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COMMISSION OPINION

of 3.11.2022

under Regulation (EU) No 2019/941, on risk-preparedness in the electricity sector and repealing Directive 2005/89/EC, on the Risk-preparedness Plan submitted by the Competent Authority of the Grand Duchy of Luxembourg to the European Commission.

Only the French text is authentic

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1. PROCEDURE

Article 10 of Regulation (EU) 2019/941 of the European Parliament and of the Council of 5 June 2019 on risk-preparedness in the electricity sector and repealing Directive 2005/89/EC¹ (the "Regulation") requires the Competent Authority of each Member State to establish a Risk-Preparedness Plan ("RPP"). In accordance with Article 10(8) of the Regulation, the RPPs have to be updated every four years, unless circumstances require updates that are more frequent. The consultation between Competent Authorities and the Electricity Coordination Group provided for under Article 10(4) of the Regulation has to be carried out before the adoption of the RPP.

The RPP (as well as its updates) need to be based on the regional electricity crisis scenarios identified by ENTSO-E² pursuant to Article 6 of the Regulation as well as the national electricity crisis scenarios that each Competent Authority has to identify before the adoption of the RPP pursuant to Article 7 of the Regulation. The electricity crisis scenarios must be identified in relation to system adequacy, system security and fuel security and considering, among others, extreme natural hazards, accidental hazards and consequential hazards, including the consequences of malicious attacks.

The Competent Authority of Luxemburg, the Minister for Energy (MEA), notified its draft RPP to the Electricity Coordination Group for the purpose of the consultation required by Article 10(4) of the Regulation on 3 April 2021. MEA notified to the Commission on 18 January 2022 its final RPP.

After having assessed the RPP, in view of the criteria mentioned in Article 11 of the Regulation and the template provided for in the Annex to the Regulation, and having consulted the Electricity Coordination Group between 18 January and 9 February 2022, the Commission has the following remarks on the RPP.

2. COMMISSION'S ASSESSMENT OF THE RISK-PREPAREDNESS PLAN

The RPP is quite comprehensive in the description of the national framework and measures. It describes very well the roles and responsibilities of different actors and authorities, in particular in the case of a crisis. It also shows a solid system of emergency planning with

¹ OJ L 158, 14.6.2019, p. 1–21.

² European Network of Transmission System Operators for Electricity.

dedicated plans per type of crisis and explanations on how the different plans interact with each other. Furthermore, the RPP pays particular attention to regional coordination and interaction with other Member States and with other actors in those Member States.

The Commission welcomes the efforts devoted to regional cooperation with neighbours, in particular under the Pentalateral Energy Forum³ ('Penta'). Such cooperation appears among the most advanced ones in the EU in terms of risk preparedness. As a result of this work, the members of the Pentalateral Energy Forum have established a network of risk-preparedness experts from ministries, regulatory authorities and transmission system operators (TSOs), have identified regional crisis scenarios complementary to those of ENTSO-E and have even developed together a common chapter for the RPP of all members. Moreover, members have also signed a Memorandum of Understanding ('MoU') that identifies and provides an umbrella for a number of regional measures. The Commission welcomes all this work but reminds Luxembourg that further work to deepen such cooperation is necessary in the light of the comments included in the sections below.

Nevertheless, the Commission considers that some elements of the RPP do not fully comply with the requirements of the Regulation.

2.1. Amendments to the Risk Preparedness Plan (RPP)

2.1.1. Missing information on the electricity crisis scenarios

Pursuant to Article 7 of the Regulation, each competent authority has to identify the most relevant national electricity crisis scenarios on the basis of at least certain risks (rare and extreme natural hazards, accidental hazards and consequential hazards, including malicious attacks and fuel shortages). These scenarios have to be consistent with the regional electricity crisis scenarios identified by ENTSO-E pursuant to Article 6 of the Regulation. The national and regional electricity crisis scenarios are the basis on which the Competent Authority has to establish the RPP in accordance with Article 10(1) of the Regulation, and the RPP must include a summary of the electricity crisis scenarios defined for the Member State and the region, in accordance with Article 11(1)(a) of the Regulation and point 1 of the Annex thereto.

The RPP submitted by MEA includes under section 1 a summary of the most relevant electricity crisis scenarios developed as a basis for the measures in the RPP. However, all the descriptions in that section are of very general nature. It is not possible to conclude from these descriptions what the concrete scenarios considered for Luxembourg are, nor the identified estimated impacts. In fact, the RPP acknowledges that the descriptions are purely illustrative. For example, regarding cyberattacks, the RPP only refers to general examples like switching lines or transformers or manipulating schedules from TSOs towards market partners or other TSOs.

The Commission considers that the RPP submitted by MEA needs to be amended to further describe all the national and regional scenarios considered. Although expert knowledge could serve as a basis for risk assessment, real crisis involving complex systems might result in unexpected and unforeseeable dynamics. For that reason, performing simulations of the system provides additional insights on the evolution of potential crises and their impacts,

³ The members of the Pentalateral Energy Forum are Austria, Belgium, France, Germany, Luxembourg, The Netherlands and Switzerland.

helping to identify unforeseen vulnerabilities and to define more satisfactory preventive and mitigation measures. This information on the national scenarios is also necessary to assess the completeness and effectiveness of the preventive and mitigating measures contained in the RPP. Moreover, this information is also relevant for other Member States, notably within the same region, to understand the potential impacts and shared challenges that a number of these scenarios may pose.

The Commission also considers that a refined assessment of the crisis scenarios is particularly necessary following the dramatic changes in the EU security situation as a result of the invasion of Ukraine by Russia. Consequently, the Commission takes the view that the RPP submitted by MEA needs to be updated in the light of these circumstances, focusing on geopolitical risks, where relevant, dependence on fuels and on other supply chains from third countries (including fuel-switching possibilities) and spill over effects from other sectors into electricity (e.g. increase in electricity demand for heating purposes in the absence of other fuels). The Commission reminds MEA that Article 10(8) of the Regulation already requires updating the RPP more frequently than every 4 years where circumstances so warrant.

The Commission recommends that the description of the scenarios includes:

- A clear link between the national and regional scenarios, including the assumptions for its selection and/or rejection.
- A description of the scope, including the national and regional characterization of the hazard.
- The characterization of the selected scenario, including the cross-sector and cross-border interdependencies, initial condition of the system prior to the initiating event, assets exposure and vulnerabilities (based on damage curves if available), and the time-horizon and assumptions applied.
- Account and timeline of events, including the description of initiating events and chain of events. The description should include the coping mechanisms and characterization of the response, including the applicable procedures and measures at national and regional level.
- Impacts on the electricity system and assets, including electricity flows and consequences. The assessment should include a quantitative analysis in terms of EENS⁴/LOLE⁵ estimates and/or other quantitative values, as well as possible spill over effects to other sectors, e.g. to the gas sector, manufacturing industries and cross-border value chains.
- Specifically for scenarios on cyber-risks, a reference to a framework with minimum and advanced cybersecurity requirements, procedures to follow in case of an incident, a description of the roles and interactions between the competent authority and the cyber-specific actors, such as CSIRT⁶, CERT⁷ and cyber-specific authorities (considering the link between sectorial response and national level and EU cyber response), including during a crisis, and the links with cyber specific legislation.

⁴ Expected Energy Not-Served (EENS) as defined in Article 2(1)(e) of the methodology for identifying regional electricity crisis scenarios established in accordance with Article 5 of the Regulation.

⁵ Loss of Load Expectation (LOLE) as defined in Article 2(1)(g) of the methodology for identifying regional electricity crisis scenarios established in accordance with Article 5 of the Regulation.

⁶ Computer Security Incident Response Team.

⁷ Computer Emergency Response Team.

- Impacts on the electricity system and assets, including electricity flows and consequences. The assessment should include a quantitative analysis in terms of EENS⁸/LOLE⁹ estimates and/or other quantitative values, as well as possible spill over effects to other sectors, e.g. to the gas sector.
- Specifically for scenarios on cyber-risks, a reference to a framework with minimum and advanced cybersecurity requirements, procedures to follow in case of an incident, a description of the roles and interactions between the competent authority and the cyber-specific actors, such as CSIRT¹⁰, CERT¹¹ and cyber-specific authorities, including during a crisis, and the links with cyber specific legislation. This has been largely described in section 3.1.3.1 on Crisis management by the government and public authorities.
- Climate change and environment considerations, such as climate vulnerability and risks and environmental impacts, including with a view to design preventive measures against the climate and environmental risks identified in order to reduce exposure and vulnerability to the risks. This would include an assessment of the reduction or increase of GHG emissions and the environmental impacts resulting from prevention and mitigation measures included in the RPP.

Moreover, and given the current exceptional circumstances, the Commission recommends that MEA accelerates to the extent possible or at very least maintains their calendar for the mandatory tests on the effectiveness of the procedures developed in its RPP, currently envisaged to be held biannually, starting in the fall of 2022. These tests should be carried as soon as possible and with a focus on winter 2022-2023. They should cover regional and national measures and communication and coordination protocols, in cooperation with neighbouring countries within the region. These tests should help improve the existing measures and the mechanisms for cooperation and communication, and identify additional national and regional measures (the latter preferably jointly with regional partners).

2.1.2. Missing information on regional and bilateral measures for cooperation and assistance among Member States

Pursuant to Article 15 of the Regulation, Member States have to cooperate in a spirit of solidarity in order to prevent or manage crises. Where they have the technical ability, Member States have to offer each other assistance by means of regional measures (with Member States within their region) and bilateral measures (with Member States to which they are directly connected but do not belong to the same region). Such regional and bilateral measures must be described in the RPP in accordance with Articles 12 and 15 of the Regulation and point 3(2)(b) of the Annex thereto, as well as the national measures necessary to implement them pursuant Article 11(1)(j) of the Regulation.

The RPP submitted by MEA refers under section 3.2 to a number of arrangements for regional and bilateral cooperation, some of which are of binding nature. The RPP also explains in detail the work of regional coordination centres. In terms of risk preparedness, the RPP refers to the MoU on risk preparedness in the electricity sector signed by Penta members

⁸ Expected Energy Not-Served (EENS) as defined in Article 2(1)(e) of the methodology for identifying regional electricity crisis scenarios established in accordance with Article 5 of the Regulation.

⁹ Loss of Load Expectation (LOLE) as defined in Article 2(1)(g) of the methodology for identifying regional electricity crisis scenarios established in accordance with Article 5 of the Regulation.

¹⁰ Computer Security Incident Response Team

¹¹ Computer Emergency Response Team

on 1 December 2021. The MoU provides a mandate to continue cooperation. It contains an agreed schedule for regional crisis simulations and identifies a number of measures to be studied in greater depth, such as possibilities for the cross-border use of reserve capacity, the provision of emergency equipment or possible ways to coordinate calls to reduce demand. However, these measures have not been agreed yet.

The Commission considers that the RPP submitted by MEA has to be amended to include the regional and bilateral measures required by the Regulation, including any necessary technical, legal and financial arrangements, as well as the national measures necessary to implement them.

2.1.3. Missing description of preventive measures

Article 11(6) of the Regulation and the Annex thereto require that the RPP describes the national measures designed to prevent or prepare for the identified national and regional electricity crisis scenarios.

The RPP describes in section 3.1.2 on Crisis prevention the measures envisaged to prevent an initiating event and to mitigate its negative impact. It describes measures adopted by the government and public authorities and by system operators. Regarding the measures adopted by the government and public authorities, the RPP refers to a Report on Security of Supply that provides an analysis on supply related to generation and demand, a Strategy and Action Plan for the adaptation to the effects of climate change in Luxembourg and a National Cybersecurity Strategy. While these initiatives appear very comprehensive on their domains, absent further information, it is not clear how they respond to the national electricity crisis scenarios, such as a physical attack against critical assets (Scenario ID 3) or the loss of ICT tools or telecommunication infrastructure required for electric power system operation (Scenario ID 17). Furthermore, the Crisis prevention measures described in section 3.1.2 do not seem to cover all the national electricity crisis scenarios described in Section 1.1.

The Commission considers that the RPP submitted by MEA needs to be amended to include or clarify the preventive measures envisaged to address all national electricity crisis scenarios identified.

2.2 Other comments

Apart from the substantive remarks presented above, the Commission would like to draw the attention of MEA, to some other elements of the submitted RPP, which do not raise legal concerns in terms of their compatibility with the elements mentioned in Article 13(2)(a) to (f) of the Regulation, but which may provide useful guidance to the Competent Authority for future amendments of the RPP.

- The RPP establishes under point 3.1.3.2 a 3-level list establishing the sequence in which consumers would be disconnected from the grid in case no other corrective measures are available to restore the normal state of the system, in accordance with the System Defence Plan. The RPP could further explain how this prioritization was established and how it addresses the objective of economic efficiency¹².
- Decision and intervention flowcharts would increase the readability of the RPP.

¹² Article 11.6.b of the emergency and restoration network code (OJ L 312, 28.11.2017, p. 54–85) establishes that the measures contained in the system defense plan have to be economically efficient

- While the RPP does not refer to preventive or mitigating measures that could have an impact on greenhouse gas (GHG) emissions, the Commission reminds MEA that such measures should be listed in the RPP if they existed. In such case, the Commission also recommends that the risk/impact on GHG emissions is quantified and assessed to determine the alignment of the RPP with the climate neutrality goal.

3. CONCLUSION

Based on the above assessment, and in view of Article 13(2)(c) of the Regulation, the Commission concludes that some elements of the RPP submitted by SEA do not comply with certain provisions of this Regulation.

The Commission requests MEA to amend the RPP taking duly into consideration all the concerns expressed by the Commission in the present opinion and notify the amended RPP to the Commission within three months of receipt of this opinion, pursuant to Article 13(3) of the Regulation. In view of the circumstances following Russia's invasion of Ukraine, the Commission recommends to prioritise the focused update of the RPP described in section 2.1.1, the test on the effectiveness of the procedures developed in the RPP referred to in section 2.1.1, the missing information on regional and bilateral measures for cooperation and assistance among Member States described in section 2.1.2 and the detailed description of national electricity crisis scenarios described in section 2.1.1. The Commission urges MEA to describe and assess the actions to reduce gas consumption in the power sector, as called upon in the Communication "Save gas for a safe winter",¹³ while ensuring security of electricity supply. Furthermore, the Commission urges Luxembourg to take into consideration the Council Recommendation, proposed by the European Commission on 18 October 2022, on a coordinated approach to strengthen the resilience of critical infrastructure in the EU, and, in particular, the results of the stress tests of critical infrastructure foreseen therein.

The Commission's assessment expressed in this opinion is without prejudice to any position it may take *vis-à-vis* Luxembourg as regards the compatibility of national measures with EU law, including in the context of infringement proceedings and the enforcement of European Union competition rules, including State aid rules.

The Commission will publish this opinion. The Commission does not consider the information contained herein to be confidential, in particular as it relates to the RPP which is publicly available. MEA is invited to inform the Commission within five working days following receipt of the opinion whether it considers that it contains commercially sensitive information, the confidentiality of which is to be preserved.

Done at Brussels, 3.11.2022

For the Commission
Kadri SIMSON
Member of the Commission

¹³ COM(2022) 360 final.