



**Challenges ahead  
for the EU energy policy.  
Selected issues**

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# Key findings



This paper aims at selecting and analysing the new, key actions for the European Union's energy policy. After identifying fundamental challenges ahead, the authors show how the EU energy policy should change and propose concrete reforms.



This coincides with the end of the European Commission's term, which had the energy union as its priority.



The authors highlight one key challenge in each of the three areas of the EU energy policy. Based on the shortcomings of the common gas market, they point to the need to establish a European Anti-Trust Office and fully apply the amended Gas Directive. In terms of security of supply, they call for cybersecurity efforts. Finally, in the area of sustainability, they argue for more inclusive energy transition. They propose a support programme for households and local communities, in the form of a Just Energy Transition Fund (JET Fund).

## The common energy market



Despite years of efforts to build a common energy market in the gas sector, there are still clear differences in prices and competitiveness in different EU regions.



Supporting competitiveness is the fundamental task of the EU competition policy. Nevertheless, the European Commission does not appear to implement this objective fully. It sometimes tends to give up its role as the guardian of competition, especially in relation to Central and Eastern Europe. Some examples:

- the Commission's initial internal paralysis and, consequently, lack of decisiveness in the application of EU law to the parts of the planned Nord Stream 2 which are located in the member state's territory and territorial waters,
- the Commission's 2016 decision on the OPAL gas pipeline, which in fact resulted in extending the non-application of competitive provisions to it,
- the Commission's binding decision in 2018 on Gazprom's abuse of its dominant position.



The current institutional system for competition policy raises some doubts about independence and objectivity. It is based on insufficient separation from political factors.

- Firstly, the final decision in individual cases is made by the College of Commissioners, a body that is political *par excellence*.
- Secondly, many key decisions in anti-trust proceedings (initiating proceedings, rejecting a complaint, ordering parties to the proceedings to provide information

and presenting charges) belong to the competition commissioner or are delegated to the director general by him or her. In other words, even the proceedings themselves, which should be the most impartial, depend to some extent on the political factor.



For competition instruments to be applied effectively and consistently, a European Anti-Trust Office (EAO) should be established.



As well as being apolitical, the new office should seek to level differences in the conditions of economic competition between regions or member states.



In relation to the energy market, the EAO should:

- issue a binding opinion in the exemption procedure from the liberalisation regime. It should analyse the exemption in terms of its impact on competition (taking into account security of supply) and the effective functioning of the common energy market based on objective EU criteria,
- constantly monitor competition on the market using numerous indicators, systematically recording incidents that threaten competition and the market's functioning.



The maturity and size of the common energy market allow the EU to shape its international environment at least to the extent that third countries do not distort a proper functioning of the market. The fundamental issue is protecting the territorial jurisdiction and full application of EU law. Actions undertaken outside the EU by gas-exporting countries should not undermine the effectiveness of EU measures in the single market.



The safeguarding of the internal energy market should be guaranteed through the full, transparent and objective application of the amended Gas Directive 2009/73 /EC when it comes to import gas pipelines, especially through appropriate action by the member states responsible for the application of EU law and supervision by the Commission.

## Security of energy supply



New threats to security of energy supply in the form of cyber-attacks require new preventive actions.



Cyber-attacks by both state and non-state actors are not just a potential threat – they are already part of our reality. There were 60,000 of them in 2007-2018; each month, there are a few hundred more. Experts recognise that 90% of cybernetic losses are concentrated in 18 countries, which include EU member states.



Attacks on critical infrastructure, including energy infrastructure, are among the most dangerous. The cybernetic threat in the EU is heightened by the increased

interdependence of member states' energy networks and the energy sector's increasing digitisation.



States are spending more on countering and preventing cyber-threats than ever before while facing an unprecedented number of attacks on IT infrastructure. Reactive action will not improve this state of affairs. Energy security needs to be redefined, taking into account cybersecurity.



In response to this challenge, the EU should develop and implement a cybersecurity strategy for the energy sector, aiming to:

- strengthen cyber security readiness in the energy sector,
- coordinate activities in cyberspace,
- accelerate technological change towards resilient safety systems.



Strengthening cybersecurity coordination at the European level is key. Firstly, a common perception of threats and risks, which would be updated regularly, is needed. Secondly, EU security standards for the energy sector should be agreed based on international standards. Thirdly, a European cybernetic response system for the energy sector should be created. Fourthly, joint crisis management mechanisms ought to be established.



To create a coherent cyber security system at the European level, the Agency for the Cooperation of Energy Regulators (ACER) should be named the leading institution in this field and given appropriate management competences. Close cooperation between ACER and the European Agency for Network and Information Security (ENISA) should be ensured.

## Sustainable development



The EU is among the global leaders of the energy transition. Unfortunately, the costs and benefits are spread unequally, within societies and between member states.



As the energy transition proceeds, negative phenomena can be observed, such as:

- an increase in the share of energy costs in the poorest households' budgets,
- concentration of energy poverty in regions with historically worse development conditions, such as Southern Europe and Central and Eastern Europe,
- deepening inequality in exposure to the risk of energy poverty between regions.



This may stem from the lack of proper attention to the social impact of the changes being implemented.



A Just Energy Transition Fund (JET Fund) needs to be established to overcome the lack of access to capital in parts of the EU struggling with structural constraints on development.



Support programmes should target households and local communities.



The side-effects of the proposed solution are an increase in employment and better air quality.



In addition, a platform coordinating energy, climate and environmental policy should be established within the energy union to counteract the negative social effects of the energy transition.

# Introduction

The European Union's energy and climate policy took on the form of an energy union strategy in February 2015. Although, at the conceptual level, not much was new, the energy union became a very popular slogan. It reflects the energy sector's leading position among the European Commission's priorities agenda under its current president, Jean-Claude Juncker, and, as a result, the amount of political capital invested.

However, the emphasis on increasingly regulating the energy sector at the EU level is not linked exclusively with the current Commission. It results from the maturation of the common energy market and is a long-term trend. This process remain a triangle of goals: a competitive internal market, security of supply and sustainability.

This analysis aims to identify the important steps for the development of the EU's energy policy. Taking the current formulations of the energy union strategy as their starting point, the authors propose:



For the EU energy policy to strengthen the integration of the internal energy market, it must face the differences in

energy prices in different parts of it. To this end, it should focus on improving effectiveness of competition policy instruments, especially by including energy in the competencies of the proposed European Anti-Trust Office (EAO). At the same time, the energy union should tackle the structural influence of external factors that disrupt the internal energy market.



The EU energy policy must remain forward-looking, facing technological change and the creation of an intelligent energy sector. A new vision for cybersecurity in the energy sector is needed. When the energy union was established, the issue of energy security was significant; now, as the technological environment changes, the EU should continue to treat security of supply as a priority.



The EU energy policy should be citizen-focused, giving them the tools to participate in the energy transition, which includes countering the social inequalities that results from it. If it does not, the rich will be even richer and the poor even poorer.

## Aims of EU energy policy

Common energy market

Energy security

Sustainability

## Main challenges

Ineffectiveness of competition measures

Threat of cyberattacks on energy infrastructure

Unevenly spread social costs



# Part 1.

# The common energy market

## 1. The challenge: partial application of competition measures

In the 1990s, when most national electricity and gas markets were monopolised, the European Community and its member states decided to gradually liberalise markets. Three energy packages between 1996 and 2009 established Europe's position as the leader of change. The transformation was based on the conviction that empowering industrial and individual end-users – giving them a real choice of supplier – will be the driving force for developing competition on European energy markets.

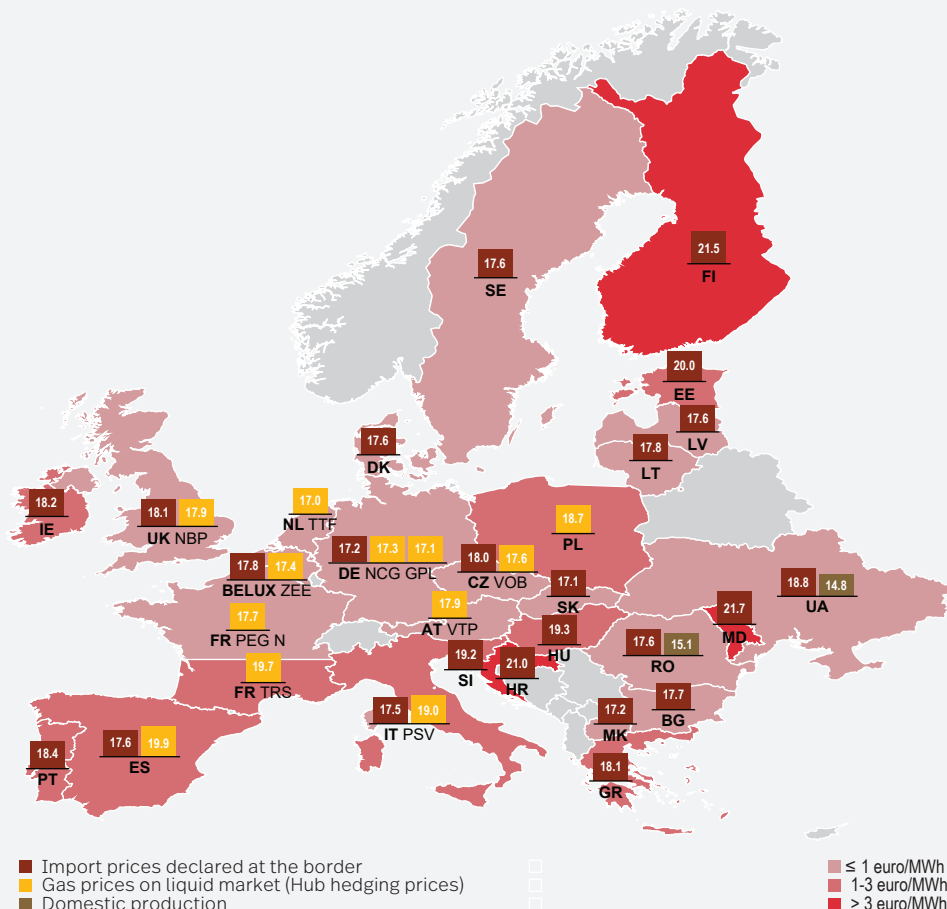
**Unfortunately, EU institutions' effectiveness in promoting competition on the European gas markets seems questionable.** Despite years of efforts to build a common energy market in the gas sector, there are still clear differences in prices and competitiveness between different EU regions (illustration 1). This mainly results from the lack of diversification of gas suppliers to certain regions. In Central and Eastern Europe, there is often only just one supplier or a very dominant one (chart 1).

The best **example of the dependence of price on the diversification of supplies is the construction of the LNG terminal in**

**Lithuania.** Before the terminal opened, gas prices were significantly higher, both compared to the Baltic region and to prices in north-western Europe. Although the gas markets of Estonia, Lithuania and Latvia are similar, Gazprom only decided to maintain higher prices in Lithuania. This was related to the implementation of the Third Energy Package by Vilnius, which directly affected Gazprom's interests. It was only through increasing competitiveness on the market by building the LNG terminal and the threat of price arbitrage that gas prices in Lithuania were reduced by over 20% – to levels comparable to those in the rest of the Baltic region and other EU markets (Pakalkaitė, 2016). Calculations indicate that if the terminal closed and the market were dominated by a single entity, prices would increase by 11-20% (Pöyry, 2018). This is the price of the lack of competition.

Supporting competition on the market is the basic task of the EU's competition policy. However, experience has shown that its institutions do **not achieve this goal sufficiently, especially in Central and Eastern Europe.**

Illustration 1. Average cost of obtaining gas from suppliers and the difference between delta and TTF (estimates for 2017, euro / MWh).



Source: ACER (2018, p. 16).

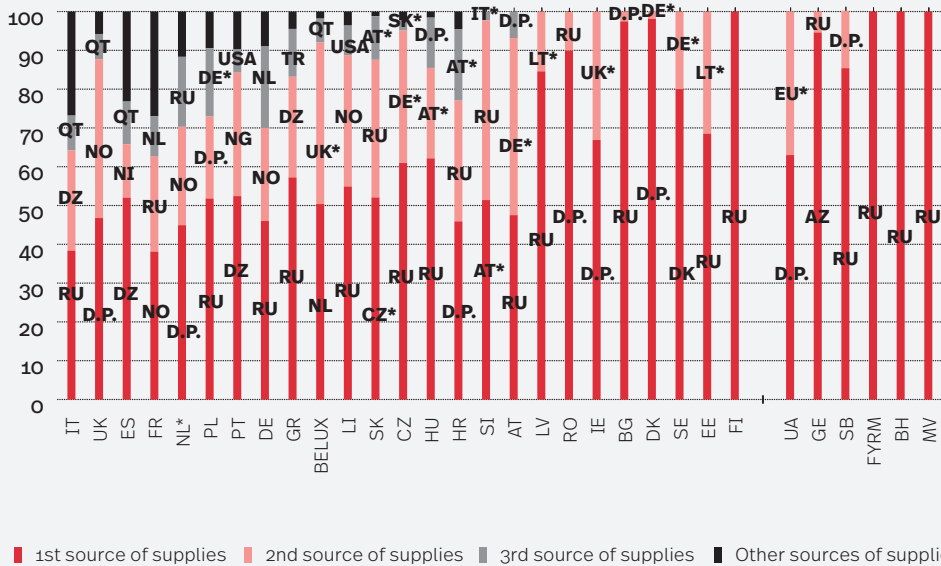
The first example is the **Commission's initial internal paralysis on the application of EU law to the planned Nord Stream 2 pipeline** (Łoskot-Strachota, Kardaś, Szymański, 2017). Contrary to the EC Legal Service's position expressed in the dispute with DG Energy, there should be no doubt that the section of the pipeline passing through Germany's territory and territorial waters and Denmark's territorial

waters is subject to EU law, including the Third Energy Package. Additionally, the pipeline's non-EU section should adopt regulations compliant with EU law or be subject to an international agreement between the EU and Russia to ensure that pipeline is covered by a single legal regime (Dudek, Piebalgs, 2017). Applying the Third Energy Package to the Nord Stream 2 would require that the whole project meet

minimum EU standards that aim to promote competition on EU energy markets. Historically, this practice was confirmed in competition law cases examined by the Court of Justice of the European Union (CJEU), such as the Wood Pulp case. Nevertheless, some member states, led by Germany, took the view that in this case EU law's territorial jurisdiction should be limited and that requirements intended to protect competition should be abandoned. This position was even more surprising given that this is not only about respecting formal rules on the functioning of the EU gas markets, but also justified fears about the material conditions of

competition. As research on the impact of Nord Stream 2 on European gas markets has shown, it will increase price differences between eastern and western European markets. The reorientation of Russia's gas transmission routes to Europe due to existing limitations in cross-border capacity will worsen Central and Eastern European countries' access to cheaper Western European markets, limiting further integration between European markets. Moreover, the impact of Nord Stream 2 on consumer welfare across the EU would also be negative (Kotek, Selei, Takácsné Tóth, 2017, p. 16, Neumann et al., 2018, p. 248).

Chart 1. Number of sources and level of diversification of supplies, taking into account the origin of gas (estimates for 2017, percentage of purchased gas)



Notes: "D.P." means "own production"; the star \* refers to countries with liquid hubs, where it is assumed that gas has been purchased; Denmark – its production also includes Norwegian subsea deposits, which are part of the Danish upstream network.

Source: ACER (2018, p. 25).

**A second example of the Commission's failure to carry out its duties when it comes to competition on the European gas market is its 2016 decision on the OPAL gas pipeline.**

With this act, the Commission extended the scope of the non-application of competitive provisions to the gas pipeline. In its decision, the Commission largely ignored the requirement that, in such cases, the exemption from market regulations should be strictly dictated by increased competition and security of gas supply, while not having a detrimental effect on competition and the functioning of the internal gas market. Since OPAL is the land extension of Nord Stream, all the arguments above on the latter's negative impact on competition and consumer welfare apply to it.

**The third example is the Commission's 2018 decision on Gazprom's abuse of its dominant position.**

Many of its elements warrant criticism, but one best reflects the essence of the problem. The Commission obliged Gazprom, within 10 weeks of the decision, to submit proposals for concluding or modifying the price revision clauses included in the

contracts, so that a price revision mechanism can be applied if there is a significant change in the European gas market or the gas price resulting from the contract does not reflect the development of the European gas market. In cases of disagreement between the parties due to one of them opening a review clause, the dispute would be subject to arbitration. There are two problems with the decision. Firstly, there are already clauses like this (or analogous ones) in the contracts, as shown by the numerous price arbitrations for settling disputes between Gazprom and its clients. Secondly, rather than deciding on its own on the price conditions in Gazprom's contracts, the Commission attempted to shift resolving disputes to private arbitration tribunals, thus avoiding its responsibility set out in the treaties.

Summing up the cases above, it can be said that the **Commission has given up its role as the guardian of competition**. Its failure to protect the conditions for the development of competition on European gas markets has particularly negative consequences for Central and Eastern Europe.

## 2. Proposed solutions

### 2.1. A European Anti-Trust Office

**To apply instruments supporting competition effectively and consistently, a European Anti-Trust Office (EAO) should be established.**

It would take over DG COMP's anti-trust powers and actions.

**The current institutional system of policy competition raises some doubts about independence and objectivity.** Firstly, the final decision on individual matters is made by the College of Commissioners, a political body *par excellence*. Less controversial matters are approved by written procedure. However, in even these cases cabinets of individual

commissioners are involved in the process of reaching an agreement, which creates potential for arrangements that do not directly relate to competition. Once an issue emerges as controversial, it is debated by the College of Commissioners, which often is connected with assigning high **political significance**. In such cases, the discussions are not conducted solely based on competitiveness criteria. Secondly, **many key decisions on the anti-trust proceeding itself** (initiating proceedings, rejecting a complaint, ordering parties to provide information, presenting charges) are **made by**

**the competition commissioner** or delegated to the director general by him. In other words, even the proceedings themselves, which should be as impartial as possible, might be dependent on the political factor. A clear example

of this are situations in which the commissioner deems a particular decision within the proceedings significant or politically sensitive, which can result in it being transferred to the College of Commissioners.

#### Changes of competition policy's legitimisation – historical evolution

**The EU's current institutional system of competition policy results from founding decisions in the 1950s** and subsequent changes, especially the largest reform since the start of European integration, introduced by Regulation 1/2003. While the institutional system has changed fundamentally, its decisive part – the collegiate political body – has remained intact.

When Jean Monnet negotiated the Treaty of Paris of 1951, it was obvious to him (Karagiannis, 2008) that there can be no European integration without competition policy and that the Federal Republic of Germany (FRG) would not allow the integration project to threaten its cartel-based industry, largely located in the Ruhr area. Collegiality was the solution. It allowed a common competition policy to be incorporated into the integration project, in line with France's expectations. The FRG was reassured that France would not use the new instrument against the Ruhr area in a discriminatory manner. Moreover, the system was open to the participation of other European countries without a tradition or interest in competition policy (except for Britain). In addition, a collegial construction, unlike an independent regulator, guaranteed a different competition policy; one that must serve different interests and fulfil a variety of purposes. The system complicated judicial control greatly, particularly in cases of inaction.

In the 1950s, inscribing politics in the competition system was necessary for European integration to proceed. It was needed to legitimise the process. Now the opposite is the case. **Making the institutional system apolitical is necessary for its proper functioning. Just as the European Central Bank guarantees a stable monetary policy,** the European Antitrust Office should guarantee an effective competition policy. In member states, the evolution of competition regulators is moving towards stronger guarantees of independence. This trend was reflected in Directive 2019/1, which specifies rules for ensuring that national competition authorities have the necessary guarantees of independence, resources and powers (Article 1). Directive 2019/1 confirms that there has been a fundamental change in institutional traditions and perceptions of public interest compared to previous decades.

While the Treaty on European Union states that commissioners' independence is "beyond doubt" and that the Commission is "completely independent" in carrying out its responsibility (Art. 17 para. 3), it is **hard to**

**deny that, in practice, commissioners play a political role. As a result, the entire institutional system of competition policy is based on insufficient separation from political factors.**

	Competition regulator	Feature
EU level	European Commission	A collegiate <b>political</b> body
National level	National competition regulators	<b>Apolitical</b> offices with guarantees of <b>independence</b> from political influences (Article 4 of directive 2019/1)

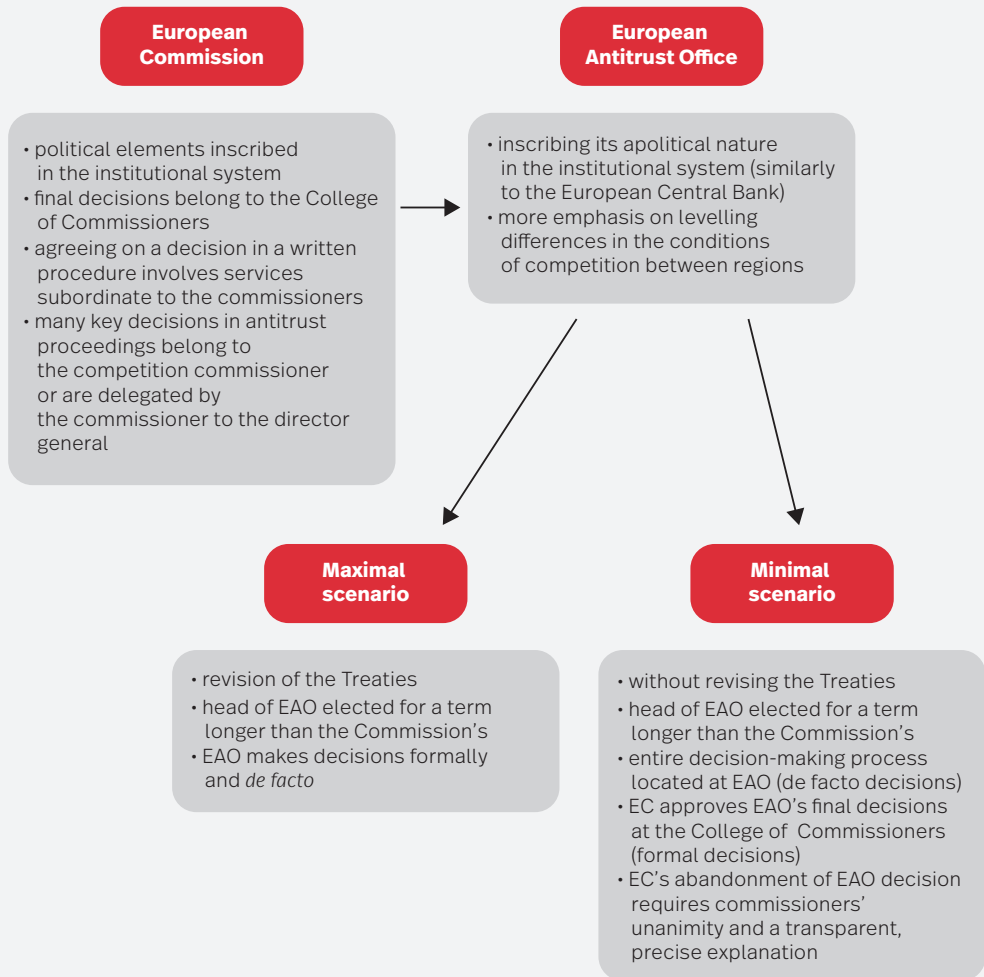
**Establishing a European Anti-Trust Office requires legal changes.** Depending on the aim adopted regarding the EAO's future institutional position, maximal and minimal versions of the process should be considered.

**The maximal scenario** means systemic change and hence the need to revise the European Treaties. The European Commission's powers would be transferred to the EAO. The office should be headed by someone from outside the circle of commissioners, with a longer term than them. As a result, the EAO would issue decisions, rather than the Commission. This would ensure apolitical decision, but implementing it would have been difficult. The idea of establishing an office of this kind (under the name European Cartel Office at that time) was discussed intensively in the 1990s and was the subject of Intergovernmental Conference negotiations in 1996-1997. The idea came from Germany, with the proposed office modelled on the German Bundeskartellamt. Ultimately, the idea was not adopted. Despite occasional critical voices, discussions on the subject have disappeared, largely due to the reform introduced by Regulation 1/2003. It seems that the new challenges linked to the digital economy have revived the topic of appointing an office of this kind (Arak, Flis, Kutwa, 2018, p. 42).

**The minimal scenario** involves institutional changes, without the need for treaty

changes. The establishment of an EAO would not formally take away the Commission's powers on competition policy. Although the office should be headed by someone from outside the circle of commissioners, final decisions would still be made by the assembly of commissioners. The difference would be that, if the commissioners waived the decision recommended by the EAO, they would be required to provide a transparent justification citing the factors that should be prioritised. The waiver would require the commissioners' unanimity. The apolitical element is ensured at the final decision-making level (many political factors would be neutralised by the requirement of transparency) and, overall, during proceedings, by establishing an office with a head who is independent of political influence.

In addition to being apolitical, the new office should aim to equalise differences in the conditions of economic competition between individual regions or member states. **In terms of the gas market, this should mean constantly monitoring the behaviour** of the dominant supplier using a series of indicators and systematically recording incidents that threaten the competition and security of the market. A permanent reporting mechanism would have preventive value and, if events took an undesirable turn, it could supply the data needed to decide how the regulator should intervene.



Each of the scenarios would require precise determination of the scope of the office's activities. Its mandate should undoubtedly include agreements between enterprises that restrict competition, describing cases of abuse of dominant position and the rules for efforts to open markets to competition. It is necessary to consider what institutional status should be granted to public aid for enterprises granted by member states'

governments, as this part of competition policy is most closely related to other policy areas and therefore requires coordination and arrangements. In addition, the procedural strengthening of the office's activity when sending complaints should be considered; above all, by strengthening courts' control of problem-solving mechanisms and transparency in decisions on matters that require investigation.

## 2.2. Full application of the revised Gas Directive 2009/73/EC

The maturity and size of the common energy market allow the EU to shape its international environment at least to the extent that third countries do not distort a proper functioning of the market. The fundamental issue is **protecting the territorial jurisdiction and full application of EU law. Actions undertaken outside the EU by gas-exporting countries should not undermine the effectiveness of EU measures in the single market.**

Applicable provisions of the Gas Directive 2009/73 and due to the internal dispute at the European Commission regarding the provisions, Germany questioned the applicability of the EU energy law on member states' territories and territorial waters regarding Nord Stream 2 (NS2). The Commission's lack of explicit action to apply the rules meant that, rather than EU law, Berlin's unilateral actions prevailed. As a result, ***faits accomplis, rather than the law, prevailed – a completely unacceptable situation in the EU, which Walter Hallstein, the Commission's first president, described as a “community of law” (Rechtsgemeinschaft).***

The Commission decided to solve the problem first by requesting a negotiating mandate from the Council for signing an EU-Russia agreement on NS2. Then it proposed an amendment to the Gas Directive to specify the existing provisions. Despite the Commission's proposal included only limited changes, work on the Council of the EU's joint position either dragged on or was not foreseen in the agenda at all. Ultimately, a compromise version of the legislative changes was agreed on in February 2019 (Łoskot-Strachota, 2019). The amendment entered into force on 23 May 2019.

Agreeing on an amendment to the Gas Directive is an important step towards protecting the common energy market. **Without a shadow of a doubt, the new provisions requires member states to apply EU law to**

**import gas pipelines. Yet the territorial jurisdiction is limited** to just the territory and the territorial waters of the member states in which the import pipeline connects with the network – for NS2, Germany. This solution, the result of a political compromise, leaves the territorial waters of other member states (in the case of NS2, Denmark) and the exclusive economic zones (for NS2, Germany, Denmark, Sweden, Finland) beyond the EU's jurisdiction.

While this solution shows that full protection of EU jurisdiction has been sacrificed for the sake of political interests, the new provisions create space for action to protect the EU's jurisdiction and the common market. **Adopting regulations for one section of the gas pipeline – if it is technically indivisible, i.e. with only an entry and an exit point – means that the remaining part of the gas pipeline should be regulated in the same way. A different solution would be a façade that does not meet the Directive's objectives.**

However, only the full, transparent and objective application of the new regulations, in accordance with the objectives set out in the European Treaties, will guarantee that a common energy market is built. From this perspective, **the actions of the member state responsible for the application of EU law (in the case of NS2, Germany) and the Commission's supervision will be decisive.**

The following elements will be key:



A full, transparent and objective assessment of the conditions allowing exemption from the provisions of the Gas Directive:

- for completed gas pipelines (Article 49a): an assessment of whether exemption from the provisions of the liberalisation regime would not be detrimental to competition, efficient operation of the common gas market and security of supply. According



to the regulations, the assessment in these three areas should apply to the entire EU;

- for new gas pipelines (Article 36): an assessment of whether the gas pipeline is fully compliant with each of the five exemption conditions. Again, assessing the absence of a negative impact on competition, the effective operation of the common market and security of supply is important. Here too, the assessment concerns the EU. In addition, the legislation stipulates a more stringent criterion for the competition impact assessment – whether it is likely affected. As a result, the criterion's standard is determined by in the extensive case law of competition law;

- taking the EU as the point of reference for assessing the absence of negative impact means adopting a perspective that views the negative impact on any member state as detrimental to the EU. A restrictive attempt to interpret the new provisions would undermine the principle of solidarity, which is not only one of the basic principles in EU law, but is also enshrined in the Treaty objectives of EU energy policy (Article 194 TFEU);
- adopting the date of the pipeline's completion (the moment separating the use of Articles 36 and 49a) based on practice, i.e. the entire pipeline's readiness for commercial use, not just of its parts that do not meet a commercial purpose by themselves.

### **The case of Nord Stream 2 (a precedent for future gas pipelines): additional circumstances affecting the application of the amended Article 36 of the Gas Directive**

#### **1. The lack of full independence of the German gas market regulator, Federal Network Agency (BNetzA)**

According to Article 36 of the Gas Directive, exemptions from the application of selected provisions of it to new infrastructure may be made by a national regulator, as an entity that European law guarantees is independent. However, in Germany's case, there are important reservations about the national regulator's independence. In July 2018, the European Commission took Germany to the EU Court of Justice for failing to implement provisions on the powers and independence of the Federal Network Agency (BNetzA).

#### **2. The ongoing UOKiK proceedings against entities responsible for funding Nord Stream 2**

In May 2018, Poland's Office of Competition and Consumer Protection (UOKiK) launched proceedings against entities responsible for funding the Nord Stream 2 on suspicion of attempting to circumvent the lack of permission to establish a company funding the construction of the pipeline. According to UOKiK, both the creation of a joint venture, which UOKiK did not agree to, and the conclusion of subsequent agreements had the same goal: funding the construction of Nord Stream 2. The proceedings have not yet been completed; its outcome could be significant in assessing the pipeline's potential impact on competition, in accordance with the amended Article 36 of the Gas Directive, which introduces a higher standard for assessing the impact on competition on the gas market (likely affected).



Consultations (as part of the Article 36 procedure) with the national regulators of other member states whose markets could be affected by the new gas pipeline:

- the consultations should be carried out in accordance with the standards set by case law in connection with the principle of sincere cooperation (Article 4 (3) TEU);
- domestic regulators of gas markets should consult the national competition authorities on the new infrastructure's potential impact on the market in question.



A full, transparent and objective assessment of the conditions allowing the

Commission to authorise a member state to negotiate with a third country to conclude an international agreement regulating the import gas pipeline (Article 49b):

- Four criteria listed in the regulations must all be met:
  - complying with EU law,
  - not harmful to the functioning of the common gas market, competition and security of supply in a member state or the EU,
  - not undermining the objectives of ongoing international negotiations in which the EU is a party,
  - not discriminatory;

Key procedural steps for correct implementation of the revised Gas Directive	Participants	Legal basis in the revised Gas Directive
<b>New gas pipelines</b> – assessing whether the pipeline meets the conditions for exemption from the liberalising regime	<b>The national regulator</b> (of the member state in which the import pipeline connects to the network) <ul style="list-style-type: none"> <li>• after consulting the national regulators of other member states concerned and the national regulators of the third countries concerned,</li> <li>• consultations should be carried out in accordance with the standards set by case law in connection with the principle of sincere cooperation (Article 4 (3) TEU).</li> </ul>	Article 36
<b>Completed pipelines</b> – assessing whether the pipeline meets the conditions for exemption from the liberalising regime	<b>A member state</b> <ul style="list-style-type: none"> <li>• after consulting third countries and other member states, if the gas pipeline is located on the territory of more than one member state,</li> <li>• at the request of interested member states, the Commission may act as an observer in consultations with third countries.</li> </ul>	Article 49a
<b>Signing or amending international agreements</b> regulating the operation of gas pipelines to which the member state is a party	<b>A member state</b> – based on authorisation provided by the Commission. <b>The European Commission</b> – if a member state does not fulfill the authorisation conditions.	Article 49b

- The assessment of the lack of damage to the common gas market, competition and security of supply is particularly important. Firstly, it must be carried out in accordance with the principle of solidarity mentioned earlier. Secondly, examining the impact on security of supply, it is necessary to consider whether the pipeline diversifies gas supplies and suppliers by using new sources of gas;
- In accordance with the Directive's preamble, if there are technical agreements between operators regulating the functioning of the new infrastructure, an international agreement with the same subject is unnecessary (point 4d). It must be added, though, that the technical agreement between operators must be compatible with EU law and the appropriate regulatory authorities' decisions, and therefore – if there is a derogation based on Article 36 – must meet the requirements set out there.



Appropriate supervision by the Commission, with full application of Article 17 TEU, which states that: “The Commission shall promote the general interest of the Union and take appropriate initiatives to that end. It shall ensure the application of the Treaties, and of measures adopted by the institutions pursuant to them. It shall oversee the application of Union law under the control of the Court of Justice of the European Union”:

- regarding assessing the criteria for exemptions from the provisions of the Gas Directive in relation to completed pipelines (Article 49a),
- regarding assessing the criteria for exemptions from the provisions of the Gas Directive in relation to new pipelines (Article 36),
- regarding negotiations conducted between an authorised member state and a third country, in accordance with the provisions in Decision 2017/684 (the so-called IGA Decision).

### 3. Proposed actions

Based on the considerations above, the following actions should be taken:



Establishing a European Anti-Trust Office (EAO) that would consistently apply the available competition policy instruments with the aim of protecting European consumers;



In relation to the energy market, the EAO should:

- Always issue a binding opinion as part of the procedure for exemption from the provisions of the liberalising regime; it should analyse this exemption in terms of its impact on competition (taking into account security of supply) and

the functioning of the common energy market based on objective EU criteria;

- Constantly monitor competition on the market using a series of indicators and systematically record incidents that threaten the competition and security of the market.



Guarantee the strengthening of the internal energy market through full, transparent and objective application of the revised Gas Directive 2009/73/EC regarding import gas pipelines, especially through appropriate action by the member states responsible for applying EU law in a given case and supervision by the European Commission.

# Part 2.

## Security of energy supply

### 1. The challenge: increasing risk of cyber attacks

Security of energy supply is one of the energy union's main aims. As a result of the successive gas crises of 2006, 2009 and 2014, the EU developed mechanisms for planning preventing actions and coordinating mechanisms setting out the conditions for reacting in a crisis. However, the **new threats to security of energy supply posed by cyber-attacks require new measures.**

According to the *RMS Cyber Loss Experience Database* (CLED), which lists all known cyber-attacks in the private and public sectors, there were 60,000 attacks of this kind in 2007-2018, with several hundred more every month. According to experts, 90% of the cyber-losses are concentrated in 18 countries (Coburn, Leverett, Woo, 2018, p. 17). Illustration 2 shows the geography of threats.

The biggest cyber-threat is linked to so-called cyber-catastrophes, systemic phenomena that affect many entities simultaneously. In 2017, the world witnessed the first incidents of this kind (WannaCry, NotPetya), which are believed to have cost several billion dollars. There is no doubt, though, that these events were catastrophes with a limited reach.

**The most dangerous attacks include those on critical infrastructure, including**

**energy infrastructure.** According to calculations, a cyber-attack on the most populated, north-eastern energy region in the United States could deprive 90 million people of electricity and cost from USD 243 billion to at least USD 1 trillion. A similar attack on Britain could affect 9-13 million people and cost USD 70-628 billion (Coburn, Leverett, Woo, 2018, p. 12).

**The intelligent energy sector faces new challenges when it comes to cyber-threats.**

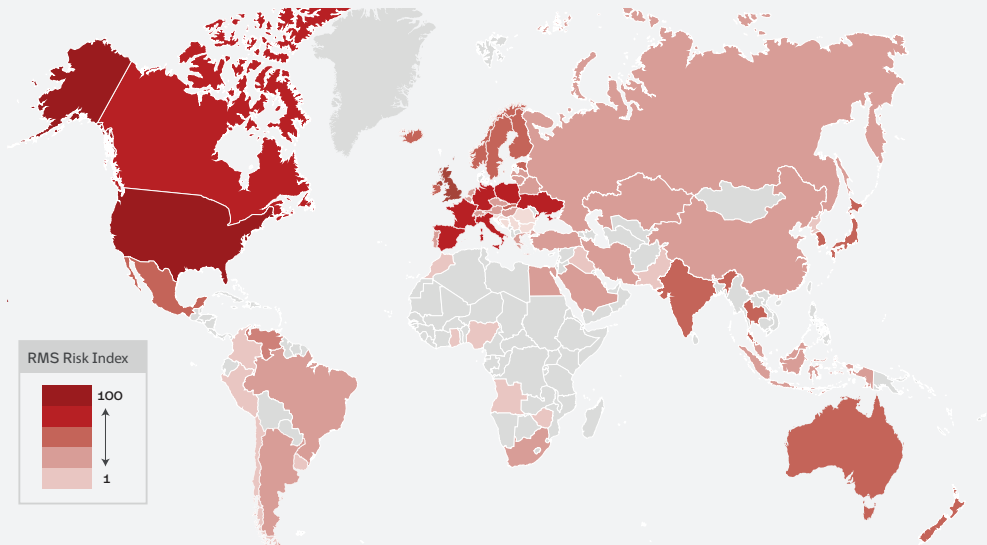
The sector's digitisation increases the possibility of a remote attack on the power network and disruption of end-users' operations. Digital technology is increasingly taking over actions that previously required a human factor, from generating and transmitting energy to managing the network and market operations. Its greater precision and speed makes them incomparably more efficient. However, as a result, the area vulnerable to a cyber-attack grows proportionally. According to the US administration's data, in 2013-2015, 34% of the 796 attacks on critical energy infrastructure concerned the energy sector (U.S. Department of Energy, 2018).

**Cyber-attacks by both state and non-state actors are not a potential threat; they are already part of our reality.** Numerous cases of attacks involving sabotage, espionage and

blackmail attempts have been documented (*Documented Attacks and Incidents Affecting Energy Infrastructures*, 2017, p. 19-20). The best-known, Stuxnet, damaged nuclear installations in 2010. One of the most recent major attacks in the energy sector took place in Ukraine in 2015 (Black Energy). The attacked power operators were forced to physically steer the system for several

weeks, which was possible mainly due to the old technology still present in the Ukrainian system. An attack on critical infrastructure was repeated with even greater precision and refinement in 2016. After these attacks, cybersecurity experts concluded that Ukraine has become a training ground for these forms of attack (Greenberg, 2017).

➤ **Illustration 2. Cyber threats around the world**



Source: Coburn (2018, p. 3).

**The cyber threat in the EU is amplified by the increased interdependence between member states' energy networks.** Energy security in the EU is based on trans-European connections. This makes the system as a whole more resistant, but it also means that electrical failure in one country can trigger a domino effect in a series of others. An organised cyber-attack could have similar consequences to the events of 2006. After

an electricity line in north-western Germany was turned off to allow a ship to pass, over 10 million people in a few member states were cut off from electricity supplies. The electrical failure could be felt in the system of each member state; it even crossed the EU border and turned off the connection between Spain and Morocco.

Today's states **spend more on counter-ing and preventing cyber-attacks than ever**

**before while facing an unprecedented number of attacks on IT infrastructure.** Reactive action will not improve this state of affairs. **Energy**

**security needs to be redefined, taking into account cybersecurity.**

## 2. Proposed solution: a cybersecurity strategy for the energy sector

Ensuring cybersecurity in the energy sector boils down to guaranteeing the energy system's resistance and reliability in the case of a cyber-attack. The sector's specificity is that the attacked control system cannot easily be disconnected from the energy network without affecting the level of security and blackouts. In addition, existing differences between member states' energy systems can cause difficulties in taking joint action if there is a threat.

In response to these challenges, the EU should develop and implement a **cybersecurity strategy for the energy sector**, which will aim to:



**strengthening readiness** when it comes to responding to cybersecurity threats in the energy sector;



ensuring that the energy sector is ready to cope with cyber threats requires the development of tools to conduct a comprehensive and timely assessment of threats. Continuous exchange of knowledge and experience between member states' relevant institutions (including energy market regulators, but also the institutions responsible for internal security) and energy system operators to identify gaps in system security, analyse the potential consequences of their use and assess the ability to respond to threats will help them determine how to react in a crisis;



**coordinating responses** in cyber-space; creating a crisis management mechanism, especially one that operates across borders (or has the potential to do so), needs to be established to ensure the smooth

coordination of activities between member states' relevant institutions and energy system operators. Central or regional coordination of activity during major energy disruptions would allow information to be shared in real time to facilitate orientation and to provide help where it is necessary;



**speeding up technological change** towards resilient security systems;



the traditional approach to R&D in the cybersecurity sector is based on feedback. Each development in the security system is followed by the development of methods for violating its integrity, which leads to further improvements in the security system. However, to anticipate further threats, this feedback needs to be overcome. An innovative approach to R&D in the cybersecurity sector should focus on developing intelligent systems with the capacity for self-improvement and self-defence.

**Strengthening cybersecurity coordination at the European level** is key. Firstly, a **common perception of threats and risks** is needed. Regularly updated, it should encompass not only EU member states, but also involve Norway and Switzerland and countries covered by EU neighbourhood policy, especially those that are part of the Energy Community. Secondly, EU **security standards** for the energy sector should be agreed based on international standards. Thirdly, a European cybernetic **response system** for the energy sector should be created. If there is a cyber-attack, operators focus on restoring their systems. For a large coordinated

attack, this is not enough. Exchanging information on the scale and type of threat is crucial.

Fourthly, **common crisis management mechanisms** should be established.

#### A cybersecurity strategy for the energy sector

Strengthening readiness for threats to cybersecurity in the energy sector

Coordinating responses in cyberspace

Speeding up technological change towards resilient security systems

To create a cohesive cybersecurity system at the European level, the EU should designate the **Agency for the Cooperation of Energy Regulators (ACER) as the leading institution in this field and grant it appropriate management powers.** Moreover, with specialists on

cybersecurity in the energy sector in short supply, the EU should allocate funds for research programmes, training and innovative efforts. Close cooperation between ACER and the European Union Agency for Network and Information Security (ENISA) should be ensured.

### 3. Proposed actions

Based on the considerations above, the following actions should be taken:



Implementing a **cybersecurity strategy for the energy sector, that will form the basis for:**

- information sharing: the obligation to report incidents and share relevant information,
- consistent risk assessment and planned activities (in particular at the regional level),
- coordinating activity: developing EU security standards in the energy sector

and their compatibility with other critical infrastructure,

- data protection in the sector and citizens' privacy,
- funding innovative projects that increase human resources and develop specific skills for cybersecurity in the energy sector.



Designate ACER as the entity that these responsibilities will be entrusted to.

# Part 3.

## Sustainability

### 1. The challenge: increasing social inequalities

The EU has adopted and is implementing ambitious targets for reducing greenhouse gas emissions and increasing the share of energy from renewable sources in electricity generation. Member states are also carrying out an innovative e-mobility agenda. These efforts and others place the EU among the leaders of the energy transition, setting standards for the international community. **The problem is that the costs and benefits of this process are unevenly distributed.**

According to European Commission data, in 2000-2014 **the share of energy costs in the poorest European households' budgets rose from 6% to 9%.** Over the same period, the share in average European households' budgets increased, too, but only by 1 percentage point, from 5% to 6% (European Commission, 2016a, p. 23). **This data not only shows that households' energy costs are rising, but that this increase affects the poorest people most, which is especially problematic.** This results in energy poverty – a state in which a household is unable to obtain the energy needed for heating, cooling, lighting and using equipment due to a combination of factors, which may include low income, high energy costs and the building's low energy efficiency

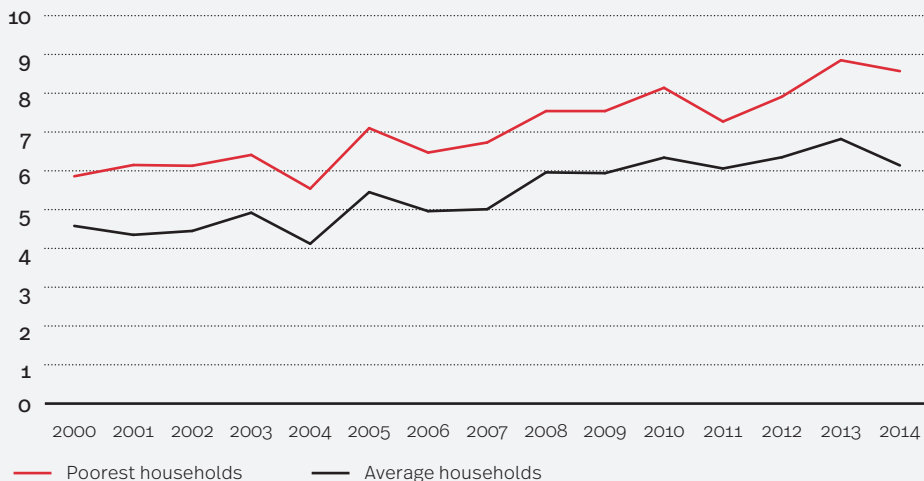
(as defined by Sokołowski, Kietczewska, Lewandowski, 2019, p. 26).

**The problem's second dimension is its geographical variation.** Studies point to three regions: **Southern Europe (around the Mediterranean) and Central and Eastern Europe, where energy poverty is more severe,** and Northern and Western Europe, where the problem exists to a lesser degree and only affects people from the poorest social group. Germany, where the average household spends 9% of its disposable income on energy utilities, is an example of a country in the latter region. In Spain, a country in the Mediterranean region, it spends 11%, rising to 16% and 18% in Bulgaria and Hungary, countries in Central and Eastern Europe (European Commission, 2016b, p. 3).

There is overlap between the data on geographical variation in the level of energy poverty and that on people at risk of poverty or social exclusion, which is one of the basic indicators of inclusive growth used by Eurostat to measure European cohesion policy's effectiveness. **In both cases, countries in Northern and Western Europe have significantly fewer people at risk of poverty – including energy poverty – than countries in the Mediterranean region and in Central and Eastern Europe** (Eurostat, 2017a).



Chart 2. EU average – share of energy spending in household budgets



Source: European Commission (2016a, p. 23).

The problem has a **third dimension, the dynamics of change in the level of poverty (including energy poverty) since 2008**. In principle, between 2004 (the first year in which data for over ten member states was available) and 2007-2008, the start of the financial crisis, the percentage of people at risk in individual member states decreased gradually. **The financial crisis reversed this trend in some member states, especially in the Mediterranean region, deepening inequalities between regions** (Eurostat, 2017b).

To sum up: the EU faces the **simultaneous existence – alongside progress in the energy transition – of a series of negative phenomena, such as:**

- 💡 an increase in the **share of energy prices in the poorest households' budgets**,
- 💡 **the concentration of energy poverty in regions with historically worse conditions for development**, like Southern Europe and Central and Eastern Europe,

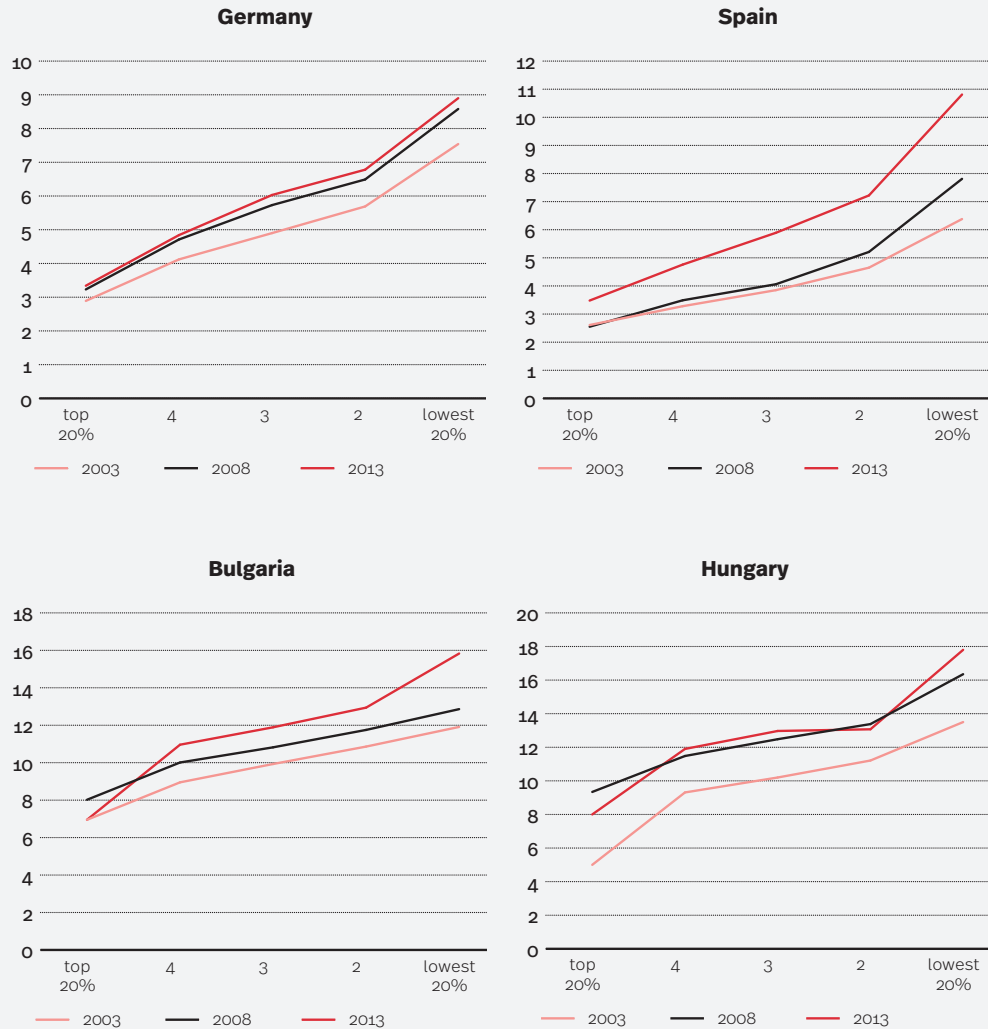
💡 unfavourable changes in which inequality between regions, measured in terms of exposure to the risk of energy poverty, is deepening.

These phenomena prevent EU citizens from benefiting from the energy transition's full potential.

This state of affairs may result from **EU institutions adopting a perspective that is distant from citizens**. Its key targets concern reducing greenhouse gas emissions from industrial sites or the share of renewable energy sources in member states' energy mix, **without adequate attention to the social implications of the changes being introduced**.

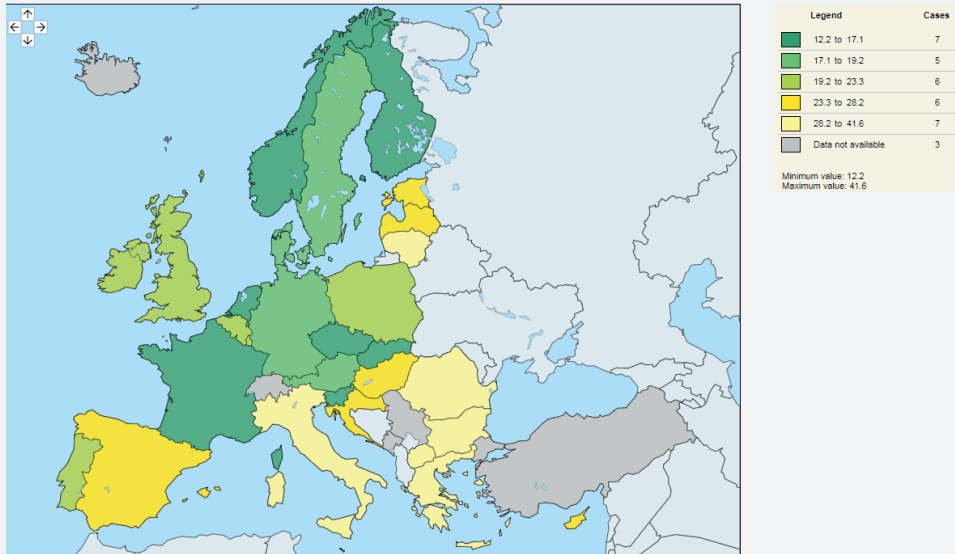
The first example of the European institutions' flawed perspective is the mechanism for granting free greenhouse gas emission allowances included in the EU ETS system. This mechanism, described as an expression of solidarity, aimed to reduce the negative impact of the transformation of industry, but did not sufficiently

▼ **Chart 3.** EU average– share of households' disposable income spent on electricity, gas and other fuels used for heating, cooking or household appliances



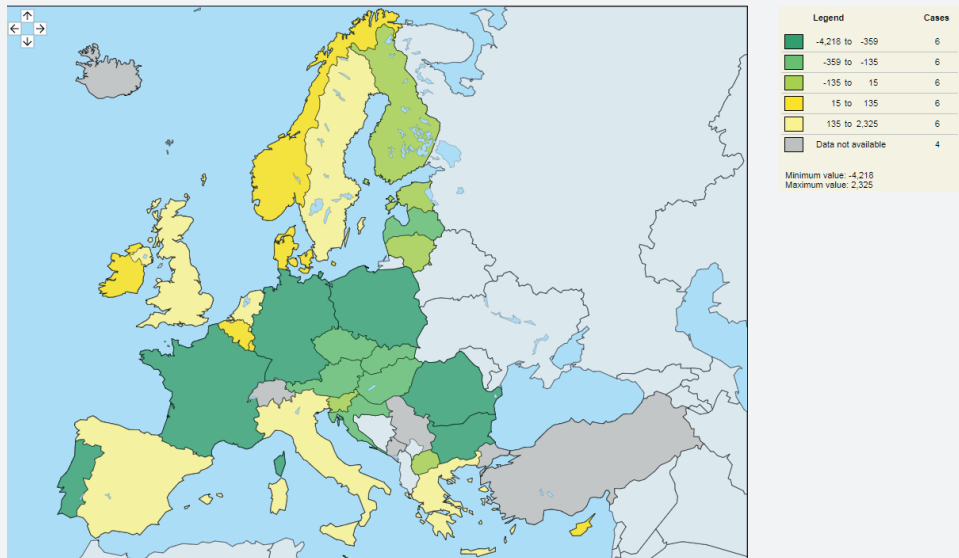
Source: European Commission (2016b, p. 3).

▼ **Illustration 3.** People at risk of poverty or social exclusion  
(data for 2017; percentage of society)



Source: Eurostat (2017a).

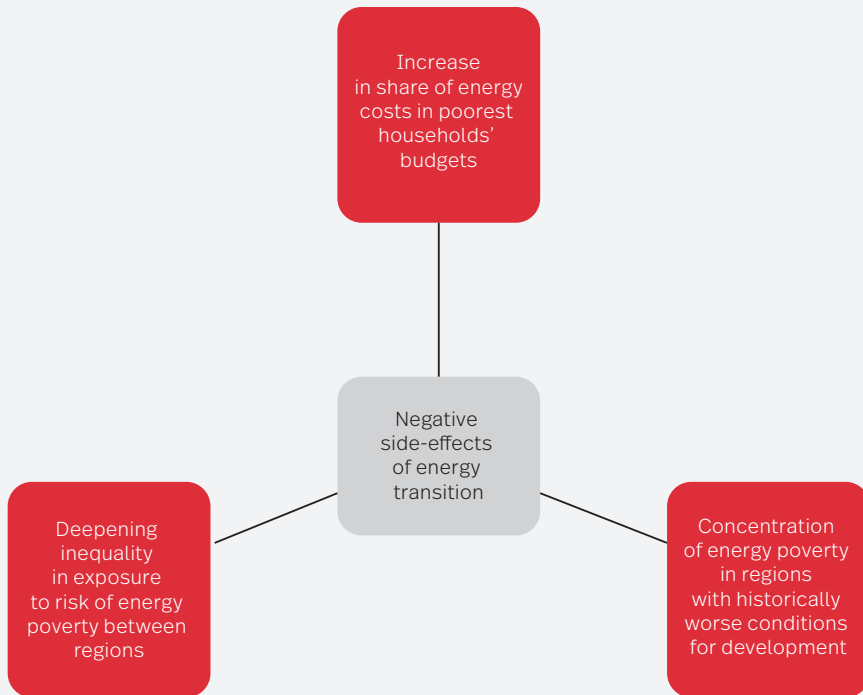
▼ **Illustration 4.** People at risk of poverty or social exclusion  
(percentage change in 2008–2017, in thousands)



Source: Eurostat (2017b).

help enterprises get started on alternative paths of development. The second example of the long-term weakness of the EU institutions' perspective is how the Commission did not become interested in monitoring energy poverty comprehensively

until the start of 2018, when the EU Energy Poverty Observatory research consortium was established. To this day, the consortium is merely an expert body that does not have the power to shape European policy.



**However, this problem can also be viewed as a challenge.** How can the EU continue the energy transition without making the inhabitants of its poor regions even poorer? **Can**

**investment in developing clean energy technology and improving energy efficiency be a tool for leading poorer EU regions out of the development trap?**

## 2. Proposed solution: A Just Energy Transition Fund (JET Fund)

Potentially, investment in decentralized, clean energy production technology and in improving buildings' energy efficiency could significantly reduce energy costs for households affected by or at risk of energy poverty. Unfortunately, this is not happening because these investments require the involvement of capital that is not available to this group of EU citizens. For this reason, **tools that can overcome the lack of access to capital in parts of the EU that face structural constraints on development should be created.**

This set of tools could take the **form of a Just Energy Transition Fund**. It should include programmes for granting preferential loans and grants for investing in improving energy efficiency and the local use of clean energy technology. **Support programmes should target households and local communities in parts of the EU facing structural constraints on development.**

This mechanism would remove the key barrier to access to the benefits of the energy transition – **limited access to capital** – for residents of EU regions that are particularly at risk of energy poverty.

While the JET Fund's fundamental aim should be to equalise opportunities in access

to the benefits stemming from the modernisation of the power industry and improvement in energy efficiency, **an important side effect may be an increase in employment**, as research on the impact of thermo-modernisation on the Polish labour market shows (Lewandowski, Sałach, Ziółkowska, 2018, p. 20). The acceleration of thermo-modernisation, as the fundamental tool for improving energy efficiency, may have helped create 100,000 jobs a year in Poland (Lewandowski, Sałach, Ziółkowska, 2018, p. 16). From the perspective of cohesion policy, it is significant that **over half of the jobs being created would be jobs for low-skilled workers** (Ibid, p. 17), **while the impact on unemployment would be strongest in less developed regions** (Ibid, p. 18).

The JET Fund's second important **side effect** would be an **improvement in air quality** where the high level of air pollution results from the use of outdated and ineffective energy solutions, and lack of capital is the main barrier to modernisation.

The proposed course of action is in line with the postulates of the *Silesia Declaration. Solidarity and Just Transition* adopted by the COP24, as well as those raised by certain experts (Delors, Fernandes, Pellerin-Carlin, 2018, pp. 3-4).

## 3. Proposed actions

Based on the considerations above, the following actions should be taken:



A Just Energy Transition Fund (JET Fund) should be established. Its aims will include administering support programmes for households and local communities to increase energy efficiency and the local use of modern energy technology. The programmes should target households and



local communities in parts of the EU facing structural constraints on development.

Establish a platform for coordinating energy, climate and environmental policy to counteract the negative social effects of the energy transition that is being implemented. The platform could be established on the basis of the EU Energy Poverty Observatory.

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# The Polish Economic Institute

The Polish Economic Institute is a public economic think-tank dating back to 1928. Its research spans trade, macroeconomics, energy and the digital economy, with strategic analysis on key areas of social and public life in Poland. The Institute provides analysis and expertise for the implementation of the Strategy for Responsible Development and helps popularise Polish economic and social research in the country and abroad.