

# Consultation Paper on risk preparedness in the area of security of electricity supply

Fields marked with \* are mandatory.

## Introduction

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In its Energy Union Strategy, the Commission announced its intention to propose new legislation on security of electricity supply in 2016, as part of a broader set of initiatives to reform the EU framework governing electricity markets.

The *Communication launching the public consultation process on a new energy market design*, COM(2015)340 ('Market Design Communication'), opens the debate on how to reform markets to ensure that they are suitable for an interconnected EU-wide electricity market, provide clear price signals for new investments and facilitate the further development of renewables, promote regional cooperation and coordination, and provide a truly European dimension to security of electricity supply.

This questionnaire complements the Market Design Communication by raising targeted questions relating to security of electricity supply. In particular it raises detailed questions on how Member States should prepare themselves and co-operate with others, with a view to identify and manage risks relating to security of electricity supply.

### 1. CURRENT LEGAL FRAMEWORK RELATING TO SECURITY OF ELECTRICITY SUPPLY

A fundamental objective of national and EU energy policy is to ensure security of energy supply, i.e., to ensure that energy (including electricity) is available to all when needed. In fact, Article 194 TFEU sets out that the aim of EU Energy policy is to ensure security of energy supply in the Union.

Directive 2005/89 creates a general framework on security of electricity supply, but leaves it by and large to Member States to define their own security of supply standards and policies, as long as the latter 'are not discriminatory and do not place an unreasonable burden on the market actors' (Article 3, paragraph 4).

Many provisions of Directive 2005/89 have been superseded by more recent EU legislation,

mainly by the Third Energy Package.[1] The Third Energy Package defines the role of the transmission system operators ('TSOs') regarding security of supply, reinforces TSO co-operation by putting into place ENTSO-E, and provides for a harmonization of technical standards and operating procedures through the development of network codes and guidelines. The latter mainly aim to achieve a more coordinated approach between TSOs when it comes to ensuring operational security.[2]

Whilst important steps have been taken to improve cooperation between TSOs, security of supply objectives, standards and procedures are mostly defined at a national level.

Whilst the Directive calls upon Member States to take account of 'the possibilities for cross-border co-operation in relation to security of electricity supply,' it provides neither rules nor tools for organising such cross-border co-operation in a structured manner. In practice, co-operation across Member States is still rather limited, although some voluntary co-operation is starting to take place at regional level. Moreover, in 2012, the Electricity Coordination Group ('ECG') was created as a forum to exchange information and foster co-operation across Member States, in particular as regards security of supply. So far, it discussed the need and importance of generation adequacy assessments in the EU, but it has not been given operational tasks.

The co-existence of national, often uncoordinated, rules and approaches entails risks, both from a security of supply as well as from an internal market perspective.[3]

The Market Design Communication discusses important aspects relating to security of supply, such as the need for common criteria and a common methodology for purposes of assessing the adequacy of the electricity system, and the need for a more joined-up approach when it comes to addressing risks relating to an insufficient investment in generation capacity. It also explores ways to further enhance co-operation between TSOs as well as between TSOs and Distribution System Operators ('DSOs').

This questionnaire complements the Market Design Communication. It looks in particular at the role of national authorities in preventing and managing risks related to security of supply, and at how the latter co-operate in a cross-border context.

## **2. RISK IDENTIFICATION AND MANAGEMENT**

Ensuring security of electricity supply requires conducting regular assessments of whether the electricity system is adequate (i.e., capable of meeting demand) and whether it is secure (i.e., physically resistant to shocks etc.). It also requires defining adequate responses, once risks are identified.

TSOs and, increasingly, DSOs have important responsibilities when it comes to guaranteeing operational security, in particular in the short term (e.g., TSOs carry out balancing activities).

Beyond operational security, it falls on Member States to identify the types of risks relating to security of supply, to set standards of acceptable risks, and to take action (or ensure that relevant action is taken) to prevent the various risks from happening. In the absence of clear pan-European rules, it appears that approaches considerably vary across Member States.

The Market Design Communication discusses the need for a joint approach to assess system adequacy, meaning the ability for supply to meet demand at all times. The questions hereunder

focus on how Member States act to mitigate various types of risks, once an assessment has been made, in different time frames (e.g., to mitigate possible risks in the given season). It also focuses on how Member States could best work together on a cross-border basis to mitigate risks.

[1] Directive 2009/72/EC and Regulation 714/2009.

[2] The most relevant Network Codes in this context are those related to the operation of the electricity system (cf. network code on Operational Security (NC OS), on Load-Frequency Control and Reserves (NC LFCR), on Operational Planning and Scheduling (NC OPS) and on Emergency and Restoration (NC ER).

[3] See the Report on the Implementation of Directive 89/2005 (COM (2010) 330 final), and the proceedings of the Electricity Coordination Group, as referred to amongst others in the Communication on a European Energy Security Strategy (2014)330 final. See also the political declarations of 8 June 2015 in favour of more regional co-operation on security of supply (see Press release IP/15/5142, [http://europa.eu/rapid/press-release\\_IP-15-5142\\_en.htm](http://europa.eu/rapid/press-release_IP-15-5142_en.htm)).

## INFORMATION ABOUT YOU

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\* Are you responding to this questionnaire on behalf of/as:

*between 1 and 5 choices*

- ☐ Individual
- ☐ Organisation
- ☐ Company
- ☒ Public Authority
- ☐ Other

\* Please describe briefly the activities of your company/organisation and the interests you represent

Norwegian Ministry of Petroleum and Energy, Energy and Water Resources  
Department

\* Which countries are you most active in?

*between 1 and 29 choices*

- ☐ Austria
- ☐ Belgium
- ☐ Bulgaria
- ☐ Croatia
- ☐ Cyprus
- ☐ Czech Republic
- ☐ Denmark
- ☐ Estonia
- ☐ Finland
- ☐ France
- ☐ Germany
- ☐ Greece
- ☐ Hungary
- ☐ Ireland
- ☐ Italy
- ☐ Latvia
- ☐ Lithuania
- ☐ Luxembourg
- ☐ Malta
- ☐ Netherlands
- ☐ Poland
- ☐ Portugal
- ☐ Romania
- ☐ Slovakia
- ☐ Slovenia
- ☐ Spain
- ☐ Sweden
- ☐ United Kingdom
- ☒ Other

## Questions:

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\* 1. Whilst Directive 89/2005 imposes a general obligation on Member States to ensure a high level of security of supply, the Directive does not specify what measures Member States should take to prevent risks. Would there be an added value in requiring Member States to draw up a plan identifying relevant risks and preventive measures to respond to such risks (risk preparedness plans)?

- ☐ YES
- ☒ NO

Please explain

It is in the interest of all member-states to have a high level of security of electricity supply, and to protect themselves against relevant risks. Risk preparedness, and how member-states prevent risks, is a decision for national authorities, which also decide what measures to take in order to prevent and respond to risks.

\*2. If yes, what should be the minimum requirements such risk preparedness plans should comply with? For instance, should they:

*between 1 and 7 choices*

- ☐ a) explain the various types of risks?
- ☐ b) identify the demand side measures Member States plan to take (e.g., use of interruptible contracts, voluntary load shedding, increased efficiency, emergency savings)?
- ☐ c) identify the supply side measures Member States plan to take (e.g., increased production flexibility, increased import flexibility)?
- ☐ d) assess the expected impact of existing and future interconnections?
- ☒ e) identify roles and responsibilities?
- ☐ f) identify how Member States co-operate or intend to co-operate amongst each other to identify, assess and mitigate risks?
- ☐ g) other elements?

Please explain

It should be a matter for the member-states to decide whether to create a risk preparedness plan or to conduct a risk assessment in a different way, in order to make it relevant to local or national conditions. In addition, the level of detail of a risk preparedness plan is of concern, as it would easily contain sensitive information.

\*3. Do you think that it would be useful to establish a common template for risk preparedness plans?

- ☒ YES
- ☐ NO

Please explain

A risk preparedness plan will vary according to pre-identified risks and vulnerabilities, which will differ from member-state to member-state, as they are exposed to different risks. A common template needs to be generic, allowing national authorities to consider local risks and conditions, and national requirements on how to handle these.

\*4. Given that electricity markets are increasingly interlinked, should risk preparedness plans be prepared at the national, regional or EU level?

- ☒ National
- ☐ Regional
- ☐ EU

Please explain

The electricity market is only one of several other factors that can influence the security of supply. Risk preparedness plans can therefore not be limited to considering matters related to the electricity market.

For such plans to be relevant for the security of electricity supply, they must be prepared at the national level, respecting the competence of the member-states. This does not exclude considering regional matters, and voluntarily cooperation at the regional level (e.g. Nordic).

\*5a. Do you see a role for the Commission in assessing these plans? Would you see an added value of having the plans peer reviewed, at a regional or EU level?

No. National plans would be a tool for national authorities to analyze risks and decide on how to respond to possible risks or vulnerabilities. Peer review: The plans would contain sensitive information; hence, it is a national decision whether, and how, to share such information.

\*5b. What role do you see in this context for the Electricity Coordination Group?

Sharing of information and best practices can be a useful tool in addressing risk preparedness at a regional or European level. This could be a role for the ECG

\*6. What level of transparency should be given to the plans? Who should be informed of what?

Such plans cannot be fully transparent, as they would contain sensitive information about critical infrastructure. Transparency in this area could endanger national security and give away company-specific information.

- \*7. How often should risk preparedness plans be made / be updated? What are the relevant time frames to be covered?

Risk preparedness plans should face the current threats to the electricity system based on an all-hazards approach. The plans must also regularly be updated to meet future challenges. Some of the threats are of a more “constant” nature, e.g. natural conditions like the impact from wind, snow and ice on overhead lines, while others are more “dynamic” like ICT-threats, computer malware etc. Each member state face different conditions and should supervise the updating frequency and indicate the necessary time frame.

- \*8. Given the challenges that DSOs are facing (e.g. integration of renewables, more decentralised systems), should DSOs take an active participation in the assessment of the risks and preparation of the risk preparedness plans? If yes, do you see the need for separate assessments and separate risk plans at the DSO levels? Or do you believe it is more appropriate to ensure an active participation of DSOs in risk assessments

DSO have a role in security of supply and should perform their own risk assessments. However, this depends to a large extent on the structure within the member-states, both when it comes to DSOs/TSOs, and the power generating structure (centralized/decentralized, as well as the size and flexibility of the plants).

- \*9. Ensuring cybersecurity is an increasingly important aspect of security of supply. What measures should Member States take to protect themselves against possible cyber-attacks or other cyber-related threats? Do you see the need for specific EU rules on cyber security, targeted to the energy field? Given the cross-border nature of cyber security risks, what scope is there for enhancing co-operation (for instance through the exchange of best practices)?

Each country should develop necessary actions to evaluate risks, and protect ICT- systems that affects supervisory and control of the energy system or security of supply in general; e.g. SCADA, smart grid systems, trading systems and AMS-systems.

When it comes to cyber-security, member-states should make sure they

- Have up to date national legislation and guidelines, as well as continuously work to improve the legislation and guidance to companies in the sector
- Perform regular exercises and/or training activities.
- Have skilled personnel.
- Promote information sharing and exchange of best practices.
- Support cooperation with the supply industry.
- Perform supervision of energy companies through compliance audits.
- Support the establishment of CERTs (Computer Emergency Response Team) for the power companies

There is a possible benefit from EU-level rules on cyber security; however, it is important that such rules are generic. Detailed rules run the risk of being easily outdated, as cyber security and cyber threats are constantly developing and changing.

There is a need for information sharing on cyber security. Exchange of best practices is an adequate approach to cyber security. Regular exercises and sharing of information about incidents, and how to handle them, are also possible areas for enhanced cooperation.

CERTs, both on a national level and specifically for the power companies, should play a major part in information sharing and cooperation.



### 3. ADDRESSING CRISIS SITUATIONS

Even where actions have been taken to prevent risks, emergency situations cannot be entirely excluded. Disturbances often occur at a local level, but they may also affect much larger areas, going beyond the borders of individual Member States.

Directive 2005/89 requires Member States to ensure that curtailment of supply in emergency situations is based on predefined criteria relating to the management of imbalances by transmission system operators and are taken in close consultation with other TSOs (Article 4(4) Directive 2005/89). It does not specify however what such emergency framework should look like, other than stating that Member States should not take discriminatory measures and should respect the requirements for a competitive internal market. Article 16(2) of Regulation n° 714/2009 imposes an obligation to compensate market participants, except for cases of 'force majeure'.

Steps have been taken to improve co-operation between TSOs in emergency situations, amongst others via the draft network code on emergency and restoration.

Nevertheless, Member States have a role to play in planning for and managing emergency situations, which goes beyond what normally belongs to TSO responsibilities (for instance they need to decide on what sequence to follow in case cut-offs are made, what compensation to offer). At present, there is a wide variety of approaches when it comes to deciding on these issues and cross-border co-ordination is largely absent. In addition, other players such as DSOs also have to assume responsibilities in emergency situations.

#### Questions:

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- \* 10. Currently, it appears that in some Member States, detailed emergency plans exist, whereas in others, there are only very summary emergency plans. Should there be an obligation for all Member States to plan for crisis situations, e.g., by including relevant rules and measures in the overall risk preparedness plans?

- ☒ YES  
☐ NO

Please explain

It is in the interest of the member-states to plan for crisis situations through emergency plans. How member-states choose to plan for and handle crises is within their competence to decide. Plans would also depend on the structure, production capacity and delegation of responsibility in the energy sectors in the different member-states.

\* 11. If yes, what should be the minimum requirements include? For instance, should Member States be required to:

- ☒ a) Identify actions and measures to be taken in emergency situations (market and non-market-based)?
- ☐ b) Set out the conditions for suspension of market activities?
- ☐ c) Identify categories of 'protected customers' which, in case of a crisis, should not to be subject to a disconnection measure (or only be disconnected by way of a last resort)?
- ☐ d) Establish rules for cost compensation?
- ☐ e) Indicate how they intend to co-operate with other Member States?
- ☒ f) Reflect any other issues in their plans?

Please explain

Plans must allow for different solutions when it comes to delegating responsibility to companies and DSOs, and be appropriate both for electricity systems with a decentralized production structure as well as centralized structure. It must allow national authorities to follow up through supervisory activity/compliance audits.

#### 4. ROLES AND RESPONSABILITIES

Security of electricity supply is a shared EU objective. This means that, throughout the European Union, relevant governments, public authorities, market actors and stakeholders should work together to ensure security of supply.

Whilst EU law assigns clear roles and tasks to TSOs, Directive 2005/89 has left it largely to Member States to define roles and responsibilities. Also structures for cross-border co-operation are largely lacking, in particular at the regional level, although voluntary initiatives have emerged.

### Questions:

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12. In relation to risk preparedness, how do you see the roles and responsibilities of:

#### \* a) national governments?

Roles and responsibilities must allow for a decentralized structure with decentralized production and responsibilities. It is important that the responsibility for matters relating to risk preparedness is understood as a national competence.

The role and responsibility of national authorities is to make laws, and ensure compliance with the laws through supervisory activity by regulator, which also gives regulations and guidelines and information sharing. The national authority also grants concessions, secure sufficient amount of energy, sufficient grid connections and a well-functioning market place, and supervise the security, contingency plans and preparedness of power companies.

#### \* b) national regulators?

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The role and responsibility of national authorities is to make laws, and ensure compliance with the laws through supervisory activity by regulator, which also gives regulations and guidelines and information sharing. The national authority also grants concessions, secure sufficient amount of energy, sufficient grid connections and a well-functioning market place, and supervise the security, contingency plans and preparedness of power companies.

#### \* c) TSOs?

The TSO is responsible for system security and operation, and all matters relating to the daily operation of the system. Compliance with regulations on system operation is ensured through supervisory activity by the regulator. The TSO should supervise the flow of energy and establish production plans including maintenance, secure fast repair in case of incidents, and operate emergency solutions in the power grid.

#### \* d) DSOs?

DSOs should be responsible for maintaining supply within their area, based on regulations from the national authorities, together with supervision. DSOs should report to TSO about the regional energy situation.

\*e) European bodies such as ENTSO-E, ACER, and the Electricity Coordination Group?

Roles for European bodies: Risk preparedness is a national responsibility. A possible role for the Commission could be to gather and share best practices, as this would benefit all member-states.

\*f) European Commission

Roles for European bodies: Risk preparedness is a national responsibility. A possible role for the Commission could be to gather and share best practices, as this would benefit all member-states.

\*g) other stakeholders, such as consumers?

When it comes to consumers as grid-users, we note that it is important that even grid-users that are completely dependent on electricity supply, have their own, independent responsibility for a back-up or reserve solution, if needed.

\*13. Given the fact that many actors are concerned by security of supply issues, would you see an added value in the designation by each Member State of a 'Competent Authority', responsible for coordinating security of electricity supply issues at national level?

- ☒ YES  
☐ NO

Please explain

It is beneficial with coordination at national level on issues related to security of supply, but it is a matter for the member-states to decide on how this coordination is performed.

\*14. If it is decided to strengthen regional co-operation on a more structural basis between various players (e.g., when drawing up risk preparedness plans), how should regions best be defined?

Definition of regions must be in line with the physics of the power system, in order not to endanger system security. For cooperation at the regional level, the synchronous area might be a suitable basis for defining a region. A region should be within a synchronous area, and must also be defined based on already existing cooperation and operational similarities, while taking into account geographical criteria and grid-structure.

If you would you like to share additional information related to this consultation, please send it within the consultation period by e-mail to the following address:  
ener-electricity-sos@ec.europa.eu

## **NEXT STEPS**

The consultation process launched by the Market Design Consultation and this questionnaire, together with further reflections and engagements with Member States and stakeholders, should pave the way for a revision of the relevant EU rules over the course of 2016.

The Commission intends to publish a document summarizing the main outcomes of this consultation. It also intends to publish the individual responses to this questionnaire, unless the respondent asks explicitly to keep its response confidential and/or not to disclose its identity.

## **Contact**

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