10.2019 d) 01.10.2019 e) 31.01.2019 f) 31.01.2019 g) not yet</p>
ES	<p>Suspension and restoration of market activities: first proposal on 18/12/2018.</p> <p><i>Update provided by CNMC (ES):</i></p> <p>4 (2)(a)-(f) Suspension and restoration of market activities: first proposal on 18/12/2018. 4 (2) (g): first proposal on 18/12/2019</p>
FI	<p>a – 11.12.2018 b – 11.12.2018 c – 18.12.2018 d – 18.12.2018 e – 11.12.2018 f – 11.12.2018 g – 18.12.2019</p>
FR	<p>CRE received RTE's proposal relating to articles 4(2)(a) to 4(2)(f) on December 20, 2018.</p> <p>CRE received RTE's first proposal relating to article 4(2)(g) on December 23, 2019 (proposal to be updated and submitted soon following requests for clarification from CRE).</p> <p><i>Update provided by CRE (FR):</i></p> <p>The new proposal (g) was submitted on October, 18 2021 together with an amendment concerning proposal (a).</p>

<p>GB</p>	<p>The majority of the information was submitted to Ofgem in December 2019 and early January / February 2020. A link to all the documents is attached below together with an individual list of the dates.</p> <p>Link to proposal</p> <p>https://www.nationalgrideso.com/industry-information/codes/european-network-codes/other-enc-documents</p> <p>NB – to access the proposals follow the link provided, scroll down and select ‘proposals pending approval.</p> <p>Dates of submission</p> <p>See Figure 4 of the Annex II</p>
<p>UK-NIR</p>	<p>See Figure 5 of the Annex II</p> <p>Please see the links below. Original submissions of ER documents from TSO were submitted to the UR in December 2018. We issued a request for amendment in Oct 2019 for all submissions. In July 2020 SONI TSO resubmitted the documents. We have since reviewed these documents and made some suggestions to SONI for minor changes. SONI submitted the latest version of documents in 16th Oct 2020. We aim to publish our decision by January 2020.</p> <p>SONI TSO original Emergency Restoration submissions (Dec 2018) to the Utility Regulator; http://www.soni.ltd.uk/media/documents/RulesForTheSuspensionAndRestorationMarketActivitiesRulesforImbalanceSettlement_Proposal_NorthernIreland.pdf SRP Original Submission SDP Original submission Terms and conditions to act as defence service provider and restoration service provider</p> <p>The Utility Regulators Request for amendment for the above submission (Oct 2019); https://www.uregni.gov.uk/sites/uregni/files/media-files/2019-10-01%20NC%20ER%20Request%20for%20Amendment.pdf</p> <p>SONI’s Resubmissions July 2020 SRP Resubmission SDP Resubmission Terms and conditions to act as defence service provider Terms and conditions to act as restoration service provider http://www.soni.ltd.uk/media/documents/RulesForTheSuspensionAndRestorationMarketActivities_Proposal_NorthernIreland-Re-submission.pdf</p>
<p>GR</p>	<p>Art 4(2):</p> <p>a) Not yet submitted b) Not yet submitted c) Yes, as an appendix of the Defense Plan. Needs resubmission as a separate proposal. d) Not yet submitted e) Submitted on the 3.9.2019; RAE however, asked for amendments. The Proposal is currently under TSO consultation (until 8. 11.2020). f) Submitted to RAE by the TSO on the 09.12.2019. Approved by RAE Decision</p>

	<p>1008/2020 (Gov. Gaz. B 3227/ 4.8.2020) g) Not yet submitted</p> <p><i>Update provided by RAE:</i></p> <p>e) It has been finally submitted to RAE by the TSO on 16.11.2020 Approved by RAE Decision 1603/2020 (Gov. Gaz. B 5944/ 31.12.2020)</p>
HR	<p>Corresponding to Article 4(2): (a) Submitted by TSO on October 31st, received by NRA on November 2nd 2018 (b) Submitted by TSO on October 31st, received by NRA on November 2nd 2018 (c) Submitted by TSO on December 5th, received by NRA on December 7th 2018 (d) Submitted by TSO on December 5th, received by NRA on December 7th 2018 (e) Submitted by TSO on November 21st, received by NRA on November 23rd 2018 (f) Submitted by TSO on November 21st, received by NRA on November 23rd 2018 (g) Submitted by TSO on December 18th, received by NRA on December 23rd 2019</p>
HU	<ul style="list-style-type: none"> • Defence service providers provide their service on legal obligation, therefore proposal for terms and conditions to act as defence service providers on a contractual basis was not submitted. • Proposal for the terms and conditions to act as restoration service providers on a contractual basis was submitted on December 18, 2018 • Proposal for the list of high priority significant grid users, and the terms and conditions for disconnecting and re-energising them was submitted on December 18, 2018 • Proposal for the rules for suspension and restoration of market activities was submitted on December 18, 2018 • Proposal for specific rules for imbalance settlement and settlement of balancing energy in case of suspension of market activities was submitted on December 18, 2018 • Proposal for the test plan was submitted on December 18, 2019 <p>HU TSO (MAVIR) submitted the proposal referred to in Article 4(2)(c) of the NC ER and it was approved by MEKH.</p>
IE	<p>EirGrid submitted documents listed in 4(2)(a)-(f) on 18 December 2018. As of yet no submission has been received on 4(2)(g).</p>
IT	<p>Proposals listed in Article 4(2)(a) – (f) were sent on 8 February 2019. Proposal 4(2)(g) is still under development: the tests on defence and restoration service providers are already defined in the national grid code but needs some updates.</p>
LT	<p>Article 4(2) points (a) to (d) and (g) have been practically implemented, because requirements set in these articles were required by the Lithuanian national legislation. Separate approvals for Article 4(2) points (a) to (d) and (g) requirements are not yet accomplished, because changes in national law have not been done yet. Therefore NERC has not yet requested the TSO to submit proposals formally. When future legislative changes are made at national level to implement the EU Regulation, the TSO is obliged to resubmit revised proposals to NERC for approval in accordance with the requirements of Article 4(2)(a)-(d) and (g).</p> <p>Proposals referred to in Article 4(2)(a) and (d) have been submitted by the TSO on 11/11/2018.</p> <p>Proposals referred to in Article 4(2)(e) and (f) have been submitted by the TSO on 18/12/2018.</p> <p>Proposal referred to in Article 4(2)(g) has been submitted by the TSO on 02/03/2020.</p>

<p>LU</p>	<p><i>A first letter was received on 21 December 2018 where all the points from a to g were presented by Creos.</i></p> <p><i>An updated letter was received on 4 June 2021 where points e to g were submitted and explanations were provided concerning the non relevance/non applicability of points a to d.</i></p>
<p>LV</p>	<p><i>Following proposals were submitted:</i></p> <ol style="list-style-type: none"> <i>1. the terms and conditions to act as defence service providers on a contractual basis in accordance with paragraph 4 - on 18 December 2018;</i> <i>2. the terms and conditions to act as restoration service providers on a contractual basis in accordance with paragraph 4 - on 18 December 2018;</i> <i>3. the rules for suspension and restoration of market activities in accordance with Article 36(1) - on 18 December 2018;</i> <i>4. specific rules for imbalance settlement and settlement of balancing energy in case of suspension of market activities, in accordance with Article 39(1) - on 18 December 2018;</i> <i>5. the test plan in accordance with Article 43(2) – on 23 March 2019.</i> <p><i>The list of high priority significant grid users (hereinafter – SGUs) was not submitted because TSO in cooperation with Ministry of Economics agreed, that high priority status cannot be allocated to any grid user.</i></p> <p><i>The list of SGUs responsible for implementing on their installations the measures that result from mandatory requirements set out in Regulations (EU) 2016/631, (EU) 2016/1388 and (EU) 2016/1447 and/or from national legislation and the list of the measures to be implemented by these SGUs, identified by the TSOs under Art. 11(4)(c) and 23(4)(c) – was not submitted, because TSO did not identify relevant SGUs.</i></p>
<p>MT</p>	<p><i>Malta’s position with the EU Commission is that there are no transmission systems in Malta and hence no need for a designation of a transmission system operator. This position has been sustained even after the coming into operation of the interconnection Malta-Italy, an HVAC 220kV 200MW cable. This cable together with the entire distribution system is not open for third party access and is used solely by the DSO/supplier to purchase electricity from the Italian market and supply final customers. The interconnector is not subject to capacity booking. Apart from the generation plants owned by the DSO (221MW) which are mainly used for emergency purposes there only two other relatively large generators of 153MW and 215MW respectively. Otherwise, the rest of the generators consists mainly of small PV systems which presently have no role either in the system defence or restoration. The DSO does not have any demand disconnection contractual agreements or access to storage.</i></p> <p><i>The Maltese electricity system is not a transit system but a small peripheral system which qualifies as a “small interconnected system” under Directive 2019/944, since the demand in 1996 was less than 3000GWh. Electrically, Malta is treated as a load connected to the Italian system.</i></p> <p><i>It is our view, the Regulation 2017/2196 is intended for member states that have one or multiple TSOs that manage large interconnected systems with a large number of generators and various DSOs connected to them, which may present coordination challenges in particular during an emergency. The role of the DSO is to implement the requirements determined by the TSO. It is in view of this that certain concepts in the Regulation are not deemed to apply to the Maltese system.</i></p> <p><i>The contractual agreement with Terna Spa, requires only that the DSO implements low frequency demand disconnection settings that are consistent with the corresponding settings for the Italian grid.</i></p>

	<p>Nevertheless, in view of the objectives of Regulation 2017/2 196 the REWS will endeavour to ensure that the existing defence and restoration procedures implemented at the DSO level are fully documented. The REWS will also seek the alignment of these procedures with the requirements of the Regulation as far as applicable to the Maltese system for the ultimate benefit of consumers</p>
NL	<p>. The proposals listed in article 4(2) (a), (b), (c), (d) and (e) have been submitted by the TSO to the ACM on 18 December 2018. . The implementation of article 4(2) (f) ER regulation has already been included in the implementation of article 18 EBGL (Regulation 2017/2 195 EC), i.e. the imbalance settlement rules; as a result, these rules were already embedded in our national Electricity code. . The proposal listed in article 4(2) (g), i.e. the test plan, has been submitted by the TSO to the ACM on 17 January 2020.</p> <p>Update provided by ACM (NL):</p> <p>With the implementation of the EB Regulation in in the national T&Cs, it was decided that market parties are responsible for their imbalances regardless of the system state. Therefore a proposal pursuant to Art. 4(2)(f) was not deemed necessary.</p>
PL	<p>A not submitted – cf. 1.4 B 12.12.2018 C 18.12.2018 D not submitted - all possible SGU are included in proposal listed in article 4 (2) (c) E 18.12.2018 F 18.12.2018 G 13.12.2019</p>
PT	<p>All documents were submitted by the relevant TSO to the national regulatory authority on December 17th, 2018.</p>
RO	<p>. Art 4(2) (a) and (b) – The framework for the terms and conditions are under discussion. For (b) - a proposal has been submitted for prequalification (technical conditions) on March 2019 and will be approved at the beginning of 2021. B29 . Art. 4(2) (c) and (d) – The documents have been sent by Transelectrica on 1.10.2020. . Art. 4(2) (e) și (f) – The documents have been sent by Transelectrica on 26.02.2019</p> <p>Update provided by ANRE (RO):</p> <p>For (a) - a proposal has been submitted for prequalification (technical conditions) on 11.10.2020 and it was approved on 14.07.2021; For (b) – a proposal was approved on 14.07.2021; For (c) and (d) – proposals were approved on 31.03.2021; For (e) and (f) – proposals will be approved at the beginning of December 2021</p>
SE	<p>A: 30 September 2019 B: N/A, in refence to article 4.4 E: 30 September 2019 F: 30 September 2019 G: 16 November 2020</p>

	<p><i>Update provided by Ei (SE):</i></p> <p>A: 18 December 2018 (N/A)</p> <p>B: 18 December 2018 (N/A)</p> <p>C: 18 December 2018</p> <p>D: 18 December 2018</p> <p>E: 18 December 2018, revised 2019-09-30</p> <p>F: 18 December 2018, revised 2019-09-30</p> <p>G: 13 November 2020. Pursuant to the submission of the proposal referred to in Article 4(2) (g), Ei has requested specific amendments/additions to the proposal through several dialogues with the TSO. In reaction to Ei's request, the Swedish TSO has started working on Ei's comments. The proposal is to be resubmitted (delayed).</p>
SI	<ul style="list-style-type: none"> • 4(2)(a): In Slovenia the defence service providers on a contractual basis in accordance with article 4(4) don't exist; • 4(2)(b): In Slovenia the restoration service providers on a contractual basis in accordance with article 4(4) don't exist; • 4(2)(c): 17 Dec 2018 • 4(2)(d): 17 Dec 2018 • 4(2)(e): 3 Feb 2019 • 4(2)(f): 3 Feb 2019 as part of the Rules from point 4(2)(e) • 4(2)(g): 16 Dec 2019
SK	<p>Article 4(2):</p> <p>a) 25.10.2018 (MoE)</p> <p>b) 25.10.2018 (MoE)</p> <p>c) 25.10.2018 (MoE)</p> <p>d) 25.10.2018 (MoE)</p> <p>e) 14.12.2018 (RONI)</p> <p>f) 21.11.2018 (RONI)</p> <p>g) 12.12.2019 (MoE)</p>

2.1.3 Decisions on the proposal

6 **Q1.3. When has the relevant regulatory authority decided on the proposals referred to in Article 4(2)? Please specify the dates of decisions of all the proposals individually and relevant references (e.g. internet link) to such decisions. If relevant, also provide any clarification details concerning possible requests for amendment and subsequent approvals by the relevant regulatory authority.**

7 Table 3: Decisions on the proposal.

MS	Answer
AT	<p>Article 4(2)(a): 28 June 2019</p> <p>RfA: 4 April 2019</p> <p>Article 4(2)(b): 28 June 2019</p> <p>RfA: 4 April 2019</p> <p>Article 4(2)(c): 25 July 2019</p>

	<p>Article 4(2)(d): 25 July 2019</p> <p>Article 4(2)(e): 4 July 2019</p> <p>Article 4(2)(f): 4 July 2019</p> <p>Article 4(2)(g): 27 March 2020</p>
BE	<p>Decisions 1st time</p> <p>(a) 18/06/2019 CREG concludes that there are currently no system defence services according to NC ER. No T&C are currently needed. As soon as SDS are needed and proposed, TSO must submit T&C to CREG for approval. CREG letter to TSO.</p> <p>(b) 18/06/2019 CREG decision (B)1928 www.creg.be</p> <p>(c) 14/11/2019 CREG advice (A)2022 www.creg.be; Ministerial Decree 19/12/2019 and 23.12.20 (list HPSNG); Moniteur Belge – Belgisch Staatsblad (BE official journal)</p> <p>(d) 14/11/2019 CREG advice (A)2022 www.creg.be; Ministerial Decree 19/12/2019 and 23/12/20 (list HPSNG); Moniteur Belge – Belgisch Staatsblad (BE official journal)</p> <p>(e) 19/09/2019 CREG decision (B)1941 www.creg.be</p> <p>(f) 19/09/2019 CREG decision (B)1941 www.creg.be</p> <p>(g) 11/03/2020 CREG advice (A)2065 www.creg.be; Ministerial Decree 15/04/2020; Moniteur Belge – Belgisch Staatsblad (BE official journal)</p>
BG	
CZ	<p><i>See Figure 2 of the Annex II</i></p>
DE	<p>Art. 4 (2) b: Date of decision: 20.05.2020</p> <p>Art. 4 (2) e: Date of Decision August 04th 2020</p> <p>Art. 4 (2) f: Date of Decision August 04th 2020</p> <p>All relevant documents are published here: https://www.netztransparenz.de/EU-Network-Codes/ER-Verordnung and all BNetzA decision here: https://www.bundesnetzagentur.de/DE/Service-Funktionen/Beschlusskammern/BK06/BK6_84_Sys_Dienst/843_er_verordnung/er_node.html</p> <p><i>Update provided by BNetzA (DE):</i></p> <p>The test plan ((Art 4(2)g) has been approved by BNetzA. (17.11.2020)</p>
DK	<p>DUR has not decided on the submitted proposals pursuant to article 4(2)(a)-(g). Public consultation on draft decision ends 18. December 2020.</p> <p><i>Update provided by DUR (DK):</i></p> <p>DUR made its decision [concerning proposals referred to in Article 4(2)(a)-(f)] on 15th of January 2021. All relevant documents are published and available here: https://forsyningstilsynet.dk/el/afgoerelser/afgoerelse-af-energinets-anmeldelser-af-krav-i-medfoer-af-artikel-4-stk-2-litra-a-f-i-forordning-20172196-om-noedsituationer-og-systemgenoprettelse</p> <p>DUR has approved the proposed test plan according to Article 4(2)(g), hence Article 43(2). The approval was made on 14th of January 2021. Available at:</p>

	https://forsyningstilsynet.dk/el/afgoerelser/afgoerelse-af-energinets-anmeldelse-af-testplan-i-henhold-til-forordning-20172196-nc-er
EE	<p>Decision of the Competition Authority on 01.09.2020, which includes:</p> <p>a) and b) - The decision of the Competition Authority that not to establish the conditions for operating as a provider of defence and restoration services, as the respective principles are covered under § 40 (5) of Electricity Market Act.</p> <p>c) Decision of the Competition Authority to approve the classification of significant network users submitted by Elering AS to the Competition Authority in the system defence plan of the Estonian electricity system.</p> <p>d) The decision of the Competition Authority to approve the position submitted by Elering AS to the Competition Authority in the system defence plan of the Estonian electricity system that there are no priority network users in the Estonian electricity system.</p> <p>The Competition Authority made a decision on 17.09.2020 regarding items e) and f).</p>
ES	<p>Suspension and restoration of market activities: approval on 10/12/2020</p> <p><i>Update provided by CNMC (ES):</i></p> <p>Suspension and restoration of market activities: approval on 10/12/2020</p> <p>4 (2) (a) – (d): DGPEM requested minor changes in the proposals (June 2019). These proposals have not been approved yet.</p> <p>4 (2) (g): The proposal has not been approved yet.</p> <p>4 (2) (f): Approved on 20/12/2020 (included in P. O. 3.9; point 5 “Normas de liquidación de desvíos y liquidación de energías en caso de suspensión de los mercados de electricidad”</p>
FI	<p>a– 11.6.2019 https://www.fingrid.fi/globalassets/dokumentit/fi/sahkomarkkinat/verkkosaannot/230874.pdf</p> <p>b– 11.6.2019 https://www.fingrid.fi/globalassets/dokumentit/fi/sahkomarkkinat/verkkosaannot/230873.pdf</p> <p>c– 18.6.2019 https://www.fingrid.fi/globalassets/dokumentit/fi/sahkomarkkinat/verkkosaannot/energiaviraston-paatos-merkittavista-verkonkayttajista.pdf</p> <p>d– 18.6.2019 https://www.fingrid.fi/globalassets/dokumentit/fi/sahkomarkkinat/verkkosaannot/energiaviraston-paatos-merkittavista-verkonkayttajista.pdf</p> <p>e– 11.6.2019 https://www.fingrid.fi/globalassets/dokumentit/fi/sahkomarkkinat/verkkosaannot/paatos---er-markkinatoimintojen-keskeyttamisen-saannot-2019-06-11-1302ss.pdf</p> <p>f– 11.6.2019 https://www.fingrid.fi/globalassets/dokumentit/fi/sahkomarkkinat/verkkosaannot/paatos---er-markkinatoimintojen-keskeyttamisen-saannot-2019-06-11-1302ss.pdf</p> <p>g– 16.6.2020 https://www.fingrid.fi/globalassets/dokumentit/fi/sahkomarkkinat/verkkosaannot/nc_er_art_43_2_legal_dokumentti_testisuunnitelmat.pdf</p>
FR	<p>CRE approved RTE's proposal relating to articles 4 (2) (a) to 4 (2) (f) on June 26, 2019 : https://www.cre.fr/recherche?search_form%5BcontentType%5D=%2F1%2F2%2F16997%2F120%2F16998%2F&search_form%5BsearchText%5D=&search_form%5BstartDate%5D=25%2F06%2F2019&search_form%5BendDate%5D=29%2F06%2F2019#</p>

	<p>CRE sent a request for amendment to RTE concerning its proposal relating to article 4 (2) (g) on June 17, 2020 (proposal to be up-dated and submitted soon following requests for clarification from CRE).</p> <p><i>Update provided by CRE (FR):</i></p> <p>The new proposal (g) was submitted on October, 18 2021 together with an amendment concerning proposal (a). The 2 proposals have been approved by CRE on October, 28 2021 : https://www.cre.fr/Documents/Deliberations/Approbation/service-de-defense-de-participation-active-de-la-demande-et-du-plan-d-essais-propose-par-rte-dans-le-cadre-de-la-mise-en-oeuvre-du-reglement-ue</p>
GB	<p>The material was submitted to Ofgem in line with the dates highlighted above and are still pending approval.</p> <p>The link to the proposals can be found in the ‘proposals (pending approval)’ section on the NGESO website, linked here > https://www.nationalgrideso.com/industry-information/codes/european-network-codes/other-enc-documents</p>
UK-NIR	<p>Decision has not yet been formally communicated to TSO. Currently the Utility Regulator are aiming to communicate our decision in January 2021.</p>
GR	<p>Decision 1008/2020 (Gov. Gaz. B 3227/4.8.2020) issued by RAE pursuant art.4.2(f). The rest are still pending.</p> <p><i>Update provided by RAE (GR):</i></p> <p>Decision 1603/2020 (Gov. Gaz. B 5944/ 31.12.2020) issued by RAE pursuant art.4.2(e).</p>
HR	<p>Corresponding to Article 4(2):</p> <p>(a) July 12th 2019: https://www.hera.hr/hr/docs/2019/Odluka_2019-07-12_03.pdf - there was 1 amendment (only “cosmetic” changes, nothing significant)</p> <p>(b) July 12th 2019: https://www.hera.hr/hr/docs/2019/Odluka_2019-07-12_02.pdf - there was 1 amendment (only “cosmetic” changes, nothing significant)</p> <p>(c) July 12th 2019: https://www.hera.hr/hr/docs/2019/Odluka_2019-07-12_05.pdf - there was 1 amendment (only “cosmetic” changes, nothing significant)</p> <p>(d) July 12th 2019: https://www.hera.hr/hr/docs/2019/Odluka_2019-07-12_04.pdf - there was 1 amendment (only “cosmetic” changes, nothing significant)</p> <p>(e) December 17th 2019: https://www.hera.hr/hr/docs/2019/Odluka_2019-12-17_09.pdf – there was 1 amendment (required significant changes, so it was decided that the document needed one more round of public consultation)</p> <p>(f) It was decided that these rules will be integrated into our Balancing Rules (in accordance to Article 18 paragraph 2. of Regulation (EU) 2017/2195). The Balancing Rules came into force in early December 2019</p> <p>(g) July 23rd 2019: https://www.hera.hr/hr/docs/2020/Odluka_2020-07-23_02.pdf there was 1 amendment (small corrections, nothing significant)</p>
HU	<ul style="list-style-type: none"> • Defence service providers provide their service on legal obligation, there for proposal for terms and conditions to act as defence service providers on a contractual basis was not submitted. • Regulatory authority approved the proposal for the terms and conditions to act as restoration service providers on a contractual basis on October 11, 2019. • Regulatory authority approved the proposal for the list of high priority significant grid users, and the terms and conditions for disconnecting and re-energising them on October 11, 2019.

	<ul style="list-style-type: none"> • Regulatory authority approved the proposal for the rules for suspension and restoration of market activities on September 09, 2019. • Regulatory authority approved the proposal for specific rules for imbalance settlement and settlement of balancing energy in case of suspension of market activities on September 09, 2019. • Regulatory authority has not decided on the proposal for the test plan yet.
IE	<p>CRU rejected the TSO's proposals on documents listed in 4(2)(a)-(f) on 2 September 2019 (see here: https://www.cru.ie/wp-content/uploads/2019/09/CRU19110-Emergency-Restoration-NC-Decision-not-to-approve-and-see-amendments.pdf). The CRU asked for re-submission of all of these documents, which we are waiting to receive.</p> <p><i>Update provided by CRU (IE):</i></p> <p>Proposals resubmitted under 4(2)(a)-(f) approved on 10 February 2021, see CRU Decision CRU2113 (https://www.cru.ie/wp-content/uploads/2021/02/CRU2113-Emergency-Restoration-Network-Code-Decision.pdf)</p>
IT	<p>Arera decided on proposals 4(2)(a)-(f) on 17th December 2019 (see resolution 546/2019/R/eel - https://www.arera.it/it/docs/19/546-19.htm).</p> <p>The TSO's proposal refers to a dedicated Arera decision for the definition of some details about the settlement rules in case of market suspension. These aspects will be decided by end 2020, following a public consultation run on the topic in June 2020.</p>
LT	<p>NERC decided on the proposals referred to in Article 4(2) at the same time on August 28, 2020.</p> <p>References: https://www.vert.lt/en/Pages/Updates/2020/2020-August_September/NERC-network-code-on-electricity-emergency-and-restoration-is-implemented-by-Lithuanian-TSO.aspx; https://www.regula.lt/Docs/nutarimas_2020_O3E-789.pdf ; https://www.regula.lt/Docs/nutarimas_2020_O3E-790.pdf .</p>
LU	<p>Not done yet.</p> <p>The submission file was considered as incomplete and it was not clear at that time if ILR would be competent or not.</p> <p>Exchanges on-going with Ministry and Creos to finalize the process.</p> <p><i>Update provided by ILR (LU):</i></p> <p>Approval of points e, f and g on 20 September 2021. https://assets.ilr.lu/energie/Documents/ILRLU-1685561960-915.pdf</p>
LV	<p>NRA included TSO proposals in national legal act - electricity Grid code. Relevant amendments came into force on 11 December 2019.</p> <p>Amendments are available here: https://likumi.lv/ta/id/311223-grozijumi-sabiedrisko-pakalpojumu-regulesanas-komisijas-2013-gada-26-junija-lemuma-nr-1-4-tikla-kodekss-elektroenerijas-nozare-</p>
MT	<p>No formal plan has been submitted to the NRA till now. The DSO has just started working on the formalisation of the existing defence and restoration procedures and the NRA will monitor in order to ensure that as far as applicable in the Maltese context these are aligned with the requirements of Regulation 2017/2196.</p>
NL	<ul style="list-style-type: none"> . ACM has not yet taken a final decision on the article 4(2) proposals . The process for amending our national electricity code (Netcode elektriciteit) in order to implement these ER provisions is currently still ongoing . ACM has requested specific amendments to the implementation proposals through a

	<p>letter to the TSO on 6 June 2019</p> <ul style="list-style-type: none"> . In reaction to our request our TSO has submitted an amended proposal with modifications to the Netcode elektriciteit on 12 September 2019 . ACM has published a draft decision on implementation of the ER regulation (amendments to the Netcode elektriciteit) on 21 November 2019 <p>Internet link: https://www.acm.nl/nl/publicaties/ontwerpbesluit-implementatie-verordening-eu-2017-2196-er-verordening</p> <ul style="list-style-type: none"> . ACM has published a draft decision on the implementation of specific elements of the ER regulation, notably the procedures for Low Frequency Demand Disconnection (LFDD), on 20 May 2020. <p>Internet link: https://www.acm.nl/nl/publicaties/ontwerpbesluit-toepassing-lfdd-implementatie-er-verordening</p> <ul style="list-style-type: none"> . ACM has published a final decision on the implementation of specific elements of the ER regulation, notably the procedures for Low Frequency Demand Disconnection (LFDD), on 25 September 2020 <p>Internet link: https://www.acm.nl/nl/publicaties/codewijzigingsbesluit-toepassing-lfdd-implementatie-er-verordening</p> <p>With the implementation of the EB Regulation in in the national T&Cs, it was decided that market parties are responsible for their imbalances regardless of the system state. Therefore a proposal pursuant to Art. 4(2)(f) was not deemed necessary.</p>
<p>PL</p>	<p>A not applicable B 7.06.2019 (http://bip.ure.gov.pl/download/3/11041/PSE2.pdf) C 7.06.2019 (http://bip.ure.gov.pl/download/3/11042/PSE3.pdf) D not applicable E 7.06.2019 (http://bip.ure.gov.pl/download/3/11040/PSEkodekssieci.pdf) F 7.06.2019 (http://bip.ure.gov.pl/download/3/11040/PSEkodekssieci.pdf) G 11.08.2020 (http://bip.ure.gov.pl/download/3/12488/PSEdecyzjaPlanTestow.pdf)</p>
<p>PT</p>	<p>Decisions are yet under approval. The revision of national codes that address the matters in article 4(2) were already scheduled in the past. The revision work has been delayed due to the pandemic situation that we face.</p>
<p>RO</p>	<ul style="list-style-type: none"> - Art. 4(2) (a) and (b) Proposals are not approved - Art. 4(2) (c) and (d) – Proposals are in the process of approval. Proposals have been posted for public consultation on ANRE website on 8.10.2020 - Art. 4(2) (e) and (f) – ANRE requested an amendment on august 2020. Proposals are in process of approval by ANRE until the first quarter of 2021. <p>Update provided by ANRE (RO):</p> <p>Art. 4(2) (a) and (b) Proposals are approved -on 14.07.2021 (https://www.anre.ro/ro/energie-electrica/legislatie/coduri-paneuropene1476186098/regulamentul-ue-nr-1485-2017)</p> <p>Art. 4(2) (c) and (d) – Proposals are approved. Proposals have been posted for public consultation on ANRE website on 8.10.2020 (https://www.anre.ro/ro/energie-electrica/legislatie/coduri-paneuropene1476186098/regulamentul-ue-nr-2196-2017)</p> <p>Art. 4(2) (e) and (f) – ANRE requested an amendment on august 2020. Proposals are in process of approval by ANRE until the beginning of December 2021.</p>

	<p>https://www.anre.ro/ro/energie-electrica/legislatie/documente-de-discutie-ee1/coduri-paneuropene/regulamentul-ue-nr-2196-20171552558905)</p>
SE	<p>A: 7 November 2019 B: N/A E: 7 November 2019 F: 7 November 2019 G: Expected Q1 2021</p> <p><i>Update provided by Ei (SE):</i></p> <p>A: N/A B: N/A C: 13 June 2019 D: 13 June 2019 E: 7 November 2019 F: 7 November 2019 G: Expected Q1 2021</p> <p>https://energimarknadsinspektionen.se/sv/for-energiforetag/el/Natforeskrifter-och-kommissionsriktlinjer-for-el/network-code-on-emergency-and-restoration-nc-er/pagaende-arenden-er/artikel-4-2-a-villkoren-for-att-agera-som-leverantor-av-skyddstjanster/</p>
SI	<ul style="list-style-type: none"> • 4(2)(a): In Slovenia the defence service providers on a contractual basis in accordance with article 4(4) don't exist; • 4(2)(b): In Slovenia the restoration service providers on a contractual basis in accordance with article 4(4) don't exist; • 4(2)(c): 12 September 2019 • 4(2)(d): 12 September 2019 • 4(2)(e): 20 March 2020 • 4(2)(f): 20 March 2020 • 4(2)(g): 15 June 2020
SK	<p>Article 4(2):</p> <ul style="list-style-type: none"> a) 18.12.2018 b) 18.12.2018 c) 18.12.2018 d) 18.12.2018 e) 11.6.2019 f) 22.5.2019 g) 2.6.2020

2.2 Terms and conditions to act as a defence service provider and as a restoration service provider

- 8 **Q.1.4. Have the terms and conditions to act as a defence service provider and as a restoration service provider (Article 4(2)(a) and (b)) been established in the national legal framework or on a contractual basis? If relevant, also provide any clarification**

details concerning possible different treatment of system users (e.g. type A, B, C and D power generating modules, aggregators, demand facilities, etc.).

9 Table 4: Terms and conditions.

MS	Answer
AT	<p><i>Restoration Service Provider: The national legal framework provides for the inclusion of such services in the grid connection contract entered into between the TSO and the system users. All types of system users are obliged to provide services in case of a restoration situation.</i></p> <p><i>Restoration service provider: The national legal framework provides for a contractual arrangement between the system user and the TSO.</i></p>
BE	<p><i>T&C approved by CREG, to be used in standard contracts between TSO and service providers</i></p>
BG	
CZ	<p><i>The terms and conditions are part of the national terms and conditions of the transmission system operator.</i></p>
DE	<p><i>For defence service providers no framework established, see question 2.</i></p> <p><i>For restoration service providers, TSOs and restoration service providers agreed on contracts defining technical, organizational, payment, penalty and termination rules. Furthermore, general terms and conditions defining/harmonizing technical and organizational rules have been established as “regulatory framework”. Based on this the current contracts will be adapted until May 2023 to be compliant with this new “regulatory framework”.</i></p>
DK	<p><i>Only type C and D PGM have been identified as defence service providers (transmission connected DSOs are treated as a separate category pursuant to art. 11(4)(b)). The requirements set to these PGM does not vary from the connection requirements set pursuant to regulation 2016/631 (RfG). On this basis the terms and conditions to act as defence service provider have been set in the national legal framework.</i></p> <p><i>Terms and conditions to act as restoration service providers are set by contracts.</i></p>
EE	<p><i>The bases set out in the Electricity Market Act cover parts of Article 4 (2) (a) and (b) of the ER NC and provide a basis for the TSO to impose justified technical restrictions on the use of the system.</i></p>
ES	<p><i>Restoration service providers, Article 4(2)(a): The proposal has not been approved yet.</i></p> <p><i>Defence service providers, Article 4(2)(b): the terms and conditions are covered by the national legal framework.</i></p>
FI	<p><i>Contractual basis.</i></p>
FR	<p><i>It has been established in the National legal framework (« cahier des charges type de concession du réseau public de transport d'électricité »).</i></p> <p><i>Update provided by CRE (FR):</i></p> <p><i>Proposal (a) has been amended and modalities are established within the national framework and / or on a contractual basis.</i></p>
GB	<p><i>Yes, the Terms and Conditions have been defined. A link to this document is attached here: https://www.nationalgrideso.com/document/160021/download</i></p>

	<p><i>This is achieved at a high level through the GB Industry Codes such as the Grid Code, Connection and Use of System Code (CUSC) and Balancing and Settlement Code (BSC). In addition, specific commercial contracts are also used on a site specific basis whose general requirements are subject to the Transmission Licence Condition C16.</i></p> <p><i>https://www.nationalgrideso.com/document/160021/download</i></p> <p><i>The above document provides details relating to different treatment for different types of User. In addition, Appendix A of the System Defence Plan and System Restoration Plan provides for the treatment of different types of SGU and how they fall under the EU Emergency and Restoration Code.</i></p>
UK-NIR	<p><i>Response for Defence is within the table below (copied from Terms & Conditions for System Defence Providers) docs. For System Restoration Providers, the only service is Black Start, which is within the National Legal Framework (as part of the GridCode).</i></p> <p><i>See Figure 6 of Annex II</i></p> <p><i>Legend for contract types in table below.</i></p> <p><i>See Figure 7 of Annex II</i></p> <p><i>Table showing contract types per service.</i></p>
GR	<i>Under study.</i>
HR	<i>It is on contractual basis.</i>
HU	<i>The terms and conditions to act as a defence service provider has been established in the national legal framework, but the terms and conditions to act as a restoration service provider has been established on contractual basis.</i>
IE	<i>No, still awaiting receipt of re-submission of this document for approval.</i>
IT	<i>These terms and conditions are included in the national grid code by Terna subject to approval by both Arera and the Minister. It's worth noticing that the grid code set the main conditions, while further details, if needed, may be defined in specific documents signed by the provider and the TSO as a mutual contractual agreement.</i>
LT	<i>Established on a contractual basis. The terms and conditions of the contracts is approved by regulatory authority.</i>
LU	<i>Not relevant: no TCM for defence or restoration service providers defined for LU as these services are provided by Amprion which operated the common Creos-Amprion LFC area.</i>
LV	<i>Minimal requirements were defined in national grid code. Other requirements were included in the agreements. There are no differences concerning participation of demand response or aggregation. Also, different treatment of system users is not applied – service provider has just to comply with technical requirements.</i>
MT	<i>Given the small size of the system in Malta which is administered by one DSO, specific terms and conditions established by law or contracts to act as a defence service provider and as a restoration service provider were not deemed necessary. Restoration from black start is initiated by the DSO using own generation plants, maintained mainly for this purpose, and/or the interconnector with Sicily if this is available. However, the two independent power producers located in Malta (156MW and 215MW) are normally available during restoration as part of the Power Purchase agreement dispatch terms and follow instructions from the DSO. Regarding defence services both independent</i>

	producers have Limited Frequency Sensitive Mode active in line with Commission Regulation 2016/631.
NL	<p>. The terms and conditions mentioned in article 4(2) (a) and (b) were – at least to some extent – already established in our existing Netcode elektriciteit.</p> <p>. For some parts, notably the “black start possibilities” the terms and conditions are included in the implementation proposal by the TSO for amendments to the Netcode elektriciteit.</p> <p><i>Update provided by ACM (NL):</i></p> <p>Of all restoration services, only blackstart services are provided on a contractual basis. The terms and conditions to act as a provider of blackstart services has been specified in the upcoming decision pursuant to Art 4(2)(b); all other services are not provided on a contractual basis, and are this established in the national legal framework</p>
PL	<p>The terms and conditions to act as a defence service provider and as a restoration service provider (Article 4(2)(a) and (b)) were established in the national legal framework as well as on a contractual basis.</p> <p>The Polish TSO did not submit the terms and conditions to act as defence service providers. The Polish TSO made a detailed assessment of the existing national regulations with having regard to Article 4(4) and did not find the existence of special defence services provided to the TSO. All services purchased by TSO and used in emergency states for system defence are also used in normal states, and their use would be carried out in accordance with the rules set out in Regulation EU 2017/1485. Terms and conditions to act as a restoration service provider on contractual basis are different depending on primary energy sources (hydro or thermal) taking into account technical constraints (ie. time availability for black start service is different for hydro and thermal).</p>
PT	Both cases are foreseen. The provisions of some services are already established in the current legal framework and for other services the possibility of contracting is foreseen.
RO	As the national legal framework does not provide any reference to these articles we are in process of assessment the approach to be adopted. It is system service.
SE	In the national legal framework.
SI	In Slovenia the defence service providers and restoration service providers on a contractual basis in accordance with article 4(4) don't exist. Terms and conditions are established in the national legislation. Only power generating modules of type D are providing black start capabilities. Power generating modules of type D are obligated to implement LFSM-U/O. All renewable power generating modules are obligated to automatically decrease production if frequency is higher than 50,2 Hz etc.
SK	Article 4(2): a) Defence service provider is defined on national legal level. b) Restoration service provider is established on contractual basis.

2.3 Notifications

2.3.1 Notification of the system defence plan

10 **Q.1.5. When has the relevant TSO notified the regulatory authority of the system defence plan designed pursuant to Article 11? Please specify:**

- a. **the date and the procedure of such notification (Article 4(5) and Article 11(1)),**
- b. **if the TSO notified at least the elements in Article 4(5)(a)-(d), and**
- c. **the compliance with the deadlines set out pursuant to Articles 12 for the implementation of the measures.**

11 Table 5: Notification of the system defence plan.

MS	Answer
AT	<p>a. The TSO notified the system defence plan on 7 December 2018 to E-Control. An updated version was notified on 4 February 2020.</p> <p>b. Yes.</p> <p>c. The TSO published the System Defense Plan on their website on 18.12.2019. A frequent monitoring of relevant parameters is implemented. https://www.apg.at/de/Stromnetz/Network-Codes/Netzbetrieb</p>
BE	<p>a. Formal notification at date of submission. CREG was early involved in the process in order to gain a common understanding before submission</p> <p>b. no answer</p> <p>c. Full compliance and good cooperation with TSO</p>
BG	
CZ	<p>a. ERU was informed by the letter on December 12th 2018.</p> <p>b. Yes, ERU was notified about the elements in Article 4(5)(a)-(d).</p> <p>c. ERU was informed by the letter on December 12th 2018 and we have regular interaction with the TSO.</p>
DE	<p>a) The system defence plan was notified by the 4 TSOs in Germany jointly to the regulatory authority (Bundesnetzagentur) on December 18th 2018.</p> <p>b) Yes.</p> <p>c) All relevant and required information was provided except deadlines for implementation of measures as no new measures were introduced. All measures are well-established and in place for many years. National standards or bilateral contracts for this measures are existing. Therefore, there was no additional need to monitor the compliance with the deadlines for the implementation of the measures.</p>
DK	<p>The notification took place along side the submission of the proposal pursuant to article 4(2)(a)-(f) on the 18. December 2018. The notification contains the elements listed in article 4(5)(a)-(d). The deadline for implementation is set to follow that of ER article 55.</p>
EE	<p>a. 01.10.2019</p> <p>b. 01.10.2019</p> <p>c. 01.10.2019</p>
ES	<p>a. TSO notified it in 18/12/2018.</p> <p>b. Yes, all these elements were notified.</p> <p>c. All the measures notified in 18/12/2018 were already implemented at that time except the measures established in Articles 15 (5) to (8) whose deadline is in December 2022.</p>
FI	<p>a. 18.12.2018. TSO notified of the whole system defence plan.</p> <p>b. Yes</p> <p>c. 18.12.2018</p>
FR	<p>a. December 20, 2018</p> <p>b. Yes</p> <p>c. The provisions were already in force</p>

<p>GB</p>	<p>a) The latest version (issue 3) of the System Defence Plan was submitted to Ofgem on 20th December 2019.</p> <p>b) The System Defence Plan contains the elements noted in Article 4(5)(a) - (d)</p> <p>c) NGENSO has notified the regulatory authority of the compliance deadlines within article 12. A first version of the System Defence Plan was required to be submitted by December 2018, which has been updated since. SGU's have not been formally notified yet, but by complying with the requirements introduced through Grid Code modifications GC0125, GC0127 and GC0128, they would already be complying with the requirements of NCER article 12.</p> <p>A link to the latest version of the System Defence Plan is attached below.</p> <p>https://www.nationalgrideso.com/document/160016/download</p>
<p>UK-NIR</p>	<p>Original SPD was submitted on 18th December 2018. After the Utility Regulator reviewed the document, it was deemed that the proposal required significant amendment and a revised SDP was submitted on October 16th 2020.</p> <p>a. After the Utility Regulator reviewed the document, it was deemed that the proposal required significant amendment and a revised SDP was submitted on October 16th 2020. Both submissions were made by email to the Utility Regulator containing PFD documents.</p> <p>b. The TSO have stated these elements are contained within the SDP document as submitted on 16th October 2020. We at the Utility Regulator are currently reviewing these documents to ensure this is the case and are aiming to make our decision in January 2021.</p> <p>c. No new measures were required and hence have all been implemented prior to submission of SDP on 16th October 2020.</p>
<p>GR</p>	<p>The TSO notified the NRA of the system Defence Plan on the 7.4.2020. No compliance with the deadlines of art. 12.</p>
<p>HR</p>	<p>a. December 24th 2018</p> <p>b. The TSO sent the whole system defence plan.</p> <p>c. December 18th 2018</p>
<p>HU</p>	<p>a. Official letter has been sent on December 18, 2018.</p> <p>b. MAVIR has sent the system defence plan itself.</p> <p>c. There aren't any measures to be implemented.</p>
<p>IE</p>	<p>a. The TSO submitted their system defence plan to the CRU on 18 December 2018 (see here: https://www.eirgridgroup.com/site-files/library/EirGrid/SystemRestorationPlanForIreland.pdf). This was rejected by the CRU and re-submission is expected shortly.</p> <p>b. While the TSO submitted by the deadline of 18 December 2018, the CRU rejected the proposal as we believed it did not contain the necessary detail.</p> <p>c. The deadlines set out in Article 12 have not been met, re-submission of the system defence plan and approval of the document is still required.</p> <p>Update provided by CRU (IE):</p> <p>Resubmitted for comment; CRU raised no issues with its content</p>
<p>IT</p>	<p>The general terms and conditions of the Defence Plan included in the national grid code were notified to Arera on 8th February 2019. The notification of the under frequency disconnection plan through automatic load reducers occurred on 22nd March 2019. All the elements listed in Article 4(5)(a)-(d) were included.</p>

	<i>The notification to DSOs and SGUs occurred in the same date, thus there was a slight delay with respect to the deadlines (18th December 2018) set in Article 12.</i>
LT	<p>a. November 21, 2018. b. Notified. c. The deadlines were met.</p>
LU	<p>a) 10 Feb 2020 b) Points c and d only are mentioned in the defence plan c) As the provisions were already in operation before the ER NC, we can consider that the measures were implemented on time, even if the official notification of the plan in the ER NC framework came later.</p> <p><i>Update provided by ILR (LU):</i></p> <p><i>Now the plans are finalized, we have a copy by mail but still need official notification</i></p>
LV	<p>a. notification was sent on 23 November 2018 by submitting the plan to NRA. b. Yes. c. The plan was based on the actual procedures, that were in force before approval of the plan. Therefore, no deadlines were set.</p>
MT	<i>Not applicable. However, the DSO is currently working on the formalisation of the system defence procedure which caters for the specificities of the Maltese electrical system.</i>
NL	<p>. Our TSO has notified the system defence plan (article 11) on 18 December 2018 to the ACM; the elements mentioned in article 4(5) (a)-(d) were included in the system defence plan . Also, DSOs and SGUs were notified and received the system defence plan . Note: the system defence plan has not yet been fully implemented by TSOs, DSOs or SGUs; the content of the system defence plan is currently still under discussion between the concerned parties. . ACM expects that the system defence plan will be revised by the end of 2020, parallel to our final decision on the implementation proposal for ER implementation (amendment to national Electricity Code)</p>
PL	<p>A 18.12.2018 B Yes. C Justification is provided in point 3.3-3.7</p>
PT	<i>The relevant TSO notified the regulatory authority on the 17th of December of 2018.</i>
RO	<i>It wasn't notified. ANRE received only the list with SGU according to art. 11 pgf. (4) c) and d) which represent a side from defence plan and restoration plan.</i>
SE	<p>a. 19th of December 2018</p> <p><i>Update provided by Ei (SE):</i></p> <p>a. 18th of December 2018</p>
SI	<p>a. 17 December 2018 by regular mail b. Yes c. The deadline is set to 17 October 2020. For now only one SGU has notified that measures are implemented.</p>
SK	<p>a. 14.12.2018 b. Yes, SEPS has informed Ministry of Economy of the Slovak Republic about</p>

requirements in Article 4(5).
c. Officially, we did not announce this.

2.3.2 Notification of the restoration plan

12 **Q.1.6. When has the relevant TSO notified the regulatory authority of the restoration plan designed pursuant to Article 23? Please specify:**

- d. **the date and the procedure of such notification (Article 4(5) and Article 23(1)),**
- e. **if the TSO notified at least the elements in Article 4(5)(a)-(d), and**
- f. **the compliance with the deadlines set out pursuant to Articles 24 for the implementation of the measures.**

13 Table 6: Notification of the restoration plan.

MS	Answer
AT	a. The TSO notified the restoration plan on 7 December 2018 to E-Control. An updated version was notified on 11 May 2020. b. Yes c. See a.B4:B22
BE	a. Formal notification at date of submission b. no answer c. Full compliance and good cooperation with TSO
BG	
CZ	a. ERU was informed by the letter on December 12th 2018. b. Yes, ERU was notified about the elements in Article 4(5)(a)-(d). c. ERU was informed by the letter on December 12th 2018 and we have regular interaction with the TSO.
DE	a) Notification by the 4 TSOs of Germany jointly to Bundesnetzagentur on December 18th 2018 b) All relevant and required information was provided except deadlines for implementation of measures as no new measures were introduced. c) Not applicable (see previous answer, no new measures).
DK	The notification took place along side the submission of the proposal pursuant to article 4(2)(a)-(f) on the 18. December 2018. The notification contains the elements listed in article 4(5)(a)-(d). The deadline for implementation is set to follow that of ER article 55.
EE	a. 01.10.2019 b. 01.10.2019 c. 01.10.2019
ES	a. TSO notified it in 18/12/2018. b. Yes, all these elements were notified. c. All the measures notified in 18/12/2018 were already implemented at that time except the measures established in Articles 41, 42 (1) (2) (5) whose deadline is in December 2022. The terms and conditions to act as a restoration service provide has not been approved yet.

FI	<p>a. 18.12.2018. TSO notified of the whole system defence plan.</p> <p>b. Yes.</p> <p>c. 18.12.2018</p>
FR	<p>a. December 20, 2018</p> <p>b. Yes</p> <p>c. The provisions were already in force</p>
GB	<p>a) The latest version (issue 3) of the System Restoration Plan was submitted to Ofgem on 20th December 2019.</p> <p>b) The System Restoration Plan contains the elements noted in Article 4(5)(a) - (d)</p> <p>c) NGENSO has notified the regulatory authority of the compliance deadlines within article 24. A first version of the System Restoration Plan was required to be submitted by December 2018, which has been updated since.</p> <p>A link to the latest version of the System Restoration Plan is attached below.</p> <p>https://www.nationalgrideso.com/document/160026/download</p>
UK-NIR	<p>Original SRD was submitted on 18th December 2018. After the Utility Regulator reviewed this document, it was deemed that these proposals required significant amendment and a revised SDP was submitted on October 16th 2020.</p> <p>a. Original SRD was submitted on 18th December 2018. These proposals required significant amendment and a revised SDP was submitted on October 16th 2020.</p> <p>b. The TSO have stated these elements are contained within the SRP document as submitted on 16th October 2020. We at the Utility Regulator are currently reviewing these documents to ensure this is the case.</p> <p>c. No new measures were required and hence have all been implemented prior to submission of SRP on 16th October 2020</p>
GR	<p>Restoration plan in progress. The TSO has not notified the elements in art. 4(5)(a)-(d)</p>
HR	<p>a. December 24th 2018</p> <p>b. The TSO ent the whole restoration plan.</p> <p>c. December 18th 2018</p>
HU	<p>a. Official letter has been sent on December 18, 2018.</p> <p>b. MAVIR has sent the resoration plan itself.</p> <p>c. There aren't any measures to be implemented.</p>
IE	<p>a. The TSO submitted their restoration plan to the CRU on 18 December 2018 (see here: https://www.eirgridgroup.com/site-files/library/EirGrid/System_Restoration_Plan_Proposal_Ireland-Re-submission.pdf). This was rejected by the CRU and re-submission is expected shortly.</p> <p>b. While the TSO submitted by the deadline of 18 December 2018, the CRU rejected the proposal as we believed it did not contain the necessary detail.</p> <p>c. The deadlines set out in Article 24 have not been met, re-submission of the system defence plan and approval of the document is still required.</p> <p>Update provided by CRU (IE):</p> <p>Resubmitted to CRU for comment on 16 October 2020. No issues raised.</p>
IT	<p>The general terms and conditions of the restoration plan included in the national grid code were notified to Arera on 8th February 2019. The notification of the operating volumes of the restoration plan (including, among others, the list of production plants involved in the plan and some technical and operating details for the restoration of the system) occurred on 22nd March 2019. All the elements listed in Article 4(5)(a)-(d) were</p>

	<p>included. The notification to DSOs and SGUs occurred in the same date, thus there was a slight delay with respect to the deadlines (18th December 2018) set in Article 24.</p>
LT	<p>a. November 21, 2018. b. Notified. c. The deadlines were met.</p>
LU	<p>The restoration plan has been finalized. As concerns the implementation of the measures, it should be noted that a restoration plan has been in place well before the coming into force of the NC ER (2013). This plan is tested and trained every second year by the whole Dispatching team at DUtrain facilities (simulator). Every year there is a common training at DUtrain together with Amprion (the main upstream grid to which Creos is connected) to train and test the restoration strategy of Amprion.</p>
LV	<p>a. notification was sent on 23 November 2018 by submitting the plan to NRA. b. Yes. c. The plan was based on the actual procedures, that were in force before approval of the plan. Therefore, no deadlines were set.</p>
MT	<p>Not applicable. However, the DSO has presented a flow chart of the restoration procedures following a total shutdown of the system to the NRA and will be working on the formalisation of the system restoration plan taking into account the specificities of the Maltese electrical system.</p>
NL	<p>. Our TSO has notified the restoration plan (article 23) on 18 December 2018 to the ACM; the elements mentioned in article 4(5) (a)-(d) were included in the restoration plan . Also, DSOs and SGUs were notified and received the restoration plan . Note: the restoration plan has not yet been fully implemented by TSOs, DSOs or SGUs; the content of the restoration plan is currently still under discussion between the concerned parties. . ACM expects that the restoration plan will be revised by the end of 2020, parallel to our final decision on the implementation proposal for ER implementation (amendment to national Electricity Code).</p>
PL	<p>A 18.12.2018 B Yes C Justification is provided in point 4.2-4.6</p>
PT	<p>The relevant TSO notified the regulatory authority on the 17th of December of 2018.</p>
RO	<p>It wasn't notified. ANRE received only the list with SGU according to art. 23 pgf. (4) c) and d) which represent a side from defence plan and restoration plan.</p>
SE	<p>a. 19th of December 2018 <i>Update provided by Ei (SE):</i> a. 18th of December 2018</p>
SI	<p>a. 17 December 2018 by regular mail b. Yes c. The deadline is set to 17 October 2020. For now only one SGU has notified that measures are implemented.</p>
SK	<p>a. 14.12.2018 b. Yes, SEPS has informed Ministry of Economy of the Slovak Republic about requirements in Article 4(5) c. Officially, we did not announce this.</p>

2.4 Prior approval requirement

- 14 **Q.1.7. Has the Member State required prior approval of the regulatory authority, designated entity by the Member State or other competent authorities concerning requirements, terms and conditions or methodologies that are not subject to approval in accordance with Article 4(2) and that are specified, established or agreed by the TSO? If so, please specify the requirements, terms and conditions or methodologies and provide references (e.g. web link) to relevant approval(s).**

15 Table 7: Prior approval.

MS	Answer
AT	No
BE	Where the MoE (Minister of Energy) has to approve, an advice of CREG is requested. See answer to question 1.3
BG	
CZ	This provision wasn't applied.
DE	No.
DK	No
EE	No
ES	No info (to be asked to DGPEM, Spanish Ministry)
FI	No.
FR	No
GB	The documents to satisfy Article 4(2) have been submitted to the regulatory authority and are pending approval. A list of all the associated documents pending approval including the methodologies are available from the following link. https://www.nationalgrideso.com/industry-information/codes/european-network-codes/other-enc-documents
UK-NIR	No such request was made by the TSO.
GR	No.
HR	No such documents.
HU	No.
IE	No.
IT	No. Please take however into account that according to the national framework all the details about the operation of the network are included in the grid code subject to the approval of both Arera and Minister.
LT	No. See answer to question 1.1
LU	No

LV	<i>No, the Member State has not requested.</i>
MT	<i>Not applicable. The Member State did not require any prior approval procedure.</i>
NL	<i>No. This has not been required.</i>
PL	<i>No</i>
PT	<i>No.</i>
RO	<i>It wasn't required a prior approval.</i>
SE	<i>No</i>
SI	<i>No</i>
SK	<i>No.</i>

2.5 Issue of decision on complaints

- 16 **Q.1.8. Has the regulatory authority issued any decision following the receipt of a complaint by any party complaining against a relevant system operator or TSO in relation to that relevant system operator's or TSO's obligations or decisions? If so, specify reference to such decision(s) e.g. web link and the timeline in accordance with the Article 4(8).**

17 Table 8: Decision on complaints.

MS	Answer
AT	<i>No</i>
BE	<i>No. Be aware that CREG decisions are always consulted publicly in a transparent manner and the outcome of the consultation is evaluated in a non-confidential report. Whether comments are taken on board or not and for what kind of reasons is transparent.</i>
BG	
CZ	<i>ERU haven't received any complaint against the TSO.</i>
DE	<i>No.</i>
DK	<i>No</i>
EE	<i>No</i>
ES	<i>No info (to be asked to DGPEM, Spanish Ministry)</i>
FI	<i>No.</i>
FR	<i>No</i>
GB	<i>No.</i>
UK-NIR	<i>No complaints have been made.</i>
GR	<i>No.</i>
HR	<i>HERA hasn't received any complaints.</i>

HU	No.
IE	N/A
IT	No
LT	No.
LU	No
LV	No complaints were received.
MT	Not applicable. No complaint has been received by the NRA regarding the aspects covered by Regulation 2017/2196.
NL	No such decision has been issued by the ACM (nor was it requested)
PL	No
PT	No complains.
RO	No decision was issued, no complaint submitted.
SE	No
SI	No
SK	No.

3. Coordination and consultation

3.1 Measures consistency in the system defence and restoration plans

18 **Q.2.1. Concerning Article 6(1), how has the TSO ensured the consistency of the corresponding measures in its system defence and restoration plans with the corresponding measures in the plans of TSOs within its synchronous area and in the plans of neighbouring TSOs belonging to another synchronous area?**

19 Table 9: measures consistency.

MS	Answer
AT	The TSO discusses those issues bilaterally with other TSOs as well as via the DACH-Group (Germany(D)-Austria(A)-Switzerland(CH)) and ENTSO-E.
BE	TSO Elia has consulted the concerned TSOs in the synchronous area before submitting the plans for approval.
BG	
CZ	Synchronous area-wide coordination through RG CE SAFA Policy on ER. Coordination with neighbouring TSOs through bilateral contracts.
DE	Most of the measures are well-established and in place for many years. Measures are coordinated within the synchronous area framework agreement (SAFA). In addition, measures are coordinated within bilateral/multilateral contracts and bilateral/multilateral exchange between experts.
DK	Through bilateral dialogues, Nordic RSC, TSC Net and the Nordic System Operation Agreement group on NC ER.

EE	<i>The Estonian electricity system (EES) belongs to the large synchronously operating joint system BRELL, comprising the neighbouring countries Latvia and Russia, connected with Estonia through the alternating current lines. They, in turn, are connected to their neighbours Lithuania and Belarus. As the system defence plan contains different contracts (e.g. the BRELL emergency reserves agreement, Guidelines for the emergency operation management of the EES, etc), different parties have been consulted.</i>
ES	<i>The consistency of the corresponding measures in system defence and restoration plans has been ensured through common meetings with the following entities:</i> <ul style="list-style-type: none"> • TSOs within synchronous area • RTE and REN (SWE CCR)
FI	<i>TSOs have agreed on general principals in the Nordic System Operation Agreement before NC ER process. After the TSOs published their system defence and restoration plans the RSC made a study on the consistency of the plans.</i>
FR	<i>Regional coordination is described in a process driven by the RSCs and ENTSO-E. Rte has participated in this coordination process, in accordance with the provisions defined at the ENTSO-E level.</i>
GB	<i>In the GB Synchronous Area there is only one TSO (National Grid ESO) who are responsible for the control of the entire GB Synchronous Area. All connections to other Synchronous Areas are via HVDC links and co-ordination with other TSO's is therefore achieved through the Grid Code (in particular BC2.9.6 under Emergency Conditions) and through Interconnector Agreements.</i>
UK-NIR	<i>Development of both NI's and IRL's plans were coordinated between their TSOs, following a similar timeline to ensure consistency. The only interface between other synchronous areas is through HVDC Interconnectors, which have a defined emergency assistance process in their IOPs (Interconnector Operating Protocol).</i>
GR	<i>Synchronous area-wide coordination through RG CE SAFA Policy. Coordination with neighbouring third countries TSOs through bilateral agreements.</i>
HR	<i>TSO has used data from bilateral operational agreements.</i>
HU	<i>The recommendations of the NCER expert team have been taken into account. Furthermore, MAVIR has participated in regional coordination meetings.</i>
IE	<i>Documents for 2017/2196 have been developed in conjunction with Northern Ireland, as the two states form an all-island electricity system. Ensuring consistency amongst neighbouring TSOs will form part of our review when we receive re-submitted documentation.</i>
IT	<i>The coordination with the other TSOs took place through the exchange via email of compiled Excel templates, which were then sent to the RSC.</i>
LT	<i>Lithuanian TSO has valid contracts with TSOs within its synchronous area and with TSOs belonging to another synchronous area. TSO provided Report on Consistency Check of System Defence and Restoration Plans in Baltic region stating that almost all requirements were implemented in accordance with Article 6(1) of the NC ER regulation, but one of the interconnectors not comply with Article 6(1) point (b). However, NERC is still assessing the data provided by the TSO.</i>
LU	<i>Creos had bilateral exchanges with Elia and Amprion. Both TSOs are informed about the LU defence and restoration plans. Other TSOs from the synchronous area are not impacted by LU measures, so only the neighbouring TSOs were consulted.</i>

LV	<i>TSO has not organized separate coordination process with TSOs within its synchronous area. The plans were based on existing coordination procedures applied within the BRELL ring, therefore all procedures were considered as already coordinated.</i>
MT	<i>As part of the contractual agreement with Terna Spa the DSO was required to implement automatic low frequency demand disconnection and this was implemented in 2015. The DSO did not receive any further instructions from Terna Spa related the implementation of Regulation 2017/2196 nor was there any consultation regarding the implementation of this regulation.</i>
NL	<i>. By means of agreements with the neighbouring TSO's Amprion, Energinet, TenneT DE, Elia, NGESO and Statnett; . Currently a check is being performed to verify the consistency between the measures in the agreements and the measures in the NC ER.</i>
PL	<i>When designing System Defence Plan and Restoration Plan the Polish TSO consulted DSOs, SGUs and other TSOs in its synchronous area.</i>
PT	<i>The national TSO (REN) in coordination with their neighbour TSO (REE) transmitted the measures to Coreso. Coreso performed the "REPORT ON CONSISTENCY CHECK OF SYSTEM DEFENCE AND RESTORATION PLANS". ENTSO-E expert team has also checked this report.</i>
RO	<i>Transelectrica identified, bilaterally, with each TSO from Bulgaria, Serbia and Hungary the common measures included in the defence and restoration plans and provided the relevant data for the TSCNET report. At SEE CCR level we are not aware of such a report elaborated by the RSC SEE so far.</i>
SE	<i>A SOA annex ER has been established where these matters are addressed to some extent. SOA annex for LFC&R Regarding other synchronous areas system operational agreements regulate these issues. LFDD is not covered by article 6.1, but is relevant for coordination in the Nordic s.a. and has been coordinated through RGN assigning tasks to the NAG</i>
SI	<i>Consistency check was performed with neighbouring TSOs and among TSOs within TSCNET. TSCNET prepared technical report "Report on Consistency Check of System Defence and Restoration Plans" in line with Article 6(1) which was sent to NRA.</i>
SK	<i>The NC ER expert group has been created. Bilateral and regional meetings of the TSOs took place. Operating contracts have been amended.</i>

3.2 Submission of the measures by the TSO to the RSC(s)

20 **Q.2.2. Concerning Article 6(3), when has the TSO submitted the measures referred to in Article 6(1) to the relevant RSC(s)?**

21 Table 10: Submission of the measures

MS	Answer
AT	28.6.2019
BE	The TSO (Elia) has submitted these measures to Coreso in October 2019
BG	
CZ	June 2019

DE	<i>End of June 2019 the relevant data and information was submitted by the German TSOs to the RSC TSCNET services.</i>
DK	<i>System defence plan and principles for restoration plan shared with Nordic RSC and TSC Net 18 December 2018.</i>
EE	<i>No reply</i>
ES	<i>REE submitted the measures referred to in Article 6(1) to CORESO on 26th July 2019</i>
FI	<i>18.12.2018</i>
FR	<i>Jul-19</i>
GB	<i>Exact date unknown but NGENSO has confirmed it was submitted before the 18th December 2018 deadline</i>
UK-NIR	<i>SONI-EirGrid 1st July 2019. SONI-NGESO 9th August 2019.</i>
GR	<i>Q4 2019</i>
HR	<i>June 21st 2019. For reasons outside its control, TSO couldn't honour the deadline from Article 6(3) (RSCs weren't formally established). HERA was notified of this by the TSO.</i>
HU	<i>2019.06.27.</i>
IE	<i>The TSO submitted the measures referred to in Article 6(1) to CORESO on 30 June 2019. Legal compliance date was deferred by ENTSO-E, due to delay in establishing CORESO.</i>
IT	<i>The measures were submitted on 29th June 2019.</i>
LT	<i>TSO submitted the 1st of August 2019.</i>
LU	<i>Creos submitted these measures on 22 July 2019 to TSCNET and on 13 September 2019 to Coreso.</i>
LV	<i>Until 18 December 2018.</i>
MT	<i>Not applicable. Enemalta is not a TSO and is not part of any Regional Security Coordinator.</i>
NL	<i>There were different submittal dates of the agreements with the neighbouring TSO's to the RSC as follows: . TenneT NL – Amprion June 28, 2019. . TenneT NL – Energinet August 8, 2019. . TenneT NL – TenneT DE June 27, 2019. . TenneT NL – Elia July 3, 2019. . TenneT NL – NGENSO August 8, 2019. . TenneT NL – Statnett July 26, 2019.</i>
PL	<i>TSO has submitted the measures in August 2019.</i>
PT	<i>In July 2019.</i>
RO	<i>Transelectrica submitted data to TSCNET in June 2019, including data concerning coherence with ESO – EAD Bulgaria, because RSC SEE wasn't constituted in 2019, and with EMS – Serbia, because SCC Belgrade could not elaborate an official report due to not recognition a RSC in UE).</i>
SE	<i>Material (excel templates) was provided during 2019 for the different neighbouring TSOs.</i>
SI	<i>01/07/2019</i>


SK 28.6.2019

3.3 Technical report referred to in Article 6(3)

3.3.1 Production of the report by the RSC(s)

22 **Q.2.3. Concerning Article 6(4), when has the relevant RSC(s) produced a technical report on the consistency of the measures based on the criteria set out in Article 6(2)?**

23 Table 11: Production of the report

MS	Answer
AT	<i>Between August 2019 and January 2020</i>
BE	<i>Coreso has produced the final version of the technical report in January 2020.</i>
BG	
CZ	<i>September 2019</i>
DE	<i>The report was finalized by TSCNET services on March 6th 2020 and sent to ENTSO -E.</i>
DK	<i>o Nordic RSC: September 2019 o TSC Net: February 2020</i>
EE	<i>No reply</i>
ES	<i>CORESO produced the technical report on the consistency of the measures based on the criteria set out in Article 6(2) in December 2019.</i>
FI	<i>Version 1: 30.8.2019, version 2: 10.1.2020</i>
FR	<ul style="list-style-type: none"> <i>September 2019 for CORESO final coordination report – emergency and restoration technical report on documentation consistency</i> <i>January 2020 for ENTSOe network code on emergency and restoration - monitoring report on the consistency assessment of system defence plans and restoration plans</i>
	<p><i>Version 5 of the report on the consistency assessment of the system defence and system restoration plan for TSOs within CORESO was produced on the 2nd December 2019 and validated in January 2020. It was submitted to the regulatory authority on 8th April 2020.</i></p> <p><i>This report was in accordance with Article 6(4) of NCER. The report covered the following:</i></p>
GB	<ul style="list-style-type: none"> <i>Inter-TSO assistance and coordination in emergency state</i> <i>Frequency management procedures</i> <i>Assistance for active power procedure</i> <i>Top down re-energisation strategy</i> <div style="text-align: center;">  <p><i>Report on consistency che...</i></p> </div>

UK-NIR	December 2019.
GR	Q4 2019
HR	February 12th 2020.
HU	First version of the technical report on consistency check was done by August 29, 2019.
IE	CORES0 delivered a coordination report in August 2019, based on the measures set out in Article 6(2) (see page 29 here: https://www.coreso.eu/wp-content/uploads/Coreso-Yearly-Operational-Review-2019-E-mail.pdf).
IT	The report was produced on 24th September 2019
LT	Deliverable version history below: The first version of Baltic RSC report was provided on September 30, 2019. The final modified report of Baltic RSC was completed on January 27, 2020. However, NERC is still assessing the data provided by the TSO.
LU	The final report from TSCNET (which also includes the information provided from Coreso as concerns the Creos – Elia bilateral exchange) was produced on 15 January 2020.
LV	30 September 2019, updated 10 January 2020.
MT	Not applicable.
NL	The first version of the document was prepared on August 29, 2019 and the final version (after all revisions) was ready on January 15, 2020.
PL	RSC has produced a technical report in January 2020.
PT	In December 2019.
RO	The report was finalized by TSCNET in January 2020.
SE	In September of 2019
SI	Between August 2019 and January 2020
SK	30.8.2019

3.3.2 Transmission of the report to the TSOs

24 **Q.2.4. Concerning Article 6(4), when has the RSC(s) transmitted the technical report referred to in Article 6(3) to all the TSOs involved?**

25 Table 12: Transmission of the report

MS	Answer
AT	January 2020
BE	Coreso has transmitted the technical report to TSO Elia on 10th March 2020
BG	
CZ	March 2020
DE	The report was provided at March 6th 2020.

DK	o Nordic RSC: September 2019 o TSC Net: February 2020
EE	<i>No reply</i>
ES	CORESO transmitted the technical report referred to in Article 6(3) to REE on 11th March 2020.
FI	Version 1: 30.8.2019, version 2: 10.1.2020
FR	<ul style="list-style-type: none"> • September 2019 for CORESO final coordination report – emergency and restoration (er) technical report on documentation consistency • January 2020 for ENTSOe network code on emergency and restoration - monitoring report on the consistency assessment of system defence plans and restoration plans
GB	Version 5 of the report on the consistency assessment of the system defence and system restoration plan for TSOs within CORESO was produced on the 2nd December 2019 and validated by the RSC and all relevant TSOs in January 2020. It was submitted to the regulatory authority on 8th April 2020.
UK-NIR	23rd January 2020.
GR	28.1.2020
HR	February 12th 2020.
HU	First version of the technical report on consistency check was sent to TSOs on August 30, 2019.
IE	CORESO delivered a coordination report in August 2019.
IT	Coreso transmitted the report to the TSOs in March 2020.
LT	The report was approved by ENTSO E SOC (System Operations Committee) and sent to TSOs on the 4th of March 2020.
LU	The technical report has been submitted on 6 March 2020.
LV	First report on 13 January 2020, updated on 21 February 2020.
MT	Not applicable.
NL	The final version of the technical report was transmitted from the RSC to the involved TSO's on January 22, 2020.
PL	RSC has transmitted the technical report to the TSO in March 2020.
PT	In January 2020.
RO	TSCNET has sent the report in March 2020.
SE	Yes
SI	15/01/2020
SK	6.3.2020

3.3.3 Submission of the report to the relevant regulatory authority

26 **Q.2.5. Concerning Article 6(4), when has the TSO submitted the technical report, referred in Article 6(3) and received from the RSC(s), to the relevant regulatory authority?**

27 Table 13: Submission of the report

MS	Answer
AT	28.2.2020
BE	<i>TSO Elia has transmitted the report to the CREG on 20th March 2020</i>
BG	
CZ	<i>The technical report was submitted on March 12th 2020.</i>
DE	<i>The technical report was submitted at March 13th 2020.</i>
DK	<i>o 10 December 2020 (N-RSC) o 10 December 2020 (TSC Net)</i>
EE	<i>Submitted to the NRA on 05.03.2020. Added to attachment.</i>
ES	<i>REE submitted the technical report to NRA on 20th April 2020</i>
FI	17.4.2020
FR	<i>The report was submitted to CRE by RTE on May 15, 2020.</i>
GB	<i>It was submitted to the regulatory authority on 8th April 2020.</i>
UK-NIR	<i>20th February 2020.</i>
GR	<i>Not submitted yet.</i>
HR	<i>Submitted by TSO on February 20th, received by NRA on February 26th 2020.</i>
HU	<i>The report was sent on April 01, 2020</i>
IE	<i>CORESOS's 2019 report stated that this would be submitted to the relevant regulatory authority in February 2020, however the CRU are yet to receive this. <i>Amendment:</i> we submitted the CORESO technical report in February 2020.</i>
IT	<i>The report was sent to Arera in May 2020</i>
LT	<i>NRA was informed that the Report on Consistency Check of System Defence and Restoration Plans in Baltic region is available on 27 January 2020. Report was provided in formal letter to NRA on the 8th of September 2020.</i>
LU	<i>Creos submitted the report via e-mail on 30 September 2020.</i>
LV	<i>Submitted on 3 March 2020.</i>
MT	<i>Not applicable.</i>
NL	<i>The technical report received from the RSC was submitted to the relevant regulatory authority ACM on April 16, 2020.</i>
PL	<i>Polish TSO has submitted report received from TSCNET on July 2020.</i>
PT	<i>The TSO submitted the technical report on the 12nd of March of 2020.</i>
RO	<i>Transelectrica has sent the technical report referred in article 6(3) to ANRE on 6.10.2020.</i>
SE	<i>In December of 2020</i>
SI	<i>1. 20 February 2020 by regular mail</i>

SK 3.6.2020

3.4 Consultations

3.4.1 Public consultation on the proposals subjects to approval

28 **Q.2.6. Concerning Article 7(1), has the TSO conducted a public consultation (for a period of not less than one month) on the proposals subject to approval in accordance with points (a), (b), (e), (f) and (g) of Article 4(2)? If yes, provide the reference to the call for public consultation. If no, provide explanation.**

29 Table 14: Public consultation.

MS	Answer
AT	Yes, consultation documents were provided on their website: https://www.apg.at/de/Stromnetz/Network-Codes/Netzbetrieb
BE	<p>(a) T&C defense service providers are not applicable as TSO Elia has not identified defense services in the system defense plan</p> <p>(b) T&C restoration service providers à https://www.elia.be/nl/publieke-consultaties/20191014-two-public-consultations-in-the-framework-of-the-network-code-on-emergency-and-restoration</p> <p>(e) rules for suspension and restoration of market activities à 20181005 NCER public consultation (https://eur01.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.elia.be%2Fnl%2Fpublieke-consultaties%2F20181005-ncer-public-consultation&data=04%7C01%7Cchristian.cuijpers%40creg.be%7C930f1da4ef6049e5626308d8dffe4c4b%7C84d38710cc8e4761b89462eda51910f7%7C1%7C0%7C637505630884433190%7CUnknown%7CTWFpbGZsb3d8eyJWljoIMC4wLjAwMDAiLCJQIjoiV2luMzliLCJBTiI6Ikk1haWwiLCJXVCi6Mn0%3D%7C1000&sdata=d2DHtVGVBShyW8MxsiOeoV6sEDU2AQYDrf97A0QDW0%3D&reserved=0)</p> <p>(f) specific rules for imbalance settlement à 20181005 NCER public consultation (https://eur01.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.elia.be%2Fnl%2Fpublieke-consultaties%2F20181005-ncer-public-consultation&data=04%7C01%7Cchristian.cuijpers%40creg.be%7C930f1da4ef6049e5626308d8dffe4c4b%7C84d38710cc8e4761b89462eda51910f7%7C1%7C0%7C637505630884443185%7CUnknown%7CTWFpbGZsb3d8eyJWljoIMC4wLjAwMDAiLCJQIjoiV2luMzliLCJBTiI6Ikk1haWwiLCJXVCi6Mn0%3D%7C1000&sdata=Sl2sYGxAQGicVnZ13qp25DTW6%2Bc2bgVx%2BeSYUNuhzjY%3D&reserved=0)</p> <p>(g) test plan à Public consultation of testplan (https://eur01.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.elia.be%2Fnl%2Fpublieke-consultaties%2F20200915_public-consultation-test-plan&data=04%7C01%7Cchristian.cuijpers%40creg.be%7C930f1da4ef6049e5626308d8dffe4c4b%7C84d38710cc8e4761b89462eda51910f7%7C1%7C0%7C637505630884443185%7CUnknown%7CTWFpbGZsb3d8eyJWljoIMC4wLjAwMDAiLCJQIjoiV2luMzliLCJBTiI6Ikk1haWwiLCJXVCi6Mn0%3D%7C1000&sdata=%2FT1EO4VlgDcB505Jwvjv29ACgVMpQVZKCvbimsgPexY%3D&reserved=0)</p>
BG	
CZ	(a) & (b) Yes, link to public consultation: https://www.eru.cz/-/navrh-zmen-pravidel-provozovani-prenosove-soustavy-predany-spolecnosti-ceps-a-s-na-zaklade-%C2%A7-97a-energetickeho-zakona-energetickemu-regulacnimu-1

	<p>(e) Yes, link to public consultation: https://www.ceps.cz/cs/verejne-konzultace/novinka/er-nc-navrh-pravidel-pro-pozastaveni-a-obnoveni-trznich-cinnosti</p> <p>(f) Delegated to NEMO. Link to public consultation: https://www.ote-cr.cz/cs/o-spolecnosti/zpravy_ote/implementace-narizeni-komise-eu-c-2017-2196-2013-navrh-podminek-pro-zvlastni-pravidla-zuctovani-odchylek-a-zuctovani-tykajici-se-regulacni-energie-v-pripade-pozastaveni-trznich-cinnosti</p> <p>(g) Yes, link to public consultation: https://www.ceps.cz/cs/novinka/nc-er-navrh-planu-zkousek</p>
DE	<p>Yes. Calls for public consultation were published on https://www.netztransparenz.de/EU-Network-Codes/ER-Verordnung</p>
DK	<p>The Danish TSO has public consulted the proposal pursuant to article 4(2)(a)-(f) from the 24. September – 31. October 2018. With regard to the testplan pursuant to article 4(2)(g) public consultation form the TSO has been conducted from 1. November – 29. November 2019.</p> <p>Attached to this questionnaire is a letter containing the TSO answer to the comments received during the public consultation. In the letter point 5 you will find a list of participants which have been directly informed about the call for consultation. The public consultation has also been carried out via the TSO website Energinet.dk.</p>
EE	<p>The public consultation took place from 21. 12.2018 to 22.01.2019.</p> <p>https://elering.ee/loppenuid-konsultatsioonid-kuni-august-2019#tab5</p>
ES	<p>Proposals for Article 4(2) (a), (b), (e), (f): Public consultation from 25/10/2018 to 29/11/2018</p> <p>Proposal for Article 4(2) (g): Public consultation from 05/11/2019 to 05/12/2019</p> <p>Consulted documents (dated 25/10/2018) are available at:</p> <p>https://www.esios.ree.es/es/pagina/propuestas-de-procedimientos-de-operacion</p> <p>About market activities (dated 31 de julio de 2020) documents are available at DCOOR/DE/004/20:</p> <p>https://www.cnmc.es/consultas-publicas/energia/consultas-publicas-entre-el-julio-de-2017-y-el-10-de-septiembre-de-2020 (</p>
FI	<p>Yes. 4(2)a-f: https://www.fingrid.fi/sivut/ajankohtaista/tiedotteet/2018/fingridin-verkkosaanto-webinaarin-aineistot-julkaistu/ 4(2)g: https://www.fingrid.fi/sivut/ajankohtaista/tiedotteet/2019/julkinen-kuuleminen-sahkoverkon-hatatilan-ja-kaytonpalautuksen-verkkosaannon-testisuunnitelmista-8.11.-alkaen/</p>
FR	<p>The public consultation took place from October 10, 2018 to November 12, 2018 (dedicated platform on ADEdF website) and was announced and agreed with stakeholders during the meetings mentioned above.</p> <p>-Proposals (a) to (f): https://www.concerte.fr/node/1367</p> <p>-Proposal (g) (first version): https://www.concerte.fr/node/1524</p> <p>-Amendment to proposal (a) and new proposal (g): https://www.concerte.fr/node/1829</p>
GB	<p>Yes – the Grid Code modifications for implementation of the EU Emergency and Restoration Code were implemented through Grid Code Modification GC0125, GC0127 and GC0128. These modifications are subject to the Grid Code Governance Process which required consultation for a one month period. A link to these consultations is available below.</p> <p>GC0125 (EU Emergency & Restoration: Black Start Testing for Interconnectors)</p>

	<p>https://www.nationalgrideso.com/industry-information/codes/grid-code-old/modifications/gc0125-eu-code-emergency-restoration-black</p> <p>GC0127 (EU Emergency & Restoration: Requirements resulting from the System Defence Plan)</p> <p>https://www.nationalgrideso.com/industry-information/codes/grid-code-old/modifications/gc0127-eu-code-emergency-restoration</p> <p>GC0128 (EU Emergency & Restoration: Requirements resulting from the System Restoration Plan)</p> <p>https://www.nationalgrideso.com/industry-information/codes/grid-code-old/modifications/gc0128-eu-code-emergency-restoration</p> <p>The System Defence Plan and System Restoration Plan and Test Plan were consulted upon through Grid Code modifications GC0127 and GC0128.</p>
UK-NIR	<p>Yes for clauses 4(2)(a, b,e,f). Call for public consultation was sent by email to all stakeholders, discussed at an All Island Stakeholder Forum and published to SONI website here: http://www.soni.ltd.uk/customer-and-industry/european-integration/. Material for clause 4(2)(g) is not yet ready for consultation but expected by end January 2021.</p>
GR	<p>Yes for 4.2(e), (f)</p> <p>Art. 4.2(e) :https://www.admie.gr/nea/diaboyleyseis/dimosia-diaboyleysi-kanones-gia-tin-anastoli-kai-tin-apokatastasi-ton</p> <p>Art. 4.2(f): Not available due to site reconstruction.</p>
HR	<p>Yes. References: http://www.hops.hr/mreznikodeksi ((a), (b), (e) and (g)) and https://www.hops.hr/obavijesti/javno-savjetovanje-vezano-uz-prijedlog-pravila-ouravnotezenju-elektroenergetskog-sustava (for (f), since it's integrated into our Balancing Rules). Available only in Croatian.</p>
HU	<p>Yes, proposals have been published on MAVIR's website for consultation.</p>
IE	<p>The TSO consulted on documents listed in 4(2)(a), (b), (e) and (f) for a period of one month starting on 14 November 2018. They re-consulted on the documents for a six week period beginning on 8 July 2020 (see details here: https://www.eirgridgroup.com/customer-and-industry/european-integration/integration/).</p>
IT	<p>Yes, a public consultation on the proposals 4(2)(a), (b), (e) and (f) was held from 21 November 2018 till 21 December 2018. See details at https://www.terna.it/it/sistema-elettrico/codici-rete/consultazioni-operatori</p>
LT	<p>As regards proposals (a), (b) and (g), see answer to question 1.1. Concerning proposals (e) and (f), public consultations have been carried out.</p>
LU	<p>LU TSO consulted on points e, f, g Other points were considered either not relevant (a, b) or not applicable (c, d)</p>
LV	<p>TSO have organized consultation procedures on its website:</p> <ul style="list-style-type: none"> • https://www.ast.lv/en/node/28715 • https://www.ast.lv/lv/events/ar-tirgus-darbibas-apturesanu-un-atjaunosanu-saistitoteikumu-sabiedriski-apsriesana
MT	<p>No public consultation has been conducted.</p>

NL	<p>Yes, a public consultation on the article 4(2) proposals was conducted by the TSO between 1 November 2018 and 1 December 2018.</p> <p>Moreover, since the proposals concerns amendments to our national electricity code, the proposals were discussed in a dedicated meeting with stakeholders (platform for parties connected to electricity and gas networks, so called GEN). A report of this meeting is included in the final proposal to the regulator (ACM).</p>
PL	<p>https://www.pse.pl/-/informacja-dotyczaca-procesu-konsultacji-warunkow-dzialania-w-charakterze-dostawcow-uslug-w-zakresie-odbudowy-na-podstawie-kodeksu-nc-er; https://www.pse.pl/konsultacje-zakonczone/konsultacje-ws.-propozycji-zasad-zawieszania-i-przywracania-dzialan-rynkowych-oraz-szczegolowych-zasad-rozliczania-niezbilansowania-i-rozliczania-energii-bilansujacej-w-okresie-zawieszenia-dzialan-rynkowych; https://www.pse.pl/konsultacje-zakonczone/konsultacje-spoeczne-propozycji-planu-testow-opracowanego-na-podstawie-nc-er; https://www.pse.pl/konsultacje-zakonczone/konsultacje-spoeczne-propozycji-planu-testow-opracowanego-na-podstawie-nc-er2.</p>
PT	<p>The public consultation started on the 29th of October of 2018 as you can see in the link: http://www.mercado.ren.pt/PT/Electr/Comunicacao/ConsPub/Paginas/CP_20181029_1.aspx</p>
RO	<p>For 4(a) and (b) technical condition was send to ANRE and ANRE posted in Proiect de Ordin privind aprobarea procedurii de calificare tehnică pentru furnizarea serviciilor de sistem - consultare publica incheiata (anre.ro)</p> <p>For 4 (c) and (d) the list was send to ANRE and ANRE posted in https://www.anre.ro/ro/energie-electrica/legislatie/documente-de-discutie-ee1/coduri-paneuropene/regulamentul-ue-nr-2196-20171552558905</p> <p>A public consultation was carried out for the proposals subject to the letters e) and f) .</p>
SE	<p>https://www.svk.se/press-och-nyheter/nyheter/natkoder/2018/offentligt-samrad-om-avbrytande-och-aterupptagande-av-marknadsaktiviteter/</p> <p><i>Update provided by Ei (SE):</i></p> <p>https://www.svk.se/press-och-nyheter/nyheter/natkoder/2018/samrad-om-manuell-samt-automatisk-forbrukningsfrankoppling-kopplat-till-natkoden-er/</p> <p>Discussions bilaterally and in already established groups/fora.</p>
SI	<ul style="list-style-type: none"> • 4(2)(a): In Slovenia the defence service providers on a contractual basis in accordance with article 4(4) don't exist; • 4(2)(b): In Slovenia the restoration service providers on a contractual basis in accordance with article 4(4) don't exist; • 4(2)(c): No. Public consultation is not mandatory according to Article 7. Defence plan was recognised as confidential by our TSO. • 4(2)(d): No. Public consultation is not mandatory according to Article 7. Restoration plan was recognised as confidential by our TSO. • 4(2)(e): 1 February 2019 – 4 March 2019; Web site: https://www.eles.si/novice-za-poslovne-uporabnike/ArticleID/14253/Zacetek-javne-obravnave-predloga-Pravil-za-prekinitiv-in-ponovno-vzpostavitev-trznih-dejavnosti • 4(2)(f): 1 February 2019 – 4 March 2019; web site: https://www.eles.si/novice-za-poslovne-uporabnike/ArticleID/14253/Zacetek-

	<p><i>javne-obravnave-predloga-Pravil-za-prekinitev-in-ponovno-vzpostavitev-tržnih-dejavnosti</i></p> <ul style="list-style-type: none"> • 4(2)(g): 11 November 2019 - 11 December 2019 <p>Web site: https://www.eles.si/obratovanje/novice-za-poslovne-uporabnike/ArticleID/15433/Zacetek-javne-obravnave-predloga-Nacrta-preskusov</p>
SK	<p>Public consultation for Article 4(2):</p> <p>a, There was no public consultation because the conditions for the defence services provider are given by legislation.</p> <p>b, https://www.sepsas.sk/VerKon_2018_06_25.asp?kod=642</p> <p>e, https://www.sepsas.sk/VerKon_2018_11_09.asp?kod=642</p> <p>f, https://www.sepsas.sk/VerKon_2018_10_04.asp?kod=642</p> <p>g, https://www.sepsas.sk/VerKon_2019_09_27.asp?kod=642</p>

3.4.2 Consultation with stakeholders during the design of the system defence plan

30 **Q.2.7. Concerning Article 11(1), during the design of the system defence plan, how has the TSO ensured consultation with relevant DSOs, SGUs, regulatory authorities, or entities referred to in Article 4(3), neighbouring TSOs and the other TSOs in its synchronous area? Provide any relevant references to.**

31 Table 15: Consultation with stakeholders I.

MS	Answer
AT	<i>The TSO elaborates it's system defence plan within the relevant working group of the Association of Austrian Electricity Companies.</i>
BE	<ul style="list-style-type: none"> •DSO: during several meetings with the working group "AHDR" within Synergrid (sector federation of TSOs and DSOs in Belgium) in the course of 2018 •SGU, regulatory authorities and competent authorities: during several meetings with the working group "WGSO & EMD" within Elia users group in the course of 2018 •Other TSOs: bilaterally and during several meetings with the working expert team NCER of Entso-e in the course of 2018
BG	
CZ	<i>The defence plan existed before NCER in relation to SAFA agreement, therefore most elements of the system defence plan remained unchanged. Consultations were conducted bilaterally, through public consultations (see above) and a workshop dedicated to NCER implementation. DSOs were consulted regularly through established national association.</i>
DE	<i>All measures of system defence plan are well-established and in place for many years. There is a continuous coordination on national and international level and also common operator trainings are established. National standards or bilateral contracts for this measures are existing for measures of DSOs, SGUs etc. Measures with other TSOs are based on synchronous area framework agreement (SAFA) or bilateral contracts are existing (e.g. emergency assistance contracts). Therefore, there was no additional need of coordination.</i>
DK	<i>The Danish TSO launched meetings with DSOs and facility owners before submitting the system defence and restoration plans to DUR.</i>

EE	<i>As the system defence plan contains different contracts (e.g. the BRELL emergency reserves agreement, Guidelines for the emergency operation management of the EES, Contract with the largest DSO, list of SGUs, etc), different parties have been consulted.</i>
ES	<i>The system defence plan was already designed and implemented before the entry into force of NC ER. Only it was needed to update the automatic under-frequency control scheme. For this update, REE has hold several meetings with relevant DSOs and NRA.</i>
FI	<i>TSO displayed its system defence plan in a webinar 23.10.2018 after which they opened a consultation until 30.11.2018. https://www.fingrid.fi/sivut/ajankohtaista/tiedotteet/2018/fingridin-verkkosaanto-webinaarin-aineistot-julkaistu/</i>
FR	<i>Stakeholders had the opportunity to work with system operators on the proposals that were the subject of this public consultation during the five meetings organized as part of the E&R consultation body, led by RTE and ADEeF (French DSOs organisation) at the request of the French General Direction for Energy and Climate (DGEC).</i>
GB	<i>The System Defence Plan was part of Grid Code Modification GC0127. Under the GB Grid Code Governance Process, there is a requirement for a Workgroup to be established across all interested parties in the industry and for consultation to be held. The information was also published and discussed at the GB Joint European Standing Group (JESG). A link to this workgroup is attached for information. https://www.nationalgrideso.com/industry-information/codes/grid-code-old/modifications/gc0127-eu-code-emergency-restoration</i>
UK-NIR	<i>Call for public consultation was sent by email to all stakeholders, discussed at an All Island Stakeholder Forum and published to SONI website here: http://www.soni.ltd.uk/customer-and-industry/european-integration/. Meetings were held during the development process between the relevant TSOs, RA and DNO</i>
GR	<i>In progress</i>
HR	<i>Bilateral communication (electronic mail and physical meetings).</i>
HU	<i>MAVIR has consulted with experts of the concerned parties by e-mail and by phone.</i>
IE	<i>The consultations conducted on documents relating to 2017/2196 were done in conjunction with the DSO. We are aware of plans of the TSO and DSO to contact SGUs to inform them of their status shortly after re-submission of consulted-upon documents. The re-consulted documents were the result of constant engagement between the TSO, DSO and Regulatory Authorities, including two full-day workshops in October 2019 and March 2020 between all parties.</i>
IT	<i>General terms and conditions for the defence plan were consulted during the public consultation mentioned at question 6. Details related to the implementation at specific sites were discussed among Terna and SGUs, before the notification of the defence plan. Each defence service providers was contacted by Terna regarding the necessary implementations of the defence plan; coordination between TSOs have taken place as defined above.</i>
LT	<i>No. See answer to question 1.1</i>
LU	<i>Creos has elaborated the system defence plan together with the Luxembourgish DSOs. There are no SGUs in Luxembourg (hence no consultation with such entities). The Ministry of Energy, which is by law responsible for monitoring the security of supply, was permanently informed of the progress of the elaboration of the system defence plan. In fact, they were represented in the working group charged with the elaboration of said</i>

	<i>plan. Due to the nature of the LU grid (eg. no LFC controller, no large power plants connected to our grid, no SGUs, no system defence provider), the system defence plan does not and cannot impact any neighbouring TSO. Nevertheless, Elia and Amprion know the content of the system defence plan (in the context of the respective Agreements on Grid and System Operation (AGSOM) concluded between Creos, Amprion and Elia).</i>
LV	<i>TSO sent separate letters to relevant DSOs, NRA, service providers and received feedback, that was submitted to NRA for information. TSO has not organized separate coordination process with TSOs within its synchronous area. The plans were based on existing coordination procedures applied within the BRELL ring, therefore all procedures were considered as already coordinated.</i>
MT	<i>Not applicable.</i>
NL	<i>The referred defence plan was based on an existing framework which was developed and applied with the stakeholders at an earlier time. New relevant elements related to the NC ER were explicitly consulted with the relevant parties in combination with proposed changes in the national Network code.</i>
PL	<i>TSO ensured consultation with other TSOs via ENTSO-E SOC cooperation – information provided by the TSO. https://www.pse.pl/biuro-prasowe/aktualnosci/-/asset_publisher/fwWgbbtxcZUt/content/zaproszenie-na-spotkanie-informacyjne-dotyczace-wdrazania-rozporzadzenia-komisji-europejskiej-ustanawiajacego-kodeks-sieci-dotyczacy-stanu-zagrozenia-; https://www.pse.pl/documents/20182/31216853/warsztaty_20180226.pdf/e32b1787-6378-4ea8-9c7f-765b76542c40; https://www.pse.pl/documents/20182/31216853/20180226_Kodeksy_Sieci_wstep_spotkanie_NCER.pdf; https://www.pse.pl/documents/20182/31216853/20180226_NCER_warsztaty_ogolny.pdf; https://www.pse.pl/documents/20182/31216853/20180226_NCER_warsztaty_DT_Aspekty_laczynosci_Glosowej.pdf; https://www.pse.pl/documents/20182/31216853/20180226_NCER_warsztaty_Plan_obroty.pdf; https://www.pse.pl/documents/20182/31216853/20180226_NCER_warsztaty_Plan_odbudowy_v2.pdf; https://www.pse.pl/documents/20182/31216853/20180226_NCER_warsztaty_zawieszanie_rynku.pdf</i>
PT	<i>Some of these plans are in protocols and agreements between TSO and DSO, producers and the neighbouring TSO. In addition, in February 2020, all SGUs were formally notified by the TSO that they were SGU.</i>
RO	<i>Partial consultations were ensured for the determination of the automatic under-frequency schema and PGM qualifications requirements (concerning DSO and SGUs). Discussions with ANRE concerning significant grid users, art. 4 (2) letters c), d), e) and f) were carried out also. Consultations between neighbouring TSOs were carried out according to point 1.</i>
SE	<i>The bottom-up re-energisation strategy has been subject to direct consultation with relevant DSOs and SGUs within the development and implementation project “Starta Sverige”. The regulatory authority has been provided with information during meetings prior to the notification as per article 4.5. TSOs in the s.a. and neighbouring TSOs: information of the restoration plan has been shared in established groups/fora.</i>

SI	Consultations were conducted on physical meetings with DSOs and SGUs. Measures relevant for neighboring TSOs are determined and harmonised within Inter-TSO agreements.
SK	SEPS had developed a Defence Plan before the entry into force of the NC ER. Therefore, the measures and procedures of the Plan are not new for SEPS and the necessary subjects. Previous updates have been based on mutual cooperation, either at the bilateral level or joint meetings of the so-called “Coordination meetings of TSOs with DSOs and SGUs” with the participation of all participants in the electricity market in the Slovak Republic. During the designing period of Defence plan, there were organized coordination workshops with all SGUs and relevant DSOs.

3.4.3 Consultation with stakeholders during the design of the restoration plan

32 **Q.2.8. Concerning Article 23(1), during the design of the restoration plan, how has the TSO ensured consultation with relevant DSOs, SGUs, regulatory authorities, or entities referred to in Article 4(3), neighbouring TSOs and the other TSOs in its synchronous area?**

33 Table 16: Consultation with stakeholders II.

MS	Answer
AT	The TSO consults its restoration plan within the relevant working group of the Association of Austrian Electricity Companies.
BE	<ul style="list-style-type: none"> •DSO: during several meetings with the working group “AHDR” within Synergrid (sector federation of TSOs and DSOs in Belgium) in the course of 2018 •SGU, regulatory authorities and competent authorities: during several meetings with the working group “WGSO & EMD” within Elia users group in the course of 2018 •Other TSOs: bilaterally and during several meetings with the working expert team NCER of Entso-e in the course of 2018
BG	
CZ	Please refer to #1 and #6.
DE	The restoration plan was not developed after entering into force of Commission Regulation (EU) 2017/2196 but all measures are well-established and in place for many years. Furthermore, bilateral contracts with black start unit operators are agreed and measures/procedures with relevant parties are permanently discussed and adjusted on technical expert level. Therefore, there was no need for consultation of the restoration plan.
DK	The Danish TSO launched meetings with DSOs and facility owners before submitting the system defence and restoration plans to DUR.
EE	The restoration of the operation of the EES is based on, among other things, the emergency operation management instructions and the BRELL emergency elimination instructions, different parties have been consulted.
ES	<p>The restoration plan was already designed and implemented before the entry into force of NC ER.</p> <p>The terms and conditions to act as a restoration service provide has not been approved yet.</p>
FI	TSO displayed its restoration plan in a webinar 23.10.2018 after which they opened a consultation until 30.11.2018.

	https://www.fingrid.fi/sivut/ajankohtaista/tiedotteet/2018/fingridin-verkkosaanto-webinaarin-aineistot-julkaistu/
FR	<i>Prior to public consultation place from October 10, 2018 to November 12, 2018, DSOs, SGUs and restoration service providers had the opportunity to work with TSO operators on the measures of the restoration plan during the various meetings organized as part of the E&R consultation body, led by RTE and ADEEF at the request of the French General Direction for Energy and Climate (DGEC).</i>
GB	<i>The System Restoration Plan was part of Grid Code Modification GC0128. Under the GB Grid Code Governance Process, there is a requirement for a Workgroup to be established across all interested parties in the industry and for consultation to be held. The information was also published and discussed at the GB Joint European Standing Group (JESG). A link to this workgroup is attached for information.</i> https://www.nationalgrideso.com/industry-information/codes/grid-code-old/modifications/gc0128-eu-code-emergency-restoration
UK-NIR	<i>Call for public consultation was sent by email to all stakeholders, discussed at an All Island Stakeholder Forum and published to SONI website here: http://www.soni.ltd.uk/customer-and-industry/european-integration/. Meetings were held during the development process between the relevant TSOs, RA and DNO.</i>
GR	<i>In progress</i>
HR	<i>Bilateral communication (electronic mail and physical meetings).</i>
HU	<i>MAVIR has consulted with experts of the concerned parties by phone.</i>
IE	<i>The consultations conducted on documents relating to 2017/2196 were done in conjunction with the DSO. We are aware of plans of the TSO and DSO to contact SGUs to inform them of their status shortly after re-submission of consulted-upon documents. The re-consulted documents were the result of constant engagement between the TSO, DSO and Regulatory Authorities, including two full-day workshops in October 2019 and March 2020 between all parties.</i>
IT	<i>General terms and conditions for the restoration plan were consulted during the public consultation mentioned at question 6. Details related to the implementation at specific sites were discussed among Terna, DSOs and SGUs, before the notification of the restoration plan. Terna sent directly to each restoration service provider the details of the part of the restoration plan for which it is responsible and the list of necessary implementations. For units included for the first time in the restoration plan, ARERA asked Terna to run a supplementary investigation in cooperation with the involved SGUs. SGUS shall provide observations by end September 2020, the final decision by Terna whether confirm or not the inclusion in the restoration plan is expected by end 2020.</i>
LT	<i>There was no need for a consultation with relevant DSOs, SGUs, regulatory authorities, or entities referred to in Article 4(3) (See answer to question 1.1) TSO has an agreement among neighbouring TSOs and the other TSOs in its synchronous area.</i>
LU	<i>Creos informed all stakeholders about the content and implications of the restoration plan when setting up the initial plan in October 2013. The modifications necessary to be compliant with the NC ER do not however change the content of the restoration plan and hence Creos has no intention of consulting again.</i>
LV	<i>TSO sent separate letters to relevant DSOs, NRA, service providers and received feedback, that was submitted to NRA for information. TSO has not organized separate coordination process with TSOs within its synchronous</i>

	<i>area. The plans were based on existing coordination procedures applied within the BRELL ring, therefore all procedures were considered as already coordinated.</i>
MT	<i>Not applicable.</i>
NL	<i>The referred restoration plan was based on an existing framework which was developed and applied with the stakeholders at an earlier time. New relevant elements related to the NC ER were explicitly consulted with the relevant parties in combination with proposed changes in the national Network code.</i>
PL	<p><i>TSO ensured consultation with other TSOs via ENTSO-E SOC cooperation – information provided by the TSO.</i></p> <p><i>https://www.pse.pl/biuro-prasowe/aktualnosci/-/asset_publisher/fwWgbbtxcZUt/content/zaproszenie-na-spotkanie-informacyjne-dotyczace-wdrazania-rozporzadzenia-komisji-europejskiej-ustanawiajacego-kodeks-sieci-dotyczacy-stanu-zagrozenia-;</i></p> <p><i>https://www.pse.pl/documents/20182/31216853/warsztaty_20180226.pdf/e32b1787-6378-4ea8-9c7f-765b76542c40;</i></p> <p><i>https://www.pse.pl/documents/20182/31216853/20180226_Kodeksy_Sieci_wstep_spotkanie_NCER.pdf;</i></p> <p><i>https://www.pse.pl/documents/20182/31216853/20180226_NCER_warsztaty_ogolny.pdf;</i></p> <p><i>https://www.pse.pl/documents/20182/31216853/20180226_NCER_warsztaty_DT_Aspekty_lacznosci_Glosowej.pdf;</i></p> <p><i>https://www.pse.pl/documents/20182/31216853/20180226_NCER_warsztaty_Plan_obrony.pdf;</i></p> <p><i>https://www.pse.pl/documents/20182/31216853/20180226_NCER_warsztaty_Plan_odbudowy_v2.pdf;</i></p> <p><i>https://www.pse.pl/documents/20182/31216853/20180226_NCER_warsztaty_zawieszanie_rynku.pdf;</i></p>
PT	<i>Some of these plans are in protocols and agreements between TSO and DSO, producers and the neighbouring TSO. In addition, in February 2020, all SGUs were formally notified by the TSO that they were SGU.</i>
RO	<p><i>Same as above and according to public consultations (see links)</i></p> <p><i><u>Proiect de Ordin privind aprobarea procedurii de calificare tehnică pentru furnizarea serviciilor de sistem - consultare publica incheiata (anre.ro)</u></i></p> <p><i><u>https://www.anre.ro/ro/energie-electrica/legislatie/documente-de-discutie-ee1/coduri-paneuropene/regulamentul-ue-nr-2196-20171552558905</u></i></p> <p><i>.</i></p>
SE	<p><i>The bottom-up re-energisation strategy has been subject to direct consultation with relevant DSOs and SGUs within the development and implementation project “Starta Sverige”.</i></p> <p><i>The regulatory authority has been provided with information during meetings prior to the notification as per article 4.5.</i></p> <p><i>TSOs in the s.a. and neighbouring TSOs: information of the restoration plan has been shared in established groups/fora.</i></p>
SI	<i>Consultations were conducted on physical meetings with DSOs and SGUs. Measures relevant for neighboring TSOs are determined and harmonised within Inter-TSO agreements.</i>
SK	<i>SEPS had developed a Restoration Plan before the entry into force of the NC ER. Therefore, the measures and procedures of the Plan are not new for SEPS and the stakeholders. Previous updates have been based on mutual cooperation, either at the bilateral level or joint meetings of the so-called “Coordination meetings of TSOs with</i>

DSOs and SGUs” with the participation of all participants in the electricity market in the Slovak Republic. During the designing period of Restoration plan, there were organized coordination workshops with all SGUs and relevant DSOs.

4. General provisions of the system defence plan

4.1 Threshold on the impact of actions of TSOs

34 **Q.3.1. Concerning Article 6(5), when has the TSO agreed with all other TSOs of each capacity calculation region on a threshold above which the impact of actions of one or more TSOs in the emergency, blackout or restoration states is considered significant for other TSOs within the capacity calculation region?**

35 Table 17: Threshold on the impact of TSOs actions

MS	Answer
AT	Inter TSO Agreements were established 10 to 15 years ago. They were evaluated within the timeframe of the ER implementation.
BE	On 12 February 2020, the System Operations Committee of Entso-e approved the following proposal for the threshold related to NCER art 6(5): the threshold is considered to be crossed over when an action (being preliminary coordinated or not) done by a TSO being in Emergency, Blackout or Restoration System State causes a situation where another TSO being in Normal or Alert System State has to declare an Emergency System State.
BG	
CZ	February 2020
DE	It was agreed between RG CE TSOs (acknowledged in SOC) that it is not possible to define such a common threshold. The influence on neighbouring TSOs depends on several factors and has to be assessed in the individual situation. In EAS (ENTSO-E Awareness System) usage procedure and in the CSO-SG EAS practical guide are common rules defined when and how other TSOs have to be informed in case of alert, emergency and black-out state.
DK	It has been discussed but it is uncertain if a conclusion has been achieved.
EE	Agreed with different BRELL agreements
ES	February 2020
FI	This was part of the RSC process which finished 10.1.2020.
FR	Default threshold for all ENTSO-E TSOs approach discussed at ENTSOe level early 2020.
GB	This is not applicable in GB because GB is one synchronous area with one TSO who is responsible of operation of the system.
UK-NIR	Not yet complete by TSO.
GR	After the regional RSC (SELENE) starts operating and be involved in relevant activities, the TSOs of the concerned CCRs (SEE, GRIT) could

	agree on such issues.
HR	59th System Operation Committee meeting on February 12th 2020: https://eepublicdownloads.azureedge.net/clean-documents/SOC%20documents/meetings/200212_SOC_Minutes_vFinal.pdf (Point 9).
HU	February 20, 2020
IE	<i>The CRU are unaware of an agreement being reached on this. It is not explicitly referred to in the last version of to-be-submitted documents, and establishing compliance will form part of our review.</i> <i>Update provided by CRU (IE):</i> <i>Technically, the CRU are no longer part of any CCR.</i>
IT	February 2020
LT	<i>TSO on 18th of December 2019 submitted a ROSC (Regional operational security coordination) proposal pursuant Article 76, 77 of SOGL to NRAs which according to TSO would implement these requirements. TSO submitted amended proposal on 28th of August 2020.</i> <i>Update provided by NERC (LT):</i> <i>On May 27th, 2021 TSOs of Baltic CCR have commonly agreed on default thresholds required in article 6(5) of NC ER, according to ENTSO-E System Operations Committee Proposal which was introduced in document "Choice of threshold for significant impact of actions in E&R"</i>
LU	<i>Creos is not aware of any such agreement. This issue is solved via the concluded AGSOMs between Creos, Amprion and Elia (mutual information in case of incidents which might impact the neighbouring TSO.</i>
LV	<i>The threshold has not been defined.</i>
MT	<i>Not applicable, Malta does not form part of a capacity calculation region</i>
NL	<i>It was decided during the ENTSO-E system operation committee (SOC) meeting of February 12th, 2020 to approve the recommended thresholds in all CCRs.</i>
PL	<i>Polish TSO has informed that on 59th ENTSO-E System Operations Committee (12.02.2020) such threshold was agreed.</i>
PT	<i>The conversation among TSOs and the RSC started in July of 2019 and was finished in December of 2019.</i>
RO	<i>We have no information concerning art. 6(5).</i> <i>Comment by RO: The point from questionnaire is 6(5) not 7(5)</i>
SE	<i>Considered in SOA ER annex in the Nordic S.A.</i>
SI	<i>The threshold was approved on ENTSO-E SOC meeting in February 2020.</i>
SK	<i>In process on ENTSOe level and NRAs. Agreed proposal will be implemented to our internal procedures.</i>

4.2 Implementation of the measures of the system defence plan

36 **Q.3.2. Concerning Article 12(1), has the TSO implemented measures of its system defence plan that are to be implemented on the transmission system?**

37 Table 18: Implementation of the measures

MS	Answer
AT	<i>The measures detailed in the system defence plan are implemented.</i>
BE	Yes
BG	
CZ	Yes
DE	<i>As these measures are well-established and in place for many years (implemented before the Commission Regulation (EU) 2017/2196 entered into force) a deadline for implementation was not necessary. The German TSOs designed a common system defence plan. The coordination of the measures between the German TSOs is also defined in common concepts ("Gemeinsames Betriebshandbuch der vier deutschen Übertragungsnetzbetreiber" = German operation handbook) which are also well-established and in place for many years.</i>
DK	<i>Yes, and the measures that have deadline 18 December 2022 are in progress.</i>
EE	Yes
ES	<i>The system defence plan was already designed and implemented before the entry into force of NC ER. Only it is needed to implement the new automatic under-frequency control scheme (deadline: 18/12/2022).</i>
FI	Yes.
FR	Yes
GB	<i>Yes – These are covered in the Grid Code and implemented through Grid Code Modification GC0127 mentioned above.</i>
UK-NIR	<i>Yes. There are no new measures proposed in the SDP.</i>
GR	<i>Measures implemented in the past, additional measures are under implementation based on high penetration of renewables.</i>
HR	<i>Yes, all the measures were already implemented beforehand.</i>
HU	<i>There aren't any measures to be implemented.</i>
IE	<i>No, as it has not yet been re-submitted and therefore approved by the Regulatory Authorities. Update provided by CRU (IE): Now implemented, existing measures in place</i>
IT	Yes
LT	<i>Yes. However, NERC is still assessing the data provided by the TSO.</i>
LU	<i>Yes. Same measures as the ones already implemented before ER NC</i>

LV	<i>TSO has implemented all processes since plan was based on existing processes.</i>
MT	<i>Not applicable</i>
NL	<i>Not yet fully implemented, also because several code changes are pending approval from the relevant regulatory authority ACM.</i>
PL	<i>Polish TSO has not declared any specific measures (new one) need to be implemented at that moment. According to information provided by TSO both documents: defence plan as well as restoration plan prepared in line with NC ER are a new one. Older plan (called “Plan generalny obrony i odbudowy” – “General defence & restoration plan”) were established in line with national legislation.</i>
PT	<i>The measures contained in the defence plans were already implemented.</i>
RO	<i>Currently the measures are implemented according to Transelectrica operational procedure Defence plan against major perturbations and Restoration plan of national power system operation into urgency or black-out state. It will be updated based on the provisions for the new Defence Plan according to R2 196/2017.</i>
SE	<i>Update of instruction to ensure reporting to regulatory authority in the event that manual load shedding is activated is to be included in coming revision.</i>
SI	<i>The automatic scheme against voltage collapse has been mostly implemented. The final implementation is planned in the next year.</i>
SK	<i>The measures are implemented. They will be verified by the Test Plan.</i>

4.3 Notification of the measures

4.3.1 Notification of the system defence plan by the TSOs

38 **Q.3.3. Concerning Article 12(2), when has the TSO notified the transmission connected DSOs of the measures of the system defence plan, including the deadlines for implementation, which are to be implemented?**

39 *Table 19: Notification of the system defence plan by the TSOs.*

MS	Answer
AT	<i>The system defence plan was established in close cooperation with the concerned DSOS and SGUs.</i>
BE	<i>On January 7th 2020, after approval of the plan by the minister of energy</i>
BG	
CZ	<i>December 2018</i>
DE	<i>As these measures are well-established and in place for many years (implemented before the Commission Regulation (EU) 2017/2196 entered into force) a deadline for implementation was not necessary. For manual measures there is a German national standard VDE-AR-N 4140 existing and for automatic measures VDE-AR-N 4142. These national standards were created by TSOs and DSOs and have also consulted.</i>
DK	<i>The TSO has send letters to transmission connected DSOs on 18. December 2018.</i>
EE	<i>No reply</i>

ES	<p>REE created a working group with relevant DSOs to coordinate the implementation of NC ER in April 2018.</p> <p>All the measures of system defence plan were already implemented before the entry into force of NC ER except the measures established in Articles 15 (5) to (8). The design and implementation of Articles 15 (5) to (8).is being coordinated from this working group.</p>
FI	18.12.2018
FR	<p>Prior to public consultation place from October 10, 2018 to November 12, 2018, DSOs, SGUs and defence service providers had the opportunity to work with TSO operators on the measures of the system defence plan during the various meetings organized as part of the E&R consultation body, led by RTE and ADEeF at the request of the French General Direction for Energy and Climate (DGEC).</p> <p>Mails have been sent to all the French DSOs beginning 2019 by our customers services.</p>
GB	The DSO's are aware of this work through Grid Code Modification GC0127 and were able to contribute to the consultation on the system defence plan which was part of this wider consultation. However, DSO's have not been formally notified by a separate letter.
UK-NIR	Yes. The DNO has been in informed of all measures in the SDP.
GR	N/A yet.
HR	December 18th 2018.
HU	Although there were some prior consultations at the end of 2018, the transmission connected DSOs were officially notified on July 22, 2019.
IE	<p>No, as the measures have not yet been re-submitted and therefore approved by the Regulatory Authorities.</p> <p><i>Update provided by CRU (IE):</i></p> <p>No additional measures were to be implemented so no notification required</p>
IT	22nd March 2019
LT	Before NC ER regulation was approved, this has been implemented as required by the Lithuanian national legislation, therefore TSO no needs to notify.
LU	The TSO and the DSOs have issued a common defence plan, so the DSOs are well aware of the requirements from the very beginning.
LV	TSO has not notified since plan was based on existing processes. Exception is manual demand disconnection procedure, but TSO is still working on it together with relevant DSO.
MT	Not applicable. There is only one DSO in Malta and the measures requested by Terna in the connection agreement concerned only automatic low frequency demand disconnection. The mentioned requested measures were implemented by the DSO in 2015, when the interconnection and the contractual agreement with Terna Spa came into action.
NL	The transmission connected DSOs were informed about the measures of the system defence plan including deadlines for implementation on December 19, 2018. They also received a PDF copy of the system defence and restoration plan.
PL	Polish TSO has informed DSO of the measures of system defence plan on 13th December 2018. Letter to the DSOs included implementation deadline.

PT	<i>The measures contained in the defence plans were already implemented.</i>
RO	<i>It wasn't notified to ANRE. It was implemented measures for the list of SGUs (art. 4 (a)).</i>
SE	<i>2018-12-18. No new measures, only information of existing measures included in SDP.</i>
SI	<i>Our DSO was notified on the 14 and 15 October in 2019.</i>
SK	<i>14.12.2018</i>

4.3.2 Notification of the measures to be implemented

40 **Q.3.4. Concerning Article 12(3), when has the TSO notified the SGUs identified pursuant to point (c) of Article 11(4) or the defence service providers directly connected to its transmission system of the measures which are to be implemented on their installations, including the deadlines for the implementation?**

41 Table 20: Notification of the measures.

MS	Answer
AT	<i>The system defence plan was established in close cooperation with the concerned DSOS and SGUs.</i>
BE	<i>On June 22nd 2020, TSO Elia has sent letters to individual SGUs identified pursuant to point (c) of Article 11(4) to notify them on the measures which are to be implemented on their installations, including the deadlines for the implementation</i>
BG	
CZ	<i>December 2018</i>
DE	<i>The system defence plan of the four German TSOs contains measures/procedures to be performed by directly connected SGUs. There are no defence service providers implemented. As these measures are well-established and in place for many years (implemented before the Commission Regulation (EU) 2017/2196 entered into force) therefore an information of the deadline for implementation was not necessary. All necessary technical requirements are regulated in existing national standards.</i>
DK	<i>The TSO has send letters to SGUs on 18. December 2018.</i>
EE	<i>I do not know the exact time, but the agreements have been concluded between the parties</i>
ES	<i>All the measures of system defence plan were already implemented before the entry into force of NC ER.</i>
FI	<i>18.12.2018</i>
FR	<i>SGU and defence services providers have been notified by mail (11th December 2018) about the implementation of the Network Code Emergency & Restoration.</i>
GB	<i>The SGU's are aware of this work through Grid Code Modification GC0127 and were able to contribute to the consultation on the system defence plan which was part of this wider consultation. However, SGU's have not been formally notified by a separate letter. Despite a formal notification not being issued, by virtue of the obligation to comply with the requirements of the Grid Code, SGU's would automatically be compliant with the requirements of NCER. A list of SGU's is included in Appendix A of the System Defence Plan, however we are still awaiting approval of this. During the GC0127 workgroup, the SGU list was discussed at length.</i>

UK-NIR	<i>TSO is awaiting a formal RA decision before communicating this. The SGU list will be made public after it is approved. Formal decision by RA is aiming to be made in January 2021.</i>
GR	<i>N/A yet.</i>
HR	<i>December 18th 2018.</i>
HU	<i>There aren't any measures to be implemented.</i>
IE	<p><i>No, however the TSO and DSO have informed us of their plans to do this shortly after re-submission of consulted-upon documents, and will share these plans with the CRU to ensure we are content with them.</i></p> <p><i>Update provided by CRU (IE):</i></p> <p><i>TSO notified SGUs of measures to be implemented on 1 April 2021</i></p>
IT	<i>29th November 2018</i>
LT	<i>System defence plans were implemented before adopting ER NC so there was no need to notify the SGUs or the defence service providers directly connected to its transmission system regarding the measures which are to be implemented on their installations, including the deadlines for the implementation. See answer to question 3.1</i>
LU	<i>No SGUs identified in Luxembourg</i>
LV	<p><i>SGUs are not responsible for implementation of any processes. Therefore, notification procedure was not performed.</i></p> <p><i>With a defence service provider separate agreement before approval of the plan are concluded. Therefore, notification procedure was not performed.</i></p>
MT	<i>The documentation concerning the formalisation of the defence procedures will be communicated to the two local independent producers and Terna Spa as the relevant TSO.</i>
NL	<i>The transmission connected SGUs and the defence service providers directly connected to the transmission were informed about the measures of the system defence plan to be implemented on their installations, including deadlines for implementation on December 19, 2018. They also received a PDF copy of the system defence and restoration plan.</i>
PL	<p><i>Polish TSO has informed respective SGUs identified pursuant to article 11 (4) (c) of the measures which are to be implemented on their installations, including the deadlines for the implementation after the NRA approval of TCM mentioned in article 4 (2) (c).</i></p> <p><i>TSO in October 2018 (set of letters from TSO to the respective SGUs) has informed SGUs about the measures to be implemented (including deadline for implementation).</i></p> <p><i>Final confirmation of the measures valid for SGU identified in line with article 4 (2) (c) were provided by TSO to SGUs after NRA decision on 07.06.2019.</i></p>
PT	<i>In February of 2020.</i>
RO	<p><i>A large majority of SGU from the lists according to the point c) from article 11 (4) are able to execute the measures proposed because they are used already into existing defence plan. Moreover, the SGUs were notified every time normative for manual disconnection and for power limitation were updated. In parallel with ANRE public consultation, Transelectrica will contact and notify all SGU from the lists proposed.</i></p> <p><i>Update provided by ANRE (RO):</i></p>

	<p>Transelectrica contacted and notified SGU from the lists proposed. on 19.03.2021 and 23.03.2019.</p> <p>Transelectrica discussed and notified DSOs measures from system defence plan (SGU designated and corresponding measures) by telco from 19.03.2021 at ANRE request no. 91106/13.11.2020 (conclusions of meeting contained also into address 12696/23.03.2021). Transelectrica notified SGUs again on 25.04.2021.</p> <p>Additional ANRE informed Transelectrica by address 35488/1.04.2021 and SGUs by address 35925/1.04.2021.</p> <p>Measures are already implemented in Romania on 1.04.2021 to SGUs and it was issued ANRE Decision no. 595/31.03.2021 which are describing this measures</p>
SE	Requirements regarding LFSM-U and LFSM-O as per national regulations (EIFS 2018:2)
SI	Our SGUs were notified on the 14, 15 and 16 October in 2019.
SK	17.12.2018

42 **Q.3.5. Concerning Article 12(4), if so provided for in national legislation, when has the TSO notified directly SGUs identified pursuant to point (c) of Article 11(4), defence service providers or DSOs connected to distribution systems of the measures which are to be implemented on their installations, including the deadlines for their implementation? When have the concerned DSOs been informed of this notification?**

43 Table 21: Notification of the system defence plan by the DSOs.

MS	Answer
AT	In the national legal framework the provision of defence services are embedded in the grid connection contracts of the concerned grid users also already before the establishment of the system defence plan. Therefore, a no specific notification was needed.
BE	SGUs: June 22nd 2020 DSOs: On January 7th 2020, after approval of the plan by the minister of energy
BG	
CZ	SGUs connected to the distribution system were notified by the respective DSOs.
DE	The system defence plan of the four German TSOs contain measures/procedures to be performed by directly connected SGUs. There are no defence service providers implemented. As these measures are well-established and in place for many years (implemented before the Commission Regulation (EU) 2017/2196 entered into force) therefore an information of the deadline for implementation was not necessary. All necessary technical requirements are regulated in existing national standards.
DK	The TSO has send letters to identified SGUs on the 18. December 2018. The transmission connected DSOs have received letters on the 18. December 2018. It is not known by DUR if DSOs have been separately informed on the letters send to the SGUs.
EE	Consulted on joining the SGU. The list is published on TSO website https://elering.ee/susteemi-toimimine
ES	Not applicable
FI	Not required in national legislation, but the TSO notifies all relevant parties. Notification date: 18.12.2018

FR	See answer to question 4
GB	The SGU's, System Defence Providers and DSOs are aware of this work through Grid Code Modification GC0127 and were able to contribute to the consultation on the system defence plan which was part of this wider consultation. However, they have not been formally notified by a separate letter. Despite a formal notification not being issued, by virtue of the obligation to comply with the requirements of the Grid Code, they would automatically be compliant with the requirements of NCER.
UK-NIR	TSO is awaiting a formal RA decision before communicating this. The SGU list will be made public after it is approved. Formal decision by RA is aiming to be made in January 2021.
GR	N/A yet.
HR	The task was delegated to the DSO (we only have one). We have no other information about the date of the notifications.
HU	There is no such national legislation.
IE	This has not yet been provided for in national legislation.
IT	The notification to DSOs of under frequency disconnection plan through automatic load reducers occurred on 22nd March 2019.
LT	See answer to question 3.1
LU	Not applicable (no SGUs, no defence service providers identified in LU)
LV	No such requirements are provided in national legal framework.
MT	This kind of notification is not a requirement of the national legislation.
NL	This is not the case in the Netherlands. This was to be done by the DSOs themselves.
PL	SGUs not connected to the transmission system were informed directly by TSOs in a process explained above (cf. 3.4). Respective DSOs were in cc of TSO letter.
PT	The SGUs are all connected to the TSO.
RO	<p>The final notification not yet done.</p> <p>Update provided by ANRE (RO):</p> <p>Transelectrica discussed and notified DSOs measures from system defence plan (SGU designated and corresponding measures) by telco from 19.03.2021 at ANRE request no. 91106/13.11.2020 (conclusions of meeting contained also into address 12696/23.03.2021). Transelectrica notified SGUs again on 25.04.2021.</p> <p>Additional ANRE informed Transelectrica by address 35488/1.04.2021 and SGUs by address 35925/1.04.2021.</p> <p>Measures are already implemented in Romania on 1.04.2021 to SGUs and it was issued ANRE Decision no. 595/31.03.2021 which are describing this measures</p>
SE	Requirements regarding LFSM-U and LFSM-O as per national regulations (EIFS 2018:2)
SI	No SGUs and defence service providers connected to distribution system were identified. Major part of 110 kV network is classified as transmission network.
SK	14.12.2018

4.3.3 Notification of the system defence plan by the DSOs

44 **Q.3.6. Concerning Article 12(5), if the TSO notified the DSOs in accordance with Article 12(2), have the DSOs notified the SGUs, the defence service providers and the DSOs connected to its distribution system of the measures of the system defence plan that they have to implement on their respective installations, including the deadlines for their implementation?**

45 Table 22: Notification of the system defence plan by the DSOs.

MS	Answer
AT	<i>In the national legal framework the provision of defence services are embedded in the grid connection contracts of the concerned grid users also already before the establishment of the system defence plan. Therefore, a no specific notification was needed.</i>
BE	<i>No reply</i>
BG	
CZ	<i>Between January and September 2019</i>
DE	<i>This question cannot be answered by the TSOs. But as no new measures were defined DSOs should not have communicated any new requirements/measures to their subordinated DSOs and SGUs. The system defence plan of the four German TSOs contain measures/procedures to be performed by directly connected SGUs. As these measures are well-established and in place for many years (implemented before the Commission Regulation (EU) 2017/2196 entered into force) therefore an information of the deadline for implementation was not necessary. All necessary technical requirements are regulated in existing national standards.</i>
DK	<i>This is the TSO expectation. We have provided the necessary information to the transmission connected DSOs.</i>
EE	<i>No reply</i>
ES	<i>Not applicable</i>
FI	<i>-</i>
FR	<i>See answer to question 3</i>
GB	<i>The DSO's are aware of this work through Grid Code Modification GC0127 and were able to contribute to the consultation on the system defence plan which was part of this wider consultation. However, DSO's have not been formally notified by a separate letter. Despite a formal notification not being issued, by virtue of the obligation to comply with the requirements of the Grid Code, DSO's would automatically be compliant with the requirements of NCER. As a consequence, they would not have notified SGU's and defence service providers, however, since SGU's and defence service providers would be considered to be CUSC parties anyway.</i>
UK-NIR	<i>TSO is awaiting a formal RA decision before communicating this. The SGU list will be made public after it is approved. Formal decision by RA is aiming to be made in January 2021.</i>
GR	<i>N/A yet.</i>
HR	<i>We have no information about the notifications.</i>

HU	<i>There aren't any measures to be implemented.</i>
IE	<i>No, as the system defence plan has not been re-submitted to the CRU and therefore has not been approved.</i> <i>Update provided by CRU (IE):</i> <i>No measures to be implemented.</i>
IT	<i>N/A</i>
LT	<i>See answer to question 3.1</i>
LU	<i>Not applicable (no SGUs, no defence service providers identified in LU)</i>
LV	<i>No SGUs, the defence service providers and the DSOs connected to DS are involved in the implementation of the system defence plan.</i>
MT	<i>Not applicable since in Malta there are no TSOs but just one DSO.</i>
NL	<i>The notification to the relevant parties about the measures of the system defence plan that they have to implement on their respective installations, including the deadlines for their implementation was not done properly by the DSOs. With the update of the defence plan to be published in December 2020 the DSOs will send a more appropriate notification.</i>
PL	<i>Not applicable</i>
PT	<i>The SGUs are all connected to the TSO.</i>
RO	<i>No notification by now.</i> <i>Update provided by ANRE (RO):</i> <i>Transelectrica discussed and notified DSOs measures from system defence plan (SGU designated and corresponding measures) by telco from 19.03.2021 at ANRE request no. 91106/13.11.2020 conclusions of meeting contained into Transelectrica address 12696/23.03.2021). Transelectrica notified SGUs again on 25.04.2021.</i> <i>Additional ANRE informed Transelectrica by address 35488/1.04.2021 and SGUs by address 35925/1.04.2021.</i> <i>Measures are already implemented in Romania to SGU on 1.04.2021 and it was issued ANRE Decision no. 595/31.03.2021 which are describing this measures.</i>
SE	<i>NA</i>
SI	<i>No SGUs and defence service providers connected to distribution system were identified.</i>
SK	<i>During year 2019, each DSO informed its partners in a different way and on a different date. However, all DSOs announced that the measures of the Defence and Restoration Plans together with the implementation dates had been distributed to all subjects concerned.</i>

4.4 Implementation of the notified measures

46 **Q.3.7. Concerning Article 12(6), has each notified DSO, SGU and defence service provider implemented, no later than 12 months from the date of notification, the**

measures notified pursuant to Article 12 and notified the implementation to the relevant system operator or TSO? If no, provide explanations.

47 Table 23: Implementation of the notified measures.

MS	Answer
AT	Yes
BE	All DSOs and most SGUs have implemented the measures. Some SGUs are still implementing the measures
BG	
CZ	Not all parties formally notified the implementation, but the TSO has the information that measures were implemented except measures which shall apply from 18 December 2022. The TSO also has common coordination working group with beforementioned parties.
DE	Due to reasons listed above all measures shall already be implemented.
DK	The requirements set by the Danish TSO do not entail implementation from SGUs. With regard to the DSOs DUR has no indications that the implementation is not on track.
EE	No reply
ES	All the measures of system defence plan were already implemented before the entry into force of NC ER except the measures established in Articles 15 (5) to (8) whose deadline is in December 2022.
FI	No. The only measure required from DSOs, SGUs and defence service providers was the low frequency demand disconnection which is required by 18.12.2022
FR	See answer to question 3
GB	No notification was issued as compliance is guaranteed through Grid Code modifications.
UK-NIR	TSO is awaiting a formal RA decision before communicating this. No new measures will be requested of these users.
GR	N/A yet.
HR	Yes.
HU	There aren't any measures to be implemented.
IE	These parties have not been notified yet. Through discussions with the TSO and DSO, we are aware of a plan to contact these parties shortly after re-submission of consulted-upon documents to the CRU (expected 16 October 2020). Update provided by CRU (IE): No measures identified, SGUs notified that they are defined as such under the NC ER.
IT	DSOs are called to implement an under-frequency disconnection plan. The deadline for the implementation is 18th December 2022 according to Article 55 of Regulation 2019/2196, consequently this measure is currently under development. No other measures are required to DSOs. The implementation of the requirements applicable to SGUs are currently under development.

LT	See answer to question 3.1
LU	Not applicable (no SGUs, no defence service providers identified in LU)
LV	The Plan was based on existing processes. Therefore, separate implantation process and notification was not needed.
MT	Not applicable since the defence plan has not been formally implemented.
NL	The DSO's, SGU's and defence service providers were notified and clarification meetings were held, but execution is awaiting approval of the respective changes to the national Electricity Code. In the meantime, the code changes for LFDD have been approved and the implementation of the LFDD has been started.
PL	Not all measures have to be implemented in a period of 12M (cf. article 55). According to the information provided by Polish TSO is expected on annual information on implementation process beginning end of Y2020. SGU which are subject of NRA approval according article 4 (2) (c) of NC ER are informing TSO of deviation of an implementation dates.
PT	There were no changes in relation to the requirements that were already in force in December of 2018, so it does not apply.
RO	<p>As it was explained at point 4, a lot of SGU has already implemented the measures required into the lists. Not all SGUs implemented the measures (new measures) pursuant to article 12 due to the fact that the final decision has not been approved and they are not notified yet.</p> <p><i>Update provided by ANRE (RO):</i></p> <p>SGUs has already implemented the measures required into the lists. Transelectrica discussed and notified DSOs measures from system defence plan (SGU designated and corresponding measures) by telco from 19.03.2021 at ANRE request no. 91106/13.11.2020 (conclusion of telco contained into address 12696/23.03.2021). Transelectrica notified SGUs again on 25.04.2021.</p> <p>Additional ANRE informed Transelectrica by address 35488/1.04.2021 and SGUs by address 35925/1.04.2021.</p> <p>Measures are already implemented in Romania to SGUs on 1.04.2021 and it was issued ANRE Decision no. 595/31.03.2021 which are describing this measures.</p>
SE	No new measures required for DSOs. LFSM-U and LFSM-O requirements for new SGUs, no notification requirements beyond compliance process in RfG.
SI	Deadline for the implementation of measures is set to 17 October 2020. Due to certain technical limitations, some of the parties will have difficulties to fully implement the measures from the system defence plan. Meetings between TSO and individual parties were and will be held to find appropriate solutions.
SK	All concerned subjects have been informed of the measures they are required to implement on their facilities. For each measure, the time horizon in which it is to be implemented was also submitted to the subject. Information on the state of implementation was not provided back to all concerned subjects. SEPS does not have the legal possibility to force non-cooperating subjects to implement measures.

4.5 Submission of the follow-up report

48

Q.3.8. Concerning Article 15(9), in case the scheme for the automatic low frequency demand disconnection of the system defence plan includes netted demand

disconnection based on frequency gradient, has the TSO submitted, within 30 days within of the implementation, to the relevant regulatory authority the report containing a detailed explanation of the rationale, implementation and impact of this measure? If no, provide explanations.

49 Table 24: Submission of the follow-up report.

MS	Answer
AT	N/A
BE	N/A
BG	
CZ	No. Scheme is not used.
DE	The German automatic low frequency demand disconnection plan does not contain a demand disconnection based on frequency gradient.
DK	The Danish TSO has not set requirements to a netted demand disconnection as provided in NC ER article 15(8).
EE	No reply
ES	Not applicable
FI	Not in use.
FR	It is not intended to establish a load disconnection based on a frequency gradient.
GB	No – the LFDD Scheme in GB does not provide for Netted Demand at present. Under NCER, there is no mandatory requirement (see article 15(8)) to have this feature in the LFDD Scheme, it is an optional requirement.
UK-NIR	Not applicable as this measure was not included.
GR	ENTSO-E gave extension until end of 2020.
HR	Not applicable for our system.
HU	The scheme for the automatic low frequency demand disconnection of the system defence plan does not include netted demand disconnection based on frequency gradient.
IE	The CRU has not yet received this report as it has not yet been implemented. Update provided by CRU (IE): TSO did not make proposal under Article 15(8) so no report required
IT	All the information justifying the activation based on frequency gradient are included in the proposals sent on 8 February 2019.
LT	No. Netted demand disconnection based on frequency gradient does not currently exist in Lithuanian electricity system. Therefore, this requirement is not applicable.
LU	Creos has not implemented a defence plan based on netted demand based on frequency gradient.
LV	Not relevant to Baltics according to Article 2(8) of ER GL.

MT	<i>The automatic low frequency demand disconnection scheme implemented in Malta does not include netted demand disconnection based on frequency gradient.</i>
NL	<i>The implementation of LFDD in the Netherlands does not include a frequency gradient.</i>
PL	<i>Not applicable</i>
PT	<i>Not applicable. In the Portuguese system automatic low frequency demand disconnection of the system defence plan does not include netted demand disconnection based on frequency gradient. Portuguese values for low frequency demand disconnection are included in the attached Excel file.</i>
RO	<i>We have no frequency gradient criteria into automatic under-frequency control scheme.</i>
SE	<i>Frequency gradient is not used.</i>
SI	<i>The scheme for the automatic low frequency demand disconnection of our system defence plan does not include netted demand disconnection based on frequency gradient.</i>
SK	<i>No measure has been activated so far, therefore no report has been prepared.</i>

5. General provisions of the restoration plan

5.1 Implementation of measures of the restoration plan

50 **Q.4.1. Concerning Article 24(1), has the TSO implemented measures of its restoration plan that are to be implemented on the transmission system?**

51 Table 25: Implementation of measures.

MS	Answer
AT	Yes
BE	Yes
BG	
CZ	Yes.
DE	<i>The restoration plans of the four German TSOs contain measures on the transmission system. As these measures are well-established and in place for many years (implemented before the Commission Regulation (EU) 2017/2196 entered into force) a deadline for implementation was not necessary.</i>
DK	<i>Yes, and the measures that have deadline 18 December 2022 are in progress.</i>
EE	<i>No reply</i>
ES	<i>The restoration plan was already designed and implemented before the entry into force of NC ER. The terms and conditions to act as a restoration service provide has not been approved yet.</i>
FI	<i>Yes. Apart from the measures in art 41 and art 42(1,2,5) which shall apply from 18.12.2022.</i>
FR	Yes.

GB	Yes – These are covered in the Grid Code and implemented through Grid Code Modification GC0128 mentioned above, which was also approved by the NRA.
UK-NIR	Yes because the SRP does not include new measures.
GR	Restoration plan is under study. N/A yet.
HR	Yes, all the measures were already implemented beforehand.
HU	In substations that are identified as essential for restoration plan procedures, diesel generators has been established, thus shall be operational in case of loss of primary power supply for at least 24 hours.
IE	No, as the restoration plan is yet to be re-submitted to the CRU by the TSO. <i>Update provided by CRU (IE):</i> No further issues raised with resubmitted document, therefore deemed implemented as no new measures involved
IT	Yes
LT	Yes. However, NERC is still assessing the data provided by the TSO.
LU	Yes, the restoration plan is essentially a transmission system issue. Moreover, the same measures as the ones already implemented before ER NC still apply.
LV	TSO has implemented all processes since plan was based on existing processes.
MT	Not applicable since there is no TSO and transmission system in Malta.
NL	Not yet fully implemented, also because several code changes are pending approval from the relevant regulatory authority ACM.
PL	Polish TSO has not declared any specific measures (new one) need to be implemented at that moment. According to information provided by TSO both documents: defence plan as well as restoration plan prepared in line with NC ER are a new one. Older plan (called “Plan generalny obrony i odbudowy” – “General defence & restoration plan”) were established in line with national legislation.
PT	Yes. All the measures of REN restoration plan are implemented on the transmission system.
RO	In present the implemented measures are those from Transelectrica operational procedure Defence plan against major perturbations and Restoration plan of national power system operation into urgency or black-out state. The procedure will be reviewed (some new procedures has to be elaborated) to be in line with the new Restoration Plan according to R2196/2017.
SE	Ongoing. Support system (traffic lights) is not fully operational.
SI	Yes.
SK	The measures are implemented. They will be verified by the Test Plan.

5.2 Notification of the measures

5.2.1 Notification of the restoration plan by the TSO

52 **Q.4.2. Concerning Article 24(2), when has the TSO notified the transmission connected DSOs of the measures of the restoration plan, including the deadlines for implementation, which are to be implemented?**

53 Table 26: Notification of the restoration plan by the TSO.

MS	Answer
AT	<i>Frequently during the process. The TSO elaborates it's restoration plan in close cooperation with all concerned DSOs.+B4:B16</i>
BE	<i>On January 7th 2020, after approval of the plan by the minister of energy</i>
BG	
CZ	<i>December 2018</i>
DE	<i>The restoration plans of the four German TSOs contain measures/procedures to be performed by DSOs and subordinated SGUs and restoration service providers. As these measures are well-established and in place for many years (implemented before the Commission Regulation (EU) 2017/2196 entered into force) a deadline for implementation was not necessary.</i>
DK	<i>December 2018.</i>
EE	<i>No reply</i>
ES	<i>REE created a working group with relevant DSOs to coordinate the implementation of NC ER in April 2018. All the measures of restoration plan were already implemented before the entry into force of NC ER except the measures established in Articles 41, 42 (1) (2) (5). The design and implementation of 41, 42 (1) (2) (5). is being coordinated from this working group.</i>
FI	<i>18.12.2018</i>
FR	<i>Prior to public consultation place from October 10, 2018 to November 12, 2018, DSOs, SGUs and restoration service providers had the opportunity to work with TSO operators on the measures of the restoration plan during the various meetings organized as part of the E&R consultation body, led by RTE and ADEeF at the request of the French General Direction for Energy and Climate (DGEC). SGU and restoration services providers have been notified by mail (11th December 2018) about the implementation of the Network Code Emergency & Restoration. Mails have also been sent to all the French DSOs beginning 2019 by our customers services.</i>
GB	<i>The DSO's are aware of this work through Grid Code Modification GC0128 and were able to contribute to the consultation on the system restoration plan which was part of this wider consultation. However, DSO's have not been formally notified by a separate letter. Despite a formal notification not being issued, by virtue of the obligation to comply with the requirements of the Grid Code, DSO's would automatically be compliant with the requirements of NCER.</i>

UK-NIR	Yes as the DNO were involved in the development of the SRP and the TSO informed that there are no new measures.
GR	TSO measures have been notified to the DSO with relevant agreements.
HR	December 18th 2018.
HU	There are substations of the distribution system that are identified as essential, and therefore DSOs are responsible for establishing diesel generators for those substations, but due to network developments, the predefined restoration paths are being reconsidered. MAVIR will notify the affected DSOs after revision of restoration paths.
IE	They have not done so, as the restoration plan needs to be re-submitted and subsequently approved by the CRU. <i>Update provided by CRU (IE):</i> No new measures exist so no need for notification to DSO
IT	22nd March 2019
LT	Before NC ER regulation was approved, this has been implemented as required by the Lithuanian national legislation, therefore TSO no needs to notify.
LU	Creos is also the main DSO. In case of restoration Creos TSO takes control of the DSO dispatching.
LV	TSO has not notified since plan was based on existing processes.
MT	Not applicable since there is no TSO in Malta.
NL	The transmission connected DSOs were informed about the measures of the system restoration plan including deadlines for implementation on December 19, 2018. They also received a PDF copy of the system defence and restoration plan.
PL	Polish TSO has informed DSO of the measures of system defence plan on 13th December 2018. Letter to the DSOs included implementation deadline.
PT	This plan is included in a protocol established between TSO and DSO.
RO	DSOs have not been yet notified by TSO concerning the new measures added for restoration plan. <i>Update provided by ANRE (RO):</i> Transelectrica discussed and notified DSOs measures from system defence plan (SGU designated and corresponding measures) by telco from 19.03.2021 at ANRE request 91106/13.11.2020 (conclusion of meeting are also contained into address 12696/23.03.2021). Transelectrica notified SGUs again on 25.04.2021. Additional ANRE informed Transelectrica by address 35488/1.04.2021 and SGUs by address 35925/1.04.2021. Measures are already implemented in Romania to SGU and it was issued ANRE Decision no. 595/31.03.2021 which are describing this measures.
SE	18/12/2018
SI	Transmission connected DSOs were notified on the 14 and 15 October 2019.
SK	14.12.2018

5.2.2 Notification of measures to be implemented

54 **Q.4.3. Concerning Article 24(3), when has the TSO notified the SGUs identified pursuant to Article 23(4) and restoration service providers directly connected to its transmission system of the measures that are to be implemented on their installations, including the deadlines for implementation pursuant to point (g) of Article 23(4)?**

55 Table 27: Notification of measures I.

MS	Answer
AT	<i>There were no new measures to be implemented out of the ER implementation.</i>
BE	<i>On June 22nd 2020, TSO Elia has sent letters to individual SGUs identified pursuant to point (c) of Article 11(4) to notify them on the measures which are to be implemented on their installations, including the deadlines for the implementation</i>
BG	
CZ	<i>December 2018</i>
DE	<i>The restoration plans of the four German TSOs contain measures/procedures to be performed by directly connected SGUs and restoration service providers. As these measures are well-established and in place for many years (implemented before the Commission Regulation (EU) 2017/2196 entered into force) a deadline for implementation was not necessary.</i>
DK	<i>The Danish TSO uses marked bases contracts (licenses provided to the most suited applicants). These licenses are time-limited. Terms and conditions for the restoration service provider are listed in these contracts. No additional requirements have been set pursuant to NC ER. This means that no additional notification has been provided.</i>
EE	<i>Consulted on joining the SGU.</i>
ES	<i>All the measures of restoration plan were already implemented before the entry into force of NC ER except the measures established in Articles 41, 42 (1) (2) (5).</i>
FI	<i>18.12.2018</i>
FR	<i>See answer to question 2</i>
GB	<i>The SGU's are aware of this work through Grid Code Modification GC0128 and were able to contribute to the consultation on the system restoration plan which was part of this wider consultation. However, SGU's have not been formally notified by a separate letter. Despite a formal notification not being issued, by virtue of the obligation to comply with the requirements of the Grid Code, SGU's would automatically be compliant with the requirements of NCER. A list of SGU's is included in Appendix A of the System Restoration Plan, however we are still awaiting approval of this. During the GC0128 workgroup, the SGU list was discussed at length.</i>
UK-NIR	<i>Awaiting confirmation for RA that these measures are approved before making contact. No new measures were proposed and hence no new measures are expected to be implemented. Formal decision by RA is aiming to be made in January 2021.</i>
GR	<i>In progress.</i>
HR	<i>December 18th 2018.</i>

HU	<i>MAVIR has not defined any specific measures to be implemented by SGUs, and therefore there was no need to notify them. Furthermore, black start capable power plants as restoration service providers were already aware of the requirements of black start service, and there are no additional measures to be implemented.</i>
IE	<i>The TSO has not notified this parties as of yet. We are aware of plans to complete this after re-submission of the restoration plan to the CRU.</i> <i>Update provided by CRU (IE):</i> <i>SGUs notified of their status under ER NC, but no need for notification otherwise as no new measures implemented.</i>
IT	<i>22nd March 2019</i>
LT	<i>See answer to question 4.1</i>
LU	<i>Not applicable as there are no SGUs and no restoration service providers in Luxembourg. National law prescribes the notification of urgent measures between the system operators and from system operators to entities impacted (producers, final customers) in case of crisis.</i>
LV	<i>SGUs are not responsible for implementation of any processes. Therefore, notification procedure was not performed.</i> <i>With a restoration service provider separate agreement before approval of the plan are concluded. Therefore, notification procedure was not performed.</i>
MT	<i>As such no SGU's or restoration providers have been specifically identified. The two independent power producers connected to the system do not have a specific contract for restoration services but are available for dispatch as part of the power purchase agreement with the DSO. During restoration of supply these IPPs follow the dispatch instructions of the DSO (who is the sole supplier of electricity to customers in Malta).</i>
NL	<i>The transmission connected SGUs and the restoration service providers directly connected to the transmission were informed about the measures of the restoration plan to be implemented on their installations, including deadlines for implementation on December 19, 2018. They also received a PDF copy of the system defence and restoration plan.</i>
PL	<i>Polish TSO has informed respective SGUs identified pursuant to article 11 (4) (c) of the measures which are to be implemented on their installations, including the deadlines for the implementation after the NRA approval of TCM mentioned in article 4 (2) (c).</i> <i>TSO in October 2018 (set of letters from TSO to the respective SGUs) has informed SGUs about the measures to be implemented (including deadline for implementation).</i> <i>Final confirmation of the measures valid for SGU identified in line with article 4 (2) (c) were provided by TSO to SGUs after NRA decision on 07.06.2019.</i>
PT	<i>In February of 2020.</i>
RO	<i>SGU from the lists according to the article 24 (3) are able to execute the measures proposed because they are used already into existing restoration plan. It is not the case in this moment for implementation pursuant to point (g) of Article 23(4).</i> <i>Update provided by ANRE (RO):</i> <i>Transelectrica discussed and notified DSOs measures from system defence plan (SGU designated and corresponding measures) by telco from 19.03.2021 at ANRE request</i>

	91106/13.11.2020 (conclusions contained also into Transelectrica address 12696/23.03.2021). Transelectrica notified SGUs again on 25.04.2021. Additional ANRE informed Transelectrica by address 35488/1.04.2021 and SGUs by address 35925/1.04.2021. Measures are already implemented in Romania to SGUs on 1.04.2021 and it was issued ANRE Decision no. 595/31.03.2021 which are describing this measures.
SE	18/12/2018
SI	SGUs were notified on the 14, 15 and 16 October in 2019.
SK	17.12.2018

56 **Q.4.4. Concerning Article 24(4), if so provided for in national legislation, when has the TSO notified directly SGUs identified pursuant to Article 23(4), restoration service providers and DSOs connected to distribution systems of the measures which are to be implemented on their installations? When have the concerned DSOs been informed of this notification?**

57 Table 28: Notification of the measures II.

MS	Answer
AT	<i>In the national legal framework the provision of defence services are embedded in the grid connection contracts of the concerned grid users also already before the establishment of the system defence plan. Therefore, a no specific notification was needed.</i>
BE	<i>SGUs: June 22nd 2020 DSOs: On January 7th 2020, after approval of the plan by the minister of energy</i>
BG	
CZ	<i>SGUs connected to the distribution system were notified by the respective DSOs</i>
DE	<i>Not applicable within national legislation.</i>
DK	<i>Not provided in national legislation. The TSO has not</i>
EE	<i>No reply</i>
ES	<i>Not applicable</i>
FI	<i>Not required in national legislation, but the TSO notifies all relevant parties. Notification date: 18.12.2018</i>
FR	<i>See answer to question 2</i>
GB	<i>The SGU's, System Restoration Providers and DSOs are aware of this work through Grid Code Modification GC0128 and were able to contribute to the consultation on the system restoration plan which was part of this wider consultation. However, they have not been formally notified by a separate letter. Despite a formal notification not being issued, by virtue of the obligation to comply with the requirements of the Grid Code, they would automatically be compliant with the requirements of NCER.</i>
UK-NIR	<i>Awaiting confirmation for RA that these measures are approved before making contact. No new measures were proposed and hence no new measures are expected to be implemented. Formal decision by RA is aiming to be made in January 2021.</i>

GR	N/A
HR	<i>The task was delegated to the DSO (we only have one). We have no other information about the date of the notifications.</i>
HU	<i>There is no such national legislation.</i>
IE	<i>They have not been notified as of yet.</i> <i>Update provided by CRU (IE):</i> <i>SGUs notified on 1 April 2021. No changes to existing agreements</i>
IT	<i>On 22nd March 2019, Tema notified, directly the SGUs connected at DSO HV grid of the measures to be implemented.</i>
LT	<i>See answer to question 4.1</i>
LU	<i>Not applicable (see Q4.3)</i>
LV	<i>No such requirements are provided in national legal framework.</i>
MT	<i>Malta does not have such national legislation.</i>
NL	<i>This is not the case in the Netherlands. This was to be done by the DSO's themselves.</i>
PL	<i>SGUs not connected to the transmission system were informed directly by TSOs in a process explained above (cf. 3.4). Respective DSOs were in cc of TSO letter.</i>
PT	<i>The SGUs are all connected to the TSO.</i>
RO	<i>SGU from the lists according to the Article 24 (3) are able to execute the measures proposed because they are used already into existing restoration plan. Final notification wasn't done yet by Transelectrica, consequently nor concerned DSOs.</i> <i>Update provided by ANRE (RO):</i> <i>Transelectrica discussed and notified DSOs measures from system defence plan (SGU designated and corresponding measures) by telco from 19.03.2021 at ANRE request no. 91106/13.11.2020 and address 12696/23.03.2021. Transelectrica notified SGUs again on 25.04.2021.</i> <i>Additional ANRE informed Transelectrica by address 35488/1.04.2021 and SGUs by address 35925/1.04.2021.</i> <i>Measures are already implemented in Romania to SGU on 1.04.2021 and it was issued ANRE Decision no. 595/31.03.2021 which are describing this measures.</i>
SE	NA
SI	<i>No SGUs and restoration service providers connected to distribution system were identified.</i>
SK	14.12.2018

5.2.3 Notification of the restoration plan by the DSOs

58 **Q.4.5. Concerning Article 24(5), if the TSO notified the DSOs in accordance with Article 24(2), when have the DSOs notified the SGUs, the restoration service providers and the DSOs connected to its distribution system of the measures of the restoration**

plan, which they have to implement on their respective installations, including the deadlines for their implementation?

59 Table 29: Notification of the restoration plan by the DSOs.

MS	Answer
AT	<i>In the national legal framework the provision of defence services are embedded in the grid connection contracts of the concerned grid users also already before the establishment of the system defence plan. Therefore, a no specific notification was needed.</i>
BE	<i>No reply</i>
BG	
CZ	<i>Between January and September 2019</i>
DE	<i>This question cannot be answered by the TSOs. But as no new measures were defined DSOs should not have communicated any new requirements/measures to their subordinated DSOs and SGUs.</i>
DK	<i>This is not known by the TSO or DUR.</i>
EE	<i>No reply</i>
ES	<i>Not applicable</i>
FI	-
FR	<i>See answer to question 2</i>
GB	<i>The DSO's are aware of this work through Grid Code Modification GC0128 and were able to contribute to the consultation on the system restoration plan which was part of this wider consultation. However, DSO's have not been formally notified by a separate letter. Despite a formal notification not being issued, by virtue of the obligation to comply with the requirements of the Grid Code, DSO's would automatically be compliant with the requirements of NCER. As a consequence, they would not have notified SGU's and restoration service providers, however, since SGU's and restoration service providers would be considered to be CUSC parties anyway.</i>
UK-NIR	<i>Awaiting confirmation for RA that these measures are approved before making contact. No new measures were proposed and hence no new measures are expected to be implemented. Formal decision by RA is aiming to be made in January 2021.</i>
GR	<i>RAE does not have this information yet.</i>
HR	<i>We have no information about the notifications.</i>
HU	<i>Same answer as of Q3.</i>
IE	<i>The DSO has not yet notified the SGUs. The TSO and DSO are planning to perform the actions required in Articles 24(3) and 24(5) simultaneously.</i> <i>Update provided by CRU (IE):</i> <i>TSO and DSO notified SGUs on 1 April 2021</i>
IT	<i>N/A</i>
LT	<i>See answer to question 4.1</i>

LU	Not applicable (see Q4.3)
LV	SGUs, restoration service providers and the DSOs connected to DS are not involved in the implementation of the system defence plan. Therefore, implementation procedure was not performed.
MT	Not applicable
NL	The notification to the relevant parties about the measures of the system restoration plan that they have to implement on their respective installations, including the deadlines for their implementation was not done properly by the DSOs. With the update of the restoration plan to be published in December 2020 the DSOs will send a more appropriate notification.
PL	Not applicable
PT	The SGUs are all connected to the TSO.
RO	<p>According to the information from point 5 DSOs have no basis to notify.</p> <p><i>Update provided by ANRE (RO):</i></p> <p>SGU from the lists according to the Article 24 (3) are able to execute the measures proposed because they are used already into existing restoration plan.</p> <p>Transelectrica discussed and notified DSOs measures from system defence plan (SGU designated and corresponding measures) by telco from 19.03.2021 at ANRE request no. 91106/13.11.2020 and address 12696/23.03.2021. Transelectrica notified SGUs again on 25.04.2021.</p> <p>Additional, ANRE informed Transelectrica by address 35488/1.04.2021 and SGUs by address 35925/1.04.2021.</p> <p>Measures are already implemented in Romania to SGUs on 1.04.2021 and it was issued ANRE Decision no. 595/31.03.2021 which are describing this measures.</p>
SE	18/12/2018
SI	No SGUs and restoration service providers connected to distribution system were identified.
SK	14.12.2018

5.3 Implementation of the notified measures

60 **Q.4.6. Concerning Article 24(6), has each notified DSO, SGU and restoration service provider implemented, no later than 12 months from the date of notification, the measures notified pursuant to Article 24 and confirmed the implementation to the relevant system operator or TSO? If no, provide explanations.**

61 Table 30: Implementation of the measures.

MS	Answer
AT	Yes
BE	All DSOs and most SGUs have implemented the measures. Some SGUs are still implementing the measures

BG	
CZ	<i>Not all parties formally notified the implementation, but the TSO has the information that measures were implemented except measures which shall apply from 18 December 2022. The TSO also has common coordination working group with beforementioned parties.</i>
DE	<i>Due to reasons listed above this is not applicable.</i>
DK	<i>Yes. The relevant measures (NC ER article 42(2) and 42(5)) have deadline 18 December 2022 in accordance with NC ER article 55.</i>
EE	<i>No reply</i>
ES	<i>All the measures of restoration plan were already implemented before the entry into force of NC ER except the measures established in Articles 41, 42 (1) (2) (5) whose deadline is in December 2022.</i>
FI	<i>No. The only measures required from DSOs, SGUs and restoration service providers are related with the 24 h hour operational readiness which are required by 18.12.2022.</i>
FR	<i>See answer to question 2</i>
GB	<i>They are already compliant owing to requirements of the updated Grid Code.</i>
UK-NIR	<i>Awaiting confirmation for RA that these measures are approved before making contact. No new measures were proposed and hence no new measures are expected to be implemented. Formal decision by RA is aiming to be made in January 2021.</i>
GR	<i>Restoration plan is under study. N/A yet.</i>
HR	<i>Yes.</i>
HU	<i>There aren't any measures to be implemented.</i>
IE	<p><i>They have not been notified of the measures to be implemented and therefore cannot complete the requirements of Article 24(6) yet.</i></p> <p><i>Update provided by CRU (IE):</i></p> <p><i>12 month period since approval still ongoing, however no new measures to implement</i></p>
IT	<p><i>For 24 hours supply devices, the deadline is 18th December 2022 according to Article 55 of Regulation 2017/2196.</i></p> <p><i>For the other requirements, Terna provided the SGUs with different implementation deadlines, often longer than the 12 months prescribed by the Regulation (usually 18 December 2020, in some cases extension till 18 December 2022). Only for few plants the deadline was shorter than 12 months (implementation by 18 December 2019).</i></p> <p><i>While approving the proposals, Arera postponed to 22 March 2020 the 18 December 2019 deadline and temporary confirmed all the other deadlines, pending a further investigation. In August 2020 with Resolution 324/2020/R/eel Arera decided to align all the deadlines to 18 December 2022 (for both 24 hours supply devices and for the other requirements). An incentive scheme is in force to stimulate restoration service providers to implement the measures in advance with respect to this last deadline.</i></p>
LT	<i>See answer to question 4.1</i>
LU	<i>As far as the DSOs are concerned, the measures have already been implemented with the first restoration plan in 2013. There are no SGUs nor restoration service providers in Luxembourg.</i>

LV	<i>The Plan was based on existing processes. Therefore, separate implantation process and notification were not needed.</i>
MT	<i>Not applicable.</i>
NL	<i>The DSO's, SGU's and restoration service providers were notified and clarification meetings were held, but execution is awaiting approval of the respective changes to the national Electricity Code.</i>
PL	<i>Not all measures have to be implemented in a period of 12M (cf. article 55). According to the information provided by Polish TSO is expected on annual information on implementation process beginning end of Y2020. SGU which are subject of NRA approval according article 4 (2) (c) of NC ER are informing TSO of deviation of an implementation dates.</i>
PT	<i>The restoration plan in the Portuguese system is the same before and after the ER code has been approved.</i>
	<i>As it was explained at point 4, a large majority of SGU already has implemented the measures required into the lists. Not all SGUs implemented the measures (new measures) pursuant to article 12 due to the fact that a decision was not approved yet and, consequently, they haven't been notified yet.</i>
	<i>Update provided by ANRE (RO):</i>
RO	<i>SGU already has implemented the measures required into the lists. SGU from the lists according to the Article 24 (3) are able to execute the measures proposed because they are used already into existing restoration plan. It was unknown information with some SGUs which was running modernisation process before the date of ANRE decision 595/1.04.2021. The final required measures (which is already implemented and operational) was established into the meeting on 19.03.2021 at ANRE request no. 91106/13.11.2020. Transelectrica notified SGUs again on 25.04.2021. ANRE notified SGU by address no. 35925/1.04.2021.</i>
SE	<i>Yes</i>
SI	<i>Deadline for the implementation of measures is set to 17 October 2020. Due to certain technical limitations, some of the parties will have difficulties to fully implement the measures from the restoration plan. Meetings between TSO and individual parties were and will be held to find appropriate solutions.</i>
SK	<i>All concerned subjects have been informed of the measures they are required to implement on their facilities. For each measure, the time horizon in which it is to be implemented was also submitted to the subject. Information on the state of implementation was not provided back to all concerned subjects. SEPS does not have the legal possibility to force non-cooperating subjects to implement measures.</i>

6. Suspension and restoration of market activities

6.1 Temporary suspension of market activities by the TSO

62 **Q.5.1. According the rules for suspension and restoration of market activities established in accordance with Article 36(1), is the TSO allowed to temporarily**

suspend market activities under circumstances other than those specified in Article 35(1)?

63 Table 31: Temporary suspension of market activities I.

MS	Answer
AT	No
BE	<i>TSO Elia submitted on 18 December 2018 to the CREG for approval, a proposal according to art. 4(2)e as well as art. 4(n)f of the NC ER 2017/2196. The CREG took a decision on 19.09.2019 concerning both proposals (disapproval of both proposals) and requested Elia to submit new proposals within a reasonable time delay. CREG Decision (B)1941 of 19.09.2019 is available on www.creg.be</i>
BG	
CZ	No.
DE	No.
DK	No
EE	No
ES	<i>Rules established by operational procedure 3.9 mention circumstances under articles 35, 36 and 37 of the NC ER as the required for market suspension. In particular, two different events are explicitly defined: transmission network on restoration state and a failure in TSO communication tools to perform market activities.</i>
FI	<i>No, Fingrid will not suspend any market activities.</i>
FR	<i>Circumstances from Article 35(1) and any situation which would make it impossible for RTE to maintain the system balanced. As it is quite impossible to foresee in advance the situation or circumstances leading the market suspension, it is mandatory for RTE to provide ex-post a detailed reporting to the CRE and stakeholders to explain and justify why market suspension was necessary.</i>
GB	<i>At current, in GB the only circumstances when the market can be suspended is during a Total System Shutdown or Partial System Shutdown. The Grid Code, through Grid Code Modification GC0144 is currently being updated to address this. This is also specifically covered in the System Restoration Plan.</i> <i>https://www.nationalgrideso.com/industry-information/codes/grid-code-old/modifications/gc0144-alignment-market-suspension-rights-eu</i>
UK-NIR	<i>The TSO is not suspending any market activities, therefore, no.</i>
GR	No.
HR	<i>No, only circumstances in Article 35(1).</i>
HU	No.
IE	<i>In the re-consultation document for rules for suspension and restoration of market activities, EirGrid did not propose to suspend any market activities under any circumstances. The TSO's full proposal can be found here: https://www.eirgridgroup.com/site-files/library/EirGrid/RulesForTheSuspensionAndRestorationMarketActivities_Ireland-Resubmission.pdf</i>

	<p><i>Update provided by CRU (IE):</i></p> <p>Approved</p>
IT	No
LT	<p>On 18th of December 2018 TSO submitted the proposal regarding Article 36(1) and 39(1). On 19th of June 2019 NRA issued an RfA. On 18th of July 2019 TSO provided clarifications and answers regarding the RfA letter. However, TSO have not yet submitted amended proposal. Currently we are continuing discussion with the TSO regarding the content of this proposal.</p> <p><i>Update provided by NERC (LT):</i></p> <p>Suspension and restoration of market activities proposal was approved. Based on the approved proposal, the TSO may temporary suspend one or more market activities solely under the circumstances provided in Article 35(1). https://www.vert.lt/en/Pages/Updates/2021/nerc-approved-transmission-system-operator-methodology.aspx</p>
LU	No.
LV	When TSO detects any circumstances specified in Article 35(1), it evaluated the necessity to suspend market activities.
MT	There are no spot markets in Malta
NL	In the view of TenneT suspension of market activities in the Netherlands is not a useful tool considering the Dutch market design. Therefore, there are no additional triggers for market suspension and the circumstances for market suspension as mentioned in Article 35 of NC ER are not used. This is awaiting final approval by the relevant regulatory authority ACM.
PL	No
PT	No. Under evaluation included in TSO proposal. The revision of national codes that address the matters for suspension and restoration of market activities were already scheduled in the past. The rules for market suspension and respective settlement are matters included in the revision of the Procedures Manual of the Global System Management foreseen for the near future. The revision work has been delayed due to the pandemic situation that we face.
RO	No
SE	No, the rules imply that the TSO is not allowed to temporarily suspend market activities.
SI	No.
SK	<p>Situations entitling the suspension of market activities:</p> <ul style="list-style-type: none"> - Disconnection of more than 50 % of load of the power system of SR - Loss of more than 50 % of the generation of the power system of SR - Different frequency ($\Delta f \geq 100$ mHz) is identified in three or more substations of the transmission system of the same voltage level - More than 75 % of balancing reserves of aFRR and mFRR resources are activated and with negative short-term forecast. - Unavailability of more than 50 % of available volume of aFRR and mFRR resources on the ancillary services providers side at the moment preceding the initialisation event

while procurement of balancing energy from other resources is not anticipated
 - Emergency state of the defined area is declared based on the requirement defined in the Article 20 of Act No. 251/2012 Coll. Energy Act.
 - Absence of the fully functioning tools and means of communication while none of the backup solutions can be applied.
 Determination of the range of the suspended market activities is in competence of a dispatcher of the SEPS dispatching centre or other SEPS responsible departments that shall evaluate the required range based on the current situation in the power system of SR.

64 **Q.5.2. According to the rules for suspension and restoration of market activities established in accordance with Article 36(1), is the TSO allowed to temporarily suspend market activities, as in Article 35(2)(f), and thus for reasons other than those specified in Article 35(2)(a)-(e)?**

65 Table 32: Temporary suspension of market activities II.

MS	Answer
AT	No
BE	TSO Elia submitted on 18 December 2018 to the CREG for approval, a proposal according to art. 4(2)e as well as art. 4(n)f of the NC ER 2017/2196. The CREG took a decision on 19.09.2019 concerning both proposals (disapproval of both proposals) and requested Elia to submit new proposals within a reasonable time delay. CREG Decision (B)1941 of 19.09.2019 is available on www.creg.be
BG	
CZ	The TSO doesn't suspend other market activities than those specified in Article 35(2)(a)-(e).
DE	No.
DK	Yes. The Danish TSO has proposed to be able to suspend one or more market activities. The proposal is not limited to situations covered in NC ER article 35(2)(a)-(e).
EE	Elering (TSO) shall not suspend provision of cross zonal capacity pursuant to Article 35(2) (a) of Regulation 2017/2196. In case conditions pursuant to Article 35(1) of Regulation 2017/2196 occur Elering shall reduce cross-zonal capacities in regards to single day-ahead coupling and single intraday coupling concerning the Estonian bidding zone borders in accordance with 26(3) of Commission Regulation (EU) 2015/1222.
ES	The capacity for suspend market activities are constraint to articles 35-36-37 of NC ER.
FI	No, Fingrid will not suspend any market activities, including those listed in Art. 35(2)
FR	Not identified currently
GB	As above.
UK-NIR	The TSO is not suspending any market activities, therefore, no. To be clear Article 35(2)(a)-(e) are the market activities that may be suspended, not the reasons. These are contained in Article 35(1).
GR	Yes, pursuant to Art. 3(2) of RAE's Decision No 1603/2020 (Gov. Gaz. B 5944/ 31.12.2020).
HR	Yes, the TSO can suspend specific market activities other than those specified in Article 35(2)(a)-(e).

HU	No.
IE	<p><i>In the re-consultation document for rules for suspension and restoration of market activities, EirGrid did not propose to suspend any market activities under any circumstances.</i></p> <p><i>Update provided by CRU (IE):</i></p> <p><i>Approved</i></p>
IT	No
LT	<p>See answer to question 5.1</p> <p><i>Update provided by NERC (LT):</i></p> <p><i>NERC has approved TSO methodology regarding suspension and restoration market activities:</i></p> <p><i>https://www.vert.lt/en/Pages/Updates/2021/nerc-approved-transmission-system-operator-methodology.aspx</i></p> <p><i>and</i></p> <p><i>https://www.vert.lt/SiteAssets/posedziai/2021-09-30/perdavimo-sistemas-operatoriaus-pasiulymu-tvirtinimas.pdf</i></p> <p><i>Moreover, these requirements have been implemented already by BRP contractual basis.</i></p>
LU	No.
LV	<i>In the national electricity grid code relevant reference to Article 35(2) f is given.</i>
MT	<i>There are no spot markets in Malta</i>
NL	<i>No, the TSO does not suspend market activities in the Netherlands.</i>
PL	<i>Yes, the TSO is allowed to temporarily suspend market activities under circumstances as in Article 35(2)(f).</i>
PT	<i>Under evaluation included in TSO proposal.</i>
RO	No
SE	<i>No, the rules imply that the TSO is not allowed to temporarily suspend market activities.</i>
SI	No.
SK	<ul style="list-style-type: none"> <i>. Standard evaluation of activated ancillary services PpS and of balancing energy.</i> <i>. Standard processes of imbalance settlement and balancing energy settlement.</i> <p><i>Reasons are the same as for all market activities.</i></p>

6.2 Time delay prior to the suspension of market activities

66 **Q.5.3. Concerning Article 36(5), specify the time delay for each parameter defined pursuant Article 36(4) to be respected prior to starting the procedure for suspension of market activities.**

67 Table 33: Time delay prior to suspension.

MS	Answer
AT	3 min for 36(4)a., without delay for 36(4)b and c, 30 min for 36(4) d and e
BE	TSO Elia submitted on 18 December 2018 to the CREG for approval, a proposal according to art. 4(2)e as well as art. 4(n)f of the NC ER 2017/2196. The CREG took a decision on 19.09.2019 concerning both proposals (disapproval of both proposals) and requested Elia to submit new proposals within a reasonable time delay. CREG Decision (B)1941 of 19.09.2019 is available on www.creg.be
BG	
CZ	Depending on the situation, market procedures may be suspended without delay.
DE	See Figure 3 of Annex II
DK	We have revised already existing national legislation in order to live up the criteria.
EE	Elering (TSO) shall not suspend provision of cross zonal capacity pursuant to Article 35(2) (a) of Regulation 2017/2196.
ES	P-O- 3.9 contains a reference to articles 35, 36, and 37 of ER Regulation, and establishes two situations where market suspension may apply, a communication failure and the restoration state of the transmission grid. The suspension of market activities is evaluated when a failure of communication tools is greater than 30 minutes.
FI	Not applicable as Fingrid will not suspend any market activities.
FR	This time delay will have to be defined with the different stakeholders depending on the situation we face. It was agreed that RTE is responsible for informing as soon as possible the stakeholders about the starting of the market suspension procedure, and clarifying the causes that lead to activate such a procedure.
GB	In GB there are only two conditions from when the market is suspended, these being either a Total System Shutdown (Blackout) or Partial System Shutdown (Partial Blackout). Under either of these conditions the BSSCo (Balancing System Administrator) will define the Settlement Period or time and date when the Market Suspension Threshold has been met which will define when the market is to be suspended.
UK-NIR	The TSO is not suspending any market activities, therefore, this clause does not apply.
GR	Under study. Update provided by RAE: No later than 30 mins as described in Art. 7 of RAE 's Decision No 1603/2020 (Gov. Gaz. B 5944/ 31.12.2020)
HR	There is no time delay, the procedure starts as soon as parameters are met and TSO has carried out coordination with the affected parties.
HU	Time delay was not specified in approved proposal for the rules for suspension and restoration of market activities.

IE	<p><i>In the re-consultation document for rules for suspension and restoration of market activities, EirGrid did not propose to suspend any market activities under any circumstances.</i></p> <p><i>Update provided by CRU (IE):</i></p> <p><i>Approved proposal</i></p>
IT	<p><i>There is no delay. If the system is in in Black out state or Emergency state and some conditions about load disconnection and/or generation availability (with respect to tertiary Reserve) and/or IT system availability and/or transmission capacity availability are met, the suspension of market activities may occur immediately.</i></p>
LT	<p><i>See answer to question 5.1</i></p> <p><i>Update provided by NERC (LT):</i></p> <p><i>TSO may suspend market activities without delay.</i></p>
LU	<p><i>Same as DE.</i></p>
LV	<p><i>If TSO identifies at least one of the following circumstances, TSO can take a decision to suspend relevant market activity (-ies):</i></p> <ol style="list-style-type: none"> <i>1. complete lack of voltage for at least three minutes;</i> <i>2. electricity consumption is 50% lower than the planned consumption and for example:</i> <ol style="list-style-type: none"> <i>2.1. it is not possible to ensure the balance of the electricity system;</i> <i>2.2. it is not possible to activate other electricity sources;</i> <i>3. the volume of electricity generation is 75% lower than the planned in the frequency control zone of transmission system operator, and the frequency is in the range from 49.0 to 48.0 Hz;</i> <i>4. a different frequency ($\Delta f \geq 50$ mHz) has been identified at one voltage level in three or more substations of the transmission system;</i> <i>5. more than 30 minutes the communication tools necessary for process of the market operation (e-mail systems, data exchange services, data networks, voice communications, and others) are not available.</i>
MT	<p><i>There are no spot markets in Malta</i></p>
NL	<p><i>The time delay as mentioned in Article 36(5) is not applicable, as the TSO does not suspend market activities in the Netherlands.</i></p>
PL	<p><i>TSO may temporarily suspend market activities immediately after announcing the suspension or from the moment indicated in the message on the suspension of the market activities. In any case when TSO makes a decision on suspension market activities is required to act in a proportionate and adequate manner, minimizing the impact of this decision on market participants.</i></p> <p><i>TSOs performs the tasks specified in Art. 36 sec. 4 NCER based on the parameters defined in the „Incident Classification Scale Methodology”</i> <i>(https://docstore.entsoe.eu/Documents/SOC%20documents/Incident_Classification_Scale/180411_Incident_Classification_Scale.pdf) - information provided by TSO.</i></p>
PT	<p><i>Under evaluation included in TSO proposal (Affected market activities will be suspended, if necessary, if the tools or communication and backup processes are unavailable for a period of at least 30 minutes).</i></p>

RO	The time delay is defined at 30 minutes in absence of properly functioning tools and communication means necessary to perform. For the other factors is not specified.
SE	Not applicable. The market activities will not be suspended.
SI	The time delay defined is 30 minutes.
SK	Depending on actual situation the market activities can be suspended in the earliest possible time, i.e. by the moment of suspension of activities by a dispatcher of SEPS dispatching centre or the time delay shall be determined by a dispatcher of SEPS dispatching centre or by the SEPS responsible department, however, this should not be done sooner than the closure of the trading period following the period in which the condition for suspension of market activities was fulfilled.

6.3 Publication of the rules by the TSO

68 **Q.5.4. Pursuant to the approval by the relevant regulatory authority of the proposal of the rules concerning Article 39(1), has the TSO(s) in the relevant Member State published these rules on its website? If so, provide the link; if not provide justification.**

69 Table 34: Publication of the rules.

MS	Answer
AT	https://www.apg.at/de/Stromnetz/Network-Codes/Netzbetrieb
BE	TSO Elia submitted on 18 December 2018 to the CREG for approval, a proposal according to art. 4(2)e as well as art. 4(n)f of the NC ER 2017/2196. The CREG took a decision on 19.09.2019 concerning both proposals (disapproval of both proposals) and requested Elia to submit new proposals within a reasonable time delay. CREG Decision (B)1941 of 19.09.2019 is available on www.creg.be
BG	
CZ	Formally speaking, market operator OTE, a.s. published the document only during the public consultation https://www.ote-cr.cz/cs/o-spolocnosti/zpravy_ote/implementace-narizeni-komise-eu-c-2017-2196-2013-navrh-podminek-pro-zvlastni-pravidla-zuctovani-odchylek-a-zuctovani-tykajici-se-regulacni-energie-v-pripade-pozastaveni-trznich-cinnosti and we cannot confirm that the final document is published. Nonetheless, the both documents are the same and the proposal of the rules concerning Article 39(1) contains already approved national rules which are set by ERU. The national rules are officially published in the Collection of Laws and widely accessible, for example https://www.zakonyprolidi.cz/cs/2015-408?text=pravidla+trhu+s+elekt%C5%99inou#prilohy . We wouldn't conclude that possible non-publication on OTE side affected market participants. ERU published the approved version of the document https://www.eru.cz/en/-/regulacni-aspekt-dle-cl-4-odst-2-pism-f-e2-80-93-zvlastni-pravidla-pro-zuctovani-odchylek-a-zuctovani-tykajici-se-regulacni-energie-v-pripade-pozasta .
DE	Approved on August, 4th 2020 by NRA Provisional document: https://www.netztransparenz.de/EU-Network-Codes/ER-Verordnung/Marktaussetzung-und-Wiederaufnahme
DK	DUR has not issued the final decision yet.
EE	Link: https://elering.ee/en/baltic-balancing-market-rules (In Estonian). I will attach in English

ES	<p>These rules are published on PO 3.9. Here is the link on CNMC website: https://www.cnmc.es/expedientes/dcoorde00420</p> <p><i>Update provided by CNMC (ES):</i></p> <p>Here is the link on REE website: https://www.ree.es/sites/default/files/01_ACTIVIDADES/Documentos/ProcedimientosOperacion/PO_3_9_BOEA2020_16964_1base.pdf</p>
FI	<p>Yes: https://www.fingrid.fi/globalassets/dokumentit/fi/sahkomarkkinat/verkkosaannot/nc_er_art_36_1_and_art_39_1_market_interactions_legal_document.pdf</p>
FR	<p>Link: https://www.services-rte.com/files/live/sites/services-rte/files/documentsLibrary/MARE%20Section%201%2020200601_en</p>
GB	<p>Yes – Please see reference to the attached link. https://www.nationalgrideso.com/document/161726/download</p>
UK-NIR	<p>The TSO is not suspending any market activities, therefore, no rules are required.</p>
GR	<p>Under consultation.</p> <p><i>Update provided by RAE:</i></p> <p>Yes. https://www.admie.gr/sites/default/files/users/dda/KAE/%CE%9C%CE%95%CE%98%CE%95%CE%BA%CE%BA%CE%B1%CE%B8%CE%AC%CF%81%CE%B9%CF%83%CE%B7%20%CF%83%CE%B5%20%CE%B1%CE%BD%CE%B1%CF%83%CF%84%CE%BF%CE%BB%CE%AE%20%CE%B1%CE%B3%CE%BF%CF%81%CE%AC%CF%82_v1.pdf</p> <p>(Gov. Gaz. B 3227/ 4.8.2020)</p>
HR	<p>As stated before, those rules were integrated into our Balancing Rules (in accordance to Article 18 paragraph 2. of Regulation (EU) 2017/2195). The Balancing Rules are published on TSO’s website. Furthermore, as per Article 39(1), it was decided that the same rules will apply as for normal operations.</p>
HU	<p>Yes, it is published on MAVIR’s website, see the link below: https://www.mavir.hu/documents/10373/231457368/5.1.+piaci_tevekenyesegek_felfuggesztese_ENG.pdf/0654be2a-22ac-417d-32da-6a98fcf684ef?version=1.0</p>
IE	<p>The consulted-upon document can be found here: https://www.eirgridgroup.com/site-files/library/EirGrid/RulesForTheSuspensionAndRestorationMarketActivities_Ireland-Resubmission.pdf. This has not yet been submitted to the CRU, subsequently it has not been approved and the rules are not published on their website.</p> <p><i>Update provided by CRU (IE):</i></p> <p>Now approved</p>
IT	<p>Rules are included in the national grid code (Annex A75) and are published on Terna web site, section Grid code. The TSO proposal refers to a dedicated Arera decision for</p>

	<p>the definition of some details about the settlement rules in case of market suspension. The decision is expected by end 2020.</p> <p><i>Update provided by ARERA (IT):</i></p> <p>Arera approved these rules with Decision 446/2020 on 3 November 2020 https://www.arera.it/it/docs/20/446-20.htm</p>
LT	<p>See answer to question 5.1</p> <p><i>Update provided by NERC (LT):</i></p> <p>NERC has approved TSO methodology regarding suspension and restoration market activities: https://www.vert.lt/en/Pages/Updates/2021/nerc-approved-transmission-system-operator-methodology.aspx and https://www.vert.lt/SiteAssets/posedziai/2021-09-30/perdavimo-sistemas-operatoriaus-pasiulymu-tvirtinimas.pdf</p> <p>In this methodology rules for imbalance settlement and settlement of balancing capacity and balancing energy are foreseen.</p>
LU	<p>Rules were approved, but not published yet.</p>
LV	<p>This proposal has been added to the national legal act - grid code. TSO has published the link to the grid code (in Latvian - Tīkla kodekss): https://www.ast.lv/lv/content/latvijastiesibu-akti</p>
MT	<p>There are no spot markets in Malta</p>
NL	<p>The proposal to not suspend market activities is currently under review by ACM and the relevant rules will be part of the national Network code "Netcode Electriciteit". As there is no market suspension in the Netherlands, additional publication is not strictly necessary. However, in dialogue with ACM and market participants, TenneT is currently working on an explanatory document on market activities in specific situations such as emergency state. This document should be published later in 2020, after or simultaneous to the approval of the relevant proposal by ACM.</p>
PL	<p>http://bip.ure.gov.pl/download/3/11040/PSEkodekssieci.pdf; https://www.pse.pl/documents/20182/c62ddaf0-941d-4e0b-b322-47afb869ae24?safeargs=646f776e6c6f61643d74727565.</p>
PT	<p>Under evaluation included in TSO proposal. Decisions have not yet been taken.</p>
RO	<p>No as the the proposal is not yet approved by ANRE. The proposals will be approved at the beginning of December 2021.</p>
SE	<p>N/A</p> <p><i>Update provided by Ei (SE):</i></p> <p>Not applicable. The rules imply that there should not be any rules regarding settlement, since the market activities will not be suspended. The link provides information in</p>

	Swedish about the rules about there not being any settlement or suspension of market activities. https://www.svk.se/press-och-nyheter/nyheter/natkoder/2019/regler-for-tillfalligt-avbrytande-och-aterupptagande-av-marknadsaktiviteter-godkanda-av-ei/
SI	Yes Web site: https://www.eles.si/Portals/0/Novice/avkcije/sistemske%20storitve/T%26C%20za%20PSI/Pravila%20za%20prekinitev%2031012020_2.pdf
SK	https://www.sepsas.sk/Dokumenty/PrevPoriadokEU/2019/06/Rozhodnutie_0023_2019_E-EU_Pravidla_trhovych_cinnosti.pdf

6.4 Communication procedures

- 70 **Q.4.5.5. Do the rules for suspension and restoration of the market activities include communication procedures in accordance with Article 38? If yes, explain how this was achieved; if not, explain reasons for not including the communication procedures.**

71 Table 35: Communication procedures.

MS	Answer
AT	Yes. This is achieved by the simultaneous dissemination of information to the following recipients: TSOs of CRR TSOs with which balancing cooperation is implemented NEMOs TSOs of the LFR-block Balancing responsible parties Balancing service providers DSO with transmission grid connection All relevant NRAs
BE	TSO Elia submitted on 18 December 2018 to the CREG for approval, a proposal according to art. 4(2)e as well as art. 4(n)f of the NC ER 2017/2196. The CREG took a decision on 19.09.2019 concerning both proposals (disapproval of both proposals) and requested Elia to submit new proposals within a reasonable time delay. CREG Decision (B)1941 of 19.09.2019 is available on www.creg.be
BG	
CZ	General communication procedures are described in the methodology. Detailed communication procedures are described in TSO's and NEMO's instructions, terms and conditions. All are shared with market parties.
DE	Yes, the rules include the following requirements <ul style="list-style-type: none"> • Communication requirements for the transmission system operator • Communication requirements for power exchanges • Communication requirements for balancing group managers
DK	We have revised already existing national legislation in order to live up the criteria.
EE	We choice fallback procedures, TSO informs the market operator.
ES	Rules establish the entities to be informed and the preferred communication tools (depending on the emergency causing the failure TSO will adapt in order to grant communication)

FI	<i>Not applicable as Fingrid will not suspend any market activities.</i>
FR	<i>As far as the local energy market is concerned, these provisions are covered under the NEMO market rules. As far as the balancing market is concerned, these procedures are covered in the RE/MA rules and the Ancillary Services Rules.</i>
GB	<i>Yes – This is addressed through the Grid Code (OC9.4.6, BC2.9) and section G3 of the Balancing and Settlement Code.</i>
UK-NIR	<i>The TSO is not suspending any market activities, therefore, no communication procedures are required</i>
GR	<i>Under consultation.</i> <i>Update provided by RAE:</i> <i>Yes, as described to Art. 11 of RAE's Decision No 1603/2020 (Gov. Gaz. B 5944/ 31.12.2020)</i>
HR	<i>The procedure is included in a separate chapter of the Rules. It is following the steps and involves the mentioned parties from Article 38.</i>
HU	<i>Yes. If any market activity is suspended, we share information about it on MAVIR's website, and if it's possible also by e-mail.</i>
IE	<i>There are no communication procedures included as the TSO does not plan to suspend any market activities under any circumstances.</i>
IT	<i>Yes, with relation to the activities under Terna responsibility. Communications will be sent by email or other available means. A publication on Tema website is also foreseen. For activities under GME (Italian NEMO) responsibility, some provisions are included in the national framework for the market services: the suspension is notified directly to Arera and the Minister, while no communication to the market participants is explicitly foreseen.</i>
LT	<i>See answer to question 5.1</i> <i>Update provided by NERC (LT):</i> <i>NERC has approved TSO methodology regarding suspension and restoration market activities:</i> <i>https://www.vert.lt/en/Pages/Updates/2021/nerc-approved-transmission-system-operator-methodology.aspx</i> <i>and</i> <i>https://www.vert.lt/SiteAssets/posedziai/2021-09-30/perdavimo-sistemas-operatoriaus-pasiulymu-tvirtinimas.pdf</i> <i>In this methodology rules for imbalance settlement and settlement of balancing capacity and balancing energy are foreseen.</i>
LU	<i>Yes, the rules include the following requirements</i> <ul style="list-style-type: none"> • <i>Communication requirements for the transmission system operator</i> • <i>Communication requirements for power exchanges</i> • <i>Communication requirements for balancing group managers</i>

LV	<i>Yes, rules for suspension and restoration of the market activities include communication procedures between market participants and TSO.</i>
MT	<i>There are no spot markets in Malta</i>
NL	<i>Communication procedures in situations of market suspensions are indirectly laid down in the changes (still to be approved) to the national Network code "Netcode Elektriciteit", where references to other documents are made which contain communication procedures where relevant. More details on market activities in specific situations, including communication procedures, are described in the explanatory document established by the TSO, to be published later this year.</i>
PL	<i>The rules concerning the suspension and restoration of market activities include communication procedures in accordance with Article 38. TSO shall immediately publish all notifications and updated information about the suspension or restoration of market activities on its website and in the RSS feed. Additionally, the TSO sends this information by e-mail to market operators at the Polish Balancing Market. If the mentioned methods of communication do not work, the TSO shall use any other available communication channel, e.g. telephone.</i>
PT	<i>Under evaluation included in TSO proposal (Yes, the actors are identified and the means will be established in national codes).</i>
RO	<i>The procedure from the terms and conditions requires that TSO will communicate as soon as possible all the relevant information related to the market suspension and restoration to the involved parties as DSOs, NEMO, BRP but is not yet approved. The channels used for communication will be the following: website, e-mail, SMS or similar.</i>
SE	<i>No, the market activities will not be suspended, and therefore no communication is needed due to this.</i>
SI	<i>In principle MSR foresee a communication via email to all relevant stakeholders and the publication of relevant notices on Eles website. In addition, it is agreed with Slovenian Market Operator to have access to the most updated mailing list of MPs available.</i>
SK	<i>Yes, the TSO informs the subjects about the following facts: a) Notice of suspension of market activities (date and time of suspension) and definition of the scope of suspended activities. b) Notice of an estimate of the date and time of restoration of market activities. c) Updating information on market restoration processes. d) Notice of restoration of market activities at a specified date and time. e) Confirmation of the restoration of market activities at a specified date and time.</i> <i>All notices and updates from SEPS and the nominated electricity market operator shall be published through the trading systems and on the websites of these subjects. If notification or updating via trading venues and on websites is not possible, the notifying subject shall inform at least the direct participants of the suspended market activities by e-mail or any other available means. Mandatory subjects (neighbouring TSOs, coordinated capacity calculator, entities responsible for capacity allocation, regional security coordinator, nominated electricity market operator, other subjects to which market functions have been designated or entrusted, ancillary service providers and distribution system operators) are also obliged to inform TSOs, that their market tools and communication systems are in operation, respectively on the extent of communication restrictions on their part.</i>

6.5 Delegation of TSO's tasks to third parties

72 **Q.5.6. Has the third paragraph of Article 39(1) been applied? If so, provide further information e.g. if the re-assignment of the TSO's tasks has been performed by the**

Member State or the regulatory authority and the name of the third parties that carry out the tasks.

73 Table 36: Delegation of TSO's tasks.

MS	Answer
AT	<i>Yes, the calculation of settlement prices is assigned by national law to APCS Power Clearing and Settlement AG (https://www.apcs.at/de). The TSO established the specific rules for settlement in case of suspension of market activities. E-Control authorized those rules and APCS implements them vis a vis the market participants.</i>
BE	<i>TSO Elia submitted on 18 December 2018 to the CREG for approval, a proposal according to art. 4(2)e as well as art. 4(n)f of the NC ER 2017/2196. The CREG took a decision on 19.09.2019 concerning both proposals (disapproval of both proposals) and requested Elia to submit new proposals within a reasonable time delay. CREG Decision (B)1941 of 19.09.2019 is available on www.creg.be</i>
BG	
CZ	<i>The third paragraph of Article 39(1) was not applied per say. The Czech law (Energy Act) stipulates that market operator OTE, a.s. is responsible for calculation and settlement of imbalance system.</i>
DE	<i>No.</i>
DK	<i>No, no delegation has occurred.</i>
EE	<i>No</i>
ES	<i>Yes, there are specific rules detailing the settlement procedure in case of market suspension. The TSO will perform the tasks, no delegation.</i>
FI	<i>No.</i>
FR	<i>Not apply</i>
GB	<i>In GB the only other party involved in this process with the TSO is the BSSCo (Balancing System Administrator)</i>
UK-NIR	<i>Not applied. The TSO is not suspending any market activities.</i>
GR	<i>Under consultation.</i> <i>Update provided by RAE:</i> <i>No.</i>
HR	<i>It hasn't been applied.</i>
HU	<i>No.</i>
IE	<i>No.</i>
IT	<i>No.</i>
LT	<i>See answer to question 5.1</i> <i>Update provided by NERC (LT):</i>

	<i>Delegation of TSO's tasks is not foreseen.</i>
LU	No.
LV	<i>TSO hasn't reassigned tasks.</i>
MT	<i>There are no spot markets in Malta</i>
NL	<i>No, the third paragraph of Article 39(1) has not been applied.</i>
PL	No
PT	<i>The rules for the settlement are established on the national codes and might be updated after the approval of the proposals established on Article 4.</i>
RO	<i>Yes. The settlement is performed by a third part named SC OPCOM SA</i>
SE	No
SI	<i>Yes. According to Slovenian Energy Law the imbalance settlement is the responsibility of our Market Operator company Borzen d.o.o. In line with this also MSR foresee the responsibility of performing this procedure to Market Operator.</i>
SK	<i>TSO has performed this task (consultation with NEMO).</i>

7. Information exchange and communication, tools and facilities

7.1 Backup control room

7.1.1 Geographically separate backup control room

74 **Q.6.1. Has the TSO established at least one geographically separate backup control room, which fulfils all relevant requirements in accordance with Article 42(3)?**

75 Table 37: Geographically separate backup control room.

MS	Answer
AT	Yes
BE	Yes
BG	
CZ	<i>The backup control room already existed.</i>
DE	Yes.
DK	Yes
EE	Yes we have
ES	<i>Yes. REE already had one geographically separate backup control room compliant with requirements in Article 42(3) before the entry into force of NC ER.</i>
FI	Yes.
FR	Yes

GB	Yes
UK-NIR	Yes. Do we need more info?
GR	Yes.
HR	Yes.
HU	Yes.
IE	<p>The TSO's current assumption is that existing systems meet ER requirements. However this assumption needs to be reviewed and notify DSO if changes are needed.</p> <p>The TSO has back-up control sites for both centres in Dublin and Belfast which are regularly tested. From the latest draft of the system restoration plan available to the CRU: "If there is a significant loss of NCC computing facilities at the time of the blackout then restoration activities can be carried out from the TSO's back up control centre. Once a blackout alert is issued the System Manager will decide if the back up control centre needs to be staffed and operations will be transferred from the primary control centre. If there is a failure of software at both locations then there is a number of 24/7 on call support arrangements available to the TSO to resolve these issues."</p>
IT	Yes
LT	Yes, TSO established geographically separate back up room. However, NERC is still assessing if TSO complies with requirements in accordance with Article 42 (3).
LU	Creos has set up a geographically separate backup control room with a backup power supply for HV and MV.
LV	Backup control room has been established.
MT	The DSO has two geographically separate control rooms, both fully equipped with SCADA.
NL	Yes.
PL	Yes
PT	Yes. The TSO's (REN) main control room (National Dispatch) is located in Lisbon. The TSO has two backup control rooms which include the critical tools and facilities. The first one is in the same area of the main control room (in a different building) and the second one is in Oporto (where switching control room is located).
RO	Yes, Transelectrica established a separate backup control room.
SE	Yes
SI	Yes.
SK	Yes, it has.

7.1.2 Movement of functions from the main control room to the backup control room

76 **Q.6.2. Has the TSO prepared a transfer procedure for moving functions from the main control room to the backup control room in accordance with the requirements in Article 42(4)?**

MS	Answer
AT	Yes
BE	Yes.
BG	
CZ	<i>The transfer procedure already existed.</i>
DE	Yes.
DK	<i>As far as DUR is informed, such a procedure has been developed.</i>
EE	<i>No reply</i>
ES	<i>Yes. REE already had a transfer procedure for moving functions from the main control room to the backup control room before the entry into force of NC ER.</i>
FI	Yes.
FR	Yes
GB	Yes
UK-NIR	Yes.
GR	Yes.
HR	Yes.
HU	Yes.
IE	<i>The TSO's current assumption is that existing systems meet ER requirements. However this assumption needs to be reviewed and notify DSO if changes are needed.</i>
IT	Yes.
LT	Yes.
LU	<i>Creos has implemented such a procedure in the context of its Information Security Management System (according to ISO 27001 et 27002 with risk analysis according to ISO 27005) and the procedure is tested every year together with a fire alarm testing and evacuation of the main control room building and transfer of the dispatching teams to their respective back-up control room.</i>
LV	<i>Transfer procedure has been developed.</i>
MT	<i>There is no specific procedure in place. The staff in the main control room would simply move to the back up control room. To note that the control rooms are geographically close to each other.</i>
NL	Yes.
PL	Yes
PT	<i>Yes. The procedure also include the operation of the system during the transfer.</i>
RO	Yes.
SE	Yes
SI	Yes.

SK Yes, it has.

7.2 Essential substations provisions

- 78 **Q.6.3. Concerning Article 42(5), are the substations identified as essential for the restoration plan procedures pursuant to Article 23(4) operational in case of loss of the primary power supply for at least 24 hours? If not explain.**
- 79 **o For Ireland and Latvia only: has the TSO proposed to reduce the duration of operation of the relevant essential substations i.e. lower than 24 hours? If so, provide information on the approval of such decision by the regulatory authority or competent authority of the Member State (e.g. date of the decision and reference/web link).**

80 Table 39: Essential substations provision.

MS	Answer
AT	N/A
BE	<i>Elia is currently implementing the roll out of emergency diesel generators and batteries with an autonomy of at least 24h in the substations identified as essential for the restoration plan procedures. The process is ongoing, but not finished yet.</i>
BG	
CZ	<i>Essential transmission system substations are capable of operation for at least 24 hours. Essential distribution system substations are being equipped with that capability.</i>
DE	<i>The TSOs are currently working on implementing resp. running a retrofit program to reach compliance with the requirement of 24 hours.</i>
DK	<i>Yes. Requirement is set for back-up power supply on essential substations in order to power such station for at least 24 hours.</i>
EE	<i>12 hours</i>
ES	<i>Currently, some of the substations identified as essential for the restoration plan are not operational in case of loss of the primary power supply for at least 24 hours. The deadline for this implementation according to NC ER is in December 2022.</i>
FI	<i>Yes, but only substations that connect 30 MVA or larger power plants to network.</i>
FR	<i>24 hours backup power supply evaluation at the substations identified as essential for the restoration plan is still ongoing</i> <i>Update provided by CRE (FR):</i> <i>Substations should comply by the end of the year.</i>
GB	<i>Ongoing - This requirement does not apply until 18 December 2022 – Article 55 Refers. The issue is to be addressed as part of Grid Code Modification GC0148 – see attached link. https://www.nationalgrideso.com/industry-information/codes/grid-code-old/modifications/gc0148-implementation-eu-emergency-and-0</i>
UK-NIR	<i>Yes. All essential substations have diesel back-up generators.</i> <i>No.</i>

GR	<i>Under study.</i>
HR	<i>There are still some that haven't, but the TSO is confident that they all will be before the deadline from the Regulation.</i>
HU	<i>Yes.</i>
IE	<i>The TSO proposed "black start stations" to be operational for a 12 hour period with the aim of restoring the system by the end of that 12 hour period:</i> <i>See Figure 8 of the Annex II</i>
IT	<i>Yes</i>
LT	<i>Yes. The list of essential substations for system restoration that must operate for at least 24 hours is included into System Restoration Plan.</i>
LU	<i>All high voltage substations are per se essential for the restoration plan and are equipped with diesel generators, batteries and no-break system. Their autonomy is greater than 24 hours.</i>
LV	<i>Requirement regarding 24 hours if fulfilled.</i>
MT	<i>All primary substations are equipped with battery back-up and standby generators and thus all can be used for restoration. Their role in restoration will be detailed in the restoration plan</i>
NL	<i>The substations were identified as essential and most of them already have 24 hour emergency power. An inventory is being performed to confirm that all the substations identified as essential have the 24 hour emergency power after loss of primary power. In case some are not in compliance, the 24 hour emergency power for these essential substations shall be in place by December 18th, 2022.</i>
PL	<i>Yes, but deadline for implementation is 18.12.2022 (cf. article 55 of NC ER).</i>
PT	<i>Yes.</i>
RO	<i>All substations from national electrical system can be operational using Diesel groups for 24 hours.</i>
SE	<i>Yes</i>
SI	<i>Yes.</i>
SK	<i>Yes, we have defined system substations for the Restoration Plan with 24 hour operation. It will be verified by the Test Plan.</i>

8. Costs

8.1 Costs borne by the system operators

81 **Q.7.1. In accordance with Article 37 of Directive 2009/72/EC, has the regulatory authority assessed the costs borne by system operators subject to network tariff regulation and stemming from the obligations laid down in the NC ER?**

82 *Table 40: Costs borne by the system operators.*

MS	Answer
AT	Yes

BE	<i>No reply</i>
BG	
CZ	<i>Not specifically. The actual expenses from the current regulatory period were assessed ex post for setting up the allowed expenses for upcoming regulatory period. Next to the ex-post assessment, there is also more in-depth continuous assessment at place, which is aimed on the expenses that could be possibly withdrawn, if the expense is not eligible to remain as an allowed expense. In sum, the ex post and continuous assessment is applied.</i>
DE	<i>Yes. As the NC E&R has only been in force since the end of 2017 and given that the last base year for revenue cap setting in Germany was 2016 (the next being 2021), there has not yet been a comprehensive cost assessment within a formal procedure. However, there have already been discussions on the refundable costs.</i>
DK	<i>No tracking of obligations stemming from NC ER has been done when approving the network tariff.</i>
EE	<i>We have not assessed separately. We have evaluated the entire network service.</i>
ES	<i>Info to be provided</i>
FI	<i>No. This will be assessed for the next regulatory methods.</i>
FR	<i>The necessary costs to comply with the whole provisions of Network Code E&R are taken into account in different projects/Affairs and discussed in the framework of tariff negotiation. In France costs were assessed partially. The assessment is ongoing only for the articles that will apply from 18 December 2022.</i>
GB	<i>No reply</i>
UK-NIR	<i>No as there are no new costs imposed by NCER.</i>
GR	<i>No.</i>
HR	<i>HERA hasn't assessed the specific costs stemming from obligations laid down in the NC ER.</i>
HU	<i>No.</i>
IE	<i>No.</i>
IT	<i>The assessment is run every year while setting the national tariffs.</i>
LT	<i>No, but before NC ER regulation was approved, this has been implemented, therefore PSO didn't apply for additional costs to be included in the allowed revenue.</i>
LU	<i>No. Only global operational costs are provided and assessed.</i>
LV	<i>No, such separate assessment was not carried out. Necessary services are procured into the procurement procedure.</i>
MT	<i>No specific cost assessment has been carried out</i>
NL	<i>No. this is not yet done.</i>
PL	<i>The Polish NRA assesses the costs of TSO activity before approving the tariff (every year).</i>
PT	<i>The costs borne with ancillary services, which include the ER costs, are taken into account in the calculation of the costs base subject to tariff regulation.</i>

RO	<i>Under current legal framework there is no assessment for this type of costs.</i>
SE	<i>No</i>
SI	<i>No.</i>
SK	<i>No, it has not.</i>

8.2 Information necessary for costs assessment

83 **Q.7.2. If requested by the relevant regulatory authorities, have the system operators provided the information necessary to facilitate assessment of the costs incurred in accordance with the deadline set in Article 8(2)?**

84 Table 41: Information for costs assessment.

MS	Answer
AT	<i>The costs are assessed in the regular yearly procedure.</i>
BE	<i>No reply</i>
BG	
CZ	<i>N/A</i>
DE	<i>Yes</i>
DK	<i>No request has been filed.</i>
EE	<i>No reply</i>
ES	<i>Info to be provided</i>
FI	<i>-</i>
FR	<i>Still ongoing for articles entering into force in 18 December 2022 (as per Article 55)</i>
GB	<i>N/A</i>
UK-NIR	<i>Not applicable as no such request has been made.</i>
GR	<i>Not relevant yet.</i>
HR	<i>It was not requested.</i>
HU	<i>The regulatory authority did not request.</i>
IE	<i>N/A</i>
IT	<i>All the information is sent by Terna to Arera on a yearly basis under the procedures for the definition of the national tariffs.</i>
LT	<i>Not applicable.</i>
LU	<i>n.a.</i>
LV	<i>Not requested.</i>
MT	<i>The Maltese NRA did not request this type of information up to now (see answer to Q.7.1.).</i>

NL	<i>There has been no request to provide information necessary to facilitate assessment of costs.</i>
PL	<i>The Polish NRA assesses the costs of TSO activity before approving the tariff (every year).</i>
PT	<i>When requested, the system operator provides the necessary information for the costs assessment.</i>
RO	<i>No</i>
SE	<i>N/A</i>
SI	<i>No.</i>
SK	<i>There was no request from RONI.</i>

8.3 Remuneration scheme

- 85 **Q.7.3. Is any type of remuneration scheme for defence service providers and/or restoration service providers which are subject to a non-contractual basis available in the Member State? If so, confirm does the remuneration scheme include the cost faced by the defence service providers and/or restoration service providers for compliance testing and review.**

86 Table 42: Remuneration scheme.

MS	Answer
AT	<i>No</i>
BE	<i>No reply</i>
BG	
CZ	<i>No.</i>
DE	<i>No.</i>
DK	<i>No remuneration scheme has been set.</i>
EE	<i>No reply</i>
ES	<i>Info to be provided</i>
FI	<i>Defence/Restoration service providers work on contractual basis.</i>
FR	<i>Not apply</i>
GB	<i>For the Low Frequency Demand Disconnection Scheme - No. Grid Code modification GC0147 is looking at the emergency disconnection of Embedded Generation (ie Generators who fall outside the Wholesale Electricity Market) and consideration is being given as to whether compensation should be payable under these circumstances. A link to this modification is attached for information. https://www.nationalgrideso.com/industry-information/codes/grid-code-old/modifications/gc0147-last-resort-disconnection-embedded</i>
UK-NIR	<i>No. No such scheme exists.</i>
GR	<i>No remuneration scheme has been set.</i>

HR	<i>Not applicable (it's all contractual).</i>
HU	<i>No.</i>
IE	<i>From the system defence plan: There are scenarios where the provider is mandated by the Grid Code to offer services when operational; however, they are recompensed. Generators providing FRR or steady state reactive power fall into this category as do providers of additional active power (instructed by TSO during Emergency state) who receive payment via the Balancing Market or Interconnectors providing Emergency Assistance via a their Balancing and Ancillary Services Agreement (BASA).</i>
IT	<i>With Resolution 324/2020 Arera adopted a decision on how to refund the producers involved in the restoration plan for the cost they incur because of the update of their plants to the requirements set in ER NC. An incentive scheme is into force: a) Implementation of requirements within the original deadlines set by Terna (or within end 2021 for units to be included for the first time in the restoration plan and for the 24 hours supply services) lead to a refund equal to 100% of the investment (standard costs are used); b) The refund is reduced by 25% every quarter after the deadlines mentioned at point a); c) Implementation of the measures within the last deadline (18 December 2022) leads to 10% refund d) No refund is granted if the measures are implemented after 18 December 2022. The scheme applies to producers only. For DSO the investments are taken into account while setting the national tariffs. For defence plan Arera is evaluating whether foreseeing a similar scheme.</i>
LT	<i>Yes. TSO has the contracts with defence service providers and/or restoration service providers, however price is not determined on the contractual basis. NERC sets the regulated price of systems services every year. The price of systems services includes the cost faced by the defence service providers and restoration service providers for compliance testing and review. TSO collect system services fee from final customers. Then TSO respectively transfers the revenue collected from final customers to defence service providers and/or restoration service providers.</i>
LU	<i>Not applicable (no such service providers in LU)</i>
LV	<i>There is a remuneration scheme (specified in Grid code) – TSO covers all the costs, but not higher than DA price in the relevant trading interval. It should be noted, that those system users are not considered as service providers.</i>
MT	<i>Malta does not have defence service providers and/or restoration service providers.</i>
NL	<i>No, there are contracts only for the black start services with three providers spread over strategic locations in the country.</i>
PL	<i>Cf. 1.4</i>
PT	<i>At present there is no remuneration scheme.</i>
RO	<i>No</i>
SE	<i>No</i>
SI	<i>No.</i>
SK	<i>There is no such a scheme.</i>

9. Agreement with third-countries TSOs

87 **Q.8.1. If applicable, in accordance with Article 10, when has the TSO concluded the relevant agreement with third country TSOs?**

88 Table 43: Agreement with third countries.

MS	Answer
AT	7.6.2019 with Switzerland
BE	No reply
BG	
CZ	N/A
DE	Applicable for Switzerland. All relevant measures are agreed on within the synchronous area framework agreement (SAFA).
DK	N/A
EE	N/A
ES	Not applicable
FI	14.8.2019
FR	The provisions of Article 10 are covered at the European level within the framework of the "Synchronous Area Framework Agreement", i.e. the agreement to extend the various technical provisions from European network codes to non-EU countries
GB	This was previously not applicable to GB. However, now that GB is a third country (as of 1st Jan 2021), NGESO may need to put in place cooperation arrangements with Union TSOs, which will be part of the wider FTA agreement.
UK-NIR	Not applicable.
GR	N/A
HR	April 14th 2019 – Continental Europe Synchronous Area Framework Agreement (SAFA).
HU	With UKRENERGO on 2020.08.31, With EMS 2019.02.19
IE	N/A
IT	No agreement needed.
LT	Lithuanian energy system is in synchronous operation with IPS/UPS. In this case secure system operation is regulated in accordance with IPS/UPS synchronous area requirements set in the Operation Agreements. No additional agreements were concluded after the NC ER entered into force.
LU	Not applicable
LV	TSO hasn't concluded the relevant agreement.
MT	Not applicable (no third country TSO is connected to the Maltese DSO)
NL	The EU TSOs of the continental European synchronous area have concluded the Synchronous Area Framework Agreement for the Regional Group Continental Europe ('SAFA') that includes 6 third-country TSOs that belong to the synchronous area: CGES,

	<i>EMS, MEPSO, NOSBiH, OST and Swissgrid. This agreement has entered into force on 14 April 2019. Through Annex 5 of the SAFA, all parties, including the mentioned third-country TSOs, are legally bound to be compliant to the obligations set in the Emergency and Restoration regulation. However, still a number of exemptions and derogations apply.</i>
PL	<i>SAFA agreement – signed on 13th March 2019, enter into force 14th April 2019.</i>
PT	<i>Not applicable. No agreement with third country TSOs.</i>
RO	<i>Up now no dedicated (only for emergency and restoration) bilateral agreements with third countries were concluded. Operational agreement on synchronous zone, SAFA, represents the basis for the safety operation and includes chapter Emergency and Restoration Policy. In SAFA are provided obligations for the third countries. Between Romania and third countries (Serbia and Ukraine) are established operational agreements.</i>
SE	<i>Not sure if this article includes Norway, but Statnett participates in the SOA for Nordic S.A. New ER Annex as of 4/03/2020.</i>
SI	<i>All neighboring countries (TSOs) are EU members. Obligations for non EU countries were considered within the Synchronous Area Framework Agreement, which was concluded in March 2019.</i>
SK	<i>The complex agreement should be developed from RG CE level (as all TSOs from the SA should be party of the agreement). Additionally, concluded and updated System Operational Agreement (2020) as well as Agreement on Emergency Delivery (2020).</i>

10. Automatic under-frequency scheme

89 **Q.9.1. Details of the scheme for automatic low frequency demand disconnection in accordance with Article 15: Frequency threshold (Hz)**

90 Table 44: Automatic under-frequency schemes: frequency thresholds (Hz)

MS	Answer										
	LFDD step										
	1	2	3	4	5	6	7	8	9	10	11
AT	49	48.8	48.6	48.4	48.2	48					
BE	49	48.9	48.8	48.7	48.6	48.5	48.4	48.3	48.1	48	
BG	No reply	No reply	No reply	No reply	No reply	No reply	No reply	No reply	No reply	No reply	No reply
CZ	49	48.7	48.4	48.3	48.1	48					
DE	49	48.9	48.8	48.7	48.6	48.5	48.4	48.3	48.2	48.1	
DK	48.8	48.6	48.4	48.2	48.0					DK-East	
	49.0	48.8	48.6	48.4	48.2	48.0				DK-West	
EE											

ES	No reply	No reply	No reply	No reply	No reply	No reply	No reply	No reply	No reply	No reply	No reply	
FI	48.8	48.6	48.4	48.2	48							
FR	49	48.8	48.6	48.4	48.2	48						
GB	48.8	48.75	48.7	48.6	48.5	48.4	48.2	48	47.8			
UK-NIR	48.85	48.8	48.75	48.7	48.65	48.6	48.55	48.5				
GR	No reply	No reply	No reply	No reply	No reply	No reply	No reply	No reply	No reply	No reply	No reply	
HR	49.00	48.80	48.60	48.40	48.20	48.00						
HU	49.0	48.8	48.6	48.4	48.2	48.0						
IE	48.85	48.8	48.75	48.7	48.65	48.6	48.55	48.5				
IT	(49.3 Hz & - 0.3 Hz/s) OR (49.0 Hz)	(49.2 Hz & - 0.6 Hz/s) OR (48.9 Hz)	(49.1 Hz & - 0.9 Hz/s) OR (48.8 Hz)	(49.1 Hz & - 1.2 Hz/s) OR (48.7 Hz)	48.6 Hz	48.4 Hz	48.2 Hz	48.1 Hz				
LT												
LU	49	48.86	48.71	48.57	48.43	48.29	48.14	48				
LV												
MT	49	48.9	48.8	48.7	48.6	48.4	48.2	48.1				
NL	49.00	48.80	48.60	48.40	48.20	48.00						
PL	49.0	48.7	48.5	48.3	48.1	48.0						
PT	49.0	48.8	48.6	48.4	48.2	48.0						
RO	49	48,8	48,6	48,4	48,2	48						
SE	48.8	48.6	48.4	48.2	48.0							
SI	49	48.8	48.6	48.4	48.2	48.1						
SK	49	48.8	48.6	48.4	48.2	48						

91 **Q.9.2. Details of the scheme for automatic low frequency demand disconnection in accordance with Article 15: Demand to be disconnected - average percentage calculated on reference scenarios (% of the Total Load at MS level)**

92 *Table 44: Automatic under-frequency schemes: Demand to be disconnected (% of the Total Load at MS level)*

MS Answer

	LFDD step											
	1	2	3	4	5	6	7	8	9	10	11	
AT	At least 7%	In total the 6 steps should sum up to 45%. Steps 2 to 6 should be spread equally.										
BE	~6%	~5%	~5%	~5%	~5%	~5% (new)	~5% (new)	~4%	~3% (new)	~3% (new)		
BG	No reply	No reply	No reply	No reply	No reply	No reply	No reply	No reply	No reply	No reply	No reply	
CZ	10%	10%	10%	2%	10%	8%						
DE	step 1 = 5-10%	step 2 = step 1 + (3-7%)	step 3 = step 2 + (3-7%)	step 4 = step 3 + (3-7%)	step 5 = step 4 + (3-7%)	step 6 = step 5 + (3-7%)	step 7 = step 6 + (3-7%)	step 8 = step 7 + (3-7%)	step 9 = step 8 + (3-7%)	step 10 = step 9 + (3-7%) = 38-52%		
DK	5%	5%	5%	5%	5%					DK-East		
	8%	8%	8%	8%	8%	8%				DK-West		
EE												
ES	No reply	No reply	No reply	No reply	No reply	No reply	No reply	No reply	No reply	No reply	No reply	
FI	5%	5%	5%	5%	5%							
FR	5%	8%	8%	8%	8%	8%						
GB	4%	5%	8%	15%	3%	4%	8%	5%	4%			
UK-NIR	6%	6%	6%	6%	6%	6%	12%	12%				
GR	No reply	No reply	No reply	No reply	No reply	No reply	No reply	No reply	No reply	No reply	No reply	
HR	5%	10%	10%	10%	10%	5%						
HU	6%	8%	8%	8%	8%	8%						
IE	10%	10%	4%	4%	4%	4%	12%	12%				
IT	7.0%	6.60%	6.50%	6.40%	6.10%	6.0%	5.70%	5.60%				
LT												
LU	5.71%	5.81%	5.32%	4.82%	4.36%	5.43%	5.51%	6.29%				
LV												
MT	11%	8%	8%	8%	5%	5%	5%	5%				
NL	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%						

PL	10%	10%	9%	8%	8%	5%						
PT	6.7%	6.6%	6.9%	6.6%	6.4%	9.7%						
RO	8%	8%	10%	10%	10%	6%						
SE*	>5%	>5%	>5%	>5%	>1%							
SI	10%	10%	10%	10%	10%	5%						
SK	10%	9%	9%	8%	8%	6%						

* - Due to the geographical distribution of load and production in Sweden, demand needs to be disconnected in the south (south of 61 deg lat), which is also reflected in the national regulation. The amount of demand identified in the national regulation is equivalent to the amounts on national level as presented in the table below, i.e. 5% on a national level is typically equivalent to 7.5% south of 61 deg. The last step requires at least 1% to be disconnected, which has not been translated to an amount on MS level.

The proposed national regulation sets out that at least 1% of the total load south of 61 deg lat be disconnected.

93 **Q.9.3. Please, provide the date of implementation**

94 Table 44: Date of implementation.

MS	Answer
AT	27/11/2018
BE	Roll out of new frequency relays is ongoing. Ready after 2022.
BG	No reply
CZ	January 2018
DE	Started on 01.04.2020, to be finished latest by 18/12/2022
DK	01/02/2020
EE	
ES	No reply
FI	18/12/2018
FR	18/12/2022
GB	Prior to 18/12/2019
UK-NIR	In existence for decades
GR	No reply
HR	20/07/2017
HU	Expected date of final implementation: 31/12/2020
IE	N/A <i>Update provided by CRU:</i>

	10 February 2021
IT	LFDD Plan was already compliant to NC ER requirements in terms of number and percentage LFDD steps. Due to new network scenarios, a periodical check of field implementation is in progress.
LT	LFDD is already implemented in accordance with synchronous IPS/UPS area requirements.
LU	No reply
LV	No reply
MT	No reply
NL	18/12/2022
PL	18/12/2022
PT	January 2020
RO	November 2016 - January 2017
SE	New national regulation is proposed to enter into force Dec 18 2022. The proposal will be publicly consulted in the coming months (2020).
SI	The scheme was implemented with national grid code and with the approval of the system defence plan in year 2019.
SK	01/01/2020

95 **Q.9.4. Is frequency gradient in accordance with Article 15(8) implemented? If yes, provide details in accordance with this provision.**

96 Table 44: Frequency gradient implementation.

MS	Answer
AT	The TSO requests 6 load shedding steps between 49,0 and 48,0 Hz. The first step should at least be 7% of the total load. In total the 6 steps should sum up to 45%. Steps 2 to 6 should be spread equally. DSOs are asked to provide/update their detailed scheme each year.
BE	No.
BG	No reply
CZ	Not implemented.
DE	Not implemented.
DK	No requirements have been set.
EE	
ES	No reply
FI	No.
FR	No
GB	No.

UK-NIR	No.
GR	No reply
HR	No reply
HU	No.
IE	N/A
IT	Yes, see the table above (question 9.1.)
LT	Not applicable.
LU	No.
LV	No reply
MT	No reply.
NL	No.
PL	Not implemented
PT	No.
RO	No.
SE	Not applied in Sweden.
SI	Frequency gradient is not implemented in accordance with Article 15(8).
SK	No.

97 **Q.9.5. Are system protection schemes in Accordance with Article 15(11) implemented? If Yes, provide details in accordance with this provision.**

98 Table 44: Additional system protection schemes implementation.

MS	Answer
AT	Yes, there are additional measures implemented between 49,8 and 45 HZ for generators and pumps (of pumped hydro) and storage.
BE	No.
BG	No reply
CZ	Not implemented.
DE	Not implemented.
DK	No requirements have been set.
EE	
ES	No reply
FI	No.
FR	Not implemented

GB	<i>No - The only exception to this would be where a commercial arrangement is in place or on a site specific basis which has been agreed Bilaterally.</i>
UK-NIR	<i>No.</i>
GR	<i>No reply</i>
HR	<i>Yes, for threshold 47,50 Hz, the power plants can disconnect from the grid - depending on the power plant, it either starts island operation, operating for self-consumption or operating with no-load (idling).</i>
HU	<i>No.</i>
IE	<i>N/A</i>
IT	<i>Yes, a controlled islanding protection scheme is implemented on some generation/load industrial aggregates, in order to maintain operation and support a faster restoration process.</i>
LT	<i>Yes, Kruonis HPSPP and Kaunas HPP shall be used for frequency control. Disconnection of Pumps is implemented at 49,6 Hz. In case frequency is not restored to 49,6 Hz start up of hydro generators in Kruonis HPSPP is implemented. Start up of hydro generators in Kaunas HPP is implemented for frequency setting of 49,9 Hz.</i>
LU	<i>No.</i>
LV	<i>No reply</i>
MT	<i>No reply.</i>
NL	<i>No.</i>
PL	<i>Not implemented</i>
PT	<i>No.</i>
RO	<i>No.</i>
SE	<i>Not applied in Sweden.</i>
SI	<i>No system protection schemes are implemented in accordance with Article 15(11).</i>
SK	<i>49,8 and 50,2 Hz - disconnection of the pump storage power plants from the grid and change of control from power to speed others power plants.</i>

Annex II: Figures

Czech Republic

The proposal according the letter in the Article 4(2)	The proposal submitted
A	12.12.2018
B	12.12.2018
C	12.12.2018
D	12.12.2018
E	12.12.2018
F	12.12.2018
G	16.12.2019

Figure 19. (related to question (1.2))

The proposal according the letter in the Article 4(2)	The methodology approved	The methodology re-approved
A	28.6.2019	
B	28.6.2019	
C	28.6.2019	
D	28.6.2019	Re-approved 1.4.2020 the methodology was submitted on 6.12.2019, reason: the update of the list of high priority significant grid users
E	28.6.2019	
F	28.6.2019	
G	19.5.2020	The link to the decision: https://www.eru.cz/documents/10540/6720266/dopl%C4%9Bn%C3%AD%20dle+%C4%8DI.+4+odst.+2+p%C3%ADsm.+g%29%20+rozhodnut%C3%AD.pdf/6cc09d7c-d9ef-4489-8ec8-d641edd76445

Figure 20. (related to question 1.3)

Germany

criteria	time delay
Using manual load shedding does not have the required effect	within 15 minutes
The automatic frequency relief (underfrequency load shedding) levels have triggered	immediately
frequency deviation +/- 0.8 Hz	30 minutes
A sufficiently large share of the power of the power generation plants in the LFR area of a TSO was disconnected from the grid	immediately
In case of geographically large subnetworks with asynchronous networks in the transmission network	immediately
Market players can no longer adequately carry out their market activities and thus endanger system security.	within 15 minutes
Tools and communication facilities that are necessary for the continuation of the market are not available	30 minutes

Figure 21. (related to question 5.3)

Great Britain

Article No.	NCER documents	Status	Date submitted (Issue number)
Article 4.2a)	T&Cs for Defence providers	Pending approval	20/12/2019 (Issue 3)
Article 4.2b)	T&Cs for Restoration providers		
Article 4.2c)	List of SGUs (submitted as appendix to SDP and SRP)	Pending approval	20/12/2019 (Issue 3)
Article 4.2d)	High priority SGUs (submitted as appendix to SDP and SRP)	Pending approval	20/12/2019 (Issue 3)
Article 4.2e)	Market Suspension and Restoration rules - with intermediate methodology	Pending approval	21/01/2020 (Issue 3)
Article 4.2f)	Imbalance settlement rules for suspension of activities – this is covered in section G3 of the BSC		

	and the mapping table which we have attached separately		
Article 4.2g)	Test plan	Pending approval	20/12/2019 (Issue 1)

Figure 22. (related to question 1.2)

Northern Ireland

Clause	Date Submitted to UR by SONI
4(2)(a) the terms and conditions to act as defence service providers on a contractual basis in accordance with paragraph 4;	16 th October 2020. UR currently reviewing submission with decision expected to be being published in Jan 2021
4(2)(b) the terms and conditions to act as restoration service providers on a contractual basis in accordance with paragraph 4;	16 th October 2020. UR currently reviewing submission with decision being published in Jan 2021
4(2)(c) the list of SGUs responsible for implementing on their installations the measures that result from mandatory requirements set out in Regulations (EU) 2016/631, (EU) 2016/1388 and (EU) 2016/1447and/or from national legislation and the list of the measures to be implemented by these SGUs, identified by the TSOs under Art. 11(4)(c) and 23(4)(c);	16 th October 2020. UR currently reviewing submission with decision being published in Jan 2021
4(2)(d) the list of high priority significant grid users referred to in Articles 11(4)(d) and 23(4)(d) or the principles applied to define those and the terms and conditions for disconnecting and re-energizing the high priority grid users, unless defined by the national legislation of Member States.	16 th October 2020. UR currently reviewing submission with decision being published in Jan 2021
4(2)(e) the rules for suspension and restoration of market activities in accordance with Article 36(1);	16 th October 2020. UR currently reviewing submission with decision being published in Jan 2021
4(2)(f) specific rules for imbalance settlement and settlement of balancing energy in case of suspension of market activities, in accordance with Article 39(1);	16 th October 2020. UR currently reviewing submission with decision being published in Jan 2021
4(2)(g) the test plan in accordance with Article 43(2).	Not yet submitted by SONI. SONI are aiming for a Sept 2021 submission.

Figure 23. (related to question 1.2)

	Capability/ Service Characteristics	How Procured?	Payment/ Re-compense
Contractual Basis - Full	Contract	Voluntary	Contract
Contractual Basis - Part	Grid Code	Compulsory	Contract
National Legal Framework	Grid Code	Compulsory	None

Figure 24. (related to question 1.4)

Individual System Defence Measure / Service	SGUs							
	Type D Generator (T-Connected)	Type D Generator (D-Connected)	Type C Generator	Type B Generator	Aggregators of Gen/ Dem	T-Conn Demand Facility	Interconnector Owners	T-Conn closed Distribution Systems
Authority to disconnect SGUs	X	X	X		X		X	
Operational Reserve (FRR) (Inc. Turlough Hill)	X	X	X		X			
Replacement Reserve (RR)	X	X	X		X			
Active power set points when Freq./ Power Flow is outside Alert limits and system adequacy is lacking	X	X	X		X			
Special Protection Schemes (Inc. Step wise linear disconnection)	X	X	X					
Over Frequency Generator Shedding Scheme		X	X					
Reactive power set-points	X							
Interconnector Emergency Assistance (MWs) & Making Mvars available							X	

Figure 25. (related to question 1.4)

Ireland

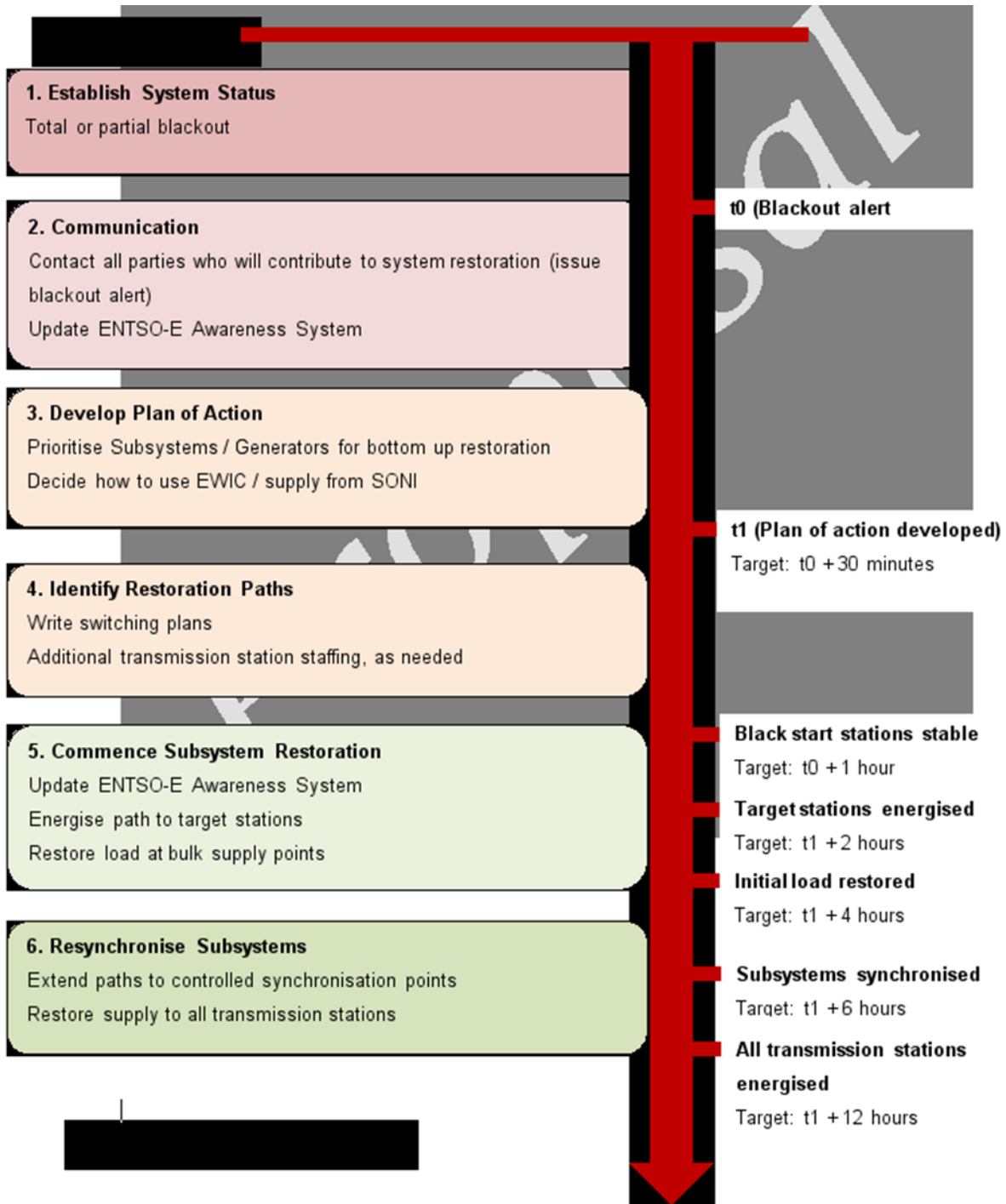


Figure 26. (related to question 6.3)

Annex III: List of abbreviations & country codes

Acronym	Definition
ACER	Agency for the Cooperation of Energy Regulators
EC	European Commission
ENTSO-E	European Network of Transmission System Operators for Electricity
EU	European Union
NC	Network Code
NRA	National Regulatory Authority
E&R	Emergency and Restoration
TSO	Transmission System Operator
RSC	Regional Security Coordinator

ISO code	Country
AT	Austria
BE	Belgium
BG	Bulgaria
CZ	Czech Republic
DE	Germany
DK	Denmark
EE	Estonia
ES	Spain
FI	Finland
FR	France
GB	Great Britain
UK-NIR	Northern Ireland
GR	Greece
HR	Croatia

ISO code	Country
IE	Ireland
LT	Lithuania
LV	Latvia
HU	Hungary
IT	Italy
LU	Luxembourg
MT	Malta
NL	Netherlands
PL	Poland
PT	Portugal
RO	Romania
SE	Sweden
SI	Slovenia
SK	Slovakia

Abbreviation	NRA
ACM	Autoriteit Consument & Markt/Authority for Consumers & Markets
ARERA	Autorità di Regolazione per Energia Reti e Ambiente
AGEN-RS	Agencija za Energijo/Energy Agency
ANRE	Autoritatea Națională de Reglementare în Domeniul Energie/Regulatory Authority for Energy

Abbreviation	NRA
BNetzA	Bundesnetzagentur/Federal Network Agency for Electricity, Gas, Telecommunications, Posts and Railways
CRU	The Commission for Regulation of Utilities
CRE	Commission de régulation de l'énergie
CREG	Commission de Régulation de l'Électricité et du Gaz/Commissie voor de Regulering van de Elektriciteit en het Gas
CNMC	La Comisión Nacional de los Mercados y la Competencia/The National Commission on Markets and Competition
DUR	Forsyningstilsynet/Danish Utility Regulator
E-Control	Energie-Control Austria
ECA	Konkurentsiamet/Estonian Competition Authority
Ei	Energimarknadsinspektionen/Swedish Energy Markets Inspectorate
ERO	Energetický regulační úřad/Energy Regulatory Office
ERSE	Entidade Reguladora dos Serviços Energéticos/Energy Services Regulatory Authority
EWRC	комисия за енергийно и водно регулиране (KEBP)/Energy and Water Regulatory Commission
EV	Energilavisto /Energy Authority
MEKH	Magyar Energetikai és Közmű-szabályozási Hivatal/ The Hungarian Energy and Public Utility Regulatory Authority
HERA	Hrvatska energetska regulatorna agencija/Croatian Energy Regulatory Agency
ILR	Institut Luxembourgeois de Régulation
Ofgem	Office of Gas and Electricity Markets
PUC	Sabiedrisko pakalpojumu regulēšanas komisija/Public Utilities Commission
RAE	Ρυθμιστική Αρχή Ενέργειας/The Regulatory Authority for Energy
RONI	Úrad pre reguláciu sieťových odvetví/Regulatory Office For Network Industries
UR	Utility Regulator of Northern Ireland
URE	Urząd Regulacji Energetyki/Energy regulatory Office
NERC	National Energy Regulatory Council