eurelectric
powering people

EC Consultation on the fitness check of the Energy Security framework

A Eurelectric response paper

December 2024

Eurelectric represents the interests of the electricity industry in Europe. Our work covers all major issues affecting our sector. Our members represent the electricity industry in over 30 European countries.

We cover the entire industry from electricity generation and markets to distribution networks and customer issues. We also have affiliates active on several other continents and business associates from a wide variety of sectors with a direct interest in the electricity industry.

We stand for

The vision of the European power sector is to enable and sustain:
- A vibrant competitive European economy, reliably powered by clean, carbon-neutral energy
- A smart, energy efficient and truly sustainable society for all citizens of Europe

We are committed to lead a cost-effective energy transition by:

investing in clean power generation and transition-enabling solutions, to reduce emissions and actively pursue efforts to become carbon-neutral well before mid-century, taking into account different starting points and commercial availability of key transition technologies;

transforming the energy system to make it more responsive, resilient and efficient. This includes increased use of renewable energy, digitalisation, demand side response and reinforcement of grids so they can function as platforms and enablers for customers, cities and communities;

accelerating the energy transition in other economic sectors by offering competitive electricity as a transformation tool for transport, heating and industry;

embedding sustainability in all parts of our value chain and take measures to support the transformation of existing assets towards a zero carbon society;

innovating to discover the cutting-edge business models and develop the breakthrough technologies that are indispensable to allow our industry to lead this transition.

Dépôt légal: D/2024/12.105/40

Markets & Investment Committee
Generation & Environment Committee
Distribution Market Facilitation Committee

Contact:
Christian Gruber, Advisor – Wholesale Markets -
cgruber@eurelectric.org

Contribution ID: eb8164b0-999c-4366-b550-00fdde703703
Date: 26/11/2024 17:23:27

Public consultation - energy security fitness check

Fields marked with * are mandatory.

1
Introduction

The EU has a comprehensive energy security framework, with the Gas Security of Supply Regulation (EU) 2017/1938 and Electricity Risk Preparedness Regulation (EU) 2019/941 as key pillars. Since their adoption in 2017 and 2019 respectively, sufficient time has passed **to perform an evaluation (fitness check)** to identify synergies within the framework and structurally internalise lessons learned from the COVID-19 and energy crises, as well as to prepare for the changing landscape due to the energy transition and Europe's phase out of Russian energy imports' dependency.

The objective of this evaluation is to evaluate the functioning of the energy security regulations, against 5 criteria:

- **Effectiveness** (how successful were the regulations in achieving its objective of ensuring preparedness, security of supply and resilience of the EU's energy system?)
- **Efficiency** (how efficient were the regulations, e.g. in terms of financial and human resources used for the changes generated by the previously mentioned regulations?)
- **Relevance** (how have the scope and objectives of the regulations remained relevant in addressing the past and current problems across the implementation period from 2017 and 2019 until now? Are they relevant in addressing future needs and problems?)
- **Coherence** (how well did the regulations work with other policy interventions and how well did specific measures in the regulations work together?)
- **EU Added Value** (to what extent did the regulations better reach the objectives, compared to what could have been reasonably expected from regional, national or local actions?)

Through this evaluation, the Commission aims at **assessing the performance of the EU's energy security framework during the energy crisis and during the energy transition**, and identify possible deficiencies, as well as synergies and efficiency gains. This could benefit the ongoing sectoral integration, as well as reduce administrative burden. The assessment

will also look at how the cooperation with neighbours worked, in particular with Energy Community contracting parties.

Besides evaluating how the EU's energy security framework functioned in the past, this questionnaire **looks at the future** by considering the dynamic changes ongoing in the EU's energy landscape, such as new challenges brought by diversification of gas suppliers to non-Russian suppliers, decarbonisation, climate change adaptation and electrification.

This public consultation is structured in **two main sections:** one section with **general questions on energy security** for all respondents, and a **second section with more specific and technical questions**. The section with specific questions is divided into three subsections: (1) on the whole energy security framework, (2) on security of gas supply, and (3) on security of electricity supply. Respondents may choose to answer those subsections of the questionnaire that are of interest to them.

2 About you

* 1 Language of my contribution

- ○ Bulgarian
- ○ Croatian
- ○ Czech
- ○ Danish
- ○ Dutch
- ◉ English
- ○ Estonian
- ○ Finnish
- ○ French
- ○ German
- ○ Greek
- ○ Hungarian
- ○ Irish
- ○ Italian
- ○ Latvian
- ○ Lithuanian
- ○ Maltese
- ○ Polish
- ○ Portuguese
- ○ Romanian

- ○ Slovak
- ○ Slovenian
- ○ Spanish
- ○ Swedish

*2 I am giving my contribution as

- ○ Academic/research institution
- ○ Business association
- ○ Company/business
- ○ Consumer organisation
- ○ EU citizen
- ○ Environmental organisation
- ○ Non-EU citizen
- ○ Non-governmental organisation (NGO)
- ○ Public authority
- ◉ Trade union
- ○ Other

*3 First name

Christian

*4 Surname

Gruber

*5 Email (this won't be published)

cgruber@eurelectric.org

*9 Organisation name

255 character(s) maximum

Eurelectric

*10 Organisation size

- ○ Micro (1 to 9 employees)
- ◉ Small (10 to 49 employees)
- ○ Medium (50 to 249 employees)

- ○ Large (250 or more)

11 Transparency register number

Check if your organisation is on the transparency register. It's a voluntary database for organisations seeking to influence EU decision-making.

4271427696-87

* 12 Are you active in the energy sector?

- ◉ Yes
- ○ No

* 13 Which energy sector?

- ☑ Electricity
- ☐ Gas
- ☐ Oil
- ☐ Other

* 15 What is your segment of activity?

- ○ Public authority
- ○ Regulator
- ○ Producer
- ○ TSO
- ○ DSO
- ○ RCC
- ○ Trader
- ○ Shipper
- ○ Retailer
- ○ Aggregator
- ○ Storage operator
- ○ Energy exchange
- ◉ Other

* 16 Please specify which other segment of activity:

Trade Association

* 17 Country of origin

Please add your country of origin, or that of your organisation.

This list does not represent the official position of the European institutions with regard to the legal status or policy of the entities mentioned. It is a harmonisation of often divergent lists and practices.

- Afghanistan
- Åland Islands
- Albania
- Algeria
- American Samoa
- Andorra
- Angola
- Anguilla
- Antarctica
- Antigua and Barbuda
- Argentina
- Armenia
- Aruba
- Australia
- Austria
- Azerbaijan
- Bahamas
- Bahrain
- Bangladesh
- Barbados
- Belarus
- Belgium
- Belize
- Benin
- Bermuda
- Djibouti
- Dominica
- Dominican Republic
- Ecuador
- Egypt
- El Salvador
- Equatorial Guinea
- Eritrea
- Estonia
- Eswatini
- Ethiopia
- Falkland Islands
- Faroe Islands
- Fiji
- Finland
- France
- French Guiana
- French Polynesia
- French Southern and Antarctic Lands
- Gabon
- Georgia
- Germany
- Ghana
- Gibraltar
- Greece
- Libya
- Liechtenstein
- Lithuania
- Luxembourg
- Macau
- Madagascar
- Malawi
- Malaysia
- Maldives
- Mali
- Malta
- Marshall Islands
- Martinique
- Mauritania
- Mauritius
- Mayotte
- Mexico
- Micronesia
- Moldova
- Monaco
- Mongolia
- Montenegro
- Montserrat
- Morocco
- Mozambique
- Saint Martin
- Saint Pierre and Miquelon
- Saint Vincent and the Grenadines
- Samoa
- San Marino
- São Tomé and Príncipe
- Saudi Arabia
- Senegal
- Serbia
- Seychelles
- Sierra Leone
- Singapore
- Sint Maarten
- Slovakia
- Slovenia
- Solomon Islands
- Somalia
- South Africa
- South Georgia and the South Sandwich Islands
- South Korea
- South Sudan
- Spain
- Sri Lanka
- Sudan
- Suriname

- Bhutan
- Bolivia
- Bonaire Saint Eustatius and Saba
- Bosnia and Herzegovina
- Botswana
- Bouvet Island
- Brazil
- British Indian Ocean Territory
- British Virgin Islands
- Brunei
- Bulgaria
- Burkina Faso
- Burundi
- Cambodia
- Cameroon
- Canada
- Cape Verde
- Cayman Islands
- Central African Republic
- Chad
- Chile
- China
- Christmas Island
- Greenland
- Grenada
- Guadeloupe
- Guam
- Guatemala
- Guernsey
- Guinea
- Guinea-Bissau
- Guyana
- Haiti
- Heard Island and McDonald Islands
- Honduras
- Hong Kong
- Hungary
- Iceland
- India
- Indonesia
- Iran
- Iraq
- Ireland
- Isle of Man
- Israel
- Italy
- Myanmar/Burma
- Namibia
- Nauru
- Nepal
- Netherlands
- New Caledonia
- New Zealand
- Nicaragua
- Niger
- Nigeria
- Niue
- Norfolk Island
- Northern Mariana Islands
- North Korea
- North Macedonia
- Norway
- Oman
- Pakistan
- Palau
- Palestine
- Panama
- Papua New Guinea
- Paraguay
- Svalbard and Jan Mayen
- Sweden
- Switzerland
- Syria
- Taiwan
- Tajikistan
- Tanzania
- Thailand
- The Gambia
- Timor-Leste
- Togo
- Tokelau
- Tonga
- Trinidad and Tobago
- Tunisia
- Türkiye
- Turkmenistan
- Turks and Caicos Islands
- Tuvalu
- Uganda
- Ukraine
- United Arab Emirates
- United Kingdom

- Clipperton
- Cocos (Keeling) Islands
- Colombia
- Comoros
- Congo
- Cook Islands
- Costa Rica
- Côte d'Ivoire
- Croatia
- Cuba
- Curaçao
- Cyprus
- Czechia
- Democratic Republic of the Congo
- Denmark
- Jamaica
- Japan
- Jersey
- Jordan
- Kazakhstan
- Kenya
- Kiribati
- Kosovo
- Kuwait
- Kyrgyzstan
- Laos
- Latvia
- Lebanon
- Lesotho
- Liberia
- Peru
- Philippines
- Pitcairn Islands
- Poland
- Portugal
- Puerto Rico
- Qatar
- Réunion
- Romania
- Russia
- Saint Barthélemy
- Saint Helena Ascension and Tristan da Cunha
- Saint Kitts and Nevis
- Saint Lucia
- United States
- United States Minor Outlying Islands
- Uruguay
- US Virgin Islands
- Uzbekistan
- Vanuatu
- Vatican City
- Venezuela
- Vietnam
- Wallis and Futuna
- Western Sahara
- Yemen
- Zambia
- Zimbabwe

18 This public consultation is structured in four sections. Apart from the section containing general energy security questions (for all respondents), which other sections do you wish to answer (if any)?

- [x] Specific questions on the energy security framework
- [x] Specific questions on Gas Security of Supply
- [x] Specific questions on Electricity Security of Supply

The Commission will publish all contributions to this public consultation. You can choose whether you would prefer to have your details published or to remain anonymous when your contribution is published. **Fo r the purpose of transparency, the type of respondent (for example, 'business association, 'consumer association', 'EU citizen') country of origin, organisation name and size, and its transparency register number, are always published. Your e-mail address will never be published.** Opt in to select the privacy option that best suits you. Privacy options default based on the type of respondent selected

*20 **Contribution publication privacy settings**

The Commission will publish the responses to this public consultation. You can choose whether you would like your details to be made public or to remain anonymous.

- ○ **Anonymous**
  Only organisation details are published: The type of respondent that you responded to this consultation as, the name of the organisation on whose behalf you reply as well as its transparency number, its size, its country of origin and your contribution will be published as received. Your name will not be published. Please do not include any personal data in the contribution itself if you want to remain anonymous.
- ◉ **Public**
  Organisation details and respondent details are published: The type of respondent that you responded to this consultation as, the name of the organisation on whose behalf you reply as well as its transparency number, its size, its country of origin and your contribution will be published. Your name will also be published.

☑ I agree with the personal data protection provisions

3 General questions on energy security

Energy security is the ability of an economy to ensure the balance between energy supply and energy needs across different timeframes and the ability of the system to **react to sudden shocks** (resilience) supported by the underlying energy infrastructure. Energy security also has a strong **international dimension**, given that the EU depends on energy imports from third countries.

While the fundamentals are well-functioning and well-interconnected energy markets and energy efficiency efforts, the EU has also developed a **robust energy security framework** relying on: oil emergency stocks, gas security of supply and storage, electricity risk-preparedness, offshore safety, critical infrastructure protection, and cybersecurity.

The energy crisis caused by Russia's unprovoked and unjustified military invasion of Ukraine has shown how external energy dependencies of the EU can be weaponized. It was a stark reminder of how **energy security is a key building block of a resilient, future-proof and competitive economy**.

Besides, decarbonisation and electrification will bring new energy security challenges. Increasing energy system integration increases the risk of cascading **cross-sectoral** failures, in particular between gas and electricity sectors. In 2023, natural gas notably accounted for

around 15 % of EU electricity generation, while in the future substantial volumes of electricity will be required for the production of hydrogen through electrolysis.

This section aims at collecting feedback regarding the functioning of the current EU energy security framework, and its possible future evolution.

21 How would you grade the functioning of the current EU energy security framework?

3

22 Please elaborate your choice:

The European Union's energy security framework has demonstrated notable strengths while revealing areas for improvement in recent years. Key measures, such as the Regulation on Security of Gas Supply adopted in 2017 and the recent revision of the Electricity Market Design (EMD), have significantly enhanced the resilience of the energy system and fostered cooperation among Member States. However, challenges brought by the 2022 energy crisis, ongoing geopolitical tensions, and the accelerated energy transition driven by the European Green Deal have highlighted gaps that require further attention.

The framework has prioritised cross-border and cross-commodity collaboration. For example, enhanced bidirectional gas transport capacities have strengthened the EU's gas ability to respond to supply disruptions; as critical gas-fired power plants continue to ensures continuity for electricity generation. Additionally, by making two-way Contracts for Differences (CfDs) eligible for new investments in firm and dispatchable decarbonised capacity, such as nuclear energy, the recent EMD reform further strengthened the EU's ability to ensure security of supply while advancing its decarbonisation goals.
Infrastructure development and the implementation of flexibility mechanisms have further bolstered system resilience. Initiatives such as the establishment of the European Union Agency for the Cooperation of Energy Regulators (ACER) in 2009 and risk preparedness regulations for electricity have improved coordination in managing supply disruptions and market volatility.

Despite these advancements, Europe continues to rely heavily on imported fossil fuels, leaving it vulnerable to market price volatility and supply risks. According to the latest findings in the Power Barometer 2024, the EU's oil and gas imports have been steadily decreasing over the past five years. However, the cost of these imports remains alarmingly high. In 2023 alone, fossil fuel imports accounted for 2.6% of the EU's total GDP, amounting to €451 billion.

As cold winters and supply disruptions could still result in energy shortages. This dependency underscores the urgency of developing domestic, decarbonised capacities to enhance energy independence. To address these challenges and ensure the framework’s long-term efficacy, the following areas require targeted action:
1. Robust frameworks based on long-term price signals are essential to secure investments in clean energy, ensure supply security, and drive innovation.
2. Accelerating the deployment of new decarbonised, dispatchable, and firm domestic capacity, as well as grid infrastructure is critical to achieving decarbonisation goals.
3. Greater emphasis is needed on mechanisms that incentivise investments in flexibility solutions, including storage technologies and demand-side response systems.
4. The principle of energy solidarity should be backed by concrete measures to ensure consistent implementation among Member States, especially during periods of market stress.

* 23 Which of the following objectives do you consider the most important for the EU energy security architecture?

between 1 and 5 choices

- [ ] Making the most of existing infrastructure
- [ ] Allocating the costs of energy security fairly
- [x] Enhancement of interconnections and smartening of infrastructure between Member States
- [ ] Cybersecurity
- [ ] Securing energy-related supply chains
- [ ] Strengthen the use of energy storage (electricity, gas, liquid fuels, heat) for energy security
- [x] Diversification of energy sources, suppliers and routes
- [x] Investments in domestic decarbonised energy system
- [x] Energy demand response and reduction
- [x] Resilience of energy infrastructure, e.g. to climate change
- [ ] Preparedness (assessment of risks and formalisation of emergency plans)
- [ ] Phase-out of Russian fossil fuel supply
- [ ] Physical protection of critical energy infrastructures against man-made attacks

24 Please elaborate your choice:

All objectives play a critical role in enhancing the EU's energy security, strategic autonomy, and overall competitiveness, while advancing towards a net-zero energy system. However, the following prioritised objectives are particularly vital in addressing current challenges to ensure a reliable energy security architecture fit for purpose:

1. Investments in domestic decarbonised energy system

Expanding the deployment of new decarbonised, dispatchable, and firm domestic capacity, alongside the rapid expansion of network infrastructure is key to reduce reliance on imported fossil fuels and mitigating geopolitical risks, given the imperative to significantly increase the share of electricity in the energy mix. To support this objective, it is necessary to:

- Establishing a stable regulatory and investment framework to drive capacity expansion by timely implementing the provisions recently reformed Electricity Market Design.
- Supporting investments through market-based support mechanisms like PPAs, and two-way CfDs, and capacity mechanisms where needed
- Streamlining permitting processes and fostering social acceptance of new infrastructure, ensuring the full implementation of existing provisions.

2. Diversification of energy sources, suppliers and routes

The recent energy crisis and geopolitical tensions have underscored the need for a diversified energy supply to enhance resilience. Diversification reduces reliance on any single exporting country or energy source, while mitigating exposure to external risks. Key measures for this objective include:

- Upgrading existing and expanding transmission and distribution infrastructure to support supply diversification
- Strengthening interconnections between Member States to enable resource sharing and system flexibility
- Promoting solidarity mechanisms among Member States during energy shortages

3. Resilience of energy infrastructure, e.g. to climate change
Climate-resilient and secure infrastructure is vital amid increasing risks from extreme weather and cyber threats. Measures include:
- Strengthening system reliability to ensure infrastructure can withstand frequent and severe climate impacts.
- Improving hazard modelling to accurately assess and mitigate the impact of severe weather events on national and cross-border energy systems.
- Prioritising cybersecurity risk management through measures such as the implementation of the NIS 2 Directive provisions, Network Code on Cybersecurity and incorporating non-price criteria on cybersecurity in net-zero technology auctions)

4. Accelerating energy demand response and efficiency
To bolster energy security, the EU must strengthen demand response initiatives to mitigate the occurrence of high and negative electricity prices effectively. Alongside the development of renewable and decarbonised dispatchable capacities, flexibility and storage solutions are vital to balance demand and supply while simultaneously reducing costs. To achieve this objective:
- Promote the development of market frameworks to support investments in flexible resources
- Support the roll-out of smart meters and advanced demand-side management technologies for all consumers
- Stregthen consumer participation by offering dynamic pricing schemes to incentivise consumers to adjust their electricity usage in response to price signals.
- Recognise the critical role of storage solutions in maintaining system reliability, particularly during crises or weather events such as "Dunkelflaute" scenarios, where low renewable generation coincides with high demand.

5. Developing interconnections and smartening of infrastructure between Member States
Interconnections and intelligent energy infrastructure are essential for balancing supply and demand and ensuring market integration. Key priotiries include:
- Further develop cross-border infrastructure to enhance interconnectivity allowing Member States to optimise resources during scarcity or surplus periods.
- Upgrade ageing infrastructure via anticipatory investments to proactively reinforce and expand transmission and distribution networks to handle increasing electricity flows from renewable sources and electrification in end-use sectors.
- Establish regulatory frameworks that incentivise investments in resilient and climate-adaptive grid infrastructure.
- Investing in smart grids and advanced digital solutions (such as real-time monitoring systems, AI-driven grid management tools, and smart meters) to enhance grid flexibility, efficiency, and responsiveness to shifting loads.

* 25 How do you think electrification has already impacted and can further impact EU energy security in the medium term? Was the EU energy security framework sufficient to address such impacts and if not, what improvements you think are needed?

Electrification has significantly reshaped EU energy security by reducing dependence on imported fossil fuels and facilitating the integration of decarbonised, domestic energy sources. This transition has made progress towards energy autonomy, yet it has also introduced new challenges, such as increased system complexity, interdependencies, and adequacy issues. While the EU's energy security framework has laid the groundwork for addressing these impacts, it has not fully adapted to the rapid pace and scale of electrification.

Electrification decreases the EU's reliance on imported fossil fuels, strengthening energy autonomy and resilience. The growing electrification of sectors such as transport and heating drives higher electricity demand, placing added pressure on grid capacity and requiring investment in infrastructure. The shift towards renewable energy enhances long-term energy security, but managing their intermittency requires advanced grid management solutions and energy storage capabilities.

While the EU framework has facilitated progress, it was not fully designed to address the evolving demands of rapid electrification. Key areas for improvement include:
1. To meet rising electricity demand, there is an urgent need to prioritise investments in grid expansion and the integration of smart technologies that enable efficient electricity transmission and distribution.
2. Faster permitting processes and streamlined deployment of renewable energy projects are necessary to meet growing demand and ensure a cleaner, more reliable energy supply.
3. As the electricity mix becomes more variable with greater renewable integration, robust support for storage solutions, demand-side flexibility, and other system balancing measures is critical for maintaining stability.

With increased reliance on electricity, robust cybersecurity measures and the resilience of infrastructure are essential to protect against potential vulnerabilities and threats.
The transition to electrification offers significant potential for enhancing EU energy security, but it necessitates careful planning and investment to manage the associated challenges effectively. We therefore recommend the following:
- A coordinated effort to enhance grid infrastructure, leveraging the work of ENTSOs and the new ENNOH to develop integrated network planning that accommodates electrification's demands.
- Regulatory clarity is needed to stimulate investment in flexibility solutions, such as storage and demand response. The full participation of renewable energy sources in system and balancing services should be encouraged, and the correct implementation of the Electricity Directive by all Member States (as some have yet to fully align with its requirement) is necessary to ensure this flexibility.
- Simplify the approval process and implementation of capacity mechanisms (where necessary) by using streamlined processes such as simplified or automatic approvals, provided they adhere to established standard criteria.
- While Regional Coordination Centres (RCCs) play a crucial role in optimizing transmission infrastructure use, their operational capacities should be expanded. They should have the means to conduct longer-term scenario analyses, going beyond short-term forecasts (W-1, D-1), to improve overall power adequacy planning.
- Enhancing domestic supply chains, particularly for critical materials such as lithium and cobalt, and fortifying cybersecurity measures will be essential in supporting the electrification transition.

* 26 Are there energy security risks associated with possible future electricity imports from third countries?

- (●) Yes
- ( ) No

- No opinion

27

To what extent are there energy security risks associated with possible future electricity imports from third countries?

The term third countries refers to nations outside the EU, with a wide range of geopolitical and economic contexts, leading to varying levels of energy security risks. Low-risk countries, such as Norway, Switzerland, and the UK, generally provide stable governance and strong alignment with EU energy policies, offering a reliable source of electricity. On the other hand, higher-risk countries, like Russia, pose significant vulnerabilities due to geopolitical tensions, policy divergences, and unreliable supply channels.
The EU's energy security is primarily supported by internal generation and intra-EU trade, which is well-integrated across Member States and includes production from and transit via very well interconnected non-EU neighbouring countries like Norway, Switzerland, and the UK.

The risks tied to imports could increase in the future due to several factors: geopolitical tensions, diverging regulatory standards (e.g., carbon pricing or environmental requirements), and reliability issues in exporting countries. For example, market coupling with the UK has facilitated efficient electricity flows and price convergence, contributing positively to energy security. However, the UK's departure from the EU's internal energy market has introduced uncertainties regarding the price coupling mechanism, which must be urgently addressed in line with the requirements of the TCA. Additionally, disparities in carbon pricing or the application of the CBAM could distort trade and impact investments. To address these challenges, continued cooperation within frameworks like the Trade and Cooperation Agreement is crucial, particularly through negotiations to link the EU and UK ETS, as outlined in the TCA. Eurelectric is actively advocating for the linkage of the EU and UK ETS by COP30.

Strategic diversification of energy sources, including imports, enhances resilience against supply shocks but must avoid overdependence on specific suppliers or routes. Well-connected, aligned nations like the UK, Norway, and Switzerland could be categorised separately to facilitate deeper cooperation while recognising their distinct status.

* 28 Are there improvements to the EU energy security framework that are needed to prepare for the ongoing transition (towards e.g., more electrified, renewable-based and integrated EU energy system)?

- Yes
- No
- No opinion

* 29 Can you please elaborate?

Building a resilient electricity system requires a balanced approach, integrating intermittent renewables with dispatchable low-carbon assets, robust interconnections, and diverse storage solutions like pumped hydro and batteries. This combination is vital for maintaining affordability, security, and system stability.

The growing integration of decentralised renewable installations introduces new vulnerabilities. While enhancing energy diversity, these systems also collect sensitive data and serve as critical infrastructure, making them attractive targets for cyberattacks that could have serious implications for national security and public safety. Conversely, centralised systems also face significant risks, as they depend on a limited number of key generation sites and transmission nodes. Additionally, global supply chains heighten exposure to external risks that could compromise system reliability.

Therefore, to strengthen the EU's energy security framework in light of these challenges, we recommend the following actions, we would recommend the following actions:
- Accelerating the deployment of new decarbonised, dispatchable, and firm domestic capacity, alongside the rapid expansion of network infrastructure
- Strengthen European power adequacy assessments (2022–2035), with particular focus on addressing immediate risks (2024–2025).
- Expand RCCs' operational capabilities for long-term scenario analysis, moving beyond the current W-1 and D-1 time scales to better anticipate and mitigate risks.
- Set minimum cybersecurity standards and reporting obligations tailored to the size and capabilities of each actor to protect critical infrastructure – as outlined by the NIS 2 Directive.
- Integrate cybersecurity criteria in auctions for net-zero technologies, ensuring security is embedded in the deployment of future energy assets.
- Invest in strengthening electricity grids, developing interconnections, and integrating advanced digital solutions to enhance resilience and adaptability.
- Simplify the approval process and implementation of capacity mechanisms (where necessary) by using streamlined processes such as simplified or automatic approvals, provided they adhere to established standard criteria.

* 30

What role can decarbonised and renewable hydrogen, including in the form of liquid fuels, play for future EU energy security?

Renewable and low-carbon hydrogen, produced through water electrolysis, is essential for decarbonising hard-to-electrify sectors . It can replace the fossil-based hydrogen consumed annually in EU refineries, chemical, and fertiliser industries and enable clean steel production. As outlined in the RePowerEU plan, hydrogen will also address long-haul road transport, aviation, and maritime needs, aligning with the ReFuelEU Aviation and FuelEU Maritime regulations.

Additionally, hydrogen contributes to energy system resilience. Seasonal hydrogen storage offers flexibility in electricity systems with high shares of variable renewables.

* 31 What are the potential risks to hydrogen supply security and to what extent should they be mitigated? How do you see the role of hydrogen imports in the future? Should the EU energy security framework play a role?

The EU must carefully assess hydrogen imports, weighing the risks & benefits and try to diversify suppliers. Europe should focus as well on developing domestic clean hydrogen supplies to further increase its energy independence. For this purpose, the focus should be on eliminating barriers to investment in electricity grids that connect generation installations and electrolysers.

For industrial processes like steelmaking and fertilizers, hydrogen must be consistently available. A diversification strategy, incorporating renewable and low-carbon hydrogen, will ensure a more affordable and reliable supply. For balancing the electricity system, it will be crucial to have clean hydrogen as a tool to activate flexibility, contributing to Security of Supply.

* 32 Do you think that the current EU energy security framework has sufficiently taken into account climate risks, such as energy disruptions due to heat and drought or damage to energy infrastructure due to extreme weather events?

- ○ Yes
- ◉ No
- ○ No opinion

33 Please provide concrete examples and/or suggestions how this can be achieved.

The increasing frequency of natural disasters and extreme weather events underscores the urgent need for more resilient energy networks to ensure a secure and reliable electricity supply.

To address these challenges, it is crucial to develop comprehensive resilience plans that guarantee electricity availability during extreme weather events such as floods, storms, and heavy snowfalls. One such measure is the replacement of overhead power lines with underground cables, which are more resistant to weather-related disruptions and can improve system reliability.

At the national level, regulators, infrastructure operators, and asset owners—particularly those dependent on weather-sensitive energy sources—should work together to integrate climate adaptation strategies into long-term investment and infrastructure planning. This collaboration will help future-proof critical electricity infrastructure and enable it to withstand the increasing climate risks.

Furthermore, regulators and policymakers should consider establishing a “Resilience Incentive Mechanism,” which would incentivise utilities to implement climate-adaptive measures. These measures could include physical system hardening, operational improvements, enhanced recovery planning, and capacity-building initiatives. By promoting these measures, we can improve the overall resilience of the energy system and ensure its ability to cope with the impacts of climate change.

* 34 Liquified Natural Gas (LNG) has become an increasingly important gas supply source (represents now ca. 50% of EU imports). Do you see any risks associated with the increased reliance on the global LNG market?

- ◉ Yes
- ○ No
- ○ No opinion

35 Which concrete risks do you see (e.g., reliance on unstable democratic countries, exposure to global markets fluctuations, infrastructure bottlenecks or oversize, etc.)? How should they be addressed?

Even more with our dependence on LNG, Europe remains highly exposed to fluctuations in global gas markets, driven by factors such as growth and energy policies in Asia, geopolitical tensions, and the volatility of the US oil and gas markets. This exposure to external factors results in higher volatility in energy prices, which has significant consequences for downstream customers, who may face unpredictable costs and increased financial pressure.

However, an increased reliance on higher-emitting sources, particularly US gas, raises concerns about Europe's carbon footprint. In response, faster decarbonisation can be achieved by reducing gas consumption and increase the electrification share of our society through domestic clean energy sources. This shift would not only help to reduce emissions but also align with Europe's broader climate goals.

* 36 Are there specific energy security measures in other countries (US, China, Japan, Canada, Switzerland, UK, etc.) that you would like to see mirrored in the EU's framework?

- (●) Yes
- ( ) No
- ( ) No opinion

37 Which measures would you like to see mirrored?

In the case of well-interconnected non-EU countries such as the UK, Norway and Switzerland, we observe a significant alignment of their energy security measures with those of the EU. This alignment should be further reflected in the EU's energy security framework. For example, the UK plays a crucial role in the development of offshore wind parks, which is pivotal for both national and EU-wide decarbonisation efforts. Similarly, Switzerland acts as an essential electricity hub within the synchronous grid of continental Europe, supporting grid stability and supply security across borders.

Strengthening energy security cooperation with these countries is therefore crucial for ensuring a robust and resilient energy supply in Europe. Such collaboration is becoming increasingly important as the EU faces challenges like diversifying gas supplies away from Russian sources, accelerating decarbonisation, adapting to climate change, and driving the electrification of the economy.

* 38 Would you see enhancing international cooperation with close partners as beneficial for EU energy security?

- (●) Yes
- ( ) No
- ( ) No opinion

39 Please elaborate, if appropriate:

For the decarbonisation of the power sector, it is essential to consider both the carbon intensity of energy mixes and national environmental policies when strengthening energy ties with third countries. Reducing the EU's dependence on Russian fossil fuels must not lead to new dependencies on other nations with higher carbon footprints or less reliable energy practices.

Energy security cooperation with neighbouring countries, especially Energy Community Contracting Parties, is crucial. However, this should also encompass highly interconnected countries such as Switzerland, the UK, and Norway. Regardless of further integration into the EU's Internal Energy Market, these countries—along with the EU—should collaborate on energy security matters to mutual benefit. This principle was emphasised in the European Parliament resolution of 4 October 2023 on EU-Switzerland relations, which stressed the importance of EU-Switzerland cooperation in the electricity sector:
"36. Stresses that in the electricity sector, grid stability and the security of supply and transit depend on close cooperation between the EU and Switzerland; notes the interconnection of Swiss, German, Italian, Austrian, and French power grids; remains concerned that excluding Switzerland's energy industry poses systemic risks for the synchronous grid of continental Europe…"

For the UK, it is essential to address the challenges arising from Brexit, particularly with regard to market coupling and the implementation of the Carbon Border Adjustment Mechanism (CBAM). While market coupling is crucial for ensuring efficient cross-border electricity flows, the UK's departure from the EU's Internal Energy Market, and failure to implement an enduring solution, has introduced uncertainties regarding access to market coupling mechanisms, which could impact the stability of the electricity market. Moreover, the potential application of CBAM on UK exports may strain energy trade relations, particularly in the power sector, and could lead to increased costs for both sides.

Therefore, any assessment of energy security should not only focus on the Energy Community Contracting Parties but also encompass key interconnected countries like Switzerland, the UK, and Norway. This will ensure a comprehensive, resilient, and effective energy security strategy for Europe.

* 40 What is the additional value for EU energy security resulting from EU legislation, compared to what could reasonably have been achieved (in terms of effectiveness and efficiency) by Member States acting at national level?

The additional value for EU energy security resulting from EU legislation, compared to national actions by Member States, is substantial:
- EU legislation establishes a consistent set of rules for security of supply, congestion management, and network access. A harmonized framework enables seamless cross-border energy flows, ensuring greater efficiency and harmonisation across Member State.
- EU-level coordination facilitates a collective response to energy crises, allowing Member States to support one another in times of need. This solidarity enhances overall resilience and strengthens the Union's ability to tackle energy security threats.
- A clear and consistent regulatory framework provides greater investment certainty, encouraging infrastructure and renewable energy projects. This is more effective than fragmented national approaches, which can create barriers to investment and project development.
- EU legislation promotes the diversification of energy sources, reducing dependency on single suppliers and enhancing resilience, which would be harder to achieve through national initiatives alone.
- Collaborative research and innovation, supported at the EU level, drives advancements in energy technologies. This contributes to both improving energy security and enhancing system efficiency.
- EU legislation helps optimise infrastructure costs by promoting shared benefits and ensuring a fair distribution of costs across Member States, resulting in more cost-effective solutions for all involved.

In summary, EU legislation enhances the effectiveness and efficiency of energy security efforts, enabling collective action that would be difficult to achieve through isolated national strategies.

* 41 Has the EU level action and coordination become more important or less important for energy security due to recent developments, e.g. due to the rising importance of LNG, the enhanced cross-border infrastructure and the joint phase out of Russian gas, or other?

- (●) More important
- ( ) Equally important
- ( ) Less important
- ( ) No opinion

42 Please elaborate:

EU-level action and coordination are increasingly crucial to achieving a truly integrated Energy Union for enhanced energy security, driven by recent developments:
- The collective effort to reduce reliance on Russian gas underscores the need for a unified, strategic approach to ensure a secure and diversified supply.
- As the EU diversifies its energy sources, LNG has become a vital component of supply. EU coordination must streamline infrastructure development where necessary, while avoiding lock-in mechanisms and stranded assets, and ensuring equitable access to resources across Member States.
- EU coordination facilitates the efficient development of cross-border infrastructure and the integration of electricity markets, enhancing overall system resilience.
- EU-level action is essential for harmonising regulations, promoting best practices, and coordinating investments to integrate diverse energy sources while maintaining grid stability and supporting expansion.
- EU coordination ensures that energy security measures are aligned with sustainability goals, advancing the transition to a decarbonised energy system.

However, there are important considerations:
- Retrospective legislative or regulatory changes that destabilise the regulatory framework could undermine investor confidence and jeopardise energy security. For example, extending or reinforcing inframarginal rent caps is no longer justified following the 2022 energy price crisis.

* 43 Has the EU’s energy security policy tackled the needs of EU citizens and/or businesses (e.g., in terms of energy availability, affordability, etc)? Will it continue to be relevant for them in the next decade?

The EU's energy security policy has made notable progress in addressing the needs of both citizens and businesses, particularly in terms of energy availability and affordability. By focusing on diversifying energy sources and enhancing infrastructure, the policy has ensured a more reliable and stable energy supply.

Key initiatives, such as the development of cross-border connections and increased LNG imports, have strengthened energy availability. Efforts to reduce dependency on Russian gas and mitigate exposure to volatile fossil fuel markets have also played a critical role in stabilising prices. This includes measures like the REPowerEU plan and the recent Electricity Market Design (EMD) reform, which promote long-term contracts (PPAs and CfDs), enhance forward market liquidity, and boost flexibility services such as demand-response. These reforms help shield investors, energy generators, and consumers from short-term price volatility.

However, challenges remain, particularly regarding high levies and taxes, which continue to impact international competitiveness and public support for the energy transition. In the mid-term, affordability must be prioritised to ensure that both businesses remain competitive and the public maintains support for the energy transition.

Key actions to address these challenges include:
- Aligning energy taxes with the goals of the energy transition and affordability. It is critical to avoid policies that disproportionately burden households and energy-intensive industries, particularly those exposed to international competition. The emphasis should be on incentivising the shift to low-carbon and renewable energy, while ensuring that the costs are distributed fairly.
- A more detailed and updated outlook (2022-2035), with a specific focus on the near-term (2024-2025), will be crucial. This includes bolstering Regional Coordination Centres (RCCs) with additional operational capacity to enable them to conduct longer-term scenario analyses beyond just the W-1 and D-1 time frames.
- The uptake of PPAs rose by 40% in 2023 compared to the previous year, but their adoption remains uneven across Member States and concentrated in specific sectors such as IT and heavy industry. Practical solutions are needed to further expand these markets and ensure broader participation.
- Ensuring consistent and effective implementation of the Electricity Market Design across all Member States will be critical for achieving a more integrated and resilient electricity market.
- Expanding the role of demand response and renewable energy sources in system balancing and ancillary services to enhance grid flexibility and reliability.
- Developing clear business cases to support the scaling up of flexibility services will be necessary for improving the system's ability to integrate intermittent renewable energy and enhance resilience.

* 44 The European Commission's Joint Research Centre identified 14 megatrends (see figure below), which are long-term driving forces that are most likely to have a global impact in the future. For which one(s) of these megatrends do you think the EU Energy Security architecture is the least prepared and why? Please explain.

The EU Energy Security architecture is likely least prepared for the following megatrends identified by the European Commission's Joint Research Centre:

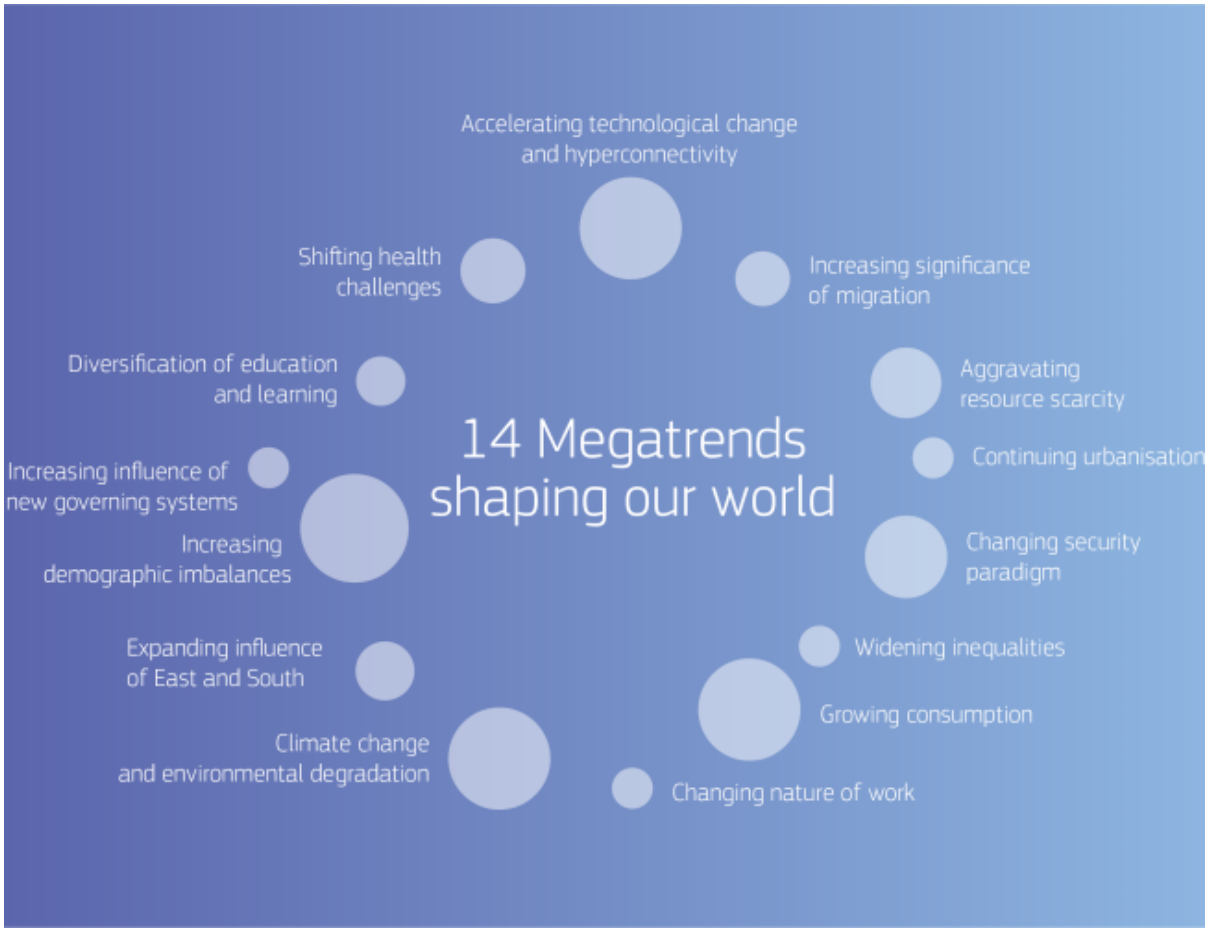
1. Accelerating technological change and hypoconnectivity: while the EU is investing in emerging technologies, the rapid pace of innovation in energy generation, storage, and consumption (e.g., smart grids, AI, data centres, and advanced batteries) presents a challenge. The current regulatory framework may struggle to keep pace with these innovations, which can impede the necessary agility to integrate them into existing energy systems. This lag can create vulnerabilities, potentially undermining the security and resilience of the energy infrastructure.

2. Climate change and environmental degradation: the EU has robust climate policies in place, yet the evolving nature of climate risks requires an adaptation of the energy security framework. The increasing frequency and intensity of extreme weather events—such as floods, storms, heatwaves, and droughts—are beginning to strain energy infrastructure. The current architecture may not be sufficiently resilient to these climate-related disruptions. There is an urgent need to strengthen strategies for infrastructure adaptation, disaster response, and long-term resilience planning to protect energy systems from the impacts of a changing climate.

3. Increasing influence of new governing systems: as global geopolitical alliances shift, the EU's energy security framework may not fully account for the complexities of these new dynamics. The EU's efforts to diversify energy sources are increasingly influenced by geopolitical considerations, which can introduce uncertainties in energy supply chains. The current energy security system needs to enhance its capacity for risk assessment and develop proactive measures to address these risks, ensuring a stable and resilient energy supply amidst geopolitical challenges and external pressures.

4. Aggravating resource scarcity: with growing competition for critical natural resources, including rare earth metals and minerals essential for modern energy technologies, the EU faces increasing challenges in securing access to these materials. The current energy security framework does not adequately address the need for sustainable resource sourcing, recycling, and securing long-term access to these vital materials. As the EU continues to drive forward the energy transition, ensuring a stable supply of these materials will be crucial for maintaining energy independence and technological competitiveness.

In summary, while the EU Energy Security architecture has strengths, it may be least prepared to tackle the rapid changes brought by technological advancements, climate impacts, geopolitical dynamics, and resource scarcity. To ensure long-term resilience, the EU must adopt proactive strategies, enhance flexibility within the regulatory framework, and strengthen the capacity to respond to these emerging megatrends.



45 Do you have anything to add regarding the general functioning and/or the future orientation of EU energy security policy?

The future of the EU's energy security policy should prioritise several key areas to enhance its functioning and long-term resilience:

1. Greater focus on flexibility: with the increasing share of renewable energy, ensuring system flexibility through demand-side response, storage solutions, and grid modernisation will be essential to balance supply and demand. This includes effective implementation of the EMD reform, increasing participation of demand response and renewable energies in system and balancing services, and integrating more dynamic flexibility solutions to cope with variable generation patterns.

2. Stronger and smarter strategic autonomy: reducing reliance on imports, particularly of critical energy-related materials and technologies, by fostering EU-based supply chains and innovation is key for greater energy independence.

3. Cross-sectoral integration: to achieve decarbonisation and energy security, the EU must take a more integrated approach that coordinates energy policy with other sectors, such as transport and industry. This holistic approach will ensure the alignment of various energy carriers—power, gas, hydrogen, and heat—across sectors, enabling a smoother transition to a clean, resilient energy system.

4. Updated governance and coordination: the increasing complexity of the EU's energy security policy necessitates addressing cross-sectoral regulations, emerging risks, and varying responsibilities across entities. More transparency is needed with clearly defined responsibilities, a clear allocation of actions (local, regional, EU), and established timeframes for decision-making (short, medium, and long-term) to ensure effective governance.

5. Enhanced cybersecurity: As digitalisation increases, protecting energy infrastructure from cyber threats must remain a priority, with continued investment in securing grid systems and smart technologies.

6. Investments in smart grids and digital infrastructure: Significant investments will be needed for the digitalization and modernization of distribution n networks. The deployment of smart grids and the integration of ICT solutions will enable effective monitoring, analysis, and forecasting of grid states, while supporting flexibility services. This requires careful analysis of funding sources to avoid potential financial risks that could hinder successful implementation.

In summary, the EU's energy security policy must evolve to address the growing complexity of energy systems, technological advances, and geopolitical uncertainties. By prioritising flexibility, strategic autonomy, cross-sectoral integration, cybersecurity, and clear governance, the EU can build a more resilient and sustainable energy future.

46 Are there any papers, reports or other documents that you would like to upload?

Only files of the type pdf,txt,doc,docx,odt,rtf are allowed

4 Specific questions on energy security framework

47 To what extent do you agree with the following statements? "*EU-level action has...*

	1 (Strongly disagree)	2 (Disagree)	3 (Neither agree, nor disagree)	4 (Agree)	5 (Strongly agree)
... benefitted preparedness and security of supply in the energy sector"	○	○	○	◉	○
... increased coordination and transparency between Member States"	○	○	○	◉	○
... reduced distortions of the market and spill-over effects in neighbouring countries"	○	○	◉	○	○

48 Are there any inconsistencies or gaps between the Gas Security of Supply and Storage Regulation and the Electricity Risk Preparedness Regulation that emerged in past years, and which hinder the achievement of the respective objectives of these Regulations?

- ◉ Yes
- ○ No
- ○ No opinion

49 How could the coherence between the previously mentioned Regulations be concretely improved in the future and the identified gaps filled?

750 character(s) maximum

Gaps between the Gas Security of Supply and Electricity Risk Preparedness Regulations hinder a unified approach to energy resilience. Key issues include limited cross-sector integration, which misses flexibility needs in electricity critical for renewable growth, and sector-specific governance that hampers coordinated responses to hybrid threats (e.g., cyber, climate impacts, cross-commodity flexibility supply). Additionally, both frameworks lack real-time risk response mechanisms and oversight on supply chain dependencies. Eurelectric recommends integrated and coordinated risk assessments between relevant stakeholders (e.g. ENTSOs, ENNOH), resilience-focused frameworks, and stronger governance for cohesive, cross-sector risk mitigation.

50 Are there strategies in place in your industry or country to mitigate the impact of an electricity crisis on gas supply, and vice versa?

- ○ Yes
- ○ No
- ◉ No opinion

51 Please elaborate on the strategies in place:

750 character(s) maximum

These strategies differ across countries, reflecting their unique energy systems.
For instance, the French emergency gas plan mandates coordination between gas and electricity systems; gas TSOs cannot enforce firm load shedding of gas power plants without electricity TSO authorisation.

52 Are the roles and responsibilities, as well as the mechanisms to coordinate between electricity and gas sectors, effective during crises?

- ○ Yes
- ◉ No
- ○ No opinion

53 Why are they not effective?

750 character(s) maximum

The coordination between the electricity and gas sectors is currently limited and often ineffective during crises. The Gas Security of Supply and Electricity Risk Preparedness Regulations treat these sectors independently, hindering real-time, cross-sectoral responses. Without an integrated governance framework, critical interdependencies are not adequately managed during disruptions or scarcity. Eurelectric recommends strengthening crisis management by leveraging existing bodies like the Electricity Coordination Group and Gas Coordination Group. These groups should address cross-border challenges while respecting national competencies, ensuring a more cohesive and effective response to any supply disruption.

54 Electricity and gas markets have become increasingly intertwined. Do you see the following as potential areas where regulatory synergies could be sought?

	Yes	No	No opinion
Risk assessments and scenarios	◉	○	○
Preventive action/risk preparedness plans	◉	○	○
Definitions and levels of crises	◉	○	○
Crisis management procedures	○	○	◉
Protected customers / Special protection against disconnection	◉	○	○

Storage measures for energy security (electricity, gases, liquid fuels, heat)	◉	○	○
Regional cooperation	◉	○	○
Solidarity / Assistance	◉	○	○

55 Please elaborate, if appropriate:

750 character(s) maximum

The interdependencies between electricity and gas markets demand regulatory synergies across key risk areas, including aligned risk assessments and scenarios to address cross-sector threats like gas-fired power' s role in electricity generation. While national-level management is vital for preventive actions and crisis management, harmonised crisis definitions and protected customer levels are needed to avoid conflicts in consumer protection. Coordinated EU action is essential. Regional cooperation and energy storage measures can enhance security during peak demand, while unified solidarity mechanisms ensure efficient cross-border support in crises.

56 Are there other areas, not identified in the table above, where synergies should be sought?

750 character(s) maximum

On power resource adequacy, we support enhanced cooperation through an updated European outlook (2022–2035), focusing on 2024–2025, to assess the system's ability to balance power injections and withdrawals. Strengthening the governance framework for ERAA, TYNDP, NDP, and flexibility needs assessment is key, with improved stakeholder engagement and collaboration with Member States and DSOs. We propose assigning an EU coordinator role to the European Commission or ACER to clarify responsibilities and establish a joint electricity-gas coordination group focused on cross-border issues, respecting national competencies. Strengthening RCCs will enhance market capacity optimisation, operational security, and long-term scenario planning.

57 Do you see reasons and ways to bring the energy security frameworks for gas storage and wider energy storage closer?

- ◉ Yes
- ○ No

58 Can you provide concrete examples?

750 character(s) maximum

Electricity storage, critical for short-term flexibility, complements gas infrastructure, while assets like gas storage, decarbonised thermal plants, and hydrogen infrastructure address seasonal needs beyond electricity's capacity. Initiatives like MIBEL improve gas-electricity market coordination, and projects like HyDeploy explore dual-function storage for hydrogen and batteries.

59 What are the most relevant cross-sectoral or cascading risks affecting gas and electricity that should be addressed in the future (e.g. shortage of critical gas

volumes for power generation, power outages affecting turbines in the gas system or boilers, or power outages affecting production of renewable/low-carbon gases)?

750 character(s) maximum

Key risks include:
- A shortage of gas volumes can trigger significant price volatility in short-term electricity markets, impacting both consumers and producers.
- The lack of investment security for peak-load power plants poses a major risk to grid reliability, highlighting the need for stronger support and incentives for these assets.
- As biogas, hydrogen, and derivatives remain limited resources, strategic management of their supply and demand will be essential to avoid disruption in energy systems and maintain decarbonisation goals.

60 How could these risks be tackled in the future?

750 character(s) maximum

- Diversify gas supply sources and routes to mitigate dependence on single points of failure and enhance supply security.
- Develop joint gas-electricity risk assessments to coordinate infrastructure investments and boost resilience.
- Prioritise energy storage (e.g., batteries, pumped hydro) and demand-side response to ensure backup during outages and reduce gas reliance during peaks.
- Strengthen cybersecurity across sectors to protect critical infrastructure from disruptions.
- Promote cross-sector collaboration and information sharing through regulations, fostering a more resilient and adaptive integrated energy system.

61 To what extent are risks associated with the further digitalization and smartening of energy networks, i.e., cybersecurity risks, sufficiently covered in terms of ensuring security of supply? Do you see a need for improvements to the EU energy security framework to tackle these risks?

750 character(s) maximum

Given the recent efforts by the European Commission to improve the cybersecurity framework, including the NIS2 directive, NCCS, REC, Net Zero Industry Act, and European Common Criteria-based Cybersecurity Certification Scheme, it is important to first focus on the effective implementation and transposition of these regulations. After their implementation, a comprehensive evaluation of their feasibility and efficiency should be carried out before proposing further improvements.

62 Do you see any additional or increasing role for demand-side measures in the future EU energy security architecture, on top of the already existing framework under the recently adopted Electricity Market Design?

- (●) Yes
- ( ) No
- ( ) No opinion

63 Can you provide concrete examples that would allow to better recognize and leverage demand-side policies?

750 character(s) maximum

- Ensure full implementation of the Electricity Directive across all Member States (as some have yet to fully comply with this requirement) to establish consistent demand-side measures.
- Promote dynamic pricing models to encourage off-peak energy use, balancing demand and improving grid reliability.
- Enable consumers to receive payments for reducing consumption during peak periods, enhancing flexibility.
- Support widespread adoption of advanced metering infrastructure to allow real-time usage adjustments.
- Empower local energy cooperatives to optimise community-level demand.
- Provide incentives for energy-efficient appliances and building retrofitting to reduce demand and enhance grid stability.

64 Please explain:

750 character(s) maximum

These measures foster a more flexible and resilient energy system by shifting consumption patterns, reducing peak demand, and enhancing grid reliability. By incentivising consumer participation through dynamic pricing and financial rewards, grid operators can more effectively balance supply and demand. Furthermore, enabling local cooperatives and incentivising energy efficiency contribute to long-term system stability goals.

65 Are there any papers, reports or other documents on these issues that you would like to upload?

Only files of the type pdf,txt,doc,docx,odt,rtf are allowed

5 Specific question on Gas Security of Supply

Gas security of supply (SoS) is the ability of the gas system to guarantee the supply of gas to customers with a clearly established level of performance. At EU level, safeguards are introduced by the **Gas Security of Supply Regulation (EU) 2017/1938**, amended in 2022 by the Gas Storage Regulation and the Gas Package adopted in 2024. It relies on:

- Improved **information exchanges** and transparency via e.g. the **Gas Coordination Group**.
- EU-wide **simulations** and **risks assessments** conducted at European, regional and national levels.
- A framework for national **Preventive Action Plans** and **Emergency Plans**, to prevent and react to risks and crises.
- **Crisis management** procedures and **solidarity** safeguards in emergencies, in particular to **"protected customers"** (e.g. households).
- A policy to ensure a filling of gas **storage.**

The Commission published on 5 October 2023 a report reviewing the Regulation (COM(2023)

572). Following the most recent amendments, the Commission has to prepare a report on the implementation of the storage provisions and of the solidarity provisions of the Hydrogen & Decarbonised Gas Package by 28 February 2025. Besides informing the fitness check on the energy security framework, this public consultation intends to provide input also for that report.

A. Backward-looking

1) Effectiveness

66 Regulation (EU) 2017/1938 pursues several objectives. How would you grade its performance on the following objectives?

	1 (Very poor)	2 (Poor)	3 (Average)	4 (Good)	5 (Excellent)
Secure an adequate level of preparedness in Europe for gas supply disruptions, e.g. through assessing risks and sufficient infrastructure	○	○	○	◉	○
Ensure that all necessary measures are taken to safeguard an uninterrupted supply of gas, in particular to protected customers	○	○	◉	○	○
Enhance regional and EU-wide cooperation, including in times of supply emergencies	○	○	○	◉	○

67 Have you experienced barriers or difficulties in implementing and enforcing the provisions of the Regulation?

- ○ Yes
- ○ No
- ◉ No opinion

68 Which provisions proved difficult to implement and why?

750 character(s) maximum

The default solidarity provisions introduced in the update of the SoS Regulation 2017/1938 are not enough to operationalize the solidarity exchanges between member states, since they do not include the operational details or the detailed legal clauses.

The uncoordinated, often non-market-based measures among Member-States to implement the 90 % storage filling target (cf. emergency Regulation EU 2022/1032), has created a major and long-lasting disruption to the functioning of the internal gas market (cf. peak prices reached end of August 2022), thus very detrimental to consumers. More coordinated approaches, via the Gas Coordination Group could be implemented instead.

69 Have there been any unexpected and/or unintended effects caused by the implementation of this Regulation, which hindered progress towards these objectives?

- (●) Yes
- ( ) No
- ( ) No opinion

70 Which effects were there and what parts of the Regulation caused these effects?

750 character(s) maximum

The – voluntary – reduction of the demand (mandatory in case of gas SoS emergency situation) stemming from the Regulation EU 2023/1369 was beneficial but should not lead to a forced, structural reduction and delocalisation of the industry out of Europe. Moreover, gas-fired power plants should be considered as a special category of sensitive consumers since their interruption can affect the entire power system in scarcity periods.

71 To what extent do you agree that the following specific provisions have been effective in ensuring preparedness, security of supply and/or resilience?

	1 (Not effective at all)	2 (Marginally effective)	3 (Moderately effective)	4 (Effective)	5 (Very effective)
Gas Coordination Group	( )	( )	( )	(●)	( )
Infrastructure standard and bi-directional capacities	( )	( )	( )	(●)	( )

Supply standard and protected customers	○	○	○	◉	○
Common Risk Assessments	○	○	○	◉	○
National Risk Assessments	○	○	◉	○	○
Preventive Action Plans and Emergency Plans	○	○	◉	○	○
Crisis management	○	◉	○	○	○
Crisis levels	○	○	○	◉	○
Solidarity provisions	○	◉	○	○	○
Information exchange requirements under Article 14	○	◉	○	○	○
Storage targets	○	○	○	◉	○
Annual storage trajectories set by the Commission	○	◉	○	○	○
Storage system operators' certification	○	○	◉	○	○
Demand reduction and EU-alert	○	○	◉	○	○

Cooperation with Energy Community Contracting Parties	○	○	○	◉	○

72 Do you wish to elaborate on any of the points above? If so, please indicate to which point(s) you are referring to.

750 character(s) maximum

The SoS Regulation has undoubtedly improved the security of supply, albeit at a cost. The introduction of storage filling targets and trajectories has created obligations to store gas, leading to concentrated demand during injection periods and additional constraints on withdrawals during the winter. These dynamics can disrupt market balance and efficiency.
Similarly, the requirement for strategic stockholding in some Member States has reduced capacities available for commercial use, complicating price volatility management. Such measures should be carefully reassessed to avoid unintended consequences.

73 What do you consider the main strengths and weaknesses of the Storage Regulation, in particular the 90% storage targets, the trajectories, burden sharing, the certification procedure, the sunset clause in 2025 of the storage provisions?

750 character(s) maximum

Main strengths:
1. The target sets a clear and ambitious benchmark for Member States, strengthening resilience and preparedness against supply disruptions.
2. The equitable distribution of responsibilities among Member States promotes solidarity and collective action in addressing supply challenges.

Main weaknesses:
1. The obligation to fill storage at any cost, especially during the summer of 2022, contributed to energy price spikes, straining markets and consumers.
2. Interim filling trajectories, on top of the filling targets at end of the summer period, add operational rigidity, limiting the flexibility of storage assets to respond efficiently to dynamic market conditions and limiting the flexibility potential of storage.

2) Efficiency

74 What were the costs and benefits of the implementation of the Gas SoS Regulation (including the storage and solidarity amendments introduced by the Storage Regulation and the Hydrogen and Decarbonised Gas Package) for your organization? If possible, please provide both quantitative and qualitative elements.

750 character(s) maximum

75 To what extent have the following provisions created **disproportionate** burden (e.g. administrative, financial or other burden)?

	1 (Negligible)	2 (Low)	3 (Average)	4 (High)	5 (Very high)
Gas Coordination Group	○	◉	○	○	○
Infrastructure standard and bi-directional capacities	○	◉	○	○	○
Supply standard and protected customers	○	◉	○	○	○
Common Risk Assessments	○	◉	○	○	○
National Risk Assessments	○	◉	○	○	○
Preventive Action Plans and Emergency Plans	○	◉	○	○	○
Crisis management	○	○	◉	○	○
Crisis levels	○	○	◉	○	○
Solidarity provisions	○	◉	○	○	○
Information exchange requirements under Article 14	○	◉	○	○	○
Storage targets	○	○	◉	○	○
Annual storage trajectories set by the Commission	○	○	○	◉	○
Storage system operators' certification	○	○	◉	○	○
Demand reduction and EU-alert	○	◉	○	○	○
Cooperation with Energy Community Contracting Parties	○	○	◉	○	○

76 Do you wish to elaborate on any of the points above? If so, please indicate to which point(s) you are referring to.

750 character(s) maximum

Robust data management and reporting requirements can strain administrative resources, particularly for organisations with limited capacity. To minimise this burden:

- Reporting should not overlap between national and EU levels, ensuring streamlined processes.
- Obligations must focus strictly on necessary and useful information to prevent inefficiencies.
- Disproportionate reporting requirements can hinder both authorities and market participants, especially during crises, impacting operational effectiveness.

77 How can the Regulation's reporting and monitoring requirements be simplified? Have the current reporting and monitoring requirements or frequency avoided unnecessary duplication or overlapping responsibilities (e.g. regarding risk assessments and plans)?

750 character(s) maximum

The regulatory framework on reporting aspects should evolve to reduce administrative burden and facilitate consistency across Member States. Monitoring and reporting obligations should be introduced only when this is effectively useful and necessary to avoid administrative burden (e.g. the reporting obligation of gas supply Contracts of more than 5 TWh per year). On preventive plans, the focus should be limited to the necessary data on physical flows for performing the risk assessment.

3) Relevance

78 To what extent were the provisions of the Gas Security of Supply Regulation relevant in addressing the gas supply challenges and disruptions experienced by the EU since its implementation? Please elaborate your answer, e.g. by making explicit reference to the 2022/2023 energy crisis.

750 character(s) maximum

The regulation's emphasis on risk assessments and preventive action plans helped Member States identify vulnerabilities and strategies to mitigate reduced gas supply impacts.

Temporary demand reduction measures under Regulation 2022/1369 (mandatory in emergencies) proved crucial for managing disruption risks.

Mandated storage levels created a buffer, enabling gas stockpiling ahead of winter and market stabilisation. However, uneven implementation across Member States sometimes undermined these measures, highlighting the need for greater harmonisation to enhance resilience across the EU.

79 How well adapted is the Gas Security of Supply Regulation to technological or scientific progress, and to the environmental/climatic challenges that EU will face?

750 character(s) maximum

The SoS Regulation should primarily focus on changes that may have an effective impact on physical flow of gas (e.g. changes of geopolitical factors) rather than on specific technical advancements or environmental challenges.

While the decarbonisation goals of the EU are now clearly set and demand for natural gas is expected to dramatically drop in the future, security of supply considerations remain unchanged throughout this process. Scaling-up pf renewable and low-carbon gases in the EU gas networks will strengthen security of supply but this requires no additional amendments to the Regulation which should still focus on ensuring EU cooperation for SoS crisis management purposes.

4) Coherence

80 To what extent is the Gas Security of Supply Regulation aligned with other EU policy goals?

750 character(s) maximum

81 Did some provisions within the Regulation prove to be inconsistent with one another?

- Yes
- (●) No
- No opinion

82 Please give concrete examples:

750 character(s) maximum

While not necessarily inconsistent, both the Common Risk Assessment and National Risk Assessment processes require similar data and methodologies. This duplication adds administrative burdens and complicates compliance efforts, ultimately hindering effective risk management. Simplifying and streamlining these processes would improve efficiency and reduce unnecessary complexity.

5) EU added value

83 The 2016 Commission's proposal for the Gas Security of Supply Regulation argued that the necessity of EU action was based on the following:

- "The increasing interconnection of the EU gas markets and the 'corridor approach' for enabling the reverse flows on gas interconnectors call for coordinated measures";

- “Without such coordination, national security of supply measures are likely to adversely affect other Member States or the security of supply at EU level”;
- “The risk of a major disruption of gas supplies to the EU is not restricted to national boundaries and could affect several Member States, whether directly or indirectly”;
- “National approaches both result in sub-optimal measures and aggravate the impact of a crisis”.

Did the events of past years (in particular the 2022/2023 energy crisis and the increased importance of LNG as alternative to Russian gas) confirm these statements in your view?

- (●) Yes
- ( ) No
- ( ) No opinion

84 Can you please elaborate on why you think that these events confirmed those statements?

750 character(s) maximum

The 2022/2023 energy crisis underscored the need for coordinated measures between countries to avoid adverse effects on neighboring Member States. The reliance on LNG as an alternative to Russian gas highlighted the importance of interconnectivity and reverse flow capabilities. Countries with better infrastructure were better able to adapt. Non-coordinated national SoS measures led to significant over-costs for consumers across Europe. The statement "The risk of major gas disruptions is not confined to national boundaries" should also apply to well-interconnected non-EU countries like the UK and Switzerland, whose inclusion in the EU security architecture would benefit all parties.

85 Can you please elaborate on why you think that these events invalidated those statements?

750 character(s) maximum

B. Forward-looking

86 According to the impact assessment on the 2040 targets, natural gas demand in the EU should decline from ca. 319 Mtoe today to 100-150 Mtoe in 2040, with an increase in biomethane production. The overall decreasing gas consumption may lead to a change in consumption pattern with likely different speeds of phase out

across sectors. How should the Gas Security of Supply Regulation change to remain relevant, considering the foreseen evolution of the EU gas supply and demand?

750 character(s) maximum

The overarching principles of the Regulation 23017/1938 should remain in the future and will be still relevant with regards to renewable and decarbonised gases.
In particular, the SoS provisions should ensure a proper assessment of both supply and flexibility needs, in order to adapt to decreasing gas demand.
The update of risk assessment methodologies, when needed, will have to reflect evolving consumption patterns and potential supply disruptions, including those related to RES. We should also bear in mind that the power system will keep on relying on the gas system, on both gas-to-power and power-to-gas sides, notably with regards to the role that electrolysers will play in times of over abundant power of renewable origin.

87 Are there objectives for gas security of supply that were not considered in 2017 and that a potential revision of the Regulation should aim to achieve?

- ○ Yes
- ◉ No
- ○ No opinion

88 Which blind spots in the current Regulation do you think should be addressed in a future update of the energy security framework?

750 character(s) maximum

With the increasing digitalisation of energy systems, the regulation should include provisions to enhance cybersecurity and protect critical infrastructure from potential threats.

89 Some provisions expire in 2025, including the 90% storage target. What role do you think gas storage policies should play beyond 2025 in the short and long-term?

750 character(s) maximum

Storage should continue to provide a buffer against supply disruptions and seasonal demand fluctuations, allowing for more responsive energy management as the market evolves. Gas storage is and will definitely remain an instrumental asset for security of energy supply. However, it should be carefully considered the need and for how long to maintain the measure or even some part of it (e.g. intermediate trajectories)

90 Should a revision of the Regulation provide more transparency on long-term gas contracts e.g. via Article 14, in particular where a single third country supplier represents a significant share of the overall supply mix?

- ○ Yes
- ◉ No
- ○ No opinion

91 How should the Regulation provide more transparency?

750 character(s) maximum

92 Why should the Regulation not focus on providing more transparency?

750 character(s) maximum

93 How should the costs of maintaining a high level of gas security of supply be distributed between various actors, such as companies, citizens and governments?

750 character(s) maximum

The costs of maintaining gas security of supply should be distributed equitably among the beneficiaries of such a delivered security, including those attached to another energy carriers (cf. cross-commodity aspect, e. g. the gas-to-power stream). Special protecting measures should be reflected for vulnerable customers for affordability reasons and for industries when their competitiveness is at risk.

C. Other

94 Do you have anything to add regarding the general functioning and/or the future evolution of the Gas Security of Supply Regulation?

Future evolution of the Gas Security of Supply Regulation should prioritize flexibility and adaptability to emerging challenges in the energy landscape. It should promote synergies with other energy policies, particularly those focused on decarbonization and the integration of renewable gases. Continuous stakeholder engagement, e.g. via the Gas Coordination Group, is essential to ensure that the regulation reflects real-world dynamics and promotes innovation. Moreover, fostering regional cooperation among Member States and sectors can enhance collective resilience and response capabilities in times of crisis.

6 Specific questions on Electricity Security of Supply

Interconnected and coupled electricity markets and systems require EU Member States to **coo perate** more closely when **preventing and managing electricity crises**. The EU introduced a **Regulation on risk-preparedness in the electricity sector**, and put in place several tools to prevent, prepare for and manage electricity crises in a spirit of solidarity and transparency.

According to Article 18 of the Regulation, by 1 September 2025, the European Commission shall submit a report to the European Parliament and to the Council on the application of this Regulation. Besides informing the **fitness check** on the energy security framework, this

public consultation will inform this **report.** The EU framework for electricity security supply is completed by other regulatory texts to which particular attention should be given when assessing the consistency criteria, such as the system operation guideline established by Commission Regulation (EU) 2017/1485 and the Network code on emergency and restoration established by Commission Regulation (EU) 2017/2196, Regulation (EU) 2019/943 and Directive (EU) 2019/944 on the internal market for electricity.

A. Backward-looking

1) Effectiveness

95 According to the 2016 impact assessment accompanying the Commission's proposal for a Regulation on Risk-Preparedness in the electricity sector, the new regulation was pursuing several specific objectives. How would you grade its performance on the following aspects?

	1 (Very poor)	2 (Poor)	3 (Average)	4 (Good)	5 (Excellent)
a) Improving prevention and preparedness	○	○	○	◉	○
b) Improving transparency and information sharing	○	○	◉	○	○
c) Improving coordination in electricity crisis	○	○	○	◉	○
d) Reducing the risk of negative spillover effects that purely national measures could have in neighbouring Member States.	○	○	◉	○	○

96 Have there been any unexpected and/or unintended effects caused by the implementation of this Regulation, which hindered progress towards these objectives?

- ◉ Yes
- ○ No

97 Which effects were there and what parts of the Regulation caused these effects?

750 character(s) maximum

One unexpected effect has been the over-reliance on national measures, which sometimes led to insufficient coordination with neighbouring Member States during crises. The Regulation's focus on national preparedness plans may have unintentionally encouraged countries to prioritize their own security measures at the expense of regional cooperation. Additionally, the lack of standardized metrics for assessing preparedness and risk levels has created discrepancies in how different countries interpret and implement their obligations, leading to inconsistent practices across the EU.

98 To what extent do you agree that certain specific provisions have been effective in ensuring preparedness, security of supply and/or resilience?

	1 (Not effective at all)	2 (Marginally effective)	3 (Moderately effective)	4 (Effective)	5 (Very effective)
Regional Risk Assessments	○	○	◉	○	○
National Risk Assessments	○	○	◉	○	○
Risk assessments in relation to the ownership of infrastructure	○	○	◉	○	○
Seasonal and short-term adequacy studies	○	○	○	○	◉
Risk preparedness plans as regards national measures	○	○	○	◉	○
Risk preparedness plans as regards regional and bilateral measures	○	○	◉	○	○

Early warning and declaration of an electricity crisis	○	○	◉	○	○
Users entitled to receive special protection against disconnection due to public safety and personal security	○	○	○	○	◉
Cooperation and assistance	○	○	◉	○	○
Electricity Coordination Group new tasks assigned by the Regulation	○	◉	○	○	○
Establishment of Competent Authority	○	○	○	◉	○
Regional emergency tests	○	○	◉	○	○

99 Do you wish to elaborate on any of the points above? If so, please indicate to which point(s) you are referring to.

750 character(s) maximum

The effectiveness of risk preparedness plans is often limited by diverse ownership structures across Member States, with market players lacking visibility into processes defined in the Regulation. While many processes are implemented in national frameworks, Risk Preparedness plans remain high-level compared to national continuity plans. The 2022 energy crisis showed that most actions were taken nationally, despite increased EU-level dialogue. The success of these plans depends on political will and trust among Member States, with cross-border cooperation agreements needing concrete implementation before crises arise. Strengthening the Electricity Coordination Group's mandate and resources is essential for better cooperation.

100 Do you think that the framework of cooperation and assistance presented in Article 15 of the Electricity Risk Preparedness Regulation is effective enough for dealing with regional crises?

- ○ Yes
- ◉ No
- ○ No opinion

101 Can you please elaborate? How can it be improved?

750 character(s) maximum

Cooperation and solidarity among Member States are vital, but each country must contribute to systemic resilience, respecting the EU's principles of free circulation. Establishing protocols for cooperation ensures faster crisis responses, while regular emergency drills improve preparedness and coordination. Enhanced communication systems support real-time information sharing for quicker decision-making. Formal agreements for resource sharing during emergencies strengthen resilience. For third countries like the UK and Switzerland, aligning energy security measures with the EU is crucial, regardless of their integration into the EU Internal Electricity Market.

2) Efficiency

102 What were the costs and benefits of implementing this Regulation for your organization? If possible, please provide both quantitative and qualitative elements and make explicit reference to the costs associated with the preparation of the Risk Preparedness Plans.

750 character(s) maximum

The implementation of the Regulation primarily impacts governments and TSOs, with indirect effects on other energy companies, making it difficult to quantify specific costs or benefits for our organization. The processes related to electricity supply continuity were already established before the Regulation. The national Risk-Preparedness Plans are essentially formal summaries of existing national processes for risk identification, alerts, and crisis management. As such, they serve more as a harmonized reporting tool than a significant operational change. Therefore, the development of these plans is an administrative task for Member States rather than a substantial cost or benefit for our organisation.

103 To what extent have the following provisions created **disproportionate** burden (e.g. administrative, financial or other burden)?

	1 (Negligible)	2 (Low)	3 (Average)	4 (High)	5 (Very high)
Regional Risk Assessments	○	○	◉	○	○
National Risk Assessments	○	○	○	◉	○

Risk assessments in relation to the ownership of infrastructure	○	○	◉	○	○
Seasonal and short-term adequacy studies	○	○	◉	○	○
Risk preparedness plans as regards national measures	○	○	○	◉	○
Risk preparedness plans as regards regional and bilateral measures	○	○	○	◉	○
Early warning and declaration of an electricity crisis	○	○	◉	○	○
Users entitled to receive special protection against disconnection due to public safety and personal security	○	○	◉	○	○
Cooperation and assistance	○	◉	○	○	○
Electricity Coordination Group new tasks assigned by the Regulation	○	○	○	◉	○
Establishment of Competent Authority	○	○	◉	○	○
Regional emergency tests	○	○	◉	○	○

104 Do you wish to elaborate on any of the points above? If so, please indicate to which point(s) you are referring to.

750 character(s) maximum

We would like to elaborate on the National Risk Assessments and Risk Preparedness Plans. The complexity of these processes, particularly in terms of stakeholder engagement and data collection, increases the administrative burden. Streamlining these procedures could enhance efficiency and alleviate resource strain. It is important to note that these assessments and plans are the responsibility of Member States and TSOs to evaluate.

105 How timely (regarding e.g., the update every 4 years) and efficient is the Risk Preparedness Plans administrative process?

3

106 Can you please elaborate on your grading?

750 character(s) maximum

The process of updating Risk Preparedness Plans every four years can be timely but often inefficient due to the extensive stakeholder engagement, data gathering, and coordination required. The involvement of national producers and DSOs should be increased. Currently, these plans are primarily an administrative exercise rather than operational documents for electricity crises. The need for updates every four years may not be relevant, as the risk categories and processes involved do not change frequently. However, crucial documents for security of supply, such as National and European Adequacy Assessment studies, require stronger cooperation to ensure regular and updated assessments.

107 Are there any aspects of the Risk Preparedness Plans administrative process that could be streamlined or improved?

- (●) Yes
- ( ) No
- ( ) No opinion

108 Can you please elaborate?

750 character(s) maximum

Streamlining the Risk Preparedness Plans process could involve simplifying reporting requirements and using digital tools for efficient data collection. Clearer guidelines and standardized templates would enhance efficiency and reduce administrative burdens.
Current regulation (2019/941) follows a top-down approach for identifying electricity crisis scenarios, starting regionally and then nationally. This may overlook certain risks. We recommend a bottom-up approach, involving national power generators more actively in planning. As the electricity system becomes more decentralized, national specifics must be better considered, making a bottom-up approach more appropriate.

3) Relevance

109 To what extent did the provisions of Electricity Risk Preparedness Regulation prove relevant in addressing the electricity supply challenges experienced by the EU since its implementation? Please elaborate your answer, by making explicit reference to the recent crises (i.e. COVID pandemic and the energy crisis of 2022 and 2023).

750 character(s) maximum

The Electricity Risk Preparedness Regulation has partially addressed electricity supply challenges during the COVID pandemic and the 2022-2023 energy crisis by facilitating coordination and preparedness among member states. However, the rapid pace of crises exposed gaps in flexibility and responsiveness, highlighting limitations in the regulation's top-down approach for real-time disruptions. While the regulation provides a foundation, it requires refinement for better adaptability. Core challenges like resource adequacy, affordability, and system resilience are addressed by other EU legislation, including the Electricity Directive and Emergency & Restoration Guidelines.

110 To what extent could the risk preparedness plans be effective in preventing, preparing, managing and mitigating actual electricity supply crises? What could be improved?

750 character(s) maximum

Risk preparedness plans can be effective in managing crises by establishing clear protocols and communication channels. However, their impact is limited by inconsistent implementation and lack of real-time data. Improvements could include enhanced data-sharing mechanisms, regular simulation exercises, and better alignment with local and regional capacities for quick responses. Additionally, stronger cross-border coordination through the Electricity Coordination Group would improve EU-wide crisis management, while integrating local security of supply mechanisms could enhance resilience and efficiency in the interconnected network.

111 How well adapted is the Electricity Risk Preparedness to technological or scientific progress, and to the environmental/climatic challenges that EU will face?

750 character(s) maximum

The Electricity Risk Preparedness Regulation has made progress in addressing technological advancements, particularly in integrating renewable energy sources. However, it needs to better account for the rapid pace of technological change and emerging environmental challenges, such as the impact of climate change on grid resilience. As the energy transition drives decentralisation of generation, a shift from a top-down to a bottom-up planning approach is crucial. National plans should be regularly updated to reflect real-time developments and feed into regional plans, ensuring more adaptive and effective responses.

4) Coherence

112 To what extent is the Electricity Risk Preparedness Regulation aligned with other EU policy goals?

750 character(s) maximum

The Electricity Risk Preparedness Regulation aligns moderately with key EU goals, such as the Green Deal and Fit for 55, by supporting the transition to a low-carbon economy and enhancing grid resilience. However, there is potential for greater alignment with sustainability, energy efficiency, and climate resilience. Security of supply is addressed through various EU legislations, including the Electricity Directive, Regulation, and network codes. As the EU adopts a more integrated energy and climate policy, security of supply must be addressed consistently, prioritising resilience, adequacy, and secure system operation for a robust, flexible energy system amid increasing renewable integration.

113 Do you see inconsistencies with other EU legislation?

- (●) Yes
- ( ) No
- ( ) No opinion

114 Which EU legislation?

750 character(s) maximum

There are potential inconsistencies between the Electricity Risk Preparedness Regulation and the revised EMD. The current risk preparedness framework does not fully address the need for flexibility and adaptability in light of rapid technological advances and climate impacts. Additionally, the CEP's 70%-rule requires at least 70% of network capacity to be available for cross-border trade between Member States. However, interpretations differ regarding non-EU countries like Switzerland. In revising the Network Code CACM, it's essential to include electricity flows between the EU and non-EU countries in the 70% to avoid inefficient optimization that could compromise system stability within the synchronous grid of Continental Europe.

115 Did some provisions in the Regulation prove to be inconsistent with one another?

- (●) Yes
- ( ) No
- ( ) No opinion

116 Please give concrete examples:

750 character(s) maximum

Certain provisions in the Regulation, particularly those related to emergency measures versus long-term planning, may create tensions. The emphasis on immediate crisis response can sometimes overshadow the development of long-term strategies for resilient infrastructure, leading to a reactive rather than proactive approach. In the electricity sector, the ongoing energy transition and decentralization of generation call for a shift in the planning approach from top-down to bottom-up. This implies a potential change in the planning structure, where regional plans should be informed by continuously updated national plans. This would allow for better integration of cross-border connections and synergies, improving overall system resilience.

5) EU added value

117 What is the additional value for EU security of electricity supply resulting from the EU intervention, compared to what could reasonably have been achieved (in terms of effectiveness and efficiency) by Member States acting at national level?

750 character(s) maximum

The EU intervention enhances security of electricity supply by fostering coordination and cooperation among Member States, crucial for managing cross-border challenges. National efforts alone are insufficient due to interconnected systems and shared dependencies. The Regulation provides a unified framework for risk assessment and crisis management, improving resilience and response effectiveness. It also facilitates dialogue within the Electricity Coordination Group, allowing for shared best practices and resource pooling. The EMD reform, with tools like long-term contracts (incl. capacity mechanisms where needed) and demand-side flexibility, further strengthens EU security of supply.

B. Forward-looking

118 Given the recent experience of Member States with drafting the Risk Preparedness Plans, how can both the process as well as the substance of the plans be improved?

750 character(s) maximum

The drafting process could be streamlined by simplifying reporting requirements and clarifying guidelines to ensure consistency. Enhancing stakeholder engagement during the drafting phase would improve relevance. In terms of substance, incorporating detailed risk assessments addressing emerging threats, such as cybersecurity and climate impacts, will strengthen the plans. A flexible framework that allows for rapid updates as circumstances change is essential for maintaining responsiveness. However, as we were not directly involved in preparing Risk Preparedness Plans, we cannot provide specific feedback.

119 To what extent is the Electricity Risk Preparedness Regulation still relevant considering the evolution of the threats landscape and evolution of the EU's electricity supply and of the EU's energy mix as whole? Are there some objectives that were not considered in 2017 or blind spots and that a revision of the regulation should aim to achieve?

750 character(s) maximum

The Regulation remains relevant, but it needs to evolve to address emerging threats, including climate change, technological advancements, and decentralization of energy resources. Cybersecurity resilience and demand-side management should be incorporated. Additionally, the Regulation must explore synergies with EU climate and sustainability goals, which were less emphasized in 2017. Given the increasing complexity of the power system, national transmission system operators should have a more prominent role in planning, with regular consultations with power generators and DSOs, complementing regional and EU-level approaches.

120 Do you think that the definition of electricity crisis should be common for all Member States or at least based on common criteria?

- (●) Yes
- ( ) No
- ( ) No opinion

121 If so, based on which criteria?

750 character(s) maximum

The definition should include criteria such as the severity of supply disruptions, the duration of outages, the impacts on essential services, and cross-border implications. Establishing a common framework for defining an electricity crisis will facilitate coordinated responses, ensuring that Member States are aligned in their understanding and management of crises. This will ensure a more cohesive approach to crisis management across the EU while allowing for flexibility in applying these criteria within each Member State's context.

122 Do you think the definition of regions in Article 2 of the Regulation should be different?

- ( ) Yes
- ( ) No
- ( ) No opinion

123 If so, based on which criteria?

750 character(s) maximum

The current definition of regions based on the RCCs seems appropriate. However, a more flexible regional framework that takes into account changing energy landscapes, technological advancements, and geographical interconnections could further improve the effectiveness of regional cooperation and crisis management. This would allow for adjustments based on emerging energy dynamics and enhance the responsiveness of regional plans.

C. Other

124 Do you have anything to add regarding the general functioning and/or the future evolution of the Electricity Risk Preparedness Regulation?

It is crucial for the Regulation to remain dynamic and adaptable to evolving energy landscapes and technologies. Regular reviews and stakeholder consultations should be established to ensure the Regulation addresses emerging risks and incorporates lessons learned from recent crises. Fostering stronger collaboration between Member States and industry stakeholders will enhance the overall resilience of the EU electricity supply system.

Contact

ENER-SOS-REVISION@ec.europa.eu

Eurelectric pursues in all its activities the application of the following sustainable development values:

Economic Development

- Growth, added-value, efficiency

Environmental Leadership

- Commitment, innovation, pro-activeness

Social Responsibility

- Transparency, ethics, accountability

Union of the Electricity Industry - Eurelectric aisbl
Boulevard de l'Impératrice, 66 – bte 2 - 1000 Brussels, Belgium
Tel: + 32 2 515 10 00 - VAT: BE 0462 679 112 • www.eurelectric.org
EU Transparency Register number: 4271427696-87