

The revival of the debate around the energy-related problems of the European Union, provoked by the Polish proposal of 2014 to create an Energy Union, demonstrates that the subject is widely considered to be significant. This conclusion is supported by opinions of experts and stakeholders gathered by the Institute of Public Affairs in four countries: France, Germany, Poland, and the United Kingdom. The functioning of the internal energy market does not meet expectations and it seems that it is only through concerted efforts of member states – a coherent European strategy – that the most pressing problems can be addressed effectively. An overview of reactions and expectations in member states suggests that the Framework Strategy published by the European Commission in February 2015 reflects rather well the dominant opinions on the most pressing challenges. It is, however, a general document that formulates a large number of priorities which might sometimes turn out to be difficult to reconcile. The measures needed to achieve the goals spelled out in the document may become the object of discord between member states.

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THE ENERGY UNION: VIEWS FROM FRANCE, GERMANY, POLAND AND THE UNITED KINGDOM

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Magdalena Skłodowska
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Foreword

The first step towards European integration was taken when several countries in Western Europe came together to cooperate on the market of raw materials used in heavy industry and energy production. This pillar formed the basis for further stages. Currently, energy policy still constitutes a significant area of integration; however, it is difficult to work out a unified vision – among all 28 member states of the European Union – for future energy policy development. Successive proposals have been modified many times, and developed strategies have not been fully implemented. National interests in this sensitive area are very strongly protected and hotly debated in member states. Moreover, the motives and policy directions of particular countries are different – in the same way that the sources of energy they use and the degree of development of various branches of energy vary.

The conception of the Energy Union presented in spring 2014 by then Polish prime minister, Donald Tusk, thus met with varied reception. Its adoption by the new European Commission as one of the leading themes for the coming years is an indication that this project will at the same time be an important area, around which negotiations will take place in the coming months. As usual in such cases, various interested circles in the member states have taken positions on this project, and have also assessed the potential stances of other countries in the EU – sometimes guided by conjecture, stereotypes, or on the basis of fragmented, incomplete information. In order to get a broader picture of the real views of entities influencing energy policy in given countries and to show the similarities and differences that exist in this field between member states of the EU, the Institute of Public Affairs from Poland together with the Genshagen Stiftung from Germany, and in consultation with experts from France and Great Britain, implemented a research project presenting the opinions of members of political, economic/business and scientific elites from France, Germany, Poland, and Great Britain on the subject of the Energy Union and the potential for cooperation between countries of the EU in this field.

The study encompassed over 50 in-depth interviews conducted in four countries in the winter and spring of 2015 (February – April) on a basis of the same questionnaire. Due to the challenge of conducting a dozen or so interviews in each country, the periods of study in these countries were just before and just after the European Commission issued a communication – on 25 February 2015 – concerning the Energy Union. The small differences in dates of the interviews did not, however, have a significant influence on interviewees' assessments – as the content of the communication was to a significant degree consistent with earlier postulates and, furthermore, well-known thanks to preliminary versions of the text that were generally available to experts, originating from “leaks”. It is also worth emphasising that both before publication of the communication (but after presentation of the concept of the Energy Union by Donald Tusk) and after it, many experts claimed that many issues remained unclear and would require clarification. Hence, statements by the interviewees should be regarded as comparable.

Interviews were conducted with representatives/members of the government administration (offices of heads of government, and ministries of foreign affairs, the economy, and the environment), the energy industry (both corporations and associations of energy companies¹) and (non-governmental) environmental organisations. Another group consisted of experts, including analysts from independent research centres, academics, and journalists specialising in the subject. In each country, we tried to make sure that there was as broad a cross-section of interviewees as possible, corresponding to the actual spectrum of main actors in the field of energy. Hence, for example, in Germany, interviews were also conducted with experts from political foundations or people associated with parliamentary factions that specialise in the subject, whilst in Poland influential journalists in this field were also interviewed. In total, we conducted just over 50 interviews: in France – 11, Germany – 18, Poland – 16, and in the United Kingdom – 10.

The respondents' answers have been cited anonymously – only the group which they represent is identified. This method allows us – while maintaining the anonymity of interviewees – to highlight differences between particular groups of respondents, and also to identify issues that

1 In Poland, we also interviewed consulting firms dealing with the subject – hence, we used a broader term when referring to this group of interviewees: “business” circles/milieux.

members of particular groups strongly emphasised, but which (issues) at the same time were not opposed by other groups.

The opinions of interviewees from particular countries have been presented in chapters devoted separately to each of them. These chapters reflect the views of people that we interviewed, supplemented by opinions from available texts: government “non-papers”, the public positions of companies and NGO’s, and analyses prepared by research centres. The chapters on different countries have a common structure. The first part of each chapter is devoted to a short discussion of features that are characteristic of the energy market of the given country. In the next part, an assessment of the Energy Union project is presented, based on three main factors: 1) the security of supply of energy raw materials, 2) the functioning of the energy market, and 3) the relationship between energy policy and climate policy. The analysis is supplemented by a presentation of the attitude of citizens to energy issues. In the concluding chapter, assessments have been compared, presenting similarities and differences between views of the interviewees from four countries, indicating in which areas a European compromise is possible or will be in the future, and formulating suggestions for possible actions that it would be advisable to undertake in a given field. The last chapter reflects the opinions of the authors of the publication.

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Introduction – The European Union energy policy – challenges and solutions

It is universally acknowledged that the European Union should undertake effective actions, both internally and internationally, in order to strengthen energy security. Currently, the EU is highly dependent on the imports of energy resources, has high energy prices for final consumers, and some member states have a limited bargaining power towards their external suppliers because of the lack of competing sources. While the EU has implemented ambitious climate plans, actions in the area of energy security have been neglected. The dependence on external, dominating energy suppliers weakens the position of the EU not only in the sphere of economics, but also politically. Member states have a different perception of the individual components of the energy policy, and even though it is agreed that there should be an internal energy market and that energy security should be strengthened, the means to achieving these goals, or even the way they are defined, are still under dispute. Therefore, formulating a common standpoint in the field of energy is very challenging.

The EU is the largest energy importer in the world and pays about 400 billion euros per year for it. Imports provide 53% of the energy consumed in the EU market – not only crude oil (88%) and natural gas (66%), but also coal (42%).¹

The EU energy market is strongly integrated with the world market. The EU does not have enough natural resources to meet its needs and thus has a strong incentive today to invest in renewable energy sources and cooperate with resource-rich countries, in particular Russia, that due to its geographical location and abundance of natural resources is the largest partner in the field of energy, even though it is a politically difficult partner, and which has been recently confirmed by actions undertaken by Kremlin – the annexation of Crimea and supporting military activities in Eastern Ukraine, resulting in political and economic sanctions being imposed on Russia.

1 EU energy in figures, Eurostat, 2014

EU energy policy challenges

Diversification of energy sources that would lessen the dependence on external suppliers poses a huge challenge for the EU. In this area, establishing a consistent and efficient EU strategy has proven very difficult, an example of which is the case of the unrealised Nabucco pipeline from the Caspian Sea.

Russia supplies 39% of the natural gas used in the EU, half of which is transmitted through Ukraine. Finland, Slovakia and Bulgaria have a sole gas supplier – Russia, which makes them vulnerable to potential economic and political blackmail. It was only last year that the Baltic Sea countries obtained access to natural gas supplied from outside Russia – from the newly opened liquefied natural gas (LNG) terminal in Klaipeda. After opening its LNG terminal, Lithuania began to import 0.5 billion cubic meters of gas a year from Norway. Gazprom's long-term contracts with gas utilities in Estonia and Lithuania expire this year, and since the new LNG terminal opens the way to competition Gazprom may be willing to offer more favourable conditions in the new contracts.

Another challenge is to complete the internal energy market. In the EU, "energy islands" are isolated from exchanging energy with other countries, and the existing gas and electricity infrastructure is not enough to facilitate the free energy flow and diversification of sources. Thus, the question arises of how, and whether it is possible at all, for the EU as a whole to cope with potential disruption of gas supply.

In recent years, the implementation of the energy and climate package has been at the centre of the EU's energy policy, although it has not been sufficiently coordinated with other important areas such as the common market, price competitiveness, safety and diversification of the supplies. Thus, the EU is today highly dependent on the import of fossil fuels, including growing coal imports, making it urgent to formulate a comprehensive energy strategy that comprises the above-mentioned aspects. One of the most important consequences of the climate-energy package is the dynamic development of renewable energy sources, which has been supported by high subsidies. However, this does not necessarily translate into supporting the most cost-effective technologies. Moreover, the costs of financing new investments and subsidies has led to the

increase of energy prices for final consumers.² Therefore, eliminating energy poverty and increasing energy bills poses yet another challenge.

Facilitating the investments necessary to modernise the energy sector and to develop competition is another urgent need. Large production of subsidised energy has disturbed the functioning of the wholesale market. Conventional power generation is at a competitive disadvantage in comparison with subsidised green energy, which is prioritised in the network; on the other hand, renewable energy sources must have backup in the form of more stable power plants, e.g., gas power plants. Neighbouring EU countries are reluctant to receive the occasional surplus of green energy from abroad (because it is prioritised in the network), which doesn't facilitate the integration of the markets.

“Unilateral political decisions do not take into consideration the co-dependence on neighbouring countries, nor are these countries consulted, which sometimes leads to unnecessary and costly for the Europeans investments and may destabilise the entire European energy market,” Jerzy Buzek said in May 2013.³

The entire EU Emissions Trading System needs to be adjusted, as it failed to meet the expectations; the low allowance prices are not enough to motivate the switch to low emission technologies. Utilities must make difficult decisions about what energy sources to invest in; investments into new capacities are necessary, although they do carry the risk of not being economically viable. Low coal prices make it an attractive resource, even though it runs against the objective of limiting CO₂ emissions and increases the dependence on external suppliers.

Improving competitiveness and transparency in the natural gas market is another challenge. Prices of natural gas in the European market are twice as high as in the United States, where the discovery and extraction of shale gas has led to a “shale revolution”. It will be mainly Asian countries that will take advantage of the shale revolution, by increasing the import of American gas Europe will benefit to a lesser degree.

The situation in the EU is completely different, as gas prices in Europe depend to a large degree on negotiated contracts, and over 40% of

² http://ec.europa.eu/energy/sites/ener/files/documents/20140122_communication_energy_prices.pdf

³ Rzeczpospolita, *Czas na Europejską Wspólnotę Energetyczną*, 22.5.2013 <http://www.rp.pl/artukul/1011974.html?p=2>

them use the price estimation model based on indexing gas to crude oil, particularly in import contracts with gas pipelines. The development of liquidity on wholesale markets allows for deviating partly from this model, albeit mostly in Northern and Western Europe. The EU has not increased the production of its own natural gas resources, both conventional and unconventional, and the International Energy Agency predicts that the EU will continue to depend on Russian pipeline gas imports for the foreseeable future.

The clauses imposed by Gazprom are detrimental to the interests of some countries and make transparency in the gas market impossible. Each individual contract for natural gas may be significantly different. In case of the Member states for which Russia is the main or the only supplier of the blue fuel, Gazprom is in a position to dictate the conditions and the price; being a monopolist, Russia is able to demand higher prices and impose unfavourable clauses (e.g., prohibition on reselling gas) on countries that do not have diversified supply sources. Thus, in 2012 the European Commission initiated an investigation against Gazprom accusing it, among other things, of dishonest price practices.⁴

As the construction of the internal energy market is going forward with additional layers of regulation, many member states have difficulties keeping up with the implementation process. The third energy package has led to a massive increase in the number of proceedings in the European Court of Justice.⁵ Simultaneously, it seems reasonable to strengthen management and control on the European level, to avoid cross-border disputes and ensure that national rules are made compatible.

EU energy market regulations

Since the very beginning of the European Community, energy has always been at the centre. It is enough to say that in 1951, six countries established the European Coal and Steel Community to be followed in 1957 by the European Economic Community and the European Atomic Energy Community (Euroatom). Due to their strategic importance in the reconstruction of the industry in Europe, energy supply has always been a

⁴ <http://www.europarl.europa.eu/sides/getAllAnswers.do?reference=E-2013-008583&language=PL>

⁵ *From European Energy Community to Energy Union*, Institute Delors, p. 71, <http://www.institut-delors.eu/media/energyunion-andouravinois-jdi-jan15.pdf?pdf=ok>

pivotal issue in the formulation of EU policy. This was also the reason why the electricity and gas markets have been monopolised for decades and there was no intention to pass control over them to EEC organs. Likewise, energy issues were not agreed on during the implementation of the Treaty on the European Union and it was only the Lisbon Treaty implemented in 2009 that clearly defined the EU's competences in this field. Article 194 of the Treaty says that member countries have a sovereign right to choose their energy sources and exploit the resources, whereas the EU is to ensure the functioning of the internal market and security of supplies, and promote the unification of energy networks, renewable energy sources, and energy efficiency.⁶

Since the 1990s, the EU has undertaken many actions to open energy markets to competition. The first directive on liberalisation of the energy market was adopted in 1996. Two years later, a directive on the liberalisation of the gas market was issued; the second legislative package was adopted in 2003 and implemented in 2004–2007.

Liberalisation meant separating energy sales from the natural monopoly of network operators. The owners of the infrastructure were obligated to make it available to a third party (the so-called TPA – third party access) to give consumers a wider choice of sellers. Barriers protecting the market against importers and energy producers from other sources were removed as well as the restrictions on changing energy suppliers. The energy market regulations were to be supervised by an independent body.

Wholesale markets for electricity and gas have developed along the liberalisation process and trading platforms have been progressively set up. The first European power exchange, Nord Pool, was opened in Norway in 1990, only to encompass the entire Scandinavian region later on. After the development of such platforms in the different member states, the next step has been to implement market coupling and handle the allocation of electricity and transmission capacity and minimise price differentials between national power exchanges.

Unfortunately, the regulations did not meet expectations in full. Cross-border exchange remains limited and the new players have difficulties in competing with the incumbents. Further steps are needed, in particular

⁶ The Lisbon Treaty, Article 194, <http://www.lisbon-treaty.org/wcm/the-lisbon-treaty/treaty-on-the-functioning-of-the-european-union-and-comments/part-3-union-policies-and-internal-actions/title-xxi-energy/485-article-194.html>

for what it relates to cross-border infrastructure, consistency of market rules, regional cooperation, linkages between wholesale markets, and empowerment of the consumers.

Energy crises speed up reforms of the common energy market. In the past, when gas supplies have been disrupted, EU members were not able to speak with one voice and support each other. During the crisis in 2006, when Russia limited gas transit through Ukraine, the Prime Minister of Poland, Kazimierz Marcinkiewicz, proposed the so called “musketeers’ pact”. The pact called for providing help in the time of threat to energy supplies, even if caused by political actions of the suppliers. The proposal gained no support and France decided that better results could be obtained by negotiations and dialogue with the suppliers. “Poland proposed a new dynamics referring to the Treaty on the basis of NATO. As far as France is concerned, I believe it is better to give new life to the already existing instruments, or to improve them if necessary” – claimed the French Minister of Finances, Thierry Breton.⁷

The crisis did, however, accelerate the work on formulating a new energy policy. Adding to the necessity to reduce CO₂ emissions, concerns over the rising important dependency provided solid grounds for the Green Paper presented by the European Commission in March 2006. The document gives priority to six areas: competitiveness and the internal energy market, differentiation of sources, solidarity and prevention of supply crises, climate change, technological progress and innovation, and integrated internal energy policy.⁸ A year later, the heads of the governments of the member states agreed on a new European energy policy that was to strengthen the common market, increase cooperation in the development of energy infrastructure, and promote renewable energy sources. In January 2008 the European Commission put forth concrete proposals on the regulations of the energy and climate package that were adopted during the summit meeting in December 2008. The energy and climate package calls for limiting greenhouse gas emissions by 20% by 2020, increasing the proportion of renewable resources in the energy balance in the EU (up to 20%), and reducing final energy consumption by 20% compared to business as usual levels. Each member state was given an individual goal in the area of renewable energy

7 Gazeta.pl, Andrzej Kublik, *Francja sceptycznie o energetycznej solidarności*, 12.2.2006, <http://wiadomosci.gazeta.pl/wiadomosci/1,53600,3160373.html>

8 http://europa.eu/documents/comm/green_papers/pdf/com2006_105_en.pdf

resources. The reduction of greenhouse gas emissions was divided into sectors within the EU ETS (energy and industry) and targets were defined per member state for the non-ETS sectors.

After the crisis in 2009, when Russia stopped gas deliveries through Ukraine for two weeks, the EU introduced legal mechanisms that made the gas market more resilient. The regulation on gas security of supply introduced supply and infrastructure standards as well as mandatory preventive and emergency plans. Simultaneously, reverse flows have been implemented at cross-border points, although not everywhere in the EU.⁹

In 2010 Jerzy Buzek, then the Chairman of the European Parliament, proposed the project on the Energy Community and obtained for it the support of Jacques Delors, the former chairman of the EU Commission. The concept was to tighten the cooperation of member states in the area of the energy market and to “diversify energy sources in the spirit of solidarity”.

After 2009, the number of built and planned interconnectors on pipelines increased. Member states have also been working on new gas transit routes from Russia – Germany started importing gas via Nord Stream, whereas Italy, Bulgaria, Hungary, Serbia, and Slovenia joined the South Stream project. Some of these actions evoked controversies as they only altered gas transit routes.

The third energy package whose regulations were accepted in 2009, was foremost to facilitating the completion of a harmonised, competitive energy market within the EU. It strengthened the rule of “unbundling”, namely separating network activities – transmission and distribution – from production and turnover of gas fuels and energy. The idea was to “separate” vertically integrated enterprises and to prevent conflict between the producers, suppliers, and operators of the transmission system.

The package includes clauses giving right to deny the transmission licence to a company controlled by an entity from a third country if it does not comply with the rule that network activities be separated from trade activities, and if the entrance of the entity into the market would jeopardise the security of supplies in the member state market or in the EU – the clause is known as the Gazprom clause.

9 Regulation (EU) NR 994/2010

ACER, the Agency for the Cooperation of Energy Regulators, was established in order to promote cooperation between the national regulators and to facilitate access to cross-border infrastructure. Another move was to formalise the cooperation of operators, thus the European Network of Transmission System Operators (ENTSO-E) for energy and ENTSO-G for gas. In order to make access to information easier and to facilitate the change of the supplier, the European Charter on the Rights of Energy Consumers was introduced.

In the direction of an Energy Union

Solutions and investments implemented after 2009 have better prepared the EU for potential gas supply disturbances, although when Russia began military actions in Ukraine in winter 2014, the question arose whether this country can be treated as a dependable gas supplier to the EU and whether the European countries should rely on their energy partnership with Russia. For this reason, on 21 March 2014, the European Council called upon the European Committee to present a document on energy security.¹⁰

Poland joined the debate – then prime minister Donald Tusk presented the project of the Energy Union resting on six pillars: development and financing of the infrastructure, solidarity mechanisms, strengthening the bargaining power vs. external suppliers, developing own energy sources, diversifying the supply sources of crude oil and gas, and strengthening the Energy Community. Donald Tusk compared the situation in the gas market to creating a banking union in the time of financial crisis. “Regardless of the development of the events in Ukraine, the main lesson Europe will learn is that being dependent on Russia makes it weak,”¹¹ he said in the *Financial Times*, and suggested that the EU should create one organ responsible for gas purchases.

The proposal evoked a hot discussion and its assumptions left their trace in the European Strategy of Energy Security, accepted by the European Council during the meeting on 26–27 June 2014.¹² The need for

10 http://www.consilium.europa.eu/uedocs/cms_data/docs/pressdata/PL/ec/141756.pdf

11 *Financial Times*, Donald Tusk “A united Europe can end Russia’s energy stranglehold”, 21.04.2014, <http://www.ft.com/intl/cms/s/0/91508464-c661-11e3-ba0e-00144feabdc0.html>

12 European Commission, *In-depth study of European Energy Security*, 2.7.2014, http://ec.europa.eu/energy/sites/ener/files/documents/20140528_energy_security_study_0.pdf

closer cooperation of member states and increasing the role of market mechanisms in case of the interruption in gas supply were pointed out in the report of the European Commission on security of the gas market.¹³

The Energy Union strategy project presented on 25 February 2015 is a response to the current, incomplete EU policy and challenges relating to the improvement of energy security. Commissary Maros Sefcovic's ambitious strategy was not only to improve energy security, but to build a resilient Energy Union with a forward-looking climate change policy. When the conditions are right, the EU will consider reframing the energy relationship with Russia. "European Union should be able to give a consistent answer in case of unexpected events, use to the full its capacities and to foresee in advance future developments in energy market and technology".¹⁴

The proposal of the European Committee is strongly correlated with the postulates formulated by Poland in the Energy Union. The Commission lists five, interlinked and mutually supportive areas: energy security, a uniform energy market, energy efficiency, decarbonisation of the economy, and innovations in the energy sector. The Polish document focused strongly on strengthening the bargaining power of the EU vs. foreign gas suppliers, price policy for gas and the solidarity of member states in the energy market, whereas the axis of the EU proposal is the creation of an integrated market benefiting consumers, energy producers, and the environment.

The EU project aims to eliminate the political risks related to energy supplies. The European Commission stated the necessity to diversify sources by finding new suppliers (such as Azerbaijan and Turkmenistan) and building new transportation routes (e.g., the Southern Gas Corridor). Cooperation with Russia must be "based on a level playing field in terms of market opening, fair competition, environmental protection and safety, for the mutual benefit of both sides" – says the strategy project. Thus, the European Commission points out that current international contracts with Russia for energy supply affect the interests and legal regulations of the EU.

¹³ European Commission, *Preparedness for a possible disruption of supplies from the East during the fall and winter 2014/15*, 16.10.2014, https://ec.europa.eu/energy/sites/ener/files/documents/2014_stresstests_com_en_0.pdf

¹⁴ European Commission, *Energy Union Package*, 25.2.2015, http://ec.europa.eu/priorities/energy-union/docs/energyunion_en.pdf

The Commission wants to consult international gas contracts *ex ante* to ensure that they conform to EU legal regulations and provide energy security for the entire Community. The Committee wants to verify the Intergovernmental Agreements (IGA) – which was also sought by Poland. The Commission proposes that similar procedures be used for commercial contracts – a suggestion that is likely to be criticised. Moreover, the Commission is to evaluate the possibility of common gas purchase – a solution proposed by Poland in the Energy Union project.

The Commission stresses in the project that energy produced from local resources should diminish the dependence on imports. Renewable as well as conventional and unconventional – e.g., shale gas – resources are listed. Meanwhile, the supporters of nuclear energy – Great Britain, France, and Poland – strive to obtain EU support for this particular technology, as one of the means to reaching the energy and climate goals.¹⁵

The European Commission considers that better integrating the national markets will contribute to improving the functioning of the retail markets. The Commission has announced that it will be monitoring on an annual basis the realisation of the obligation to ensure that the capacity of interconnectors is at least at the level of 10% of the energy market in 2020 and 15% in 2030. What remains problematic is the supervision of member states. The Strategy project considers the possibility of giving wider authority to ACER and strengthening the role of ENTSO-E and ENTSO-G. The Commission supports the emergence of the regional energy and gas flow management centres, using as the example the Baltic Energy Interconnection Plan (BEMIP).

In the Energy Union, an important role has been given to energy consumers, who, as the Commission points out “should be able to select due to the access to information and the possibility to manage demand and supply”. Never before so much importance has been given to the management of demand and supply and enhancing the role of efficiency in the heating and cooling sector in a strategic document. The Commission announced that new funds should be allocated for this goal.

The strategic project of the Energy Union fits very well with the climate policy of the EU. In October 2014, member states committed themselves

15 https://docs.google.com/file/d/OB__JqTUh86obYUFNNmVNX1VRRmdXUE1rMHRtMS1dHVjV-Vpn/edit#identifying

to limiting CO₂ emissions by 40% by 2030, produce 27% of energy from renewable resources, and to also improve energy efficiency by 27%. The compromise of the agreement is to give member states a large degree of freedom in the implementation of the common commitment, without defining separate, obligatory national goals for the share of energy from renewable resources and the improvement of energy efficiency, which gives member states an opportunity to achieve the goals in the most economic and effective way.

With sustainable, justified and market-based support schemes for green energy and a well functioning EU ETS that should create comparable conditions for technological competitiveness in the energy sector, the internal electricity market should be able to function better – states the Energy Union project.

In the meeting on 19–20 March, EU leaders backed plans for an Energy Union and a single market based on improving connections between member states. They urged stronger cross-border links and improved energy market design to help integrate renewable energy. The leaders called for more transparency in natural gas contracts with Russia and other external suppliers under the proposed Energy Union plan, but stopped short of moving towards the EU buying on behalf of the bloc or interfering with member states' energy mix. EU leaders agreed to look at the European Commission proposal on voluntary joint purchases of gas that would be compatible with World Trade Organization and EU competition rules.¹⁶

The Energy Union – opportunities and barriers

Energy policy must reconcile many interests. How the member states define energy security and the measures to attain it, shape their internal energy market and meet the expectations of the consumers as well as comply with the obligations of energy and climate package will definitely impact the commitments.

The answer to the question of what energy security in the EU really means is of key importance. Some countries focus on the development of renewable energy sources, others with using their own fossil resources or

¹⁶ European Council, *European Council Conclusions on the Energy Union (19 March 2015)*, 19.3.2015, <http://www.consilium.europa.eu/en/press/press-releases/2015/03/conclusions-energy-european-council-march-2015/>

diversifying energy supplies and their sources. The common strategy must accommodate all these attitudes.

Member states must clarify their energy partnership with Russia and define what level of dependency is acceptable. These are difficult decisions, as they will result in significant investments in new infrastructure and technologies. For the time being, investments such as Nord Stream make the EU more resilient to potential gas supply disruptions through Ukraine, but at the same time strengthen the energy trade between the EU and Russia for the coming decades¹⁷.

Although the member states agree that market integration must be completed, the implementation of this plan may be a complicated process, for instance, due to the fact that some member states resist new investment in interconnectors, as they fear that their neighbours' excess renewable production will disturb their wholesale market and affect their own energy producers.

The EU must cope with the increasing energy costs for final consumers. On the other hand, the energy sector does not have predictable conditions for investment. The consumers – the industry sector in particular – expects the European Commission to provide concrete solutions against high energy prices and loss of competitiveness and jobs in EU member states.

The European Commission hopes that signing the international, legally binding agreement on climate change in Paris in 2015 – replacing the expired Kyoto treaty – will be an impulse to implementing the targets defined in the energy-climate package. The EU is going to present a very ambitious approach to climate issues at the conference in Paris.

“The EU contribution to the agreement to be signed in Paris in 2015 is the attempt to reduce internal greenhouse gas emissions by at least 40% by 2030. To achieve this goal, sectors within the ETS will have to reduce emissions by 43% by 2030 as compared to the level of 2005. Sectors outside the EU ETS will have to reduce emissions by 30% below the level of 2005. The goal to reduce emissions by at least 40% is ambitious, just, cost viable,

17 The Oxford Institute for Energy Studies *What Ukraine crisis means for gas markets*, March 2014, <http://www.oxfordenergy.org/wpcms/wp-content/uploads/2014/03/What-the-Ukraine-crisis-means-for-gas-markets-GPC-3.pdf>

and complies with the plan to reduce internal emissions by at least 80% by 2050.”¹⁸

Without a new, international agreement binding the largest greenhouse gas emitters (China, the US, Canada, Japan) to significantly reduce emissions, it will be difficult for the EU to meet the long-term goal of reducing emissions without losing competitiveness.

There is no single, simple solution to all the challenges in the energy sector. The debate on the EU's strategy focuses on the definition of energy security and its co-dependence on climate policy. Some countries, for instance, Poland, perceive promoting the reduction of greenhouse gas emissions to be in juxtaposition with the improvement of energy security. Others, for instance, Germany, cannot envision anything else but pursuing the strategy of decarbonisation. The key issue is to reconcile free market rules with support given to renewable energy sources. How to maintain competitiveness of the EU's economy in the face of the increasing costs of the implementation of the energy and climate package has been debated for years and remains an open issue. Another sensitive issue is the division between the supporters and opponents of interconnectors and LNG ports who cannot agree whether such an expensive infrastructure should be built at all, as it may not be fully utilised later. Moreover, no answer has been found yet to the question of what position should be adopted towards Russia as the EU's main energy supplier.

The EU project is a strategic document and requires additional legal regulations, which means the majority vote in the European Council. The proposals may still be adjusted during the discussions and the current experience proves that often the proposals put forth by the European Commission are weakened.

18 Questions and Answers on the European Commission Communication: The Paris Protocol – A blueprint for tackling global climate change beyond 2020, 25 February 2015



The Energy Union: a French perspective

French energy sector: a brief summary

France can boast a secure and resilient energy system. In response to the oil price shocks of 1973 and 1979, the country decided to foster its energy independence by launching ambitious nuclear power programmes. With 58 reactors in operation today, the nuclear energy sector produces 75% of the electricity generated in France and accounts for 43% of the total primary energy supply.¹ Because uranium is bought from diverse producers, is easily stored and processed by French companies, stability of supply is guaranteed. In addition, the developed nuclear production has a low operational cost, contributing to the affordability of electricity, the price in France being among the lowest in Europe today.² However, as modernising the nuclear fleet, maintaining geographically equalised tariffs and social tariffs as well as expanding renewables will create substantial financing needs, the price of electricity is expected to increase in the near future.

France is obliged to import the vast majority of its sources of energy: oil, gas and coal which account for 28.6%, 14.9% and 4.5% of the total primary energy supply respectively.³ With only a marginal mine gas production and biogas still at an early stage of development, France imports almost all (99.3% in 2013) of the gas used, but has a diversified supply including Norway (largest supplier – 42%), the Netherlands, Russia, Algeria, Nigeria, Qatar and Egypt. It imports gas through land pipelines (72%) as well as through LNG terminals (28%). While LNG infrastructures give access to a wider range of gas producers, attracting LNG cargoes to France has become more challenging since 2011 because of the competition with higher-paying markets in Asia and South America.

1 Data for 2012 according to International Energy Agency. Available at: <http://www.iea.org/statistics/statisticssearch/report/?country=FRANCE=&product=balances&year>Select>

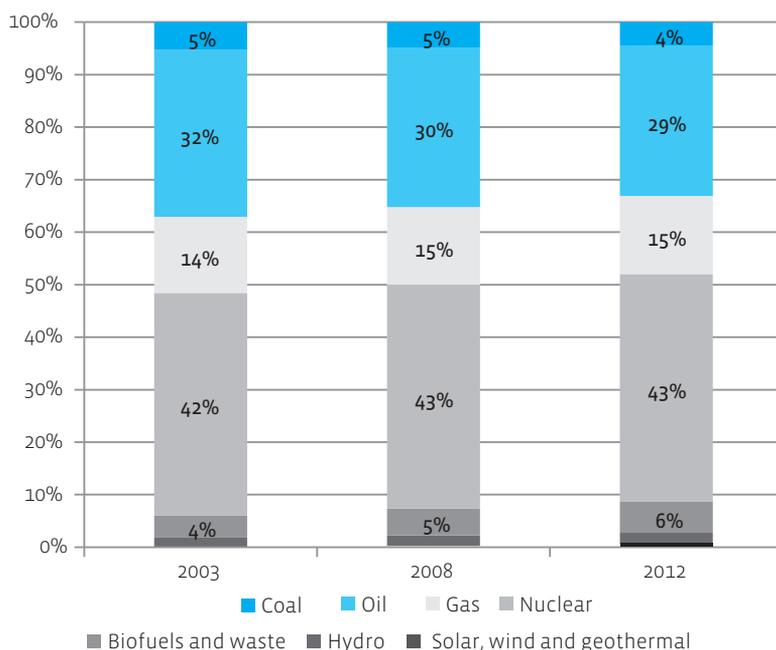
2 According to Eurostat, in 2014 France had the lowest average price for residential consumers from among the so-called old member states.

3 The source of data in this paragraph is a publication of the International Energy Agency entitled *Energy Supply Security 2014*, pp. 184-198. Available at: http://www.iea.org/media/freepublications/security/EnergySupplySecurity2014_France.pdf

The security of supply is also bolstered by “extensive storage facilities”, which can cover a quarter of the yearly gas demand. France was one of the best-rated EU countries according to the supplier concentration index concocted by the European Commission and designed to portray relative dependence on natural gas suppliers from outside the European Economic Area.⁴

Total primary energy supply in France

Source: International Energy Agency 2015, <http://www.iea.org/statistics/statisticsearch/report/?country=FRANCE=&product=balances&year>Select>



Regarding oil, France also has a variety of suppliers, none of which provides more than 14% of French imports (the largest suppliers being Russia and Saudi Arabia). France’s energy dependence indicator calculated by Eurostat stood at 48% in 2013 (the EU-28 average being 53.3%). The imports of energy show a downward trend in recent years from a peak of 141 million tonnes of oil equivalent in 2004–2006 to 125 million in 2012.⁵

France has a relatively well-developed sector of renewable energy production, which in 2013 generated 16.9% of electricity (15% in 2009) and

⁴ *In depth study of European Energy Security*, Commission Staff Working Document SWD(2014) 330 final/3, 2 July 2014, p. 8.

⁵ Eurostat: <http://ec.europa.eu/eurostat/web/energy/data/main-tables>

accounted for 14.2% of gross final energy consumption.⁶ The majority of renewable energy is produced from biomass (43%) and hydropower (25%).⁷ Since 2006 the production of renewable energy has grown by an average of 10% per year (with the exception of 2011, when production fell due to meteorological conditions) and should reach 23% in 2020, in line with the target assigned to France in the EU directive 2009/28/CE.

The prominent place of nuclear energy in the energy mix means that France has been able to maintain a relatively low level of CO₂ emissions (5.5 tonnes per capita in 2012 as opposed to 7.3 tonnes in the EU).⁸ Since 2000, CO₂ emissions created by energy combustion fell by an average of 1.5% per year.⁹

France is relatively well interconnected with its neighbouring countries. Its electricity network is connected to that of Belgium, Germany, Italy, Spain, Switzerland and the United Kingdom, the capacity of its interconnections being 12,000 megawatts for export and 8,000 megawatts for import.¹⁰ This, according to Commission de régulation de l'énergie – the regulator of the French energy market – “is insufficient in relation to the volumes of energy that market actors would like to exchange”.¹¹ France was the world's third largest exporter of electricity in 2012 having exported 73.4 TWh.¹² In the same year, imports accounted for 29 TWh. With the widespread use of electricity for heating purposes, French electricity demand is highly sensitive to weather conditions, and cross-border imports play a crucial role at peak times as a complement to demand response.

The French electricity and gas markets have been opened to competition since 2007. Although market concentration has been decreasing steadily, the two incumbents, Electricité de France (EDF) and Gaz de France SUEZ, still hold dominant positions, on the electricity market in particular. EDF supplies 91% of the market in terms of number

6 Data for 2013 according to Eurostat: <http://ec.europa.eu/eurostat/web/energy/data/main-tables>

7 Chiffres clés de l'énergie, Edition 2014, p. 31.

8 European Environment Agency: <http://www.eea.europa.eu/data-and-maps/data/data-viewers/greenhouse-gases-viewer>

9 Chiffres clés de l'énergie, Edition 2014, p. 36.

10 In February 2015, a new electric interconnection between France and Spain was inaugurated doubling the capacity for exchange between the two countries from 1,400 to 2,800 megawatts.

11 <http://www.cre.fr/reseaux/reseaux-publics-d-electricite/interconnexions> All translations from French in the chapter are the author's.

12 US Energy Information Administration <http://www.eia.gov/countries/country-data.cfm?fips=FR> Data on quantities of exported and imported electricity according to CRE.

of sites and 84% in terms of consumption of electricity. The gas market is more balanced with the so-called alternative suppliers providing gas to 17% of sites, and 42% in terms of energy consumption.¹³

France is currently in the middle of a debate on the medium- and long-term strategy for the development of its energy market. The Bill on energy transition for green growth promoted by the Socialist-led government spelled out a number of key targets:

- ▶ 40% reduction of greenhouse gas emissions by 2030 (with emissions from 1990 being the reference);
- ▶ 50% reduction of energy consumption by 2050 (with 2012 being the reference);
- ▶ 30% reduction in consumption of energy from fossil fuels in comparison to 2012;
- ▶ achieving the share of 23% of renewable energy in the gross final consumption of energy by 2020 and 32% by 2030;
- ▶ reducing the share of nuclear energy in electricity generation to 50% by 2025.

The strategy is compatible with the plans adopted at the EU level, which promote reduction of greenhouse gas emissions in parallel with the development of renewable energy sector and efforts to improve energy efficiency. With a clear focus on the economic opportunities that the energy transition can create, the draft law aims at “providing citizens, businesses and regions throughout France with the means to take action, boosting employment [...] while protecting our planet from climate change”.¹⁴ The Senate, dominated by a right-wing opposition party, adopted a number of important amendments to the Bill. The senators named greenhouse gas emissions reduction as the primary objective of the reform, with the other goals having secondary importance. They also weakened the move to reduce the share of electricity from nuclear energy: accepting the 50% target, but removing the 2025 deadline, leaving it as an open-ended declaration. The majorities in the two chambers failed to achieve a compromise, which means that debates on the Bill will continue, aiming at a final adoption before summer 2015.

13 Data as of 30 September 2014 provided by on the website of Commission de régulation de l'énergie, the French energy regulator: <http://www.cre.fr/marches/marche-de-detail/marche-de-lelectricite> and <http://www.cre.fr/marches/marche-de-detail/marche-du-gaz> [accessed 20 April 2014].

14 http://www.developpement-durable.gouv.fr/IMG/pdf/14123-2_plaq-NMTE-parlementaires_GB_DEF_Light-2.pdf

What kind of Energy Union?

Achieving secure energy supply

The vast majority of French respondents quoted security of supply as a top priority for the Energy Union. Respondents clearly differentiated the external and internal dimension of this problem. The former related to guaranteeing an uninterrupted supply of energy sources from abroad. The latter to ensuring that the generation of energy always meets demand and that energy can be delivered to customers. The present section focuses on the external dimension of energy security, while the problems related to the internal one are discussed in the following section.

Being obliged to import an important part of the energy consumed, the EU has to guarantee for itself a stable and diversified supply of energy from abroad. “Energy and geopolitics are closely related,” claimed one respondent. Consequently, in his view, the European Union could do little to strengthen energy security. Security is dependent mostly on effective diplomacy, which is still a domain controlled by member states. “The initiative has to come from powerful member states.” Others have argued that one key objective of the European Union should precisely be to better coordinate the internal and external dimensions of energy policy, in line with a more realistic assessment of EU’s interests.¹⁵

Russia: an awkward, but necessary partner

The shipments of gas from Russia are seen as the most challenging aspect of the problem of imports of energy sources. Russia is perceived by French respondents as a supplier whose reliability has suffered in recent years. It can provoke problems by suddenly cutting or limiting the supply of gas. The threat is, however, not considered as a very serious one. First of all, because – as several respondents stressed – “Russia does not have an interest in cutting supplies to the EU.” Some respondents also argued that the balance of power between Russia and the EU was in reality much more positive for the EU than the widespread mediatic narrative would have it. While the EU could import gas from other suppliers, Russia would

¹⁵ Jacques Lesourne, *La sécurité énergétique européenne et les relations extérieures de l’Union et des pays membres*, Institut Français des Relations Internationales 2015.

struggle to find as important a client as the EU. Several respondents pointed out that the EU coped quite well with the 2009 supply crisis; only fringe countries – entirely dependent on Russian supplies and poorly interconnected with the centre – faced serious difficulties. Respondents concurred that countries for whom Russia was a single supplier should take urgent measures to diversify. Russia’s “divide and rule” strategy towards the EU was deplored and depicted as “counterproductive for trade relations”, but the majority expressed a conviction that Russia will remain the major supplier of gas for years to come – “an indispensable partner” – and that some sort of *modus vivendi* with that country was possible and should be achieved. One of the respondents claimed that the best way to improve the security of supply would be to “rationalise” relations with Russia.

Security of Supply: achievements and next steps

Several respondents claimed that since the 2009 crisis, “considerable progress” has been made to guarantee that EU member states could consider their energy supply from abroad as secure. The measures taken – adoption of the Regulation on the security of gas supply in 2010 – enable the EU to minimise the probability of similar crises arising in the future and to combat them effectively should they come about. The obligation bestowed on member states to create emergency plans was positively appraised. Yet one respondent stressed the necessity to ensure coherence of those plans at EU level: “If we look at the plans, it becomes clear that many member states depend so much on others that it simply does not add up.” In this realm, more involvement from the European Commission is expected, which should ensure that individual plans constitute a coherent whole. Another respondent added that emergency plans at EU level needed “an in-depth analysis that would result in a strategy making the most of a wide variety of tools that were available: LNG terminals, storage, etc.” The French government in its non-paper suggested that the creation of a European crisis management centre could be considered, which would “ensure surveillance and transparency of flows and contribute to optimisation of the use of infrastructure, including

storage and LNG terminals”.¹⁶ Several respondents argued that in order to achieve greater coherence, member states should discuss and try to align the criteria that are used to trigger the emergency measures as well as some key concepts in this area. However, the French authorities would probably oppose the adoption of a standard definition for the category of “protected customers”, because it may lead to weakening the existing Public Service Obligations. On a more general note, there was consensus that achieving greater convergence between member states would facilitate common actions and help optimise the use of the EU gas infrastructures in times of supply crises.

Several respondents pointed out that EU solidarity entailed responsibilities as well as rights. While member states had the right to expect that in case of supply problems others would come to their rescue, they should also take actions to improve the security and resilience of their energy systems. A common security strategy should not encourage free-riding.

The idea of collective purchases of gas evoked varied reactions. Respondents related to the energy companies expressed their scepticism quoting several formal problems (“Who would negotiate? For what amount? What would the destination for shipments be?”). But the proposal also provoked some more fundamental criticisms. “Our fundamental conviction was that market players would deliver energy to consumers. So far we have had good results. How would we promote completion of the internal market with a single buyer?” One respondent argued that faced with a number of EU companies vying for the best deal, Gazprom is less likely to dictate high prices. Another stressed that the idea of collective purchases neglected the good relationship that many companies have built with their partners from gas-producing countries. Yet another claimed that opting for collective purchases of gas would further politicise that aspect of the relationship with Russia. While it could bring benefits in terms of lower prices in some areas, it would also run the risk of provoking a hostile reaction from Gazprom.

Several respondents expressed a positive appraisal of the idea. One politician went as far as depicting it as “ideal, if difficult to carry out”. An energy expert argued that following the entry into force of legal measures

16 Note des autorités françaises, *l'Union de l'Énergie*, February 2015. The non-paper has not been officially made public, but it was widely circulated between government officials and analysts, and thus can constitute a source for this chapter.

focused on liberalising the EU market, “European energy companies were now dispersed and weak in the face of the powerful Gazprom monopoly”. The same respondent went on to add that while the Commission rushed to point out that collective purchases might be incompatible with competition regulations, it was rather lax towards Gazprom taking control of gas storages and investing in energy production in some member states – “we have let a wolf into the sheepfold”. Divergences between respondents open to the idea of collective purchases surfaced regarding the entity which should carry the negotiations. One respondent stressed that if it were a consortium of private entities, it would create a risk of “replacing one monopoly with another”. Another stressed that the European Commission does not possess the adequate expertise to carry out effective negotiations (this was also an argument raised by many opponents of collective purchases). The French government in its non-paper was cautious about the idea, stating that “feasibility of collective purchases – organised on a voluntary basis – should be examined”.¹⁷

The energy industry-related respondents argued that greater transparency of contracts and the negotiation processes could affect their bargaining power with suppliers and hinder the development of competition on the European market. “We could have some more exchange of information, but a total transparency would run counter to the principles of trade relations,” one respondent declared. Another stated that “the actors involved are not inclined to have greater transparency”. One respondent pointed out that greater transparency would be beneficial as regards the state of the gas fields, the production potential and the availability of export infrastructure in gas-producing countries.

The French government non-paper refers to the issue of energy independence by stating that it can be guaranteed only through “a more profound transformation which [...] will be based on three key objectives: energy savings, putting an end to European dependence on fossil fuels and developing renewable energies”.¹⁸ This clearly shows a different approach to enhancing energy security than the one brought to fore by the Polish non-paper. The French focus more on the long-term transformation of the energy system rather than more short-term

¹⁷ Ibidem.

¹⁸ Ibidem.

measures designed to boost the bargaining power of the EU and its member states in relations with outside suppliers.

Several respondents drew attention to the fact that increasing energy security comes at a considerable cost. Making EU member states better connected by building new pipelines, interconnectors and reverse flows would certainly make them better equipped to deal with cuts in supply, but it demanded pumping considerable funds into investments that in some cases would not be economically viable. “Do we want to invest millions of euros to build a pipe from Slovakia that will be used only once in a while, maybe never?” speculated one respondent. The problem of significant cost was also raised by a couple of respondents in relation to the idea of increasing gas storage. It was assessed as a “powerful, but very costly tool of energy security”. In a more general manner, one respondent noted that “the costs entailed by the considerable infrastructural investments have often been underestimated”. What makes matters even more complicated is that, in most cases, the geographical distribution of benefits does not match perfectly the geographical distribution of investment costs, leading to controversies over cross-border compensation needs. “I may bear the financial brunt of installing reverse flow mechanisms, but it will be my neighbour who will benefit from it,” stated one respondent.

Overall, while French respondents are clearly aware of the problems related to the external dimension of energy security, they consider actions taken so far at EU level as largely sufficient to strengthen the EU position in this respect. It is evident that for French decision-makers, the most pressing challenges are related to the functioning of the domestic market and that of neighbouring countries, not relations with non-EU suppliers. It is the electricity market – not gas – that takes centre stage. The rapid growth of energy from renewable sources that occurred in recent years has had a profound impact on the functioning of the entire energy system and its interactions with the systems of neighbouring states. The challenges to the security of energy supply stemming from those changes will be discussed in the following subsection.

A competitive and integrated energy market

The vast majority of respondents – and energy policy analysts and representatives of energy companies in particular – claimed that the functioning of the internal energy market, and the electricity market in particular, is marred by serious problems that needed to be urgently addressed. The market was said to be seriously distorted, which not only affected the business model of back-up electricity generators, but sometimes even endangered a stable supply of electricity to customers. The main reason for it was the plethora of objectives (increasing competition on the energy market, cutting greenhouse gas emissions, developing the sector of renewable energy) and the adverse effects from interactions between the the often conflicting measures that implemented those objectives. Several respondents argued that the push to develop the sector of renewable energy through heavy subsidies and priority access to the grid caused a disturbance to the energy market. In combination with lower demand for electricity in Europe, it resulted in sharp price falls on the wholesale market. Some thermal, mostly gas-fired, power plants had to be mothballed or decommissioned, as they were no longer profitable with curtailed running hours and depressed wholesale prices. Consequently, the financial situation of some energy producers has degraded considerably. “Should the aim of our energy policy be to make life harder for European energy companies? I do not think so,” argued one respondent. To make matters even worse, the closing of power plants meant that at times when only very little energy from renewable sources could be generated the conventional back-up capacity faced a serious strain with blackouts looming. The fluctuations in energy generation – due to the intermittent character of renewables – provoked serious difficulties for the management of electricity networks. Faced with an unpredictable and unstable market the generators turned to coal, which is cheaper than gas, but produces considerable CO₂ emissions.

Making national policies more compatible

The problems of the common market were aggravated by energy policies carried out by member states which – as many respondents argued – were often too self-centred, having insufficient regard for

the situation in neighbouring states. Faced with the challenges of the energy market, many countries decided to act as they saw fit without giving much thought to the impact of their decisions beyond their borders. The German *Energiewende* was mentioned on many occasions as an example of a too self-centred and rushed decision. The decision to renounce nuclear energy and to create an energy system built around renewables has caught the French by surprise. A report authored by a French senator, Jean Bizet, offered a critical appraisal of the German energy policy focused on rapid growth of renewable energy.¹⁹ The speed with which renewables are being expanded in Germany is an issue of concern because it amplifies the market disruptions described above, especially in a context where national electricity systems are more and more interconnected. But it was not only the content of the reform, but also the manner in which the reform was adopted – with very little consultation with neighbours – that provoked the irritation on western side of the Rhine. Overall, the assessment of the *Energiewende* is rather critical – the project was described as a “unilateral and brutal choice”. One respondent called the German strategy on renewables “totally ruinous”. In a more general way, one respondent declared that “the very nationally-oriented decisions will result in a return to a fragmented market”. Many respondents deplored that despite some progress of the efforts aimed at creating a fully integrated common energy market, decisions on the national energy mixes are increasingly divergent, which may impede the creation of a unified energy policy.

Several respondents expressed opinions that problems generated by the fragmentation of the electricity generation systems and the increasing prominence of narrow national outlooks could be avoided only through more exchange of information and coordination between member states. “Solidarity is needed not only when a member state has its supplies cut off, states should have regard for their neighbours and the common interest when they shape their energy policy.” “[Each country] has to talk to its neighbours about how it wants to develop its energy mix and be in a position to assess the consequences of its decisions.” One energy expert suggested carrying out peer reviews of national

¹⁹ *La coopération énergétique franco-allemande*, Sénat de la République française, Rapport numéro 534 (2013-2014).

energy policies.²⁰ Several respondents stated that greater coordination was especially important on the regional level between neighbouring countries. Close regional or bilateral ties should facilitate debates at the EU level. The French governmental non-paper, for instance, urged greater regional market coupling, mentioning the Pentalateral Forum²¹ as an example to follow and proposing that long-term analyses of supply and demand could be carried out within such regional frameworks.²²

The pleas for more coordination were accompanied by a conviction that it is a difficult task to accomplish, as “it is not only a technical exercise, but a political one as well”. Achieving genuine market integration entails a considerable dose of regard for others’ interests, while shaping the national energy policy and making decisions that constitute the very core of sovereignty.

The main aim of closer coordination is to mitigate the effects on neighbours of sudden changes of one country’s energy policy. Respondents were doubtful whether such coordination could bring about greater convergence of national strategies. The shape of the energy mixes remains to be seen as a sovereign decision of member states. Any attempt to impose a greater convergence of energy mixes “would be not only impossible politically, as states would not want to give up this right, but also counterproductive. There is no ideal energy mix [that could be imposed]. Their shape is dependent on a number of factors that are different from country to country.” Another respondent, much in the same vein, argued that “the EU benefits from diversity. Different energy mixes are important as they mean that all member states will not experience the same problem at the same time.” A different assessment was presented by the environmentalist movement, which depicted national control over energy mixes as “totally incompatible with the will to create an Energy Union”.²³ Several respondents expressed a similar but more moderate viewpoint, suggesting that the serious divergences between member states’ views of the “right energy mix” make it difficult to achieve a consensus on a truly European energy policy. “There is

20 Jacques Lesourne, *Pour une révision de la politique européenne de l'énergie*, Institut Français des Relations Internationales, mars 2014.

21 Pentalateral Forum was created in 2005 by the governments of France, Germany and Benelux. It is a platform designed to facilitate cooperation on cross-border exchange of electricity. Austria joined the initiative in 2013.

22 Note des autorités françaises, *l'Union de l'Énergie*, February 2015.

23 *Stratégie européenne d'Union énergétique*, press release Réseau Action Climat France, 19 March 2015.

an absolute divergence between Germany and others [large member states],” deplored one respondent, implying that this made common undertakings at EU level more complicated. Such pessimism is, however, not omnipresent. Some analysts believe that the divergence between energy mixes of France and Germany could constitute an incentive for closer cooperation.²⁴

Good governance at the EU level

The role that respondents assigned to the European Commission in this context is to facilitate the coordination between member states, monitor and enforce the rules that were adopted, and ensure coherence between actions carried out in different policy areas. It was emphasised that the impulse coming from the top should be properly balanced and well thought out. “We need to be attentive not to have too much regulation. We adopt new directives even before the previous ones have been fully implemented. Let’s implement what we have first and let the European Commission check the effects before we move on.” Several respondents spoke in the same vein emphasising that the Third Energy Package contained a lot of measures that were called for at the moment. Particular importance was assigned to the creation of network codes that would improve the complementarity of national regulatory frameworks and thus facilitate the cross-border exchange of energy. “What we need first is a well-integrated market where energy can flow freely. Only then we can start thinking about harmonising our policy choices,” stated one respondent. One respondent even assessed that “the bulk of changes necessary to complete the single energy market has already been made”, now they just needed swift and proper implementation. Several respondents deplored that some member states are too slow to implement the package. Without adequate rules, cross-border energy flows cannot respond smoothly to price signals and market players cannot take full advantage of supply complementarities.

24 See C. Maisonneuve, *Europe et Energie*, IFRI 2014; Stefan Bössner, *Strengthening the European electricity market through improved Franco-German cooperation*, Notre Europe – Institut Jacques Delors 2015.

Granting new competences to the Agency for the Cooperation of Energy Regulators (ACER)²⁵ was mentioned by some energy experts as a means of speeding up the adoption of network codes and improving the coordination between member states.²⁶ The majority of respondents claimed that such a move could be considered, but clarifications are needed regarding which new competences should be ascribed to the agency. Several respondents doubted whether granting the central agency more powers and control over national regulators was the right decision.

Adopting a more holistic approach to energy policy may be, in the eyes of French experts, an effective remedy for the deficiencies of the energy market. Many respondents drew attention to the fact that the complex character of energy-related problems, as well as the multiple linkages of energy with other policy areas, call for an appropriate approach from EU institutions, the Commission in particular. The Commission should make sure that its proposals were not contradictory. It should also maintain the proper balance between priorities and try to avoid situations in which overly ambitious actions in one area wreak havoc in another. In this context, the decision to establish a post of a Commissioner responsible for the Energy Union, who could coordinate the work of several Directorates General, is seen as a step in the right direction.

Because of its high dependency on imports, the EU energy system is significantly impacted by global energy trends and geopolitical events in particular. In addition, energy price differentials with other regions can boost or hinder the competitiveness of the European industry. In this context, respondents highlighted that the European energy policy should not be disconnected from the rest of the world. In addition to improving the functioning of the internal market, the Energy Union has to enhance the resilience to external shocks and ensure that all opportunities can be seized by the European market players. The added value of an annual report on the “state of the energy union” was emphasised, in the sense that the Commission would be required to question the progress achieved and update its strategy in line with the latest global developments.

25 ACER is an EU agency which coordinates the cooperation of energy regulators from member states.

26 Stefan Bössner argues that “granting ACER the power to issue binding [network] codes could facilitate the energy trade across borders” (Stefan Bössner, *Strengthening the European electricity market through improved Franco-German cooperation*, Notre Europe – Institut Jacques Delors 2015, p. 26).

A better coordination between member states coupled with improved governance of the market should lead to the establishment of a more clearly defined vision for the future of the energy policy and provide a sense of greater stability which – in view of many respondents – was one of the major expectations of all stakeholders, energy investors in particular. As one academic argues, “the inability of policy-makers to credibly commit to a set of long-term predictable policy objectives is a key issue that undermines the European energy policy framework”. Hence, “the European Commission and member states should develop detailed energy policy implementation roadmaps towards the 2030 objectives”.²⁷

Interconnections: finding the most useful investments

Apart from enhancing coordination between member states, making their energy networks more interconnected was often mentioned as an important objective of the Energy Union. Respondents appreciated the advantages of greater interconnections which were said to be not only commercial (facilitating the flows and trade in energy), but also technical. For instance, a wider, integrated electricity network would make it easier to manage the unstable production of energy from renewable sources. Professor Fabien Roques drew attention to the fact that lengthy administrative procedures often hinder the establishment of interconnections. To speed up the process of granting licenses and permissions, a “one-stop-shop agency as part of ACER” could be created.²⁸

Some respondents stressed, however, that wise infrastructure development would not be an easy task: it is costly, sometimes faces serious public opposition and may bring about more problems of grid management. Hence, important infrastructural projects should be preceded by some careful strategic thinking regarding their financial viability, compatibility with the long-term strategy for the development of the energy market, and consequences for energy flows. As one respondent put it: “It will be difficult to encourage investors to contribute to building a huge gas pipeline while the Commission advocates a move away from fossil fuels.” A certain apprehension was present in some opinions that

²⁷ Fabien Roques, *The new European Energy Union – Toward a consistent EU energy and climate policy?* A report for the French Commissariat Général à la Stratégie et à la Prospective, December 2014, p. 9.

²⁸ *Ibidem*, p. 6.

growth of interconnectors could bring about further disturbance of some national markets and energy grids. The latter would have to deal with sudden “floods” of energy from renewable sources which cannot be used in the neighbouring country. “Interconnectors’ main role should be to make two national energy systems function better together, not just to make one country able to ship its excess of energy towards the other,” one respondent noted. Some respondents warned of overinvestment in infrastructural projects, arguing that if Europe does not manage its infrastructural investments carefully, it might end up with more than it needs to have a well-functioning energy market. Interconnections are incontestably a good idea to put an end to energy isolation of some countries, but in the case of member states that were already well connected with others, more interconnection could deviate funds from other, more important projects. A recent report drafted at the request of the French president suggests that “the priority given for the moment to the gas networks stems from dealing with economic and political urgency. [...] an important risk exists: that gas pipelines financed by the Connecting Europe Facility will be abandoned”.²⁹ Along the same lines, one respondent argued that “infrastructure development should be driven by real market demand”. An idea that was mentioned in this context, and assessed as “misguided” on a couple of occasions, is the economic viability of a pipeline that could transport gas from LNG terminals in southern Spain to Germany. “The means are limited and we have to target the infrastructural investments very carefully. LNG infrastructure gives us more flexibility. I believe it is better to have LNG terminals in Germany than build a gas pipeline through France.” While the idea of creating a “south-north gas corridor” is attractive on paper, the concern is that market players make little use of this new gas highway, pay too little to the transmission operator and leave the infrastructure costs to be covered by the French gas customers. To avoid such a situation, the investment would need to be triggered based on shippers’ financial commitments and the “cross-border” benefit would need to be evaluated and paid for by France’s neighbours or the EU. Finally, some respondents underlined the importance of making the most of the existing means: “We are so focused on the development of new infrastructure that sometimes

29 Michel Derdevet, *Énergie, l’Europe en réseaux*, La documentation française, 2015, p. 41.

we miss the fact that we can gain quite a lot by managing better what we already have.”

Renewables: an opportunity and a challenge

Managing the development of renewable energies more effectively was often mentioned as an important goal for the Energy Union. Respondents agreed that the role of renewables in the energy mix would increase, but some of them emphasised that there were important challenges related to their development that needed urgent reaction. This point was made by representatives of energy companies and some analysts. As it was mentioned above, the rapid development of the heavily-subsidised renewables sector was often identified as one of the main reasons for market disturbance (the low wholesale – high retail energy price in particular) and its environmental benefits were questioned (the rise of coal use to cope with intermittency). While further expansion of renewables is desirable, it is necessary to control their rate of development. Several respondents argued that as some renewables reach technological maturity the subsidies given to them should be gradually scaled down in order to create a level playing field with other energy sources (GDF Suez position paper calls for “progressive phasing out of support schemes”).³⁰ Other ideas included modifying the method of calculating the cost of production of renewable energy (“renewable energy sources should have to pay for their intermittence”) and achieving greater convergence between member states in this respect. Some respondents also suggested – as a more medium-term objective – moving towards convergence of subsidy mechanisms.

A more pragmatic approach to renewables is needed, claimed several respondents, based upon thorough analysis of their potential: “We should be more cautious in our approach to renewables. Before we decide to give a green light to a massive development of a certain technology, we should make sure that it can become financially viable in the near future.” “The subsidies,” argued another, “should be allocated to the technologies that offer the best return on investment”. “I believe the debate around renewables is too ideological. It is not about whether renewables are

³⁰ *Energy Union : Building together the future European Energy landscape*, GDF Suez, 8 December 2014. Position paper provided by the company.

good or bad, but about choosing the most effective technologies. I like the idea of solar panels in the south of Italy and wind turbines in Scotland, but we really do not have to develop solar energy in the north of Germany. We cannot spend without counting,” summarised one respondent.

A very different narrative was presented by the environmentalist movement which contest the claim that renewables are the main culprit of the dysfunction of the internal energy market. Réseau Action Climat – a federation of organisations focused on the fight against climate change – in a commentary assessing the debates around the Energy Union, argues that the Commission’s framework strategy “completely ignores the positive consequences [of subsidies granted to renewables] for economy and jobs in Europe”.³¹ The environmentalists then go on to argue that “wide-ranging and swift deployment of renewables is indispensable”. They also call for “gradual elimination of subsidies and public support granted to fossil fuels, and full internalisation of their [fossil fuels’] external costs”.

As mentioned above, the growth of renewables provokes a proportional increase of the need for back-up capacity, but the profitability of conventional power stations is no longer guaranteed in the context of depressed wholesale electricity prices. To avoid putting grid stability at risk, several member states are now considering new ways to compensate utilities which bear the adjustment burden. Several respondents drew attention to the fact that some member states decided to regulate the capacity markets independently. This is assessed as an obstacle to an integrated market: GDF Suez in its position paper suggests that “capacity mechanisms [...] should be integrated at – at least – regional level”.³²

An energy policy that contributes to competitiveness

The impact of energy policy on the condition of European industry has clearly caused the concern of many French stakeholders. Several respondents – and not only ones representing energy companies – drew attention to the fact that European industry, and its energy-intensive branch in particular, has suffered some collateral damage from the quest

31 *Stratégie européenne d’Union énergétique*, press release Réseau Action Climat France, 19 March 2015.

32 *Energy Union : Building together the future European Energy landscape*, GDF Suez, 8 December 2014.

for reducing emissions with highly-subsidised renewables. The growing gap between energy prices in the EU and the United States (where the shale gas revolution has provoked a considerable decrease in prices) means that the problem of the exodus of industry may aggravate. Subject to various regulations and limitations, European companies have had a hard time facing the foreign competition that is granted access to EU markets, but enjoys much more relaxed regulatory regimes in their home countries. “The Commission has focused too much on creating a level playing field on the internal market and seems to forget that European companies also take part in a global race,” contented one energy policy analyst. One industry-related respondent illustrated the problem evoking the example of the nuclear industry: “The Hinkley Point project which has the potential to create 12,000 jobs and would inject more hard cash into the economy than we plan to put in the Juncker plan, has lost a year because it had to be vetted by the DG Competition. In the meantime, the Hungarians have signed a deal with Russia which opens the door for the Rosatom company financed by public money.³³” Cécile Maisonneuve argues that “competition [policy] is a tool at the service of [industrial] competitiveness, not the other way round”³⁴ – a thought that encapsulates very well the arguments put forward by a large number of respondents. Unsurprisingly, representatives of industry were the ones to devote the most attention to this aspect.

Several respondents stressed that the unstable energy market, and low wholesale energy prices in particular, discourage investors, which could lead to serious problems in the next decades. Europe could have problems replacing the ageing power stations, run the risk of losing its position of a technological leader and, eventually, find itself obliged to buy equipment abroad. “It will not be a problem to find investors from outside the EU,” stated one respondent, “but do we really want to see the majority of our energy capacity in foreign hands?” The nexus of energy, competition and industry policy provides a good illustration of the holistic approach preached by many respondents. They expected the Commission to adopt a wide perspective that appreciated all the challenges stemming from the fact that the EU market was part of the global one.

33 This opinion was voiced before the European Commission questioned the deal between Rosatom and the Hungarian government.

34 C. Maisonneuve, *Europe et Énergie*, Institut Français des Relations Internationales 2014, p. 39.

Industry-related respondents suggested that energy companies, which often conducted business operations in many member states and were acutely aware of the obstacles to a greater integration of the EU market, could provide the Commission with valuable insights which could facilitate the definition of clear goals for the Energy Union.

Demand-side Management: technological progress at the service of effective energy policy

Many respondents advocated greater attention to the demand side of the energy market. While the debate has focused on the problems with the supply of energy, a more thorough analysis of demand-related aspects could lead to considerable economies. Several respondents concurred that economies could be achieved through the use of smart meters which, by supplying a wealth of information to consumers, would enable them to shape the consumption so that it would be both less expensive and less strenuous for the electricity grids at times of peak demand. As one respondent noted, “more and more people looked for ways of more moderate and smarter use of energy”. Respondents also noted that an increasing number of citizens are willing to get involved in energy production. The growing technical means in this respect could considerably transform the energy market: “The era of big structures is coming to an end, we have to leave more room for individuals to act.”

Many respondents emphasised that a better-coordinated action at EU level could bring considerable benefits in the area of research and development of new technologies. In this domain the value-added of common actions is particularly important. Pulling resources for scientific undertakings will enable member states to avoid duplication and tackle big projects that would be too costly for individual states. Focus on science is all the more important because a scientific breakthrough could enhance the use of indigenous, mostly renewable, energy sources and thus considerably improve the EU’s energy independence. A flurry of avenues for further study was mentioned: several respondents emphasised that finding affordable ways of storing electricity from renewable sources would constitute a sea change for the EU energy market by solving the crucial problem of their intermittence. One respondent argued that the EU should follow the example of the US where “the Department of Energy is one of the biggest sponsors of research

and development”. Respondents called for a more generous funding for scientific studies focusing on carbon capture and storage, power to gas technology, hydraulic fracturing, electric cars as well as nuclear technologies. “No technology should be excluded,” one respondent asserted.

The environmentalist movement displays a less inclusive approach to research, which contests the use of public funds for carbon capture and storage (“a technology far from being mature”) and shale gas (“maintaining dependence on fossil fuels”), and calls for channelling public and private investments towards renewables which “use mature technology and are often competitive”.³⁵ The latter assertion jarred with opinions of other respondents who emphasised the uncompetitive character of some renewable sources (offshore wind in particular).

It is worth noting that despite the legal ban on hydraulic fracturing having been introduced in France, some respondents were rather positive about further examination of the potential of shale gas in Europe, at least to clarify the actual state of reserves. However, the French non-paper does not mention shale gas at all. Amidst concerns over the competitiveness of the French industry, the discussions on shale gas may be re-opened before the next presidential election in 2017, unless hydrocarbon prices remain as low as they are today.

A sustainable energy market

Respondents were unanimous in stressing that energy and climate policy were strongly interrelated. They also agreed about the necessity to fight climate change and decarbonise the EU energy mix. It was usually mentioned as a second priority following the imperative to guarantee secure supply. The French non-paper claims that “climate objectives have to figure at the heart of the Energy Union”.³⁶

Emission Reduction and Energy Efficiency: cornerstones of climate policy

Virtually all respondents admitted that decarbonisation would be very difficult without a thorough reform of the EU Emission Trading System.

35 Stratégie européenne d'Union énergétique, press release Réseau Action Climat France, 19 March 2015.

36 Note des autorités françaises, l'Union de l'énergie, February 2015.

Many stressed that the very low price of allowances did not create an incentive for the industry to invest in low-carbon technologies, but much the contrary – turn to coal that was cheap and readily available. The reforms of the ETS proposed by the Commission were generally depicted as going in the right direction, but inadequate: “Temporary removal of some allowances would only result in postponing the problem.” Only a significant increase in carbon price, and the creation of a system that would prevent the price from falling below a certain level could encourage investors to turn to low-carbon technologies and thus reinforce the energy transition. One energy industry-related respondent suggested the creation of a sort of a central bank that would control the supply of allowances and thus maintain a stable price. A carbon tax was also recalled by some respondents, but it was noted that it is unlikely to get unanimous support of member states, necessary for taxation matters.

The set of climate and energy targets adopted by the EU for the 2020 (the so-called 20-20-20 strategy) was critically assessed on some occasions – one of the respondents calling it “a nonsense”. Whether the strategy contributed to a quick and effective decarbonisation was contested. “It was a mistake to choose three objectives which – to make matters worse – were contradictory. As a result we have more emissions and less security. [...] The reduction of CO₂ emissions should be our primary objective,” one energy expert contended. The other targets were described by several respondents as having secondary importance. The actions aimed at their achievement should be carried out only inasmuch as they contributed to the principal objective of emission reduction. A very similar assessment was presented by a report of the Synopia think tank. The authors argued that “CO₂ emissions should be the sole binding quantifiable target [...]. The 3x20 target [...] makes the market overdetermined, is thus ineffective, and should be removed.”³⁷ The best way to increase the probability of the EU achieving the emissions reduction target, argued one industry-related respondent, was to leave more freedom to member states and not to limit their room for manoeuvre by the introduction of binding targets regarding the generation of energy from renewable sources and energy efficiency. This way states could best shape their policy within the limitations that were not the same for everyone. The government position

37 *A new European energy policy? Assessment and proposals*, Synopia, March 2014, p. 6. The report was authored by a group of academics and energy experts led by Claude Mandil, former Executive Director of International Energy Agency.

is not as clear-cut in granting a privileged position to emissions reduction, but the importance of this target is also particularly emphasised in the non-paper.

In the part of the French government's non-paper entitled "Proposals for the energy union", energy efficiency comes as number one. It is described as "a cornerstone for achieving our objectives".³⁸ The French authorities call for "a coherent plan for financing energy efficiency". The environmentalist movement also attracts particular importance to this aspect, claiming that energy efficiency is "the least expensive and the simplest solution for strengthening our energy security".³⁹ The other respondents were not as lavish when referring to this subject, but many of them emphasised the variety of efficiency measures that could contribute to the decrease of energy consumption. The construction sector was often mentioned: works on improving the energy performance of buildings could help make energy savings while at the same time contributing to economic growth in the EU. Transportation often appeared as a sector that could make important contribution to reductions of energy use. Respondents declared that they expected swift implementation of numerous EU directives related this policy area, energy efficiency directive and the one on ecodesign in particular.

Looking for a balanced approach to decarbonisation

As it was already mentioned, several respondents preached caution regarding the rapid development of renewables. Many argued that achieving the emissions target would only be possible through the creation of a diversified energy mix in which renewables would have an important place, but which would also rely on nuclear energy and gas. "It was mainly thanks to the well-functioning nuclear energy sector that France has been able to be the good pupil as regards climate," argued one respondent. Many drew attention to the fact that nuclear energy scored well in many aspects: energy security, market and climate. The supply of uranium was diversified and secure. The price of nuclear energy was stable and relatively low. The nuclear industry was based in Europe and thus could generate jobs and growth. Finally, it was also a low-carbon

38 Note des autorités françaises, l'Union de l'énergie, February 2015.

39 Stratégie européenne d'Union énergétique, press release Réseau Action Climat France, 19 March 2015.

source. Similarly gas, as a conventional energy source that generated significantly less emissions than coal, is seen as “an important element of the energy mix for the next 20–30 years”. Coal, as the least environment friendly resource, was generally depicted as a source whose share in the energy mixes should be gradually diminished, but some respondents underlined that carbon capture and storage technology could grant a lease of life to coal. This approach was vehemently contested by the environmentalists who called for speeding up the transition towards an energy system based entirely on renewables.⁴⁰

Several respondents, mainly representatives of the energy industry, stressed that a very strong concentration on the struggle against climate change has created difficult conditions for the industry just as some aspects of the competition policy did (see previous subsection). “Considerable subsidies for renewable energy mean that we spend quite a lot of money for solar panels from China that perform poorly. The Commission should pay more attention to maintaining a strong European industrial base in low-carbon technologies.” “We have to be aware that while making strategic decisions, the industry sector also makes assumptions on how the conditions will evolve in the future. At the moment, Europe is the worst place in the world for steel production. And it is not likely to change. One of the objectives of the Energy Union should be to maintain the ability of our industry to compete globally.” Several respondents noted that the economic crisis has forced EU institutions and governments to rethink the balance between the importance of climate policy and the needs of the industry in favour of the latter. “The 2030 energy and climate package testifies to more realism of the governments,” claimed one representative of industry, pointing to the fact that no binding targets regarding energy efficiency and renewables for individual member states were imposed. This view from the industry contrasted with the assessment given by environmentalists, who claimed that the 40% emissions reduction target was below what the EU could achieve.

Several respondents emphasised that setting a relatively ambitious emissions reduction target for the EU was important as it would define a clear direction for climate-related actions internally and, at the same time, strengthen the EU’s position in negotiations of a global agreement. “The 40% target that existed as a pledge of the European Council should

40 Ibidem.

now be streamlined into legal acts,” argued one respondent. There were, however, several industry-related respondents who expressed doubts regarding the “lead by example” strategy. “By focusing on it too much we run the risk of ruining our economy without really making a change when it comes to the climate.” “We are torn between the will to maintain a competitive industry and to remain leaders on climate. I guess we are starting to realise that globally the result of our efforts is minute, while the price that we have to pay in terms of growing unemployment is huge.” A reform of the ETS surfaced also in the context of the forthcoming COP 21. Several respondents stressed that without solving the problem of the very low carbon price, the EU will have a hard time convincing its major partners to adopt an ambitious agreement.

Social attitudes towards energy policy

Virtually all respondents assessed that even though energy is a subject that attracts growing attention, public knowledge of energy-related problems is still very limited. Respondents also doubted that Russian aggression against Ukraine has provoked an increase of public awareness of the security of supply problems: “The knowledge about the events in Ukraine is obviously there, but I do not think that people relate this with the way in which they consume energy.” Respondents generally pointed to price increases as the main driver of popular concern around energy.

The issue of nuclear energy, as respondents stressed, has been central in the French public debate around energy for many years. Public opinion polls suggest that supporters of continuous development of the nuclear sector have always outnumbered opponents. Their numbers were almost equal following the Fukushima accident in 2011, but the gap has grown again since then and currently stands at 47% to 40%.⁴¹

Respondents claimed that fight against climate change is an important factor for the French public, which supports the evolution of the energy mix towards one that will be based to a greater extent on renewable energy sources. A public opinion poll carried out in 2012 showed that 91% have a positive image of renewables, while 63% pointed to the development of renewable energy as one of the top three priorities of energy policy (increases in energy prices and dependence

41 Chiffres clés de l'énergie, Edition 2014, p. 4.

on imported energy sources both scored 42%).⁴² But this general support, many respondents argued, does not always translate into acceptance of concrete measures that implement the energy transition, “for example when a wind farm is established next to their homes”. In addition, as one respondent stressed, “people do not realise the cost of energy transition”, suggesting that the enthusiasm could die away, if the fact that clean energy means higher prices would be more commonly appreciated.

Respondents agreed that affordability remains the key factor for consumers. Such was also the conclusion of the authors of the Report – Energy 2050, who argued that “economic considerations, more than general interest and fight against climate change, seem to be the first priority for the French. The relative cost of technologies is an essential reference considered by households when making a decision about investing in one and not another energy source.”⁴³ The authors of the report also stress that many citizens expect the state to cover the cost of developing new technologies – “not a very realistic situation”, as the authors conclude.

On a more positive note, the respondents also stressed that growing numbers of consumers wanted to make amends to their use of energy, which would make it less costly and more environment-friendly. Several respondents concluded that if given the tools and opportunities, the citizens could actively contribute to decreasing consumption and achieving greater energy efficiency. However, as one respondent contended, on some occasions “willingness to consume better is limited by geographic, economic and technical constraints”. Especially those living in the countryside still have limited opportunities to modify the patterns of their energy consumption.

Conclusions

The evidence from interviews clearly shows that stakeholders in France agree that the EU energy market needs reform and that better cooperation between member states can bring tangible benefits.

42 The poll was carried out in December 2012 by Ipsos: <http://www.connaissancedesenergies.org/les-francais-et-les-energies-renouvelables> Access 20 April 2015

43 *Rapport Energies 2050*, Annexe 7 Acceptabilité, p. 198. The report was a study prepared in 2012 for the French minister for energy by Jacques Percebois, professor at Montpellier University, and Claude Mandil, former executive director of the International Energy Agency.

French respondents largely share the same definition of major problems that need to be tackled. The EU energy market is, in their view, ridden with problems stemming from conflicting policy objectives, narrowly conceived energy strategies of member states and mismanagement of some aspects of energy transition taking place in the EU. The unstable market and policy framework discourages investors creating a likelihood of more serious problems in the future: insufficient modernisation of energy infrastructure, weakening of some EU energy companies and the inability to promote competitive European technologies.

The French are aware of the security of supply problems faced by the countries in Central and Eastern Europe, but show limited enthusiasm for the new ideas that were the focal point of the Polish Energy Union initiative, collective purchases in particular. The majority of respondents clearly believe that facilitating flows – through the development of key infrastructure projects and removal of regulatory barriers – as well as enhancing emergency plans will provide sufficient protection against potential crises in relations with non-EU suppliers. Given the diversity and resilience of the French energy mix, such an approach is understandable.

Emphasising the progresses achieved with the internal market, the French argue that focus should be placed on the implementation and improvement of the existing rules rather than on a radical shift away from the market-based approach to flows management and infrastructure development. The greatest challenges to the proper functioning of the French energy market come from the instability of the EU energy market, and it is in this area that the French see the most room for improvement. Opinions of the French respondents clearly demonstrate a critical assessment of the German *Energiewende*, which is seen as a rushed decision taken with very little regard for neighbours and having a negative impact on European cooperation in the realm of energy. This is arguably the main reason behind the importance that French respondents ascribe to greater coordination of energy policy choices between member states. The coordination could lead to greater convergence in certain areas, such as subsidies granted to the production of energy from renewable sources and the governance of the capacity market. The challenge for architects of the Energy Union will be to find the right balance between harmonisation of certain aspects of the energy market and freedom for member states. This way member states could make the most of the benefits of an

integrated market, while remaining able to shape their energy policy in accordance with the particular traits of the country.

Shaping the energy mix remains in the eyes of the French a sovereign decision of member states. There is also a widespread conviction that oil, gas and nuclear energy will remain very important components of the energy mixes for the foreseeable future. Unsurprisingly, the benefits of nuclear energy – EU-based, relatively cheap and emission-free – were emphasised by many respondents, although the draft Bill on energy transition suggests that France is aiming at a more balanced portfolio for its electricity production.

The fight against climate change figures among the top priorities. Reform of the ETS that would result in a stronger incentive to develop low-carbon energy sources was cited by all respondents as a precondition for progress in this respect. While many respondents show appreciation for the “lead by example” strategy followed by the EU on the international arena, there is also manifest concern that this approach is increasingly costly for European industry. The latter was often depicted as the main victim of high energy prices and the drive for climate protection. Paying greater attention to the impact of energy policy on the industry was a plea expressed by the majority of French respondents – those representing companies involved in energy business did so with particular emphasis.

Research and development was named on many occasions as an area where the value added of common actions could bring considerable benefits. Many respondents recommended focusing on the demand-side of the energy market, which offered numerous opportunities for achieving economies.

The vast majority of respondents were hopeful that the Energy Union initiative can bring about a positive evolution of the energy market. The environmentalist community displayed the most critical assessment. While the government, energy industry and most analysts define the main problems and solutions in a very similar way, environmentalists stand out with their strong emphasis on the necessity to significantly speed up a pan-European energy transition.

Many respondents stressed that to a certain extent the project was a tentative to give some fresh impetus to proposals that have been around for some time. However, some of them emphasised that in order to be successful, the Energy Union had to be more than “old wine in new

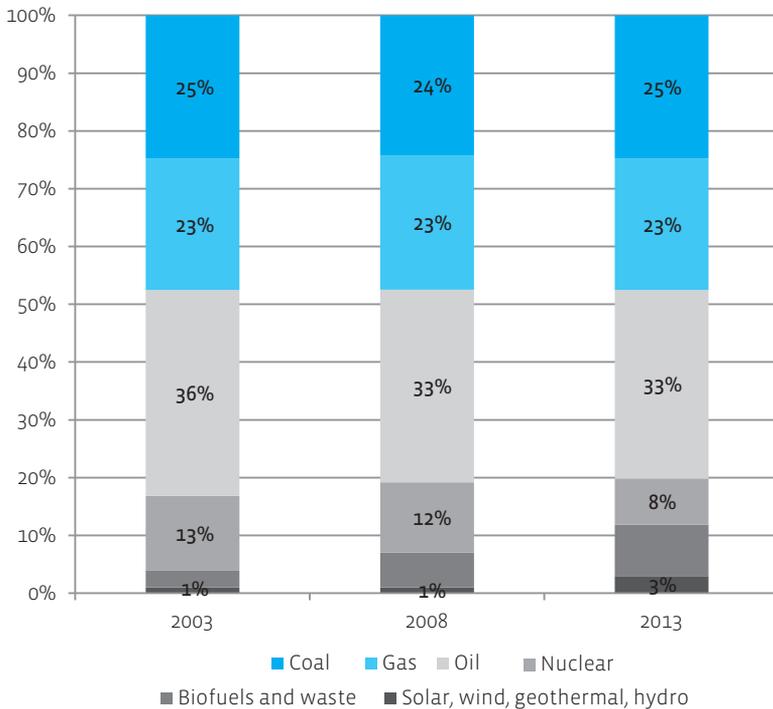
bottles”. It seems that the so-called “holistic approach” – which, along with “coordination”, was a watchword for many French respondents – could constitute the crux of the innovative edge. The European Commission is expected to appreciate fully the complexity of the energy sector and its strong relations with other domains. It is supposed to analyse in conjunction the internal and external dimension of the energy market, its linkages with the global economy, and the geopolitical context of trade in energy sources. Consequently, the Commission should propose actions that would not be contradictory and could establish an acceptable equilibrium between the multitude of goals to be achieved. The respondents are aware that it is very challenging to come upon strategies that would be perfect on all grounds. Yet, decision-makers must adopt a wide outlook because this is the only way to forge solutions that would be as close to optimum as possible. Greater coordination and a more holistic analysis of the problems within and around the energy market should, according to French experts, open the way for the creation of a clearer and stable framework for the development of the energy market – an indispensable element to boost investments and avoid misguided decisions.



Energy Union: a German perspective

Country profile

The Germans are the biggest consumers of energy in Europe. One third of Germany's primary energy supply comes from petroleum, and one-quarter from hard coal, lignite (brown coal), and natural gas. The rest comes from renewable sources and nuclear power plants. Imports account for the majority of energy consumed in the country.



Total primary energy supply in Germany

Source: International Energy Agency 2015, <http://www.iea.org/media/countries/slt/GermanyOnepagerJune2014.pdf>

Germany is currently going through a period of energy transformation, known by the German term *Energiewende*. The aims of the policy of *Energiewende* are as follows: transform the German economy in accordance with the principle of sustainable development, shift from the

use of fossil fuels to renewable energy sources, save energy and increase energy efficiency, and nuclear exit. The assumption is that by 2050, 80% of electricity will be produced from renewable sources, which, among other things, will help steadily reduce Germany's dependence on gas and fuel imports. Furthermore, German greenhouse gas emissions should be reduced by between 80% and 95% by 2050 in comparison with 1990, among other things through the promotion of greater energy efficiency. It is also assumed that this policy will increase innovation in the German economy and create jobs.

Energiewende is being implemented in practice via numerous detailed projects that involve both changes in the law and undertakings in society. The most important of these projects are the following: the Renewable Energy Law, the European Union Emissions Trading System (EU ETS)/EU 2030, reforms of the electricity market, regional cooperation within the framework of the European Internal Market, an energy efficiency strategy, the expansion of network infrastructure, a gas supply strategy, and discussion platforms for debating issues with interested parties.

The first Renewable Energy Law (*Erneuerbare-Energie-Gesetz – EEG*) was enacted in 2000 and has already been revised several times since. The last reform took place in 2014. Since this law came into force, the share of electricity from renewable sources has grown threefold. In 2014 it totalled 25.3%, which translates into an increase of 1.7% percentage points in relation to the previous year. The aim is for renewable energy to account for 35% of gross electricity consumption by 2020.

The costs of financing EEG are being borne by electricity consumers. However, the Renewable Energy Law provides for certain exemptions, for example, lower energy prices for energy-intensive branches of industry.

Besides renewable energy, which is mainly produced domestically, Germany also covers nearly all its lignite coal needs from domestic production. Indigenous gas production satisfies 10% of the demand for this raw material. Most of the country's gas is imported from Russia (38% – in quantitative terms Germany is the biggest importer of Russian gas in the world), the Netherlands (26%), and Norway (20%). Admittedly, Germany has no LNG terminal. This does not mean, however, that no LNG gas is consumed in Germany, as the country imports this gas from other European states.¹

1 For example, via the port in Rotterdam. In theory and from a technological point of view, once the LNG terminal in Świnouście is completed, it will also be possible to transport gas from this source. In practice, however, experts do not see such a need arising in the future.

In addition, at the present time no shale gas is being extracted through “fracking”, despite the fact that there are areas in the country where shale gas can be found. The reason for this is the absence of any legal regulation in this area, and this in turn is due to strong opposition among Germans against this method. During the debate on the regulations that were being prepared in this area, there was talk of introducing the strictest law on fracking in the world. The planned regulation stipulates that fracking will not be possible.

Germany possesses the largest gas storage area in the European Union (and the fourth largest in the world) and stockpiles more than 20 billion cubic metres of gas. The stored gas is the private property of gas companies, including partially foreign-owned companies, which sometimes gives rise to a debate over whether this provides adequate security and whether a state-managed storage facility should be created.

German oil extraction (2.6 million tonnes in 2010) is marginal in comparison with its imports (93.4 million tonnes imported in 2012). The biggest exporter of gas to Germany in 2012 was Russia, from which it obtains more than one-third of its imports. Another 24.7 million tonnes came from the European Economic Area. According to statutory requirements, Germany should maintain at least 90-day oil reserves.²

One great challenge facing Germany is how to transport electricity generated from renewable sources from its places of production to where it is needed by consumers. Large amounts of wind energy are generated in the north of the country. On the other hand, demand comes from the industrialised south. Germany’s best developed trans-border connections with its neighbouring countries are those with Austria. There is also a connection with Sweden and concrete expansion plans for connections between Germany and Norway. Norway is an interesting partner, as it possesses many hydro-storage power plants, which could store surplus German production. Meanwhile, if Germany is to go ahead with its energy plans, it will require an ever increasing energy storage capacity. Currently the most economical option is water storage, which, due to Germany’s topography, may be feasible (only) to a limited extent.

Consumers in Germany have been able to choose who they buy their electricity from since 1998, and the gas market was similarly opened

² This regulation was introduced following the crisis in the 1970s, when there was a shortage of oil on the market – citizens could not fill up their private vehicles with petrol. These reserves are in the hands of private entrepreneurs.

up five years later. Following a wave of privatisations and mergers of smaller firms in Germany at the beginning of the new millennium, there are now four large energy companies operating in the country: E.ON, RWE, EnBW, and Vattenfall. Reforms implemented in the energy sector, in particular the closing down of nuclear power plants, as well as consumers' production of their own energy, have resulted in high costs and lower revenues for these companies.

What kind of Energy Union?

Germany generally support the idea of the Energy Union, but there is little understanding of this concept, or engagement in its implementation. This is due to the fact that this concept is still new and vague, as well as due to the nature of Germany's energy needs.

Achieving a secure energy supply

For Germany, energy security means the certainty of having, without any stoppages, a sufficient amount of energy for which there is a demand, i.e., a guarantee of a continuous energy supply for customers. This continuity depends, in a German perspective, on suitable technical capabilities that ensure that electricity is not cut off as a result of an interruption in supplies of energy from renewable sources. On the other hand, there is no fear of any energy shortage arising as a result of a shortage in supplies from external sources. Hence, energy security is a very important issue for Germany, but mainly from a technical rather than a geopolitical point of view, and thus their approach to the idea of the Energy Union as a whole has a different basis than in other countries, which are dependent on Russia in this area. The interviewees do, however, understand the fears of these states. Nevertheless, they themselves rarely speak about the principle of solidarity in this context.

Energy union and energy security

The German approach to energy security challenges is determined by two facts. First of all, the energy mix it has currently achieved has made Germany less and less dependent on supplies of raw materials from

external importers for its own energy production needs. Moreover, these importers have until now been very reliable partners – they have never restricted supplies nor have they ever threatened to do so. “We have no fear of Russia turning off the tap,” the respondents explain unanimously. Hence, Germany in no way feels threatened by the prospect of a shortage of supplies of energy raw materials, especially on such a scale that would negatively impact on the amount of energy reaching private consumers.³ When analysing energy security in terms of the availability of conventional sources, Germans thus tend to focus on their own coal resources and not on external gas supplies. A second factor that affects German understanding of energy security is the challenges arising from *Energiewende*. Switching from the consumption of electricity produced from conventional sources in favour of renewable alternatives has led to feelings of uncertainty over the electricity supply as a consequence of weather factors. As a result, weather⁴ renewable energy sources are not able to provide baseload supply. The problem in their case lies in both a shortage or a surplus of energy produced at different moments.⁵ The challenge is how to properly combine different sources of energy in a network in such a way as to avoid fluctuations in the supply of electricity despite a shortage in the energy produced in any one place. All the interviewees stress in this context the importance of expanding the electricity grid and creating as many cross-border connections as possible, which would help prevent any shortages in electricity supply. This aspect of the Energy Union – aiming for stronger connections between member states as well as coordinating the flow of electricity in Europe, has thus for the most part had a positive reception.

Members of environmental organisations in particular see in this approach an opportunity to balance out surpluses and shortages of electricity supply. Since these people assume that the share of conventional sources in the overall energy mix will steadily decline in the coming years, this infrastructure will serve as the basis for energy

3 The respondents representing the power industry stressed that even when conducting very negative simulations, i.e., when assuming a sudden interruption in the gas supply from Russia, it turns out that households would not suffer, as industry is first in line in terms of any reduction in power consumption. As a consequence, there is no social awareness of the problem whatsoever.

4 This aspect was stressed by the people interviewed, however, large share of German renewables come from hydro, biogas, and biomass which are not all weather dependent.

5 Fears that this would lead to blackouts are justified by experience, as there have been cases of power cuts in Germany lasting several days. This problem has now been solved, although some negative associations remain.

security. This is because it makes it possible to exploit the resources of nature, which vary in form and quantity from member state to member state. “Proper coordination allows us to avoid fluctuations, for it will always be possible to use surpluses of solar energy in Italy or Spain, or wind energy in Denmark, even if there are no strong winds in Germany itself. In turn, countries with surpluses will not have to worry, because there will always be a need for their energy elsewhere in other regions of Europe. This obviously requires good planning, but after all weather forecasts are getting more and more accurate.”

In addition, those interviewees who are decidedly more sceptical about a growing share of renewable energy technologies see precisely in the further expansion of the network in Europe a solution to the danger of an uncertain supply of electricity coming from renewable sources. At the same time, the respondents were – especially the diplomats and representatives of the energy industry – much more cautious as to the chance of successfully connecting member states and developing a coordinated collaboration, as this goal is difficult enough to achieve in German areas alone. According to the members of environmental groups, the problem of providing protection against fluctuations in electricity also has an economic side – this is because it requires decisions to be made about what to invest in and how much. Environmental experts believe, however, that there is no debate on the costs such investments will necessarily entail. On the other hand, there is a need for a discussion on the two pillars of *Energiewende* – energy efficiency (defined by these groups as “the basis of everything connected with energy security”) and the expansion of renewable energy sources, which not only ensures energy security, but also allows for climate protection, and is – in the opinion of these interviewees – the ideal solution.

The importance of a diversified supply for energy security

Understanding energy security mainly in terms of a technical assurance of a permanent energy supply for customers also influences how the goals of energy diversification are defined. In general, German citizens are in favour of diversifying their energy supply, although it is not a question of energy security in a geopolitical sense that is the main goal of diversification. Moreover, among the interviewees there

are clear differences as to what is actually meant by the concept of “diversification”. Some of the respondents speak of diversifying sources of external energy in order to ensure they are not dependent on any single supplier, whereas others perceive diversification primarily as a way of ensuring a variety of domestic energy sources, mainly by broadening the range of renewable sources, so as to make changes to the energy mix that would be desirable for environmental protection needs. The German government regards the basic components of a secure energy supply as being the following: a common market, decarbonisation, and moderation in demand – and these must be given priority.

For members of environmental and social democratic circles, diversification is ensured by the implementation of the *Energiewende* programme, above all through the provision of an energy mix in which locally obtained renewable sources will play a substantial role. This will free Europe from exposure to any possible fallout from political crises as well as to the challenges arising from the exhaustion of conventional raw materials. This is because in such a case (energy mix), the remaining, imported energy (gas) will make up only a small percentage of the total. In line with this approach, it will be necessary to accordingly adapt power networks which will link the diversified renewable sources with the small gas resources. Diversification in this case is not thus solely a response to the need for energy security in the sense of ensuring independence from the monopoly position of a supplier (this argument often only appears to be “thrown in” in order to strengthen the case for diversification), but also in the sense of providing a guarantee that whenever fluctuations occur in the supply of energy from one renewable source, a different source could be used, or, if necessary, gas. Respondents sceptical of the growing share of renewable sources have opposed such a viewpoint, stressing that they are not sure it would guarantee the desired security.

The remaining interviewees point out that Germany already has a diversified gas supply. Hence, from the viewpoint of energy security, this issue is not of key importance for Germans. They perceive here a clear difference between the situation in their own country and that of Poland and Germany’s other eastern neighbours, and this is how they explain the absence of debate on this issue in Germany as well as the greater significance of this subject for countries in Eastern Europe.

The diplomats and representatives of economic/business circles are the most convinced about the importance of diversifying supply for energy security purposes, although they do not believe that Germany is in any way threatened in this respect. They reckon that diversification is a desirable goal, regardless of who supplies the energy. It is a bad idea to rely on a single importer. According to them, one method for ensuring a differentiated supply is to expand the network and the infrastructure as a whole, including through the construction of interconnectors, creating suitable conditions for reverse flow, focusing on LNG as well as gas storage. All these projects should be coordinated at the European level so as to fully exploit the capabilities of different countries and combine forces. Additionally, respondents representing politics – both the Christian Democrats and the Social Democrats – as well as the German “non-paper” on the Energy Union, mention LNG and the expansion of the network as necessary means of ensuring diversification.⁶ The costs of such and other investments in the power industry should, in their opinion, be borne by enterprises. Support from the EU budget should be considered, although it is not taken for granted.

On the other hand, the issue of shale gas extraction is not being addressed in the debate on diversification. The (conventional) gas that Germany currently extracts from its own sources accounts for approximately 10% of domestic gas consumption. There are no plans at present to increase this percentage. At the same time, members of environmental groups emphasise that this is a transitional raw material, until the time renewable energy sources further increase their share. Shale gas extraction, on the other hand, will soon be legally banned. The interviewees from environmental organisations wholeheartedly approve of this decision and at the same time assert that Germany should not and never will extract gas by means of fracking. Besides arguments relating to environmental protection, they also use economic ones, pointing out that the amount of this gas available is not large, and that its extraction will not be as profitable as initial estimates had claimed. “Fracking is not a game-changer. After the initial euphoria it is evident that the reality is not so rosy,” they say.

⁶ At the same time, they draw attention to the possibly higher costs of energy obtained from such sources. See: Energieunion “Das halte ich für aussichtslos”. Arnold Vaatz im Gespräch mit Jürgen Liminski, 26 April 2014 http://www.deutschlandfunk.de/energieunion-das-halte-ich-fuer-aussichtslos.694.de.html?dram:article_id=283719 [accessed: 9 May 2015]

Representatives of the energy industry and political groups (in particular, the Christian Democrats, although also some Social Democrats) are in this case decidedly more open to this solution. They express the hope that the positive experiences of other countries with this method as well as the country's weaker economic situation in the future will one day bring Germans around to the idea, and certain legal loopholes in the current statute in force will help revive debate on this topic.⁷ People who are exceptionally disappointed with the debate in Germany refer blatantly to what they call a "hysterical opposition, driven by hardliners and an overbearing environmental movement, which has managed to force through its ideas and bring about a ban on fracking". Being advocates of shale gas, they promote their position by pointing out its economic benefits to Vorpommern, Brandenburg, and parts of Saxony.

The need for a diversified energy supply is also being discussed in Germany in the context of diversifying the country's energy mix. A secure energy supply is used as an argument in debates for and against the mining of lignite coal. Advocates of opening more mines appeal precisely to the argument that Germany can free itself from dependence on suppliers (which is to say, Russia) by possessing its own sources of energy from fossil fuels. Opponents of mines reply to this by saying that Russia has always been a reliable supplier for Germany and thus this argument is groundless. The representatives of the energy industry observe that the solution also does not lie in the import of coal or gas, as, leaving aside the fact that in other parts of the globe mining has led to the destruction of the natural environment, it reduces employment in their own country (Germany) – which in turn has a negative impact on economic security in general.⁸ Similar tendencies can be observed in debates on whether or not to abandon nuclear energy. In the case of the latter, security in Europe is generally understood in very different ways. Opponents of nuclear energy point out that its use does not in any way foster energy security,⁹ because,

7 In this case, however, the anti-American sentiments of many Germans may discourage the country both from purchasing gas obtained from shale extraction operations in the United States and from drawing on the experiences of that country for its own extraction needs.

8 The respondents themselves do not mention, although it seems obvious for them, that in this respect the argument of compensating the nuclear fleet is very important. Germany has lost a lot of nuclear capacity and will keep losing it until 2022.

9 Representatives of the economic interest groups expressed understanding for Polish plans to build nuclear power plants, but warned against the enormous costs this would entail, which make such investments financially unviable. In their view, it is better to invest in the expansion and modernisation of the gas and coal market.

among other reasons, uranium is imported from Russia. In other words, diversification of raw materials (uranium and not gas) does not at the same time ensure diversification of suppliers. Meanwhile, opponents of extracting shale gas locally in Germany stress that this raw material will run out one day, as a result of which it cannot be relied upon to foster energy security.

In the context of seeking new energy sources, it has also been suggested that Germany should resume relations with those partners with whom it has recently suspended or reduced cooperation. According to the expert who put forward this proposal, one such partner would be the United States, from whom it would be worth buying gas for an LNG terminal.

Shaping relations with Russia in the area of energy supply

As mentioned above, Germany obtains its gas from several sources. When assessing the country's suppliers, the interviewees mention not only Norway and the Netherlands, but also Russia as honest and reliable partners. The latter country, the interviewees agree unanimously, has never let Germany down and even in the darkest periods of the Cold War, gas supplies reached Germany without any problem. Hence, Russia must be regarded as a stable partner in this area.

All the interviewees claimed that the reason why there was no fear that Russia would cut off supplies was that this dependency works both ways. This is because, in the opinion of the respondents, Russia needs "us as much as we need Russia". Russia needs a market, and "turning off the tap" would be economically unviable, both in the short term (loss of guaranteed income) and in the long term (the high costs of reopening the gas supply and losing the trust of its partners). The contracts Russia has signed with other countries will not replace the European market so quickly or completely. In addition, the poor state of the Russian economy at present means, so the interviewees believe, that Moscow is even more in need of gas revenues. Moreover, the percentage of energy raw materials that Germany imports from Russia is not so high that in the worst-case scenario of the supply being cut off it would put excessive strain on Germany's energy system. If the worst comes to the worst, experts estimate, the economy would simply have to save energy. Private

consumers would not feel the effects of this directly, and thus the German people have little fear of any sudden movements from Russia. Hence, some of the respondents believe that from a purely German perspective, no special measures that would change the country's policy towards Russia are necessary from either an economic or political perspective, and there is little debate on this issue in Germany – even in light of the conflict in Ukraine.

On the other hand, the fact that the present Ukrainian-Russian crisis has exposed the need for certain steps to be taken at a European level and provides a good incentive for this, is stressed by the diplomats, including the German Minister for Foreign Affairs, representatives of the Christian Democrats¹⁰ and the Greens.¹¹ Representatives of the energy industry also support this approach. Larger groups, which until now had not been aware of the fear of Russia among countries in Central and Eastern Europe, have now, like the experts, also become aware of this fact. However, the interviewees believe that this is not the first situation of its kind to occur and previous ones have not led to the introduction of any major systemic solutions.¹² While hoping that things will be different now, the interviewees remain realists and are not overestimating the possibility of EU action in this area. They also realise that German society, viewing the problem from a distance, will quickly forget about it once it is no longer discussed in the media.¹³ At the same time, they point out that the stress tests recommended by the European Commission showed that the region can be regarded as safe in the short to mid term, since as a result of hitherto recommendations on how much gas should be stored there will be no shortage of this raw material even if supplies are cut off. Hence, the interviewees do not perceive the danger of a situation arising where there will be no gas. If a country actually needs help, then

10 Julian Staib, Energy Security Summit 2014. Steinmeier ruft Europa zu Geschlossenheit auf, Frankfurter Allgemeine Zeitung from 28 May 2014.

11 The Green Party in particular often addresses both these issues together, stressing at the same time that the crisis, while motivating the country to reduce its dependence on Russia, cannot pave the way for the increased use of other conventional sources. See. Katrin Göring Eckardt zur Ukraine-Krise/OSZE, Energieunion/EEG und NSA/Snowden https://www.gruene-bundestag.de/presse/cvd_ID_4390798/katrin-goering-eckardt-zur-ukraine-kriseosze-energieunioneeeg-und-nsasnowden_ID_4391781.html [accessed: 9 May 2015] as well as a press release from members of the European Parliament: <http://www.greens-efa.eu/de/europaeische-energieunion-12416.html> [accessed: 9 May 2015]

12 However, the interviewees do not expand on the solutions they expected.

13 However, one should not forget that the German government and German industry supported the sanctions against Russia.

it is precisely for this reason, they believe, that reverse flows are being expanded.

Representatives of economic/business circles additionally dwell on the significance of diversified supply channels conveying gas to the EU through Russia. In their opinion, the Nord Stream gas pipeline, which has come in for criticism in Poland, actually guarantees supplies to Central and Eastern Europe. This is because the gas – which Germany is supplied with due to it – can be stored, and then, thanks precisely to the reverse flow system, transferred to those countries that require it if the need arises. Hence, investing in infrastructure, storage facilities, and interconnectors is all the more necessary. At the same time, the interviewees understand that for other countries in Europe, especially those that are very dependent on Russian supplies, Russia is no longer trustworthy, and politics has much more influence on energy security and drives the debate on supply diversification. Other countries' experience of long years of dependence on Russia has justifiably given rise to a different perception of the danger than that prevailing in Germany. Some individuals, however, point out that countries in the region have not undertaken any appropriate measures in this area and still remain totally or almost 100% dependent on Russian gas. Some interviewees have been highly critical of Ukraine – its failure to implement reforms that could have broken its dependence on Russia, excessive support for the concern Naftogaz, poor energy efficiency, and no liberalisation of the energy market. They praise the example of Lithuania, which achieved independence through an LNG terminal. They also draw attention, with a hint of condescension, to Germany's own diversification of its energy sources.

A number of the interviewees from environmental groups draw very clear and stark conclusions: "Europe is financing Russian aggression against Ukraine – after all we regularly pay Putin for raw materials. A necessary response to its policy should be to drastically reduce imports of gas from Russia." At the same time, these people see the need for solutions whose introduction would compensate for any shortages of this raw material. Above all else, this entails insulating buildings, which, so they believe, are "currently in an awful state". And it is gas that is usually used for heating. It is in this area, in the case of individual consumers, that they see a need for state support so as to eventually be able to reduce

imports. Industry should also take appropriate measures to reduce gas consumption.

There is also currently a debate – although not an especially widespread one – going on among German experts on the general ethical dilemma involved in importing gas and oil from various sources. The interviewees are aware that the authorities in Azerbaijan and the Arab state sheiks are not renowned for their respect for human rights, and thus buying raw materials from them is morally suspect. In this way, the interviewees point to the fact that it is not only Russia that should be regarded as a questionable partner. It is, therefore, all the more important to expand the common energy market and save energy in order to ensure greater independence from these suppliers.

Challenges linked with creating energy solidarity within the European Union and with its neighbours

Aware of the difficult situation in which Central and Eastern European countries find themselves, dependent as they are on supplies of Russian gas, Germany in principle regards it as of paramount importance that actions be undertaken aimed at creating a stable situation for energy throughout the EU, and argues there is a need for European solidarity in this area. However, the interviewees agree that, as with other similar situations (they mention Greece as an example here), such solidarity will not be easy to achieve. This is because numerous examples exist of member states being very much guided by national interests. The present crisis is perceived completely differently in Central and Eastern Europe than in Portugal. Furthermore, many countries are keen to maintain their own energy policies – such as, for example, the Scandinavians and the British, who are in favour of shale gas extraction. Moreover, many member states have different energy mix solutions and they will be reluctant to make any changes in this area.

Solidarity, understood here to mean mutual aid and assistance, should, however, remain the goal to which everyone should aspire. A suitable compromise must be worked out and then put into effect. There are fears that some member states may not agree to this and pursue their own goals (“Great Britain goes nuclear”). Moreover, some of the interviewees believe that hitherto experiences in climate policy show that not all countries are faithful to the principle of a solidarity that goes in

both directions – they expect a lot for themselves from others, but fail to fulfil their own obligations (the interviewees representing environmental organisations clearly pointed to Poland in this case). Meanwhile, implementing adopted climate goals also increases energy security in the region. In this light, some of the interviewees point primarily to the need for action from those states that are currently dependent on Russian supplies. It is these countries that above all else need to develop a new energy mix for themselves. On the other hand, all the interviewees are unanimous in rejecting the idea of joint purchasing as contradicting the principle of market liberalisation. The only proposal that experts believe is possible is for joint purchasing to be purely voluntary and only apply to precisely those countries that it could help. However, this would be a difficult option for the Germans to accept.

Political representatives are aware that to achieve European solidarity it is precisely at the political level that action must be taken. Negotiations here will be difficult, for every state will defend its position and claim more for itself, even though self-interest should be sacrificed in the name of solidarity. In turn, the representatives of the economic/business sector call for more room for manoeuvre for the market (“the market, not politics, must decide”). Even more market liberalisation is needed, including with a view to improving the situation in those EU countries where energy monopolies prevail (Poland and France are mentioned here). According to representatives of the energy industry, solidarity means establishing shared priorities and thus giving up one’s own. “It is important to support gas projects in Europe, but only those which are truly necessary economically, and not those which certain politicians are most vocal in backing. This is because EU money is currently being used to finance those projects which some governments have skilfully forced through and not those that are truly needed.”¹⁴ In the opinion of these interviewees, certain investments that are not important for European security and the economy are also worth implementing, but only with national or private funds rather than from European sources. One possible example of solidarity is plans to build interconnectors. Poland, a state that is no longer relatively the poorest in the region and which already has its own LNG terminal,¹⁵ does not in its current situation need interconnectors

14 When asked, an interviewee admitted that he had Poland in mind here.

15 One interviewee assumed that it will open in the near future and thus we can assume that Poland already has it.

as much as, for example, Bulgaria, Romania, and Croatia do, i.e., poor countries unable to finance such investments on their own. Meanwhile, the EU sometimes gives its consent for certain projects simply to satisfy a particular government, which makes other concessions (e.g., accepting climate goals) in return. Companies which own power networks are obviously interested in expanding interconnectors, although only with their own profit in mind, and thus contradicting the idea of solidarity.

In turn, members of environmental groups perceive in the current crisis further proof that we should stop using conventional raw materials. In the short term, i.e., over the next two to four years, they admittedly accept continued reliance on gas and, in light of this, its diversification. However, they emphasise at the same time that it is vital to use this raw material carefully and efficiently. They categorically reject the idea of ensuring security in the region through the use – and even more so the further expansion – of coal and nuclear power stations, which would entail enormous costs and damage to the environment. In their view, solidarity means the joint implementation of climate goals.

On the other hand, in Germany the topic of energy security in the EU's neighbourhood is limited to Ukraine. The idea that gas flows from Slovakia to Ukraine with the help of a special interconnector is general approved. In addition, the coordination of the EU energy policy with Ukraine, so that Ukraine can store gas needed by EU member states, is assessed positively.

However, some of the interviewees point out quite emphatically the challenges facing Ukraine. These challenges are so serious that an interconnector or Ukraine's future incorporation into the European gas storage system are not seen as offering a genuine opportunity for increasing Ukraine's energy security. The interviewees believe that this is because the country must first of all fundamentally reform its energy market. This, in turn, is because up until now aid programmes from the EU, Denmark, and Germany have changed little, although it is good that they exist and should continue to do so. The hitherto efforts of experts from the EU and its member states have assumed a need to educate Ukrainians in how to use and save their energy properly on the basis of the local conditions and regulations in Ukraine.

According to respondents, Ukraine must above all liberalise its energy market, end state support for Naftogaz, and reduce energy losses in industry, transport, and households. The EU should at all times assist

Ukraine in carrying out these reforms, including through financial aid. At the same time, interviewees are sceptical about the effects of reform, as until now various programmes have not had any major impact. Moreover, these reforms will be painful for society, which in turn may lead to further destabilisation of the state and dissatisfaction among the population.

Investments in energy infrastructure as a means of strengthening energy security

Infrastructure investments are of key importance when trying to create an integrated energy policy in the EU. Once again, however, different circles see different goals for these projects and also have different views on how they should be implemented (e.g., sources of financing). In addition, (investments in) power networks are distinguished from investments in infrastructure linked to different sources of energy acquisition.

According to the general consensus, it is worth investing in the integration of power networks so that the energy produced in one place in Europe in times of surplus can easily be transferred to other states where there is a deficit.¹⁶ On the other hand, members of environmental groups reject the appropriateness of further expanding the scale of any investments that involve the mining of coal or the transport of gas (LNG, gas pipelines), arguing that since in the future we will be shifting away from these energy sources, such investments would be unjustified. The other interviewees regarded the following as key projects: the construction of gas pipelines, LNG terminals, gas storage facilities, reverse flows, and interconnectors.

In the case of the latter solutions, however, it is vital to ensure that contracts with suppliers, for example with Gazprom, include a clause allowing gas to be resold to other partners, otherwise the infrastructure itself will not suffice on its own. However, diplomats from the Ministry of Foreign Affairs fear that relying on a system of reverse flows might also have – in the long term – negative consequences. “It may turn out that cheaper gas will flow through such a system. Meanwhile, a given country will still be obliged to buy the more expensive gas, which does not come via reverse flow.”

¹⁶ Sigmar Gabriel über die Krise in Europa und die Sanktionen des Westens gegen Russland, “Handelsblatt”. Accessed: 20 January 2015.

A system of reverse flows also creates more opportunities for storing gas in different places in Europe. As local geological conditions mean that not every state is able to store gas (such conditions in Germany's case are actually good; hence, they have many such storage facilities), the task of the Energy Union, which Germany supports, should be to coordinate and plan gas storage facilities so that different countries can use them. In the case of Ukraine – this is a country that also has extensive storage space, so establishing closer links between it and the European market is all the more advisable.

At the same time, experts point out that any possible expansion of infrastructure greatly depends on the decisions made on how energy sources are to be used – what is produced and where. For this in turn determines which networks will be necessary. They emphasise that “any plans to develop networks must be in tandem with plans to expand power stations. For the time being there is no such link between the two, which is having terrible consequences. Individual countries are deciding on their own energy mix, including power stations, which has nothing to do with expanding the network.”

All the interviewees admit that suitable connections will allow energy to be supplied precisely to those countries that need it – including from Germany to the East via reverse flow. As a consequence, such a system will provide countries in the region with security and essential diversification. In such a situation, the supplier-monopoly holder will not be in a position to blackmail the customer. However, the main problem in this case may turn out to be the market, for infrastructure, just like raw materials, is owned by individual companies. Hence, some interference in market mechanisms is necessary to guarantee supplies.

Among those interviewees generally in favour of the idea of investing in gas infrastructure, there is, however, no consensus on what sources of financing should be used for these projects. Some interviewees demanded that private investors take over responsibility and in return derive some benefits from using certain infrastructure. Representatives of corporations are, naturally, not favourably inclined towards such a solution. It has also not won the support of the Ministry of Economy, as the currently enormous costs of energy reforms that enterprises are having to bear in Germany mean that every additional burden may trigger major protests among them. Diplomats and representatives of the energy

industry are in favour of including EU funds as a source of financing,¹⁷ especially for long-term projects.¹⁸ They point out that “infrastructure expansion” takes a long time – because first the money must be found from companies and subsidies, and later permits must be secured, so as to fulfil political and legal criteria. Meanwhile, what for the economy is short term, i.e., five years, is for politics medium-term. Hence, certain projects require support from EU funds. Priority should be given to key projects singled out by the European Commission.

Infrastructure projects face other challenges besides those that are financial in character. For example, the expansion of Germany’s power (electricity) network has also encountered resistance from social groups. The construction of parts of this network in their immediate neighbourhood has provoked reactions that can be summed up as “not in my backyard” (more on this in the section about social attitudes). Meanwhile, an effective barrier to gas storage in Ukraine at the present time (and to the creation of suitable connections allowing for its distribution) is the war being waged there. Another problem, according to some interviewees, is the trend towards renationalising European policy. Some countries are less and less enthusiastic about deeper European integration, as a consequence of which projects remain national in character. In such a situation, further action is difficult, because projects in the energy sector require significant financing that exceeds the capabilities of any single country. In this context, representatives of business circles consider that Germany must agree to co-finance European undertakings.

Strengthening the negotiating position of the European Union

In the opinion of the interviewees, use of the above-mentioned mechanisms as a means to completing the EU’s internal gas market – in particular the increased expansion of networks and storages – will ensure the EU a stronger negotiating position in relation to third parties. This is because diversification improves its bargaining power. Similarly, a strong

¹⁷ They suggested that it is precisely from those resources they are entitled to that Poland should finance planned investments in energy, instead of expecting further support from other European sources.

¹⁸ They refer here to the Investment Plan of the President of the European Commission http://ec.europa.eu/priorities/jobs-growth-investment/plan/index_de.htm [accessed: 9 May 2015]

common market will strengthen the EU – and its individual (constituent) entities – as an interlocutor and negotiating partner.

All German interviewees agree that the contracts themselves should continue to be negotiated by enterprises. In particular, representatives of business circles, but also diplomats, firmly adhere to the view that politicians should not interfere in such matters. In the interviews conducted before the March session of the European Council, the interviewees were unanimous in arguing that contracts must remain a trade secret of companies, which is the basis of a free market economy. The winner is the party that is the best negotiator without knowing the bargaining position of other players. Prices cannot thus be explicitly stated. In reality, however, according to the people from energy companies, prices are explicitly stated anyway, so changes are not needed. “In other words, what for Poland is truly important, is taking place even without transparency of contracts,” they explained. You can infer about prices from information from the stock market. However, in the conclusions of the European Council session of March 2015, member states agree to a clause stipulating that increased transparency must be sought, while at the same time emphasising that certain trade information in contracts must remain confidential.¹⁹ Such a clause is a compromise. As the German experts have commented, this mainly concerns intergovernmental contracts, whereas in Germany contracts are only signed by enterprises. It is precisely the latter that the second part of the clause on confidentiality relates to.

However, representatives of both political groups and business associations had already stressed back in February the need for some political intervention in this context. It is the EU that should, for example, set the framework conditions of concluded contracts in order to ensure that they include a clause allowing for the possible resale of energy. This would safeguard against situations where member states would be unable to help one another when needed, as this had been forbidden in a contract signed by one of them with, for example, Gazprom. Experts also believe that there should be important restrictions in the length of the period for which contracts are concluded. Suppliers will obviously aspire to conclude long-term contracts, but it remains in the interests of the EU

¹⁹ European Council, Session of the European Council (19 and 20 March 2015) – Conclusions <http://data.consilium.europa.eu/doc/document/ST-11-2015-INIT/pl/pdf> [accessed: 9 May 2015]

that contractual periods are not too long. While keeping trade secrets, it is also important to ensure sufficient transparency in contracts so that a common EU market can function in practice. Current arrangements, which require that concluded contracts be disclosed to the European Commission, are a step in the right direction.

The interviewees likewise reject the idea of common European gas purchasing, which, in their opinion, would go against the principles of the free market and competition, and in practice would signal a return to a centrally planned economy. Moreover, current contracts are usually signed for many years in advance, and thus if a single joint purchasing system was created today, these contracts would have to be cancelled and enormous compensation paid out. Besides this, creating such a system would beg many questions – who would be responsible for buying the gas, who would make the final decisions, and who would distribute the purchased gas according to needs? The Social Democrats also mention the inevitable price increases that would follow from the introduction of a joint purchasing mechanism. This in turn would entail higher costs for consumers. Additionally, the German economy is not ready for higher prices, even in the name of solidarity. *Energiewende* is causing for some of the companies considerable losses (data published from 2014 show this clearly²⁰) and there is growing resistance to the idea of bearing any further costs. Hence, politicians – reluctant to irritate business concerns – are against the idea of joint purchasing as an obligatory solution, as they know that this would cause harm to German industry.

A competitive and integrated energy market

The German interviewees were unanimous in believing that the key feature of the Energy Union should be a common energy market. It is this, both the government and the energy industry representatives believe, that ensures real energy security. Hence, actions aimed at creating such a market should be given priority. However, there are doubts about the

²⁰ See: RWE verharrt in der Krise, WDR Aktuell, 10 March 2015 <http://www1.wdr.de/themen/aktuell/rwe-bilanz-102.html> [accessed: 9 May 2015], Moritz Küpper, Der größte Verlust in der Konzerngeschichte, Deutschlandfunk, 11 March 2015 http://www.deutschlandfunk.de/e-on-bilanz-der-groesste-verlust-in-der-konzerngeschichte.766.de.html?dram:article_id=313943 [accessed 9 May 2015]. The RWE is certainly the biggest loser. But there are many companies that earn good money with *Energiewende*, e.g., manufacturing or small-size installers. Overall, ministries always argue that the economic balance-sheet is positive.

effectiveness of such an approach, since national governments would have to transfer many powers to the EU, and consent for this may not necessarily be given.

An assessment of current energy market mechanisms and perceived needs for change

The representatives of the economic/business groups are very critical of the current functioning of the energy market in the EU. The respondents blame, on the one hand, too much state intervention in issues which should remain the concern of enterprises, and, on the other, the absence of standard rules governing energy trading. As a consequence of these factors, the European energy prices are not competitive and this is also harmful to Europe's energy security.

However, the experts mention several already functioning valuable solutions for the market, such as unbundling (separation). Separating the transmission or distribution of energy from its production and supply to end customers promotes the principles of competitiveness.

Nevertheless, many of the interviewees do not believe that the European energy prices will become competitive in relation to the American market, which will always offer lower energy prices due to comparably high tax levels on energy in the EU.

A basic barrier to the functioning of the energy market is interference from both the EU and individual governments in market principles. Such intervention includes legal regulations that from the very outset make certain potential activities of enterprises unprofitable, as well as ad hoc political measures that have likewise made investments unfeasible from an economic point of view. As an example of the latter situation, the interviewees mentioned the challenges posed by the storage of gas. As far as enterprises are concerned it would be profitable to store more of it (which in Germany is possible thanks to its favourable geological conditions) and resell it at higher prices whenever shortages begin to occur (e.g., as a result of a severe winter). Such a strategy would allow a company to make money, as a consequence of which maintaining large reserves (which is also understood as a way of ensuring energy security) would be a profitable investment. However, in times of gas shortages it is to be expected that a government would not permit price hikes, which in turn means that it would not pay for companies to keep larger stocks

of raw material in storage facilities. The desirable solution would thus be to leave enterprises some freedom and guarantee non-intervention from the state.

Politicians also intervene in the functioning of the market by awarding concessions. Moreover, in certain member states the government continues to maintain control of energy companies. According to the representatives of economic/business circles, another key problem hampering the development of an energy market based on the notion of enterprises making a profit is the granting by the state of subsidies for various investments or to maintain existing mechanisms (e.g., the continued operation of old power stations), which in their eyes is ruining the market. In addition, the principles for supporting different investments vary from member state to member state, which makes cross-border investments more complicated and expensive.

Subsidies are only worth granting in cases where investments are essential for ensuring security and environmental concerns but not completely profitable. Nevertheless, the rules for granting aid for such investments in the EU as a whole must be standardised.

Representatives of economic/business groups also complain about the obstacles raised by various EU climate and environmental norms (directives on renewable energy and air quality). Having to respect all such guidelines raises the costs of an investment. In this case, they believe Europe undermines its own competitiveness. This is because other regions do not have to deal with such restrictions, thanks to which their final prices are lower. “You cannot simply stress that everything must be only ecological, ecological and ecological – it must be ecological, but it must also produce a profit for the economy and also be in the interests of people – here we are talking about jobs,” they stress.

In the opinion of those representing economic interests, another barrier impeding free trade within the EU are national regulations, and not only (although definitely including) regulations connected with environmental protection norms, which make energy trading between two countries unprofitable. Learning about these regulations and adapting to them is so expensive that the final costs of entry onto a neighbouring market – even at cheaper purchasing prices or with the possibility of a more expensive sale price – make it unprofitable. Adjusting to different information and technological systems significantly raises

the cost of an expansion project. Another bad rule is that of making it obligatory to store gas in a country where it is to be potentially used. Different states have different geological storage capabilities – some can build larger stores, others cannot. In a common Europe, it is thus important to facilitate the transmission of gas and do away with restrictions. This would encourage companies to invest. And it is precisely the activities of companies – interested in profit and developing their own economic contacts – that could, in the opinion of their representatives, ensure an appropriate flow of energy and thus also energy security. Establishing standard norms for all EU states is thus essential.

Another essential step would be to liberalise energy markets in all states in the EU. Currently, only some have decided to do so to a high degree. The fact remains that smaller states are unable to do this easily, as there are not a sufficient number of appropriate firms on their territories – they would thus have to join forces with another country. However, the main obstacles are, once more, political barriers.

The experts, who observe energy policy more analytically, see definitely fewer challenges posed by the current functioning of the market in the context of ensuring energy security. However, political divisions are not always typical. Christian Democrats believe that market mechanisms should be supported, but do not currently believe that state interference in the energy market is excessive. In turn, people from social democratic circles on the one hand notice such intervention, but on the other hand, they see in market liberalisation a threat to a decision-making process aimed at stabilising the energy system and ensuring its security.

Some respondents refer to energy as “a common good”, which as such, should not be subject to market regulations, but be guaranteed by the state. Such thinking leads to the assertion that the market should not steer energy policy, but rather it is the state that bears responsibility for providing its citizens with energy at an affordable price.

A sustainable energy market

Energy policy in Germany is closely linked with the issue of climate targets. The whole concept of *Energiewende* is predicated on taking into account environmental protection requirements. A German “non-paper”

on the subject of the Energy Union²¹ emphasises the importance of linking the concept of the Energy Union with progressive climate policy and an agenda of growth and creating new jobs. In the opinion of the German government, a key pillar of Energy Union must be to ensure energy efficiency and de-carbonisation, in accordance with the EU energy and climate targets for 2030. On this issue, there is a general consensus in Germany among most groups. However, it would be erroneous to state that years of debate on these subjects as well as implementation of the *Energiewende* programme have led to a complete consensus in Germany on this issue.

For the German ecological circles, energy and climate policies should go hand in hand as the most important condition for developing activities in the energy sector. They consider that energy security will only be increased when everyone follows agreed climate targets. This should be achieved by greater use of renewable resources and greater energy efficiency. In their official positions, members of ecological circles very strongly criticise those member states that are putting climate targets into question.²² In their assessment, the conception of the Energy Union proposed by Donald Tusk has been a step backwards in this area, because it concentrated too much on conventional sources – it returned to “the old school of energy supply”. Expansion of renewable energy should be one of the – separate and equal – elements of the Energy Union.

Although representatives of economic circles admit that harmonisation of climate targets and actions undertaken to achieve them is necessary, they express doubts as to whether there is one solution satisfying everyone. “In order to reach climate targets, Portugal needs something different from Poland. You have to talk and try to reach some sort of agreement, where a common compromise is possible, where an agreement is possible.” Individuals point out that you should also inform partners about planned actions in this field. “For example, the German decision to move away from nuclear power was not consulted with its neighbours, and only communicated to them – it was not particularly friendly on the part of Germany and this is not a good example of harmonisation.”

21 German “non-paper” on the “Energy Union”.

22 Prioritäten fuer die “Energy Union”, Vorschläge des Bundesverbandes Erneuerbare Energie e.V., 8 January 2015, http://www.bee-ev.de/_downloads/publikationen/positionen/2015/BEE-

Members of the ecological and economic circles and Christian Democrats agree that energy efficiency is of key importance for a sustainable energy market, which includes the insulation of buildings, energy efficiency in the sector of transport and production. However, on other issues like generating energy from hard coal, using CCS technology and relying solely on renewable resources, they hold different positions..

While ecological groups are only in favour of EU support for local renewable sources of energy,²³ Christian Democrat experts and officials indicate that subsidies should also be granted for modern technologies for generating energy from conventional sources. For example, bituminous hard coal mining should not be supported, but new lignite (brown) coal mines (such coal is, however, a debatable source, because it produces a lot of CO₂ and ruins the landscape) or CCS technology should be.

Social attitudes towards energy policy

The hitherto German energy policy – changes introduced under the *Energiewende* programme – was based to a significant extent on huge social support. This social support provides an explanation for many of the decisions taken by politicians concerning the range and speed of implementation of reforms. It can be assumed that those points of the Energy Union that are consistent with elements of *Energiewende* that are supported by German society will be well received in Germany.

The most important issues linked with energy policy in the eyes of Germans

The subject of energy – especially moving away from using conventional sources of energy to renewable sources – is an issue arousing widespread interest in Germany and considered to be important. The vast majority of German society supports these transformations. Opinion polls show that about 60% of Germans support *Energiewende* (and as many as 92% consider the expansion of possibilities of obtaining energy from renewable sources

23 According to the German Renewable Energy Federation (*Bundesverband Erneuerbare Energie*), the EU should promote local renewable sources much more strongly than they currently do and encourage a move away from conventional energy sources by means of the above mentioned withdrawal of all subsidies for conventional energy and an increase in prices. Prioritäten fuer die "Energy Union", Vorschläge des Bundesverbandes Erneuerbare Energie e.V., 8 January 2015, http://www.bee-ev.de/_downloads/publikationen/positionen/2015/BEE-Positionspapier_Prioritaetenfuerdie-EnergyUnion-DE.pdf [accessed 12 February 2015], p. 3.

as important²⁴), but only 42% consider themselves to be well informed on the subject.²⁵ The motivation for this support is, as interviewees explain, a conviction that it is necessary to care for the natural environment. These assessments are consistent with results of public opinion polls, in which 75% of respondents acknowledge renewable energy sources as a guarantee of a secure future for future generations, and 71% indicate their positive impact on climate protection. Sixty-seven per cent consider that they reduce dependence on energy imports.²⁶

However, while members of environmental organisations and some officials argue that such an attitude is the effect of the hard work of many NGOs and campaigns (which have led to the population being appropriately informed concerning the benefits of energy from renewable sources and the environmental costs of conventional sources), business circles and the Christian Democrats talk about the excessive emotionality of Germans in their approach to the subject. The latter groups put it down to “fear sown by environmentalists”. They consider that society sometimes reacts in a downright hysterical fashion to the slogans “nuclear energy” and “shale gas”. Hence, as these people explain, the German “move away from nuclear power” is absolutely a foregone conclusion, and in society there will never be consent to purchasing electricity in countries with nuclear power plants. As a result, this subject is currently not a subject in public debate.

Similarly, shale gas will not gain support in the coming years as a source of energy – and this issue is not raised in debate, as society rejects it unequivocally. “People are obsessively against fracking,” claim people supporting this source of energy. However, these interviewees are counting on the fact that the positive experiences of other countries in this field, including the United States and Poland – especially proven safety of extraction and low costs – may in the future convince currently sceptical Germans. Representatives of environmental groups absolutely rule out such a scenario.

24 Agentur für Erneuerbare Energien, Akzeptanzumfrage 2014: 92 Prozent der Deutschen unterstützen den Ausbau Erneuerbarer Energien, Oktober 2014 <http://www.unendlich-viel-energie.de/themen/akzeptanz2/akzeptanz-umfrage/akzeptanzumfrage-2014> [accessed: 10 February 2015].

25 Innovationsforum Energiewende, Deutscher Energie-Kompass 2014, p. 3 and 6. <http://www.innovationsforum-energiewende.de/deutscher-energie-kompass-20142015/> [accessed: 10 February 2015].

26 Agentur für Erneuerbare Energien, Akzeptanzumfrage 2014: 92 Prozent der Deutschen unterstützen den Ausbau Erneuerbarer Energien, Oktober 2014 <http://www.unendlich-viel-energie.de/themen/akzeptanz2/akzeptanz-umfrage/akzeptanzumfrage-2014> [accessed: 10 February 2015].

The origin of gas from foreign sources is not, however, a big issue in Germany. As, up till now, suppliers of gas have never let Germany down, citizens are not afraid of “the tap being turned off” by Russia (in December 2014, 64% of respondents expressed a lack of fear²⁷) or another country. There is also no public debate on the origin of gas from countries which do not respect human rights or where the environmental costs of extracting gas fall far short of German standards. Only expert circles note this dissonance, although interviewees themselves rarely paid attention to it.

The results of public opinion polls clearly indicate that Germans in recent years have basically not changed their support for particular sources of energy (fluctuations in support for the years 2012–2014 are 1–3% and thus are within the limits of statistical error). Sources of energy enjoying the greatest support are: water (77%), wind (76%), and sun (74%), followed by biomass (60%), gas (58%), oil (45%), and coal (43%). One-third of respondents indicate nuclear power.²⁸ Concerning the question of what kind of infrastructure should be developed in the context of ensuring an appropriate energy mix in 20 years time, Germans clearly prefer hydroelectric power (78%), wind power (76%), and solar batteries (78%) to biomass combustion (45%), gas (19%), coal (8%) or nuclear infrastructure (5%).²⁹

Society's willingness to bear the costs of energy policy reform

The presented opinions of the interviewees and the results of the survey, although indicating general support, do not mean, however, that in German society there are no divisions regarding the approach to changes in energy policy. The expansion of renewable energy sources is supported above all on an ideological level. However, the cost factor remains significant for many people, which means that Germans expect that others (in Europe) will also be prepared to make similar sacrifices in the name of higher goals.

27 Infratest Dimap, ARD-DeutschlandTREND, Dezember 2014, <http://www.infratest-dimap.de/umfragen-analysen/bundesweit/ard-deutschlandtrend/2014/dezember/> [accessed: 10 February 2015].

28 Innovationsforum Energiewende, Deutscher Energie-Kompass 2014, p. 13, <http://www.innovationsforum-energiewende.de/deutscher-energie-kompass-20142015/> [accessed: 10 February 2015].

29 Innovationsforum Energiewende, Deutscher Energie-Kompass 2014, p. 17, <http://www.innovationsforum-energiewende.de/deutscher-energie-kompass-20142015/> [accessed: 10 February 2015].

Although the German narrative of cost increase is making people worried and constitutes a significant subject of debate – especially in numerous press articles – it is not causing a revolt against *Energiewende*. As interviewees emphasised, “until now, no-one has gone out onto the streets due to rising electricity prices here” – as over half of the Germans surveyed (55%) on the part of the electricity bill that goes towards developing renewable energy sources consider the amount to be appropriate, whereas only 36% of respondents consider it to be too high.³⁰

However, when assessing the implementation of *Energiewende*, half of respondents consider that it is precisely households and their efforts that contribute to achieving the goals of this project. Only 16% and 21% of respondents believe in – respectively – the effectiveness of political and economic measures.³¹ Hence, the success of *Energiewende* is critically assessed – only 32% of respondents believe in it. Two-thirds, however, fear that the ongoing reforms may contribute to interruptions in the flow of energy; at the same time, three-quarters of respondents consider the current energy supply to be reliable.³²

Interviewees state that numerous information campaigns have taught Germans how to save energy. Financial considerations additionally motivate them to fit insulation and build energy-efficient homes, apply new heating systems and generally limit electricity and heat use. However, respondents – especially representatives of environmental circles – claim that the potential for saving energy is still significantly higher. Opinion polls show that 40% of respondents have taken action aimed at saving energy in their home or flat (insulation, etc.) in the last five years, and 13% plan similar investments.³³ One of the ways of motivating people to save energy – in the opinion of members of environmental groups – is to raise bills for energy, especially energy originating from conventional

30 Agentur für Erneuerbare Energien, Akzeptanzumfrage 2014: 92 Prozent der Deutschen unterstützen den Ausbau Erneuerbarer Energien, October 2014 <http://www.unendlich-viel-energie.de/themen/akzeptanz2/akzeptanz-umfrage/akzeptanzumfrage-2014> [accessed: 10 February 2015].

31 Innovationsforum Energiewende, Deutscher Energie-Kompass 2014, p. 17, <http://www.innovationsforum-energiewende.de/deutscher-energie-kompass-20142015/> [accessed: 10 February 2015]

32 WINGAS GmbH, Forsa Umfrage 2014 “Energieversorgung und Energiewende”, March 2014, <http://www.wingas.com/mediathek/studien/forsa-umfrage-energieversorgung-und-energiewende.html> [accessed: 10 February 2015]

33 WINGAS GmbH, Forsa Umfrage 2014 “Energieversorgung und Energiewende”, March 2014, <http://www.wingas.com/mediathek/studien/forsa-umfrage-energieversorgung-und-energiewende.html> [accessed: 10 February 2015]

sources. Members of economic circles, however, take a negative view on the subject of price rises.

People who have installed solar power generating technology on their roofs are decidedly in favour of reforms that they connect mainly with renewable support policies. These investments are subsidised by the state, which can often result in a situation where consumers not only possess their own source of energy but also make money, because they additionally benefit from favourable tax deductions and can sell surplus electricity. Interviewees noted that the costs of *Energiewende* – through such solutions – are also borne by low-income workers living in housing blocks. Such people do not have the possibility of making similar investments, but have to pay increasingly high bills, which finance, among other things, the installation of photovoltaic panels on roofs. Interviewees – especially persons from business groups – suppose that their expenditure on energy will increase, which may also in the long term lead to greater dissatisfaction with the idea of transferring to greater use of renewable sources of energy. Generally, an opinion that is being increasingly voiced – by consumers and, especially, representatives of industry – is that *Energiewende* is being implemented too quickly and ideals have clouded rational assessments of capabilities, including financial ones. Questions are increasingly being raised about who makes money on *Energiewende* (some of the interviewees mentioned banks and producers of technologies used in renewable energy sources), and who bears its costs. Questions about the time frame and speed of action are also currently broadly debated in German society.

Another aspect of this policy that is causing dissatisfaction is the expansion of networks, especially the electricity grid, in spite of the fact that it is precisely a developed, efficient network that should – in Germany's understanding – constitute a basis for energy security. "Applause in Germany for *Energiewende* finishes in your backyard, if a wind turbine is going to be put up there," is how interviewees described the attitude of many citizens. Any building investments interfering in the landscape of the area (which does not include solar panels on roofs, which do not spoil views) are accepted with great reluctance. There are widespread protests – organised locally and at grassroots level – if wind turbines or transmission networks are to be built in a given municipality.

Acceptance of investments grows when residents have already had experience of them in the past. Thus, persons in whose area wind turbines have already been built are more willing to accept more wind turbines than people who have not had them in their area (74% versus 61%).³⁴ However, the results of opinion polls are burdened by the previously mentioned tendency towards political correctness – in Germany, you are expected to support renewable sources of energy. Protests in places where such renewable energy technology is being installed/expanded show that support is not always real.

Generating social support for the Energy Union and obtaining benefits from it for society

The emphatic support in Germany for switching from conventional to renewable energy sources suggests that some of the requirements of the Energy Union will also meet with social approval. There will certainly be backing in particular for the idea of expanding renewable energy sources and the power network together with the latter's integration into the European system as a whole (and thus in a location not directly associated with Germans' "own backyard"). We can expect consent for the co-financing of investments in this area. At the same time, Germany will expect reforms: savings in energy and the overhaul of the energy sector in those countries which until now have not met the EU's high standards. At the same time, the general population cannot be expected to understand the differences that exist between countries in terms of development, security, energy potential, and investment opportunities.

One problematic issue may be the requirements of "communitisation", which may in certain cases force Germany to obtain its energy from countries where it is produced using – according to German standards – "dirty methods", i.e., from coal or nuclear power. Nor will there be support for calls for joint gas purchasing, as Germany does not see any danger of one monopoly holder imposing its policies on it and does not have any negative experiences in this regard – neither in terms of the continuity of supply nor gas prices (as a result of joint purchasing, the latter – the interviewees estimate – may tend to increase in Germany, which will be even less popular among people). On the other hand, they praise greatly

³⁴ Agentur für Erneuerbare Energien, Akzeptanzumfrage 2014: 92 Prozent der Deutschen unterstützen den Ausbau Erneuerbarer Energien, October 2014 <http://www.unendlich-viel-energie.de/themen/akzeptanz2/akzeptanz-umfrage/akzeptanzumfrage-2014> [accessed: 10 February 2015].

the idea of the free market, on which purchases – and thus prices – are determined by supply and demand. Simultaneously, however, they do not see here any absence of market principles on the Russian side.

These social views will undoubtedly have an influence on Germany's position on the EU stage, because, as all the interviewees stated, energy is a very sensitive issue for citizens and no government would risk losing popularity due to steps taken in the international arena in this sector. However, it may be possible to win the German population's support for the idea, and not only by taking the route expressed ironically by one of the interviewees: "Germany will only support the idea of the Energy Union if it implies its *Energiewende* being copied on the European stage." However, the fact remains that (German) society will be more favourably inclined towards the Energy Union if this concept suggests an increasing share of renewable energy in the energy mix.

Conclusions

Germany's energy policy will remain unchanged in the near future, even though it has sometimes been modified in previous years. All the interviewees agree that there is no longer any debate over its objectives, but only about the tempo and costs of change.

For Germany, energy security means the certainty of having – uninterrupted – the amount of energy for which there is a demand, i.e., guarantee of a continuous energy supply for customers. This continuity depends, from the German point of view, on suitable technical capabilities that ensure that electricity is not cut off as a result of an interruption in the supply of energy from renewable sources. On the other hand, there is no fear of any energy shortage arising as a result of a shortage in supplies from external sources. Hence, Germany is generally in favour of diversifying its energy supply. However, only some of the respondents speak of diversification in terms of supplies of energy from external sources, whereas for the most part the interviewees primarily perceive diversification as involving a variety of domestic energy sources, mainly in the sense of expanding the range of renewable sources and combining them appropriately with conventional energy, mainly gas.

All the interviewees stress in this context the importance of expanding the power network and creating as many cross-border interconnections

as possible, which would help prevent any shortages of electricity supply. This aspect of the Energy Union – aiming for stronger connections between member states as well as coordinating the flow of electricity in Europe, has thus for the most part been positively received. For Germans, the road to energy security also involves achieving set climate goals. According to the interviewees, the following aspects of the Energy Union would specifically contribute to enhancing the EU's energy security: the creation of a uniform energy market in the EU, infrastructural investments aimed at developing such a common energy market, and further decarbonisation of the energy mix. However, the respondents hold differing views on whether this should take place immediately, i.e., within a short period of time (up to three years) or within a longer time-frame (4-7 years or more than 10 years). The Energy Union is thus clearly an important project for Germans, but it is understood differently by different groups and there are different reasons why it is seen as important.

In the opinion of the interviewees, the concept of the Energy Union is in keeping with Germany's *Energiewende* in many areas, for example, in the desire to expand infrastructure and make use of renewable energy sources.³⁵ On the other hand, one gets the impression that ministries are so firmly convinced of the correctness of *Energiewende* that the Energy Union will only be supported if it corresponds with the reforms that Germany is making in this area, i.e., it aspires to meet climate targets, save energy, and achieve diversification. Public servants regard this project as important, as they support the idea of creating a European common energy market, which, in their opinion, will ensure that Europe is strong and competitive externally. However, this significance is only acknowledged as long as the project is in line with Germany's *Energiewende*. According to this way of thinking, Germany will contribute to the development of the European Energy Union through its own *Energiewende*. The statements made by public servants show that they do not perceive the Energy Union primarily as an opportunity to increase energy security, but rather as a way of achieving their own energy reform objectives. On the other hand, the experts, especially those close to the Christian Democratic party, appeal here for greater understanding of the need for diversification within the EU. They argue

35 See: Eine Strategie für die Europäische Energieunion – Wie könnte sie aussehen? European Energy Colloquium, Forum fuer Zukunftsenergien, Presse Nr. 15/04 vom 26 February 2015

that other countries cannot be expected to adopt the German model, for it is the specific characteristics of a country that determines its energy mix and its approach to achieving the goals it sets. “We Germans must understand that what we are doing is not necessarily ideal for others and cannot serve as a model for them. Nevertheless, we can present it as one model and encourage others to take it as a pointer, for example when implementing such measures in a different time perspective or using different methods. But we cannot impose anything by force.”

Particularly important aspects of the Energy Union for representatives of the energy industry include network expansion and integration, market liberalisation, and standardised regulations, which will make it possible to exploit Germany’s potential resulting from its position in Central Europe and its role as a transit country.

In turn, members of environmental groups are pleased above all else with the possibility that all member states will be obliged to make a greater effort to achieve climate goals, for as far as they are concerned, the Energy Union should be based on a broad energy mix with renewable sources accounting for a large share of the total, a principle which at the present time not all countries wish to observe.³⁶ “Ecologists want to see the Energy Union as a Climate Union,” say experts from think tanks. The official position of *Bundesverband Erneuerbare Energie* (the German Renewable Energy Federation) refers directly to the goals of the Energy Union, i.e., the implementation of *Energiewende* in Europe based on renewable sources and energy efficiency in all sectors, and the creation from the EU of a Community of Renewable Energy and Energy Efficiency.³⁷ The interviewees believe that the Energy Union should be based on the principle that all countries are responsible for the future of Europe. Meanwhile, in their view, some countries at present merely express a desire for greater solidarity, but only a few are actually contributing to the

36 See. Katrin Göring Eckardt zur Ukraine-Krise/OSZE, Energieunion/EEG und NSA/Snowden &fAhttps://www.gruene-bundestag.de/presse/cvd_ID_4390798/katrin-goering-eckardt-zur-ukraine-kriseosze-energieunioneeeg-und-nsasnowden_ID_4391781.html; [accessed: 9 May 2015] as well as a press release from deputies of the European Parliament: &fBhttp://www.greens-efa.eu/de/europaeische-energieunion-12416.html; [accessed: 9 May 2015] Prioritäten fuer die “Energy Union”, Vorschläge des Bundesverbandes Erneuerbare Energie e.V., 8 January 2015, &fAhttp://www.bee-ev.de/_downloads/publikationen/positionen/2015/BEE-Positionspapier_Prioritaetenfuerdie-EnergyUnion-DE.pdf [accessed: 12 February 2015]

37 Prioritäten fuer die “Energy Union”, Vorschläge des Bundesverbandes Erneuerbare Energie e.V., 8 January 2015, http://www.bee-ev.de/_downloads/publikationen/positionen/2015/BEE-Positionspapier_PrioritaetenfuerdieEnergyUnion-DE.pdf [available 12 February 2015]

responsible development of Europe's future. And for these interviewees a safe future means a policy based on climate goals.

The German interviewees regard a common energy market as one of the main features of the Energy Union. It should, among other things, ensure proper coordination of energy use. "Before building another power station in country X, it would be better to see if in neighbouring country Y there is any energy surplus which can be exploited by creating a suitable transport infrastructure." The idea of a common market is based on the conviction that there is generally a sufficient amount of energy in the EU and that it only needs to be better managed.

However, the interviewees rarely ever mentioned increased competitiveness in relation to suppliers as an advantage of the expansion of infrastructure. This is because for Germans, who enjoy the lowest prices of externally supplied energy, this issue is not an incentive for further energy integration. However, diplomats and representatives of the energy industry are counting on the fact that the energy integration of Europe will – thanks to lower energy prices – create a competitive economy in relation to other world economies. Hence, they generally support the idea of the Energy Union.

Aware of the difficult situation in which the Central and Eastern Europe countries find themselves, dependent as they are on supplies of Russian gas, Germany in principle regards it as of paramount importance that actions be undertaken aimed at creating stable energy conditions throughout the EU. It also believes there is a need for European solidarity in this area. As a consequence, many of the interviewees believe this is an excellent time to resume the debate on creating a more integrated energy policy in Europe. However, the significance of the Ukrainian crisis should not be overstated, because from the viewpoint of energy security it does not affect Germany directly – Russia is and will remain a partner on which it can depend and *Energiewende* is steadily reducing the share of energy from that country in Germany's energy mix. For Germany, calls for joint purchasing are and will remain unacceptable. A voluntary form of joint purchasing in certain well-defined cases may be the only way to compromise for Germany on this issue. In addition, assistance from EU funds for expanding nuclear energy and bituminous coal infrastructure has failed to win approval.

In its official position, the German government acknowledges that the degree of integration achieved should vary depending on the branch. Thus, full implementation of a common market for energy is necessary, but when it comes to the energy mix, individual member states should continue to have the freedom to decide, depending on their actual capabilities. On the other hand, the German debate on energy policy has still not touched on the question of which components should be regulated as a community and which at the national level. This is surely linked to the assumption that the Energy Union will only function effectively if it adapts to *Energiewende*. “Germany has still not realised that if it acts by itself – carrying out solely its own objectives, not consulting with its partners and not seeing the problem as a whole (and this has happened in the case of *Energiewende* or the withdrawal from nuclear power) – not much will be accomplished in this field. Germany needs to overcome its tunnel vision and get neighbouring countries in the EU involved.” This, however, gives rise to the question of surrendering sovereignty to Brussels, which Germany is reluctant to do.

Currently, there is no debate either on whether the Energy Union project can or should be accelerated within the framework of European integration. No mention is being made of a new treaty in this context. Rather, the discussion clearly focuses on further regulations, directives, and supranational infrastructure projects. When questioned on this subject, the German interviewees reckon that the Energy Union should be an integral part of the EU as a whole. All parallels with the economic and currency union are thus mistaken, as the latter has separate structures, which the Energy Union should definitely not have. The interviewees are thus not in favour of the idea of establishing a separate agency.³⁸ In their opinion, the European Commission already has sufficient capabilities in the field of energy. The special Commissioner already appointed for the task of the Energy Union should be responsible for coordinating the whole system.

They are, however, aware that the main factor motivating some EU states towards greater integration of their energy policies – their links to Russian gas – is not equally important for other countries such as Spain and Portugal. As a consequence of which there is a danger that the Energy Union will proceed at different speeds in the EU. Generally, however,

diplomats and representatives of business/economic groups consider that if co-operation should be made possible within the framework of the EU, it is important to understand that the same uniform solutions cannot be adopted for all 28 EU states. Both public servants and representatives of environmental organisations seem to be convinced of the excellence of Germany's solution – the *Energiewende*.



The Energy Union: a Polish perspective

The Polish energy sector – a brief description

The Polish energy sector – like other branches of the economy – began to undergo a process of change with the onset of the political transformation. The energy sector inherited from the previous regime was based on the country's own bituminous coal and lignite coal resources, which in 1990 accounted for 77% of primary energy consumption in Poland (bituminous coal – 63.9% and lignite coal – 13.4%).¹ Poland entered the political transformation with a highly energy-intensive economy in which available energy resources were being used very inefficiently. After 1989 Poland began to gradually dismantle its existing system for managing its energy sector. The reform process primarily involved dividing the country's energy (power) industry into production, transmission and distribution sectors.

The most important document regulating the Polish energy sector is the Act of 10 April 1997 – Energy Law. This statute establishes the legal foundations and basis for the functioning of a modern energy sector in the country, as it regulates both the principles and conditions for the supply and use of fuel and energy as well as the operations of energy companies. The coming into force of the Act is regarded as marking the beginning of the formation of an energy market. The main objective set out in the statute is to “create the conditions for sustainable development in the country, ensure energy security and the economical and rational use of fuels and energy, develop competition, counteract the negative effects of natural monopolies and take into account the requirements of environmental protection”.² The Energy Regulatory Office was established on the basis of provisions of the statute.

1 M. Tkocz, *Efekty restrukturyzacji górnictwa węgla kamiennego w Polsce*, [The Effects of Restructuring Bituminous Coal Mining], “Prace Komisji Geografii Przemysłu” [Studies of the Industrial Geography Committee], no. 9, Warsaw–Kraków 2006, p. 29.

2 Journal of Laws 1997, No.54, item 348 – <http://isap.sejm.gov.pl/DetailsServlet?id=W-DU19970540348> [accessed: 29 May 2015].

During its preparations for EU accession, Poland had to introduce numerous EU regulations from the *acquis communautaire* into its own legislation. These changes also related to the energy sector, for Poland adopted Directive 98/30/EC (establishing common rules governing the internal natural gas market)³ and Directive 96/92/EC (establishing common rules governing the internal electricity market)⁴ as well as other important documents concerning, for example, the transmission of electricity and natural gas.⁵ Since 2004, Poland has also, in its capacity as a member state of the EU, been shaping the energy policy of Europe. At the same time, however, as energy issues fall within the scope of the shared competences of the EU, regulations enacted at the European level are also required to be adopted in legislation at the national level.

Coal remains Poland's basic energy resource. According to data from the International Energy Agency from 2013, coal covered 54% of the country's primary energy consumption needs (petroleum accounted for 23% of consumption, gas another 14%, biofuel 8% and renewable energy generated from the sun, wind and water, barely 1%).⁶

The fact that coal is a permanent and key fixture of Poland's power industry is especially apparent when the resources used to produce electricity are analysed. Coal accounts for 85% of all electricity produced, as compared with 5% generated by biofuel, 4% by wind, 2% by water and 1% by gas. In 2014, Polish power stations generated less electricity than was consumed by domestic customers, which means that Poland became a net importer of electricity for the first time since the political

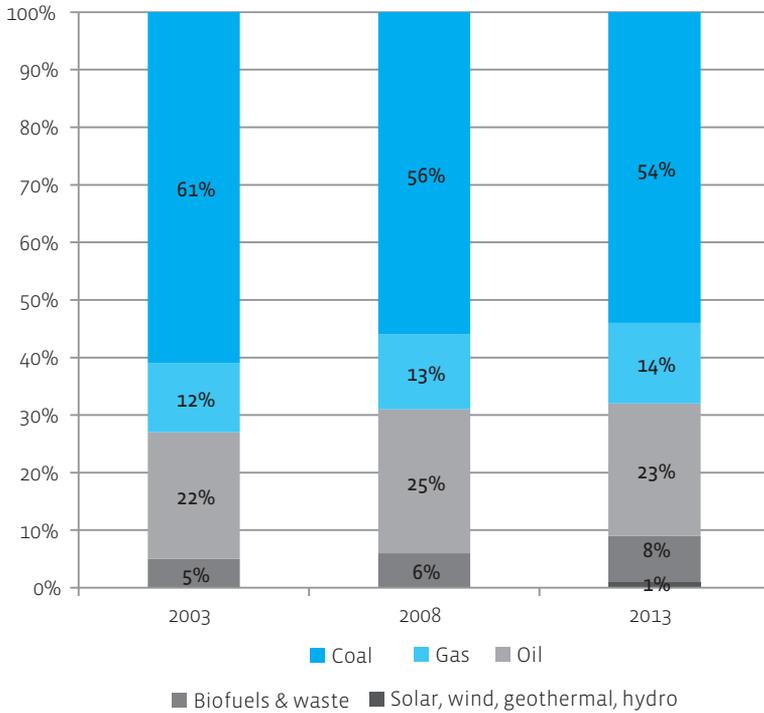
3 Directive 98/30/WE of the European Parliament and the Council of 22 June 1998 on the common rules regulating the internal market for natural gas (Journal of Laws WE, L 204/1) – <http://eur-lex.europa.eu/legal-content/PL/TXT/PDF/?uri=CELEX:31998L0030&from=PL> [accessed: 29 May 2015].

4 Directive 96/92/WE of the European Parliament and the Council of 19 December 1996 on the common rules regulating the internal market for electricity (Journal of Laws WE, L 27/20) – <http://eur-lex.europa.eu/legal-content/PL/TXT/PDF/?uri=CELEX:31996L0092&from=PL> [accessed: 29 May 2015].

5 Directive 91/296/EWG of the Council of 31 May 1991 regarding the transmission of natural gas via networks (L 147/37) – <http://eur-lex.europa.eu/legal-content/PL/TXT/PDF/?uri=CELEX:31991L0296&from=PL> [accessed: 29 May 2015]; Directive 90/547/EWG of 29 October 1990 regarding the transmission of electricity via transmission networks (L 313/30) – <http://eur-lex.europa.eu/legal-content/PL/TXT/PDF/?uri=CELEX:31990L0547&from=PL> [accessed: 29 May 2015].

6 *Poland – Overview*, International Energy Agency, June 2014 – <http://www.iea.org/media/countries/sit/PolandOnepagerJune2014.pdf> [accessed: 29 May 2015].

transformation. The reason for this state of affairs is the availability of cheaper electricity from abroad.⁷



Energy sources in Poland

Source: International Energy Agency data, 2014 – <http://www.iea.org/media/countries/slt/PolandOnepagerJune2014.pdf> [accessed: 29 May 2015].

Interviews with representatives of the Polish energy sector indicate that Poland's power industry faces a number of major modernisation challenges, in that the country must effectively meet energy security needs in the long-term as well as complying with the climate-energy policy regulations adopted by Poland and other member states of the EU with regard to increasing energy efficiency and significantly reducing emissions of greenhouse gases into the atmosphere. The ongoing debate in Poland chiefly revolves around the role of coal in the national economy and the potential for developing renewable energy sources (in particular,

7 B. Derski, *Polska została importerem prądu. Pierwszy raz od 1989*, [Poland Has Become an Importer of Electricity. First Time since 1989] *Biznes Alert* – <http://biznesalert.pl/derski-polska-zostala-importerem-pradu-pierwszy-raz-od-1989> [accessed: 29 May 2015].

photovoltaics and wind energy).⁸ Other important topics are the development of nuclear energy and the role of gas in the Polish economy.

Persons dealing with energy issues in Poland agree that at the present time the Polish mining industry is highly unprofitable and requires radical reform. However, the main focus of debate is how important role coal should play in Poland's energy mix. Government administration representatives assume that once the coal mining sector has been suitably modernised, it may in the long term still help ensure energy security for the country. Representatives of business circles and journalists are more divided in their opinions in this matter. Some reckon that coal should continue to be a key source of energy in Poland, while others believe that the time has come when coal can no longer perform such an important function in the country's power industry. At the same time, it should be pointed out that many groups concerned with the energy sector, including scientists and academics, do not regard the issue of change in Polish mining as an economic problem. Rather, in their eyes, the real issue at stake is the lack of political consensus on this matter, caused by fears over the reaction of miners and the public to changes in the sector. Two factors are key to ensuring effective modernisation of the sector: firstly, the introduction of changes enabling Polish coal mining to become competitive both pricewise, ("there is obviously a place for coal in our economy, but prices must be competitive") and in terms of employment ("the coal sector is important from the viewpoint of the jobs it provides, but it must also be profitable"); secondly, the introduction of technology that helps reduce emissions of carbon dioxide into the atmosphere ("we are focusing on ensuring a continuing role for coal, although one enhanced by the use of modern technologies", "there is a place for coal in Poland's energy mix, but clean coal technologies must be introduced"). Environmentalists believe that coal has had its day in Poland's power industry and even stress quite bluntly in their comments

⁸ More and more space is also being devoted to renewable energy resources in scientific publications in Poland. Academics and experts interested in this subject are trying to show what impact developing renewable energy resources has on state security, in particular on state security from an energy perspective – compare for example: K. Pronińska, *Development of "green energy" in coal-based energy culture – Implication for Poland's energy security*, "e-Politikon", no. 7: *Klimat i polityka*, ed. K. Książopolski, O. Annusewicz, autumn 2013, pp. 54–76; *2050.pl the journey to the low-emission future*, ed. M. Bukowski, Warsaw Institute of Economic Studies, Warsaw 2013. In addition, a number of new research initiatives are focusing on the theme of climate policy and security, including the Energy Security and Climate Policy Programme at the Centre for Political Analysis of the University of Warsaw.

that “the coal option is a treacherous one”. Meanwhile, those political parties that are keen to maintain coal’s pivotal role in the development of Poland’s power industry are in their eyes not acting in the interests of the country. However, it is not only environmentalists that believe that coal will inevitably have to be phased out. This viewpoint is also shared by other groups, primarily some journalists: “We shouldn’t cling so tightly to coal, because if we do the future of energy, i.e., modernisation geared towards renewable energy sources, will pass us by”. However, one question open to debate among opponents of coal-based energy remains the tempo – evolutionary or revolutionary – at which Poland ends its use of coal technology. One environmentalist stated that, in his opinion, a good scenario for Poland would be for the share of renewable sources in total energy production to reach around 50% by 2050.

At the beginning of 2014, the government approved the Nuclear Power Programme for Poland, in accordance with which there are plans to build two nuclear power plants in Poland by 2035 (the first power unit would begin operating as early as 2024).⁹ The construction of a nuclear power station has stirred strong emotions among those dealing with Poland’s energy sector. Some members of this community (representatives of both business circles and the public administration, as well as journalists) believe that the project is justifiable, because Poland needs to develop a nuclear programme so as to provide an alternative to coal in the Polish power industry in the future and offer an important source of energy security. It has also been argued that this type of energy has always been on the agenda of many EU member states and EU institutions, as is evident, for example, in the decision of the European Commission in the autumn of 2014 to approve a system for financing the expansion of the Hinkley Point nuclear power plant in Great Britain (adopting “mixed differential contracts”, which is a means of subsidising prices and involves setting a fixed sale price for electricity for an established period of time – in this case, the period would be thirty five years).¹⁰

On the other hand, others in the milieu express the view that nuclear energy has no viable place in Poland or in the EU as a whole in the

9 *Jest decyzja. W Polsce powstanie elektrownia atomowa*, [The decision has been taken. A nuclear power station is to be built in Poland] Newsweek, 29 January 2014 – <http://polska.newsweek.pl/elektrownia-jadrowa-w-polsce-newsweek-pl.artykuly,279748,1.html> [accessed: 29 May 2015].

10 See <http://gramwzielone.pl/trendy/13013/ke-zaakceptowala-brytyjski-system-finansowania-elektrowni-jadrowej> [accessed: 29 May 2015].

future. Environmentalists point out that the costs of nuclear energy are astronomical and are constantly rising, while the opposite is the case with renewable energy: the costs are declining with each year that passes. Another concern is safety issues, both in connection with the production of energy (of which the nuclear accident at Fukushima is a constant reminder) and the storage of radioactive waste.

It is also still unclear what role gas, extracted both from conventional sources and non-conventional sources, will play in Poland's energy mix and in its efforts to achieve energy security. The prevailing view is that gas, which currently accounts for between 13% and 15% of the energy mix (approximately 16 billion cubic metres), will not occupy an important position in Poland's power industry. It is also doubtful if it can be a real alternative to other energy sources, regardless of whether coal remains the basic energy resource, or whether coal will be supplanted in this respect by nuclear power or renewable energy sources. Some of those involved in energy issues believe that gas will become an important alternative source of energy if Poland decides to modernise its energy sector with the aim of increasing the share of renewable energy sources. Not only representatives of business and government circles, but also environmentalists emphasise that at the present time renewable energy sources are an unstable resource. If Poland is thus considering emerging as a leader in the use of such energy, it must assure itself access to raw materials that will supplement these unstable sources. Such a role should be performed by gas.

Shale gas, which a few years ago had been seen as an antidote to the problem of expensive Russian gas imports, is today of relatively minor importance in the energy debate. In the current prevailing climate of low gas prices, which in turn has led to more foreign companies withdrawing from Poland, shale gas has declined in popularity and is now perceived as a missed opportunity.¹¹

11 See: K. Książczowski, *Wpływ wydobycia gazu łupkowego na bezpieczeństwo ekonomiczne Polski* [The Impact of Shale Gas Extraction on Poland's Economic Security], "e-Politikon", no. 3, Autumn 2012, pp. 8–36; <https://www.polskielupki.pl/aktualnosci-polska/89010/potrzebujemy-czasu-ktory-zostal-zmarnowany?archpub=89010> [accessed: 29 May 2015].

What kind of energy union?

The European Commission communication entitled *A Framework Strategy for a Resilient Energy Union with a Forward-Looking Climate Change Policy* of 25 February 2015 is viewed in Poland as the joint response of the EU member states to the *Road Map towards an Energy Union for Europe. A Non-Paper Addressing the EU's Energy Dependency Challenges* – a proposal prepared by the Polish government in April 2014. Persons involved in the energy sector in Poland differ in their views of both documents and the relationship between them. The government *non-paper* met with a fairly positive response in the country, amongst both government and business circles, as well as among some journalists.¹² Simultaneously, some of the respondents from the energy industry have pointed out – although not as a criticism – that this is a purely political document and that it should serve to stimulate debate on energy security in Europe (“Our project on the Energy Union was, strictly speaking, a political project, arising from the temporary situation on the other side of our eastern border. It was designed to solve current problems affecting the supply of gas”). However, one representative of the power industry believed that business circles had not been sufficiently consulted over the document, thanks to which the business community had little to say about it later. One representative of the government administration (an official at the Ministry of Foreign Affairs) held the opposite view, stressing that representatives of business concerns were involved in work and discussions on the project, and showed great interest in this topic.

In contrast to the reaction to the Polish government proposal, the European Commission communication from February 2015 met with a cooler response in Poland.¹³

12 Journalists who traditionally had a negative view of the policies of the Donald Tusk government have been critical of the Energy Union from the very beginning. See, for example: “Unia energetyczna” pozostaje jedynie wyborczym hasłem. Kompromitacja Donalda Tuska” [“Energy Union’ remains no more than an election slogan. The Donald Tusk fiasco”] *Niezależna.pl*, 15 May 2014 – <http://niezalezna.pl/55234-unia-energetyczna-pozostaje-jedynie-wyborczym-haslem-kompromitacja-donalda-tuska> [accessed: 29 May 2015].

13 For more on this topic, see: T. Bielecki *Do unii energetycznej – z oporami* [Towards an energy union – but with some opposition], “Gazeta Wyborcza”, 26 February 2015 – http://wyborcza.pl/1,75968,17485080,Do_unii_energetycznej___z_oporami.html [accessed: 29 May 2015]; K. Szymański, *Unia klimatyczna zamiast energetycznej*, [“Climate Union instead of Energy Union”] “Rzeczpospolita”, 22 March 2015 – <http://www.rp.pl/artykul/1188061.html> [accessed: 29 May 2015].

The majority of representatives of government, business and journalist circles regard the European Commission document as “average” from a Polish point of view. The document contains all the latest concepts concerning both energy market development in the EU and the relationship between the EU and third countries. On the other hand, it did not include any ground-breaking ideas (“the document is not a revelation”). The respondents from this group agree that the proposal put forward by the European Commission does not meet the expectations set out a year earlier by Donald Tusk’s government in the *Road Map Towards an Energy Union for Europe*. On the other hand, the respondents have different interpretations of why the proposals contained in the European Commission communication do not entirely accord with Polish expectations. Some people (mainly representatives of government circles) emphasise that in its current form the document is the result of a consensus achieved at the Pan-European level. Others (primarily representatives of energy companies and journalists) suggest that during the course of negotiations, the concept of the Energy Union, which was meant to have focused on energy security, was expanded to include all other aspects of the European power industry that have appeared on the agenda of the EU in the last few years (for example, climate policy, research and development). These respondents further consider that “the current version of the European Commission communication relativises the issue of energy security – understood to mean the security of supply of energy raw materials – and puts it on a par with other issues, which are likewise important, but which were not supposed to be included as part of the concept of the Energy Union. At the same time, one expert stressed that the inclusion of all these demands in one document shows that the “Energy Union is a truly fundamental plan for reforming the power sector in the EU as a whole. We are talking about the energy (power) sector in the broad sense – for the reforms encompass gas, but also electric power industry. The European Commission communication shows that a revolution awaits us. This revolution will affect some more and others less so, but it awaits us all.”

Here it is worth underlining that representatives of the government administration have contrasting opinions on the European Commission communication. The interviews show that staff at the Ministry of Economy view the European Commission document less positively than

do their counterparts at the Ministry of Foreign Affairs, who emphasise that the communication provides a good platform for working on what matters most to Poles, i.e., ensuring the transparency of international contracts concluded with third countries (non-members of the EU) and creating a mechanism for joint purchases of gas from outside the EU.

Achieving a secure energy supply

One of the basic assumptions of the concept of the Energy Union proposed by Poland in April 2014 is that of ensuring the energy security of EU states – understood here to mean the security of supplies of energy resources from third countries. This involves developing mechanisms allowing the EU to effectively protect member states against the fallout of such events as the energy crises of 2006 and 2009, when a dispute between Russia and Ukraine over arrears in gas charges and prices led to the Russians cutting off gas supplies to Ukraine. Since the transmission system is constructed in such a way that the majority of gas and petroleum connections to Europe run through Ukraine, halting supplies to that country also deprives other European countries importing Russian gas of access. The Poles promoted the idea of creating new mechanisms for securing supplies in the belief that the stability of energy imports to Europe may come under threat once more – the source of this danger being the Russian-Ukrainian conflict, which began with Russia's annexation of Crimea and later involved Moscow's support for the separatists fighting in eastern Ukraine. As a consequence, *A Road Map Towards an Energy Union for Europe* included proposals for diversifying sources of imported energy, introducing solidarity mechanisms and strengthening the bargaining power of the EU on the world energy market. The proposal that drew the biggest response in the media was that of introducing a mechanism for aggregating demand for external gas purchases at the EU or regional level. The Polish government document also contained a proposal that the EU participate in contract negotiations with external partners in the role of an observer and that it be in a position to assess clauses of negotiated intergovernmental contracts before they are signed.

Strengthening the negotiating position of member states of the EU on energy issues is – some representatives of the Polish government

administration believe – a very important task, especially since EU member states together constitute the biggest importer of energy carriers in the world, and thus when acting in unison have a potentially considerably stronger negotiating position. Unfortunately, as one high-ranking respondent from the government administration emphasised, in the case of the energy market, when it comes to relations between the EU and third countries we are dealing with a supplier's market rather than a customer's market. Despite the fact that the Community is a key recipient of energy resources, it allows terms to be dictated to it. Some form of deeper integration will obviously be necessary, since individual states (apart from the biggest players, i.e., Germany and France), especially those countries which joined the EU in 2004 and later, are unable on their own to deal with such strong negotiators as Russia's Gazprom.

Joint purchasing

As was mentioned above, the European Commission communication published in February 2015 was coolly received by many representatives of the power industry in Poland. According to representatives of both government and business circles as well as journalists, neither the joint gas purchasing proposal nor the compulsory participation of a representative of the European Commission in the contract negotiating process, nor the possibility of verifying contracts by the European Commission before they are signed were addressed in the European Commission communication in a form that would satisfy the Poles. In particular, among Poles, there were many reservations regarding the idea of joint gas purchasing. The European Commission reckoned that any possible mechanisms for cooperation in this area and conducting negotiations with partners from third countries should be based on the principle of freedom of choice. Some of the government administration representatives have voiced their disappointment with the concept of joint purchases proposed by the EU, stating that “only a fragmentary version remains, which deviates greatly from the original proposal”. Simultaneously, the majority of the interviewees from the Polish energy sector stated that – in their opinion – the Polish proposal for joint gas purchases had little chance of success from the very beginning. This was due to two issues: mainly the political will of EU member states but

also doubts concerning the legal regulation of the way in which these purchases were to be conducted.

According to many representatives of government and business circles that regularly follow developments in the energy sector, EU states do not feel a need to speak with one voice on the issue of energy. Some of the aforementioned representatives are of the opinion that joint gas purchasing is opposed by Germany, France, Italy, Holland and Great Britain – some believe this is due to a reluctance to transfer energy security competences from the national level to the EU level, while others believe that these states do not want to relinquish favourable financial terms they have managed to negotiate, and which would be more difficult to secure if aggregated purchases were made for the EU as a whole or even just for a region. Another argument is that some states simply do not take into consideration the complex situation of those countries that acceded to the EU after 2004, most of whom are dependent on a single external source of energy. This is because the former states are in a completely different position (“France has gas from five different sources, Great Britain is even more liberalised in this respect”). One representative of the government administration described how reluctantly Europe treats the creation of a solidarity mechanism, such as joint gas purchasing and European Commission participation in negotiations, and openly exclaimed that he was not surprised by Hungary’s current energy policy.¹⁴ The actions of the government of Victor Orbán are simply aimed at ensuring the stability and energy security of the country. Moreover, some of the academic representatives point out that pursuing a policy of optional gas purchasing may give rise to the emergence of a two- or multi-speed European Energy Union, which would not be in Poland’s interests.¹⁵

Another problem, although one less frequently noted by the representatives of the Polish energy sector, concerns the way issues of joint gas purchasing are regulated. In the opinion of the legal experts as well as the representatives of business circles, creating a suitable legal format may turn out to be a complicated task and awaken opposition

14 Hungary has forged closer energy ties with Russia, which has promised to provide it with a loan to finance the construction of new power units at the Paks nuclear power station, which will replace old power plants. For more on this topic, see: A. Sadecki, Putin w Budapeszcie: *przełamywanie izolacji*, [Putin in Budapest: *Breaking Through Isolation*], “Analizy OSW”, 18 February 2015 – <http://www.osw.waw.pl/pl/publikacje/analizy/2015-02-18/putin-w-budapeszcie-przelamywanie-izolacji> [accessed: 29 May 2015].

15 See: <http://biznesalert.pl/ksiezopolski-oczekiwania-wobec-unii-energetycznej-powinny-byc-znacznie-wieksze> [accessed: 29 May 2015].

among member states – from refusing to consent to the permanent transfer of any new national competences up to the European level (Great Britain) to raising questions about how the agency responsible for making such purchases should function (creating a new EU institution, transferring competences of an existing organisation, entrusting joint purchases to a private firm). On the other hand, there are also those who hold the opposite view, and suggest that the posing of legal problems is only an excuse for a lack of political will to integrate the external energy policy of the EU. If member states are not willing to include all supplies from third countries within a joint purchasing mechanism they should consider a solution that would ensure that at least some (for example 20%) of Europe's demand for gas would be satisfied within the framework of purchases made within a solidarity system.

The EU did not include in its February 2015 communication any recommendations for establishing a joint purchasing mechanism that would have satisfied Polish expectations. However, this does not mean that the European Commission is not propagating the idea of voluntary collaboration in negotiations between EU states and external partners. In the communication it is stated that the European Commission is considering launching mechanisms for joint but voluntary gas purchases by member states. Representatives of the Polish government administration recall that if the political will exists, legal mechanisms are already in place that would allow member states to transfer to the European Commission competences for negotiating energy-related contracts on the basis of the principle of subsidiarity. Such a solution was employed, for example, in negotiations with Azerbaijan and Turkmenistan. If such competences are transferred, talks with a third party are treated as part of the trade policy of the EU.

The government administration representatives likewise emphasised that the joint gas purchasing formula put forward by the European Commission is a compromise proposal. However, it may still be regarded as a good solution, for there is still a real possibility that joint purchasing may be introduced, although only in a year or two from now. The earliest date for implementing such mechanisms, obviously on a voluntary basis, is 2020. One representative of the Ministry of Foreign Affairs said that there is clearly an interest in joint purchasing, and Poland's potential

coalition partners in such an enterprise would include, firstly, Lithuania, but also a number of other states in Central Europe.

The importance of diversification of supplies for energy security

According to representatives of the Polish energy sector, the European Commission communication of February 2015 devotes a great deal of space to the problem of diversifying supplies of energy resources to the EU. They also agree that from a Polish perspective it is especially important to distinguish between two different terms encompassed by the concept of diversification: the diversification of supply routes bringing energy resources into the EU, and the diversification of sources, i.e., the countries from which purchased energy resources originate. Different states can adopt different approaches with regard to which of these aspects of diversification is more important for them. In Poland's case both appear equally important and impact upon one another. This is because opening up new supply routes enabling Poland to import gas or petroleum from countries other than Russia would make the country much less dependent on supplies from its eastern neighbour. The next step will be to improve Warsaw's negotiating position vis-a-vis the Kremlin when purchasing those raw materials that Poland will still want to import from Russia.

Key to Poland's negotiating position is the completion of the LNG terminal currently under construction in Świnoujście. The government representatives and journalists specialising in energy issues as well as business milieux stress that the terminal will only be able to perform its intended function if it is completed prior to the commencement of new negotiations over gas imports from Russia. The current contract between Polskie Górnictwo Naftowe i Gazownictwo (Polish Oil and Gas Company) and Gazprom expires in 2022. Hence if the terminal is to be an effective bargaining chip it should begin functioning normally at a suitable point before this date. The importance of the LNG terminal as a mean of improving Poland's negotiating position, which in turn should allow for genuine supply diversification and enable the country to take advantage

of differences in prices on the emerging global gas market, is also a point being emphatically stressed by academics and scientists.¹⁶

According to representatives of the Polish energy sector, the LNG terminal in Świnoujście will also perform a very important role in safeguarding supplies of gas to Poland if there is another crisis in relations with Russia – the main supplier of this energy resource to Poland. Even if Russia decides to cut off supplies of gas for a certain period of time Poland will be able to make up much of the deficit by increasing supplies of liquefied natural gas accordingly. Poland currently imports approximately 10 billion cubic metres of gas from Russia each year.¹⁷ The launch of the Świnoujście terminal, which will initially be able to hold up 5 billion cubic metres of gas and will eventually have a storage capacity of up to 7.5 billion cubic metres, can thus significantly reduce Poland's reliance on Russian imports, and as a consequence, help reduce prices of this raw material. Some experts point out, however, that such a scenario may arise, but not necessarily so. Furthermore, the price of gas imported to the Świnoujście terminal remains unknown and the costs of liquefaction, transport and regasification also have to be added on. When all these costs are taken into account the price of liquefied natural gas may not be very competitive in relation to the price offered by the Russian supplier, and thus the negotiating power resulting from launching the terminal will not be so great.

Another problem concerns the supply routes. In theory, gas can be imported from anywhere in the world. However, Poland currently appears to be counting on the possibility of receiving imports of the raw material from the United States, which shortly – thanks to the shale gas revolution¹⁸ – may become a major exporter of gas on world markets. However, there is no guarantee that the American raw material will reach

16 *Terminal LNG w Świnoujściu a bezpieczeństwo energetyczne regionu i Polski [The LNG Terminal in Świnoujście and the Energy Security of the Region and Poland]*, ed. Piątek, R. Podgórska, Wydawnictwo Adam Marszałek, Szczecin 2013.

17 B. Derski, *Polska zależna od gazu z Rosji? Sami go dotujemy [Poland dependent on Russian Gas? It's we who are Subsidising it]*, "Wysokie Napięcie", 30 April 2014 – <http://wysokienapiecie.pl/gaz-ziemny/341-polska-zalezna-od-gazu-z-rosji-sami-go-dotujemy> [accessed: 29 May 2015].

18 The shale gas revolution – the rapid increase in the extraction and production of gas and petroleum from shale formations in the United States. The statistics show that shale gas production has grown by 51% in the United States in comparison with 2007, and the confirmed shale reserves have grown fivefold. For more on this topic, see: S. Nyquist, S. Lund, *Shale Revolution: Opportunity To Jump-Start Economic Growth* "Forbes", 19 November 2014 – <http://www.forbes.com/sites/realspin/2014/11/19/the-shale-revolution-is-an-opportunity-to-jump-start-economic-growth-in-u-s> [accessed: 29 May 2015].

Poland.¹⁹ Regardless of whether or not the completion of the terminal proves to be a strong bargaining chip in negotiations with Russia, it is important to remember that imports of gas from the east cannot be replaced in a year. However, the most important thing is that Poland has great potential for growth in terms of diversifying its energy supply, which is a success of sorts, bearing in mind the burdens of the past and how closely the country is still connected to Russia via gas pipelines and oil pipelines.

Transparency of contracts with external partners

Poland attaches most importance to the idea of getting EU institutions involved in developing mechanisms of cooperation between member states of the EU and external partners. It is also calling for extensive measures aimed at promoting diversification of sources and supply routes, since the country's strategic security depends on this. One government administration representative involved in energy negotiations at the EU level even emphasised the fact that "our passion for diversification is well known in Europe". Poland is lobbying for such mechanisms as joint gas purchasing and the compulsory participation of a European Commission representative in the negotiation of new contracts, because – as one of the officials interviewed in the survey states – Warsaw (and other states in Central and Eastern Europe which became members of the EU in 2004 and later) has had completely different experiences than older member states, not only with the process of supply and supplier diversification, but also with the legal infrastructure for such relations: "Only in the case of states in our region (new members of the European Union) are intergovernmental contracts signed independently of commercial contracts between firms, for example, for supplies of gas – for example between a given state and the Russian Federation – and these agreements guarantee the execution of commercial contracts. Such procedures are not advantageous for the state as they mean that the government guarantees payment from the state budget for gas received, for example by a Polish party to the contract. In other words, if a company fails to honour its financial obligations, the state must assume

¹⁹ One legal expert pointed out that the first gas export licences have already been issued in the United States, but most probably the gas will end up on the Asian market, as countries in this part of the world are willing to offer higher prices for the raw material.

sole responsibility itself". In the opinion of our respondent, "we might ask whether such a situation violates the principles of competition [in the European Union] and whether it goes beyond what is permissible under the law in terms of state assistance for companies listed on the stock exchange". Individual states, including Poland "cannot cope with the phenomenon of the intergovernmental contracts which have to be concluded with Russia, and only collaboration at the EU level, coordinated by such European institutions as the European Commission and approved by the Council of Europe, can help deal with this complex situation".

As diplomats emphasise, it is precisely issues relating to the legal architecture of agreements with third countries, and not the issue of joint purchasing of gas, that were the main bones of contention when it came to the concept of the Energy Union. It was a matter of the so-called transparency of contracts signed with partners outside the EU – in other words, preventing a situation where different standards are applied to different countries of the EU by a third party. Besides the above mentioned necessity of signing – simultaneously with a trade agreement – intergovernmental agreements as well: for example, including a provision on a ban on re-export of unused gas to another country, or – agreed with only some countries – linking the price of gas with that of crude oil. Representatives of the Polish Ministry of Foreign Affairs emphasise that transparency of contracts is currently a key element of the Energy Union for Poland in terms of energy security considered from the perspective of good relations with external partners, adding that in the short term (as early as the second half of 2016) it should be possible to include a provision on checking legally binding contracts in terms of their compliance with requirements of EU legislation in the proposed regulation. It is not yet known whether this provision will concern all contracts concluded with partners from third countries or only agreements with those suppliers who have a dominating position in a given country. The adoption of such a regulation seems to be a foregone conclusion, since this conception – according to representatives of the Polish Ministry of Foreign Affairs who are engaged in the process of negotiation – was supported by heads of governments and state at a meeting of the European Council in March 2015. In the long term, Poland will, however, support the inclusion in EU legislation of a provision on obligatory checking of agreements on import of gas to EU states – even

before these agreements are signed. Currently, the implementation of such a law seems to be a distant prospect: representatives of business milieux unanimously state there is no political will for this amongst EU states.

A competitive and integrated energy market

In a communication on the Energy Union, the European Commission deemed full integration of the European energy market as one of the priorities, proposing a number of solutions that concern both expansion of infrastructure enabling the connecting of energy markets of different countries and the implementation of EU legislation that will legally harmonise the energy sectors of member states. The European Commission has a broad understanding of the concept of an integrated common energy market, also encompassing the development of cooperation at the regional level and care for the end consumer of energy, and devotes much more space to this issue than the Polish government in the document *Road Map Towards an Energy Union for Europe*. In theory, the proposals of the European Commission seem to be comprehensive, for their aim is to lead to the formation of a market in which there will not be infrastructural or legal limitations on energy purchases in a selected member state. The sole determinant will be the price of the commodity. Representatives of government and business milieux, journalists and experts, in assessing this priority, unanimously emphasised that although the European Commission promotes a common energy market, this idea will still only exist on paper for a long time. The reason is a sort of “energy nationalism” of member states. This applies to the vast majority of members of the Community, including Poland – which was critically noted by respondents representing the government administration, who pointed out that in France, Poland and Germany everyone supports the development of the internal energy market, but “only when our country is on top, in other words when our country is self-sufficient in energy and could use an integrated market for export of surpluses of produced energy”. No-one is ready for a real opening of the market and the transfer of a large number of national powers to the level of EU institutions, as this would mean a threat to national interests, including countries’ energy security. One of the representatives of business circles assessed the

potential of the EU in the field of a common energy market especially negatively, emphasising that the fact that “unsuccessful efforts have been made to build a common market in the energy sector for thirty years” attests to the immense weakness of the Community and individual member states.

Infrastructure and legislation

The creation of a common energy market today seems unlikely to representatives of the Polish energy sector, since EU states are less willing to deepen cooperation (“a decade or so ago, the community tendency was reversed and we returned to a Europe of homelands”). However, it is worth making changes in smaller stages, for example, by following the proposals of the European Commission concerning infrastructure connections in the electric power sector by 2020, which will ensure that a level of 10% is reached in the field of inter-system power connections between EU states. For years now at the European level there has been a discussion about the fact that inter-system connections in the power sector are insufficient, but up till now not much has been done to change this state of affairs. A representative of the government administration mentioned this, emphasising that “for ten years, the goal has been the same – 10% in the terms of intersystem connectors. Everyone wants to be self-sufficient”. This time, however, plans at last look specific. According to interviewees from government administration and some from business circle, from the perspective of Poland, achieving the level of intersystem connections proposed in European Commission documents by 2020 is a great challenge – for it is currently at a level of only 2%. This means that only Cyprus and Malta are less integrated with the European power system. Such a low level of connections with other states means that Poland remains an “electric power island”, i.e., a country isolated from other states in terms of electric power. In order to change this state of affairs and achieve the set target of 10%, three infrastructural projects linking Poland with her neighbours have been included on the list in the so-called Project of Common Interests. Two of them relate to a power link between Poland and Germany, while the other one concerns cooperation on the Polish-Lithuanian border. According to a representative of the government administration, implementation of projects included on

the Project of Common Interests list means that the level of connectors that should be reached by 2020 is realistic. Realisation of this goal will significantly increase the level of competition on the electric power market, which will contribute to a standardisation of prices in the region and a decrease (in these prices). At the same time for many electric energy firms, which are not ready for greater competition, the expansion of the level of connectors will constitute a significant challenge.

Representatives of the government administration, and expert and business milieu emphasise that the expansion of infrastructure linking European economies, especially the expansion of connectors in Central Europe, is the key to enhancing the energy security of individual states of the EU, including Poland. At the same time, however, as interviewees noted, strengthening security will not be possible – even once adequate infrastructure has been completed – until European countries have overcome the already mentioned “energy nationalism”.

In a communication published in February 2015, the European Commission also recommends changes in the sphere of legislation, emphasising particularly that the key is to implement the so-called Third Energy Package. Furthermore, in the document there is a call to strengthen the role of two institutions that were established on the basis of provisions of the Third Energy Package – the Agency for Cooperation of Energy Regulators, (ACER) and the European Network of Transmission System Operators for Gas and Energy (ENTSO G/E). The European commission is also planning to prepare a package of additional legal solutions, which will help to modernise the electric energy market in Europe and increase monitoring of activities in the area of electric energy.

Legislative solutions proposed by the European Commission in the sphere of strengthening the internal energy market are not highly regarded by the Polish energy sector. Many doubts are especially raised by the transfer of additional competencies to newly established institutions – the Agency for Cooperation of Energy Regulators and the European Network of Transmission System Operators for Gas and Energy. Some experts even consider that transferring managerial competencies to the Agency for Cooperation of Energy Regulators will be harmful for the concept of the Energy Union – although it will increase the level of regulation at the EU level, it will not help in the development of the internal energy market of the EU. One expert, formerly associated with

the Polish Energy Regulatory Office, commented on the issue of possible strengthening of the competencies of the Agency for Cooperation of Energy Regulators. He emphasised that “excessive regulation is just as harmful as a lack of it”.

According to many respondents representing the energy industry, EU institutions led by the European Commission are once again “racing ahead of themselves”, i.e., are proposing new solutions before the deadline for fulfilling previous legislative obligations has passed, and without carrying out reliable monitoring of the implementation of present solutions.

Another criticism levelled by business representatives and experts is that although discussions concerning the common market are advisable and desirable, but they seem hypocritical. On the one hand, it is expected that development of the internal energy market will ensure not only energy security, but will also (thanks to the interplay of supply and demand) cause prices to fall for end consumers, who will be able to decide who they buy energy from. On the other hand, however – in spite of debates about the internal energy market – a policy that contradicts free market principles is being conducted. For example, renewable sources of energy, such as photovoltaic panels or windmills, are being subsidised and nuclear energy is being supported (for instance, in Great Britain).

Regional integration

The European Commission recognises the significance of regional integration, especially emphasising integration in that part of the Union where the level of cooperation is lowest, i.e., in Central and South-eastern Europe. Representatives of the Polish energy sector also appreciate the important role of such cooperation, at the same time indicating that there is no such cooperation between countries of Central and Eastern Europe. A lack of cooperation stems, firstly, from the physical conditions, i.e., from the lack of sufficient connectors in the electric power sector and gas infrastructure, and secondly, from “energy nationalism”, i.e., an approach based on willingness to integrate only once a given country is secure due to having its own raw materials and can function as an exporter. Reflections on regional integration from the Polish point of view also concern the question of who would be closer and easier to undertake such cooperation with – should the partner be Germany or rather other

countries of the region? For environmentalists and for some respondents representing the government administration and journalists, Germany is a country that can serve as a role model for reforms of the energy sector in Poland. For Germany, renewable energy has become a driving force of the economy and although currently individual consumers must subsidise the production of this energy, in several, or perhaps a dozen or so years these investments will more than pay for themselves (“Germany will be able to flood the region with cheap energy”). As environmentalists emphasise, “investment costs in renewable energy are already falling by 8–9% annually”. What is more, in Germany, interruptions (outages) in energy supply during the year amount to just 12 minutes, whilst in Poland – over 400 minutes. Most of the respondents representing the energy sector present a rather more cautious approach, arguing that it is worth developing cooperation with Germany, but only to a certain level – it is better to wait and see what results the *Energiewende* policy will ultimately deliver for the German economy. According to many journalists and representatives of the government administration and business, Germany wants to impose its model of modernisation of energy onto other countries of the EU. According to one of the journalists, such reform has no rationale in Poland, as Poles look completely differently at economic growth policies: “In the opinion of German politicians, economic growth can only occur thanks to renewable sources of energy. In the case of Poland – first, economic growth at an appropriate level, and only then gradual transition to renewable sources of energy.”

Another direction is regional integration with some countries, which – like Poland – acceded to the EU in 2004, and also with ones that joined later, in 2007 and 2013. In this case, the decisive argument in favour of cooperation is a similar level of development of the energy sector, and similar or even greater problems with a lack of diversification in gas and crude oil imports. Moreover, Poland – like other countries of the former Communist bloc – is struggling with the problem of the need to conclude (in addition to ordinary trade agreements) intergovernmental agreements with Russia, under which the state guarantees receipt of raw material at a defined price. Representatives of Lithuania, for example, declare readiness for such cooperation. Rokas Masiulis, the Lithuanian Energy Minister, emphasises that Poland is crucial for his country and other Baltic

states in the process of synchronisation of their energy system with other countries of the EU and in the creation of a common European market.²⁰

Regional cooperation, for example in the sphere of policy towards external suppliers, could bring tangible benefits for all countries involved in it. From the perspective of representatives of the Polish energy sector and some government officials, such cooperation is unlikely to take place – beyond the planned construction of new gas interconnectors between Poland and Slovakia, the Czech Republic and Lithuania, or the aforementioned electric energy connection with Lithuania. However, several interviewees noted that regional interests are beginning to tend to diverge – an example of which is the current policy of Hungary in the field of energy.

Sustainable energy market

The EU has for years placed special emphasis on developing EU energy policy that will lead to as little harm as possible to the climate. In the European Commission's communication of February 2015, the goal of a 40% reduction in emissions of carbon dioxide by 2030 was repeated.²¹ According to business representatives, but also some journalists, the inclusion of climate policy in the communication – which was intended to be a document devoted to ensuring energy security through internal integration and common external policy – was a mistake, since such action undermines the original message: such a direct link between energy security policy and climate policy as seen by representatives of EU institutions and some EU Member States does not exist. The aim of energy security is to ensure continuity of supply at an appropriate price, regardless of the type of energy raw material. Of course, this does not mean that Poland should desist from developing renewable energy resources, but it cannot link this energy with security, the more so since – as emphasised by representatives of business milieux – when you

20 W. Jakóbiak, *Masiulis: Polska także może podjąć działania na rzecz lepszej współpracy z Litwą, (Masiulis: Poland can also take steps to improve cooperation with Lithuania)* "Biznes Alert", 5 May 2015 – <http://biznesalert.pl/masiulis-polska-takze-moze-podjac-dzialania-na-rzecz-lepszej-wspolpracy-z-litwa> [accessed: 5 May 2015].

21 The goal of a 40% reduction in emissions of carbon dioxide into the atmosphere was presented in a communication of the European Commission of January 2014 *Ramy polityczne na okres 2020–2030 dotyczące klimatu i energii (A policy framework for climate and energy in the period from 2020 to 2030)* – <http://eur-lex.europa.eu/legal-content/PL/TXT/PDF/?uri=CELEX:52014DC0015R%2801%29&from=PL> [accessed: 29 May 2015].

examine the geographical conditions (sunshine, wind strength) in Poland, it should be noted that development of renewable energy sources as the main source (or one of the main sources) of energy is not well-founded.

According to some of the interviewees from the Polish energy sector, one can see the link between the energy security policy of the EU and its climate policy, but it is not as strong as would transpire from the European Commission's communication or statements by the governments of some EU countries. Declarations such as those issued in connection with the Paris climate summit in December 2015 attest to the importance of decarbonisation and the role of climate policy – even if there is failure to achieve a world compromise in the matter of reduction of the amount of carbon dioxide emitted into the atmosphere, the EU should in any case unilaterally achieve adopted reduction targets. Therefore, the Polish government has a neutral attitude to the concept of “you can't have a strong energy policy without a climate policy”, knowing that such a strong emphasis on climate policy must be maintained, since it is necessary in order to achieve a compromise in other areas in the field of energy. Such an approach is presented by many officials, who at the same time note that – in their understanding – security policy relates more to security of energy supplies from third countries than climate policy.

Environmentalists constitute a group, for whom energy security and climate policy are closely linked and for whom climate policy goals should form the basis for creating a mechanism of modernisation of Polish energy. In this sense, climate policy is the most important element determining the future of energy security of the country. Representatives of other groups, including some journalists, also have a similar view, seeing the role of renewable energy and pointing out that in the future it will not be possible to avoid the dominant role of this source of energy in the economies of EU countries. The faster appropriate changes are introduced in the energy sector, the more secure will energy security be in the future. The close relationship between climate policy and security policy is also emphasised by many interviewees from academia.²² Furthermore, the legal architecture of the European Union Emissions

22 An example may be the project “Polityki europejskie w dobie zmian modelu integracji europejskiej” (European policies in the era of changes in the model of European integration), implemented by the Institute of European Studies, Warsaw University, in which one of the research components is the Europeanisation of climate and energy policy, including studying the interdependence of climate policy and energy security. Compare – <http://www.europeistyka.uw.edu.pl/index.php/node/104> [accessed: 29 May 2015].

Trading Scheme – a system linked to EU climate policy – also arouses great interest. Among respondents from the Polish energy sector, both current solutions adopted at the European level and proposed concepts are variously received. In the opinion of government administration representatives and some experts and representatives of the energy industry, the existing European Union Emissions Trading System has not turned out to be a bad solution, above all because – in connection with the economic crisis and appropriately high availability of allowances for carbon dioxide emission on the stock market – the prices of these allowances have remained at a low level. Many interviewees from business circles in the energy sector have serious criticisms of the system of emissions trading, especially the allocation of free allowances for emissions resulting from this system. As the chairman of the *Forum Odbiorców Energii Elektrycznej i Gazu* (Forum of Electric Energy and Gas Consumers) emphasised in an article, “the number of free allowances for CO₂ emissions allocated in Poland to industrial installations located on the risk list (those at risk of relocation of production to countries with lower energy costs) covers on average 65% of their needs”, noting that only low prices of allowances for carbon dioxide emissions “allowed energy-intensive Polish firms to survive in a good condition, without spectacular bankruptcies and drastic reductions in the volume of production”.²³

New solutions linked with carbon dioxide emission trading adopted by EU institutions arouse rather negative emotions in Poland. The Polish government strongly opposed adoption by the Council of the European Union of so-called backloading, in other words, the possibility of withdrawing 900 million allowances for emission in the years 2013–2015 and their re-introducing them onto the market by 2020. Such a solution, according to the European Commission, was supposed to raise the price of emissions on the stock market and encourage countries to make greater investments in renewable sources of energy.²⁴ As representatives of both the government administration and business circles emphasise, this approach is unfavourable for the Polish energy-intensive sector, especially since it is not clear whether and in what

23 H. Kaliś, *Czy Europa stanie się gospodarczą prowincją? (Will Europe become an economic backwater?)*, “Energetyka Ciepła i Zawodowa” 2015, no 2, pp. 10–11.

24 *Rada UE zatwierdziła backloading (The Council of the European Union has approved backloading)*, “CIRE.pl”, 17 December 2013 – <http://www.cire.pl/item,86501,1,0,0,0,0,rada-ue-zatwierdzi-la-backloading.html> [accessed: 29 May 2015].

numbers the withdrawn 900 million allowances for emission will be re-introduced onto the market. The structural reform of the system of emissions trading, whose implementation is currently planned for 2021, is also problematic.²⁵ According to business circles, experts and a numerous group of officials, reform of the European Union Emissions Trading System is aimed at significantly influencing the price of emissions of carbon dioxide, which will hit the Polish economy – in which energy production is to a large extent based on coal – especially hard. As the director of the strategy department of the Polish Energy Group argued, such reform can be afforded by Western energy companies, “which have developed a diversified energy mix, but not by Polish companies, which produce energy almost exclusively from coal”.²⁶

Environmentalists have a different standpoint. They emphasise that Poland needs incentives that force changes in the energy sector and encourage a move away from the production of energy from raw materials that emit a large amount of CO₂ into the atmosphere in favour of renewable sources of energy. That is why reform of the European Union Emissions Trading System is necessary.

The issue of energy efficiency occupies an important place in the European Commission’s communication. It has been recognised as a separate (third) priority, but it is very strongly linked with the issue of climate policy, for better use of produced energy has a positive impact on the environment. The European Council agreed in October 2014 – as the European Commission pointed out in its communication of February 2015 – that the EU should increase its energy efficiency by 27% by 2030. In addition, member states were required to implement Directive 2012/27/EU²⁷, which obliges them to demonstrate new savings at a level of 1.5% annually in the years 2014–2020.

Representatives of the Polish energy sector indicate that Poland has huge potential and will achieve the targets set, but only when adequate political will is there. There may, however, be a problem with this,

25 I. Chojnacki, *DM Consus: reforma EU ETS najpewniej od 2021 (DM Consus: EU ETS reform most likely from 2021)*, 29 April 2015 – http://energetyka.wnp.pl/dm-consus-reforma-eu-ets-najpewniej-od-2021,249350_1_0_0.html [accessed: 29 May 2015].

26 Idem, *Reforma EU ETS – czy tylko dla zwiększenia cen CO₂? (EU ETS reform – only for increasing prices of CO₂?)*, 12 August 2014 – http://energetyka.wnp.pl/reforma-eu-ets-czy-tylko-dla-zwiekszenia-cen-co2,232021_1_0_0.html [accessed: 29 May 2015].

27 Directive 2012/27/EU of the European Parliament and of the Council of 25 October 2012 on energy efficiency, amending Directives 2009/125/EC and 2010/30/EU and repealing Directives 2004/8/EC and 2006/32/EC Text with EEA relevance.

since – as emphasised by an interviewee representing the government administration – “when implementing measures aimed at increasing efficiency, costs have to be borne now, but the effects will be spread over time. Caring about increasing efficiency constitutes interference from the state, and this of course will be a burden on the state budget.” An example of delays on the Polish side is implementation of Directive 2012/27/EU, which – in accordance with the recommendations of the European Commission – was supposed to be implemented into national law in June 2014. Unfortunately to date it has not been adopted.

An increase in energy efficiency in Poland can be achieved above all thanks to the so-called thermo-modernisation of existing buildings and by ensuring that new buildings will be constructed with due attention to maintaining high standards of energy efficiency. Modernisation of buildings is a significant expense, so appropriate financial incentives (tax breaks) are necessary, which encourage occupants to upgrade their flats in this respect. However, this impulse is still not there.

Another problem mentioned by interviewees is the age of the transport fleet in Poland. The condition and age of cars will no doubt improve in the coming years, but it will be quite a long process, which is why in this area we cannot expect a rapid improvement in energy efficiency.

Social attitudes towards energy policy

Most interviewees – representatives of the government administration and business, and journalists – are convinced that public knowledge in Poland on the subject of the energy sector is at a low level. What arouses public interest is, of course, the end price for individual consumers, as well as issues that are “hot topics” in the media (e.g., miners’ protests). The conducted interviews show that representatives of the Polish energy sector variously interpret the public mood in relation to the situation in the Polish energy sector, especially the attitude of Poles to coal and the situation in mining, renewable sources of energy and shale gas. In the assessment of the current situation in the coal sector, opinions have also been voiced that “society is on the side of the miners”, as well as views that “Polish society is generally ready for changes in mining, but residents of Silesia aren’t yet”. Commenting on the attitude towards renewable

energy sources, representatives of the government administration and environmentalists note that Poles want to develop (expand) this method of energy production in Poland, but they don't want to bear any costs of implementing new technologies in this field. In the case of shale gas, respondents representing the government administration and business emphasised that approval for extracting this raw material is higher in Poland than (the average approval) in the EU.

The results of public opinion polls show that Poles' approach to mining is conditioned above all by the price of energy and the energy security of the country (84% in both cases), whilst the economic situation of this branch is less important (53% of respondents regard it as important). The best method of solving the problems of the coal industry is, according to Poles, to introduce a recovery programme in coal extraction companies (77%) and to create a voluntary redundancy programme for miners (75%). The call to close unprofitable mines is supported by 60% of surveyed Poles. At the same time, it should be emphasised that social consent for restructuring Polish mining does not go hand in hand with willingness to financially support such actions. Almost three quarters of respondents (71%) answered "don't know" or did not want any part of their taxes to be allocated towards supporting unprofitable mines.²⁸ Among respondents, energy originating from renewable sources is particularly favourably viewed – over half (57%) of studied Poles consider that the energy policy of the country for the next two decades should above all involve the development of renewable energy sources. Only 16% of respondents support the development of nuclear power, 9% – the development of coal-based energy, 5% – basing the sector on oil and gas. It is worth emphasising that only 10% of respondents consider rationalisation of energy use, in other words improving energy efficiency in the economy, as a priority.²⁹

Support for renewable energy sources is decidedly higher than for conventional energy. In the opinion of 42% of Polish respondents, Poland should focus above all on the development of renewable energy,

28 *Tak dla restrukturyzacji: raport z badań Instytutu Badań Rynku i Opinii Publicznej CEM „Polacy wobec przemysłu górniczego”* (luty-marzec 2015) (Yes to restructuring: report from research carried out by the Market and Public Opinion Research Institute CEM “Poles vis-a-vis the mining industry” (February-March 2015)), 14 April 2015 – http://bepk.oapuw.pl/wp-content/uploads/2015/04/Raport-z-bada%C5%84-Instytutu-Bada%C5%84-Rynku-i-Opinii-Publicznej-CEM-%E2%80%9EPolacy-wobec-przemys%C5%82u-g%C3%B3rniczego_-luty-marzec-2015-wersja-skrocona.pdf [accessed: 29 May 2015].

29 *Ibidem*.

according to 5% – on the development of energy originating from non-renewable sources. Almost half (46%) of respondents consider that both branches of energy should be developed to an equal degree. Respondents were also asked if Poland should increase, decrease or maintain involvement (at the same level) in activities linked with production of energy originating from a given source. Over three quarters (77%) of respondents stated that investments leading to production of energy from renewable sources should be increased, and over half (54%) were in favour of a greater range of activities aimed at acquiring shale gas. The proposal to increase involvement in other sectors enjoyed significantly less support (nuclear energy: 26%, coal: 23%). What is more, one third (34%) of respondents stated that Poland should refrain from any activities linked with the production of energy from nuclear power stations.³⁰

Summary

The Polish energy sector faces a number of major modernisation challenges. All the respondents stress the need for change in energy production, but they differ in the future they envisage for the sector. Many respondents believe that coal can still serve as the basis for energy production in Poland, but that Polish mining requires extensive reform so that the sector can be profitable once again. On the other hand, environmentalists, and some government administration representatives and journalists, as well as some business representatives state that Poland should begin gradually phasing out coal and shifting towards other energy sources. The first choice should be renewable energy sources, and the majority of the respondents argue that when implementing this form of energy production in the Polish economy, an evolutionary approach should be adopted – ideally, over a long period of time. When modernising its energy sector, Poland should take note of the German policy of *Energiewende* and observe its long-term effects. In turn, environmentalists demand a much faster transition to renewable energy sources – the ideal solution would be one where such resources account for fifty percent of total energy production by 2050.

30 *Kierunki rozwoju energetyki w Polsce. Opinie o źródłach energii i ich wykorzystaniu (Development Trends in the Energy Sector in Poland)*. Research report, Public Opinion Research Centre, Warsaw, February 2015 – http://www.cbos.pl/SPISKOM.POL/2015/K_017_15.PDF [accessed: 29 May 2015].

The development of nuclear power enjoys much less support in Poland. In the opinion of the respondents, nuclear energy should not become the foundation of Poland's future energy industry.

Polish energy sector representatives stated that – in the ongoing discussion – they supported the need to strengthen energy co-operation at the EU level. The Energy Union is generally deemed a good idea, although opinions vary on the two main forms being proposed – that postulated by Donald Tusk's government in April 2014 and the version contained in the European Commission communication of February 2015. The majority of the respondents claim that the European Commission communication brings fewer benefits for Poland, the main problem being its less ambitious approach to joint gas purchasing, gas contract transparency and the participation of the European Commission during contract negotiations with external partners. Some also express the opinion that the communication covers too many additional topics, including issues connected with climate policy, which blurs the basic goal of the Energy Union, namely ensuring energy security for EU states. However, a number of the government administration representatives consider that the current proposal of the European Commission, which was adopted by the Council of Europe in March 2015 on the basis of a consensus achieved among the 28 member states, offers a good starting point for Poland and allows the country to continue working both on the issue of contract transparency and on the problem of joint purchases. Environmentalists are satisfied that the European Commission sees a strong connection between security policy and climate policy in the EU.

In their analysis of Poland's energy security, energy sector representatives raised a number of issues. One problem that comes up especially frequently is that of ensuring security of gas supplies from Russia. The respondents likewise stress the importance of expanding energy infrastructure – both infrastructure in Poland and infrastructure connecting Poland with other EU states. Another opinion voiced by the respondents, although more rarely, was that energy security should be seen in terms of ensuring a suitable amount of energy at an acceptable price for the customer.

Representatives of the Polish energy sector differ in their views of the concept of the Energy Union linked with climate policy, as presented in the European Commission communication of February 2015. The

inclusion of climate issues in the assumptions of the Energy Union only enjoys support among Polish environmentalists. The proposed reform of the European Union Emissions Trading System has also awakened differing emotions. The prevailing view is that the Polish authorities will have to take a tougher negotiating line to ensure that the proposals of the European Commission do not hit Poland's energy intensive sector too hard.

The creation of an internal, competitive energy market – which is an important postulate of the Energy Union – is widely supported by the representatives of the Polish energy sector. At the same time, almost all the respondents are convinced that declarations regarding the development of a common market may in large part simply remain “on paper”. This is because in practice EU states are guided by the dictates of “energy nationalism” – they are only prepared to open up their markets when the energy market is competitive and independent enough to export rather than import energy.

Energy sector representatives agree that implementing changes in the energy sector requires the adoption of a long-term energy strategy, which itself must be the result of a political consensus forged between political parties, business non-governmental organisations and citizens founded in turn on the guiding value of energy security. In the case of Poland – a country whose energy market is currently undergoing transformation and where short-term thinking often prevails – this is an especially difficult task.



The Energy Union: a British perspective

The UK energy market: a brief summary

The UK has a balanced energy mix, generating electricity from coal, gas, nuclear energy and renewable sources.¹ Largely self-sufficient at the end of the 20th century, the UK has had to import more oil and gas due to decreasing North Sea oil and gas reserves. In 2004 the UK became a net importer of primary energy and its imports grew steadily from 10 million tonnes of oil equivalent that year to 86 million in 2012.² Yet, domestic production still accounts for more than half of UK oil and gas use, and UK imports are only 68% of those of France. In 2012 the UK imported 37% of oil and 47% of gas, with Norway being the largest supplier in both cases (46% and 54% of imports respectively).³ Thanks to three LNG terminals, the country enjoys some flexibility in its selection of suppliers.

Due to its insular location, connecting the British grid with the continental one is a challenging task. There are currently four electricity interconnectors to France, Ireland, Northern Ireland and the Netherlands, accounting for 4 GW of capacity or 4.7% of the total capacity of the electricity network – well below the EU target of 10%. However, seven more interconnectors are scheduled for activation in the near future: these will have a 7.3 GW capacity and link the country with Belgium, Denmark, France and Norway.⁴

Renewable energy supply has been growing steadily in the UK. In 2014 renewables accounted for 19% of generation (up from 14% in 2013). Between 2013 and 2014 the renewable electricity generation increased by 20% and installed capacity by 23%.⁵ Fifty-one per cent of the world's offshore wind production originates in British waters. The UK government

1 Electricity generation in 2013: coal – 36%, gas – 25%, nuclear – 20%, renewables – 15% (Ofgem <https://www.ofgem.gov.uk/publications-and-updates/infographic-promoting-sustainable-energy-future>).

2 Eurostat: <http://ec.europa.eu/eurostat/web/energy/data/main-tables>

3 *Energy Supply Security 2014*, International Energy Agency, pp. 462-476 Available at: http://www.iea.org/media/freepublications/security/EnergySupplySecurity2014_UK.pdf

4 Ofgem: <https://www.ofgem.gov.uk/publications-and-updates/infographic-energy-security>

5 DECC, Energy trends section 6: renewables, <https://www.gov.uk/government/statistics/energy-trends-section-6-renewables>

is also committed to nuclear energy. A new nuclear power plant at Hinkley Point is to be constructed by French companies EDF and Areva. The European Commission, after almost a year-long investigation, has now granted approval for the project (it had been concerned about proscribed state aids). Yet the project has yet to fully take flight. In addition, the current government is keen on exploring the potential of shale gas reserves. The latter are situated mainly in the northern part of the country, but there are no definite data as to the amount of gas that can be extracted. An Office for Unconventional Gas and Oil was created in 2012 to assist those interested in investing in this sector. Some exploratory drilling is now happening, but progress has been slow in part because it has proved to be controversial, particularly with local communities living near to proposed fracking sites.⁶

The UK has deliberately tried to create a competitive energy market with a relatively large number of energy suppliers, including foreign ones. The electricity market is dominated by six energy companies (the so-called “big six”).⁷ Centrica (formerly British Gas – the state-owned monopoly) enjoys the strongest position with almost a quarter of electricity market share. Three companies control between 15 to 20%, with the remaining two having a market share of between 10 and 15%. There is also an increasing number of smaller suppliers that cater to more than 5% of customers. Centrica’s dominance of the gas market is more significant (over 40%) with the other companies’ shares being between 9 and 15%. Switching rates are still considered by Ofgem, the regulator of the UK energy market, to be low. The most recent regulator’s report contends that there are still barriers to entry and expansion.⁸

Greenhouse gas emissions have been falling, although not every year since 2000 (emissions grew in 2010 and 2012).⁹ The latest data show a fall in emissions in 2013 (by 2.4% overall and 1.8% regarding CO₂). The decrease was mainly due to a fall in the use of coal and gas for electricity generation (energy supply is responsible for 33% of total emissions). In

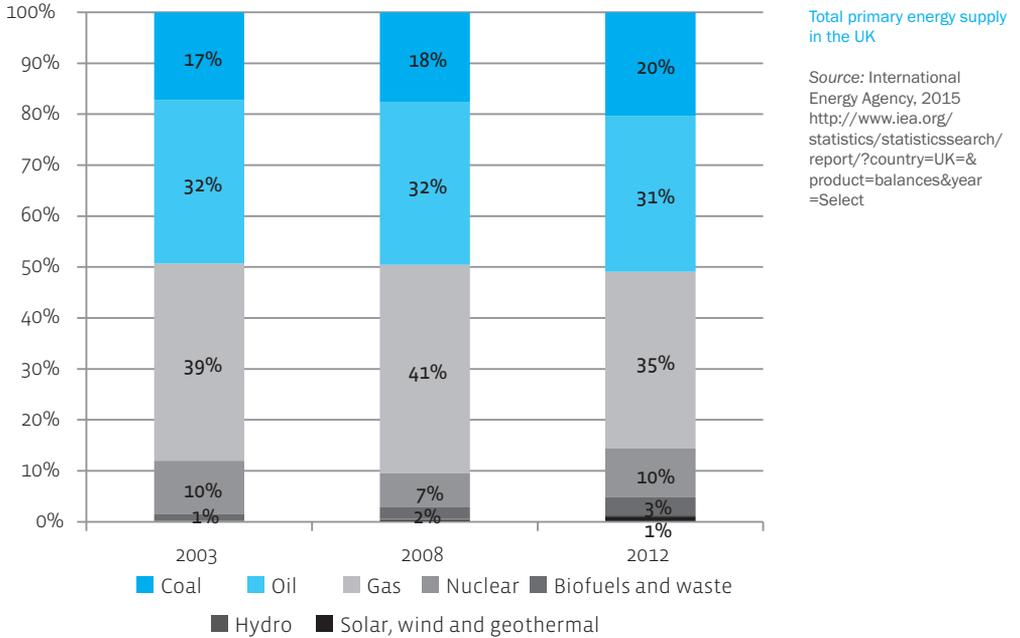
6 “UK’s shale gas revolution falls flat with just 11 new wells planned for 2015”, The Guardian, 19 January 2015.

7 Centrica, E.ON, EDF Energy, NPower, Scottish Power, SSE.

8 State of the Market Assessment, Ofgem 2014, pp. 11-15. Available at: <https://www.ofgem.gov.uk/ofgem-publications/86804/assessmentdocumentpublished.pdf>

9 2013 UK Greenhouse Gas Emissions, Final Figures, DECC.

terms of per capita CO₂ emissions, the UK stands between France and Germany (7.5 tonnes, 5.5 tonnes and 10 tonnes respectively in 2012).¹⁰



In 2013 the government pushed through important electricity market reforms aimed at encouraging investment in low-carbon technologies. The Energy Act of 2013 put in place a support scheme for low-carbon energy generation as well as an emissions performance standard that was designed to limit carbon pollution from newly built coal-fired power stations. Another important element of the reform was the carbon price floor: a tax that increased the cost of allowances for greenhouse gas emissions to a higher level than the price established through the EU ETS.

This ambitious push for a more climate-friendly energy policy has been one of the causes of the recent energy price rises, although price increases were mostly driven by the rise that took place in the wholesale market. Consumers receive detailed energy bills that show the levies they must pay in the name of greening the energy supply (c. 8% of an average bill). High energy prices have now become increasingly prominent in the

¹⁰ European Environment Agency : <http://www.eea.europa.eu/data-and-maps/data/data-viewers/greenhouse-gases-viewer>

political debate. In November 2013, the leader of the opposition Labour Party announced that once in power he would freeze energy prices for 18 months. The Conservative Party – the major partner in the governing coalition – has shown signs that its enthusiasm for greening the energy policy has begun to wane. The party has said that if it is re-elected it would stop the development of new onshore wind farms.¹¹ The necessity to take action against climate change, however, remains widely accepted. In the run-up to the 2015 national election, the leaders of the three main political parties issued a common statement pledging to maintain efforts in this respect, promising *inter alia* to end coal burning for power generation in the UK – unless it uses new clean-up technology.¹²

What kind of Energy Union?

Achieving secure energy supply

The way in which British respondents referred to energy security demonstrates that this problem is seen as more than just ensuring steady supply of energy sources from abroad. Respondents admitted that given the significant import dependence of the EU, and the increasingly unstable situation in many energy exporting countries, it is hardly surprising that it has been the issue of imports that has pushed energy to the top of the political agenda. Yet for a country such as the UK, energy security is as much about ensuring that the energy system will remain capable of meeting demand at a delicate time of energy transition and of providing energy at a price that is affordable for all, or at least the vast majority. A close link between energy and climate security was emphasised by respondents: one should not occur at the expense of the other. Finally, some respondents deplored that the multidimensional character of energy security was not always appreciated in the political debate and that some stakeholders had a tendency to oversimplify the problem by focusing on only one aspect of it – “[energy security] is a term that can easily be turned to whichever angle you want to take”. The

11 Jimmy Aldridge, Joss Garman, *The political climate: Where do each of the parties stand on energy and climate change*, Institute for Public Policy Research, 22 April 2015.

12 “Party leaders make a joint climate commitment”, BBC website: <http://www.bbc.com/news/science-environment-31456161>, access 14 April 2015.

present section focuses on the external dimension of energy security related to supplies of energy sources from abroad.

Dealing with troublesome suppliers

British respondents recognise that some EU member states cannot consider their supply of energy as secure due to their reliance on a single country – Russia – for all, or almost all, their gas needs. This is a serious problem, especially if that supplier tends to use energy as a weapon in its aggressive external policy. The UK non-paper of March 2014 opens with a clear statement that “a key medium to long-term objective of EU energy security policy should be to ensure that neither the EU collectively, nor any member state individually, is unduly vulnerable to disruption from any single energy supplier”.¹³ The authors of the document then go on to add that “in the current circumstances this means reducing the EU’s reliance on Russian gas”.

While the UK government position represents a very pragmatic approach, some respondents from environmentalist circles have adopted a more principled stance stressing that trade in energy sources was not only an economic and political, but also an ethical decision. It is important to gain greater independence from Russia not just for economic reasons, but because this is “a question [...] of moral integrity”. “The European Union was founded on the values of democracy, sovereignty and human rights. [...] decisions about energy become demonstrative of our continuous commitment to these values.”¹⁴ Thus, striving for greater energy independence would not only strengthen economic security, but also enable EU member states to avoid making morally questionable compromises, turning a blind eye to the misdemeanours of autocratic regimes that also happen to be important energy suppliers. Some representatives of environmentalist organisations emphasised, in this context, that the EU should aim to reformulate its relationship with energy suppliers in its neighbourhood by trying to involve them in the energy transition and the development of new technologies. This way, suppliers would be able to adapt to the inevitable long-run fall in fossil fuels exports.

13 The non-paper has not been officially made public, but it was widely circulated between government officials and analysts, and thus can constitute a source for this chapter.

14 Louisa Casson, Why the EU should step off the (Russian) gas and stand for an Energy Union, <http://e3g.org/library/why-the-eu-should-step-off-the-russian-gas-and-stand-for-an-energy-union>

British respondents clearly appreciate the gravity of the problem entailed by excessive dependence on outside suppliers. The government non-paper devotes a lot of space to discussing possible options for diversification of supply. It calls for strengthening relations with potential suppliers such as North America, Azerbaijan and Algeria (a timeframe for this priority is set to be between 5 to 15 years), and developing infrastructure – new pipelines as well as interconnections between electricity and gas networks – so that energy can flow freely within the EU (a timeframe of 2-10 years). The government also emphasised the importance of indigenous energy sources, claiming that the EU should be careful not to write off energy sources that might contribute to energy security; rather it should actively support their development. The British non-paper states that “countries looking to develop their indigenous sources of power (in particular shale gas, renewables and nuclear) will be supported by the Commission in creating the right investment climate (including where necessary through state aid) and that, in particular, no legislation will be introduced which threatens to reduce such potential deployment”.¹⁵

Collective purchases: a questionable idea

While greater diversification is clearly supported, the measures aimed at strengthening the bargaining position of EU member states towards outside suppliers, mainly Russia, which featured prominently in the Polish non-paper – collective purchases, strategic storage, greater involvement of the European Commission in negotiation of contracts – elicited a lukewarm response from the government and industry-related respondents. The idea of collective purchases provoked doubts about implementation (“Who would negotiate? The European Commission does not have the adequate expertise”). But the most important drawback of collective purchases was seen to be that these could interfere with the push to complete the liberalisation of the European energy market, which is the UK government’s principal goal. A system in which private companies deal with the provision of energy from suppliers to consumers is ultimately seen as a better guarantee of stable and secure supply. Greater strategic storage was criticised on similar grounds as “a step away

¹⁵ The only exception is unabated coal. This issue will be discussed in the following subsection.

from the market-based system”. “It is not economic to have gas just sitting in storage on the off-chance that there may be an emergency”. On the subject of transparency of contracts some respondents underlined that before pondering further legislative decisions, the effects of the REMIT regulation should be assessed.¹⁶ As regards the regulation on the security of supply, the British government adopted a cautious stance: while it did not rule out modification of the act, it did not see any immediate need for it. More generally, one government-related respondent claimed that the government is ready to examine the proposals spelled out in the Polish non-paper in detail, but made it clear that they were not considered as crucial elements of the project: “issues around security of supply, transparency, help in negotiations... Yes, potentially useful in the short-term, but if we implement things like that they should not damage the long-term transition to market.”

Respondents from environmentalist circles were more positive about the advantages that collective purchases and strategic storage could bring: “Obvious cost savings in having strategic reserves for the entire market rather than for individual member states,” “a European gas storage reduces the ability of outside suppliers to threaten member states.” Yet, for them, those were measures that did not address the core of the problem: “An Energy Union that focuses on purchases of energy would kind of miss the point,” argued one. For the environmentalists, the way to strengthen Europe’s energy security is not to identify more effective ways of importing fossil fuels, but to significantly reduce the demand for them, and thus become more resistant to “Russia’s principal political weapon”.

The most positive assessment of the proposals aimed at strengthening the bargaining power of EU member states, and those dependent on Russia in particular, was formulated by Professor Dieter Helm, an influential academic at Oxford University. Helm does not dismiss collective purchases stressing that “the central buyer is not necessarily inconsistent with the Internal Energy Market, if the purchased gas is auctioned. [...] The result would be a deep, liquid and transparent

¹⁶ Regulation No 1227/2011 on wholesale energy market integrity and transparency (REMIT) was adopted in December 2011. Its aim is to establish mechanisms of the energy market in order to eliminate market manipulation.

market.”¹⁷ He also emphasises the importance of strategic storage that, despite being expensive, remains “an obvious tool to help tackle the threat of interruptions in supply”. Another energy expert echoes this view stating that the “EU could, through legislation, encourage changes in gas storage tariff regimes to give commercial gas storage a better reward for its strategic value in energy security.”¹⁸ Professor Helm is critical of the EU emergency planning which, in his view, is “notable by its absence”. Thus, concludes Helm, “it is small wonder that Bulgaria is very keen to have the South Stream pipeline connection to Russia, given the lack of support it received [from the EU] in earlier crises [2006 and 2009].”

Going beyond relations with outside suppliers

The Polish and British non-papers share a number of ideas, such as a strong focus on the necessity to diversify suppliers and supply routes. The British government, however, looks for remedies for the secure supply problem beyond the issue of the buyer-supplier relationship. For the government, squarely supported by industry, the cornerstone of energy security is an integrated and well-functioning market in which energy can flow freely in response to price signals (issues related to the functioning of the energy market will be treated at length in the following section). With this in place, countries whose supply is cut off by their major supplier could always turn to other EU partners to obtain energy sources. A diversified supply, robust market and reduction of demand through energy efficiency measures are considered key factors guaranteeing energy security.

Respondents drawn from environmentalist circles argued that the problems around gas purchases should be a catalyst for a more comprehensive reshaping of national energy mixes so that indigenous renewable sources play a greater part. For them, the best way to gain independence from unreliable suppliers is to focus on renewables and energy efficiency. The environmentalist respondents stressed that the EU

17 Dieter Helm, *A Credible European Security Plan*, Energy Futures Network Paper, May 2014, p. 6. Helm defends the idea of a central buyer in the following way: “At present Gazprom is a monopoly supplier for Russian gas. A European central buyer does not change this circumstance. It would automatically impose a common price and therefore eliminate the anti-competitive price discrimination and abuse of market power. This gas would then be sold in an auction on a common basis across Europe.”

18 David Buchan, *Europe’s energy security – caught between short-term needs and long-term goals*, Oxford Energy Comment, July 2014, p. 10.

should strive to protect the more vulnerable member states in Central and Eastern Europe. Solidarity would manifest itself through funding for infrastructure in countries that are isolated from the centre of the European market, as well as through deliveries of gas should sudden cuts in supplies from abroad occur. Even if, as one respondent argued, a system of collective purchases did not materialise, the existence of reliable emergency mechanisms would make CEE countries stronger in negotiations with suppliers. However, as several respondents stressed, there were also obligations that came with this insurance policy. “Access to funds in the EU Connecting Europe Facility should be made conditional on delivery of country obligations under the Energy Efficiency Directive,” argue authors of a report containing a set of proposals for the Energy Union.¹⁹ Several environmentalist respondents spoke in the same vein, arguing that the thinking around energy security must not be limited to the issue of reliable supply, but should also consider ways of using energy more effectively and creating energy mixes that would be less vulnerable to outside pressure.

A competitive and integrated energy market

Completing market liberalisation: a priority

“A single market for gas and electricity without barriers” – this is how one government-related respondent presented the main objective of the Energy Union. Several other respondents echoed his words and admitted that a lot has already been done to achieve that goal. The major challenge, in view of the vast majority of respondents, was the full implementation of the Third Energy Package, especially the adoption of network codes that would facilitate cross-border trade in energy and make individual markets more accessible to companies from all member states. Creating common codes and practices was described as the most immediate priority, the next step suggested by several respondents could be aligning – at least to some extent – subsidies granted to renewables and integrating capacity markets. That task is, however, viewed as much more challenging due to divergences between member states.

¹⁹ *Six Principles for a Resilient Energy Union*, Discussion Paper, February 2015, p. 15. The paper was authored by representatives of an environmental NGO E3G, University of Cambridge Institute for Sustainability Leadership and European Climate Foundation.

Some expressed frustration that various member states are proceeding too slowly with implementation of the Third Energy Package: “They cannot conceive of a society where most of energy is not nationalised.” The liberalisation that has taken place in the British market is cited by some as a model for the entire EU. British Minister for Business and Enterprise, Matthew Hancock, when discussing the project of the Energy Union with a parliamentary committee, claimed that “the Commission’s current proposals, for the most part, suggest moving the rest of the EU towards the UK way of doing things – a more market-based approach to delivery – and we are pleased about that”.²⁰

Respondents did not call for more legislation around the problems of market functioning. Full implementation of the existing legislation and assessment of its impact were often identified as necessary steps before further measures could be considered. “The core aspects are already in place,” stated one respondent. Some felt that more important than new legislation was greater willingness on the part of member states to coordinate their energy policies and – to a certain extent – harmonise them. More coordinated planning and response to existing problems would bring about better results than individual energy policies that often ignore the potential for synergy. One respondent suggested that the Energy Union project might be a useful impulse for the states to reconsider the untapped benefits of closer coordination: “If every national government decides how much security of supply they want, but at the same time tries to build a European market to provide that, that’s not going to work very well. The Energy Union is starting a discussion around that, which is quite good.”

Benefits of greater interconnection

Respondents generally felt that liberalisation should be complemented by greater physical integration of the European markets, so that gas and electricity could actually flow between the member states. Liberalisation and interconnection were depicted as two sides of the same coin: the Third Energy Package opens the way for greater transfers of energy between countries, but for this to happen member states have

²⁰ Parliamentary debates, House of Commons Official Report, European Committee A, European Energy Security, 25 November 2014, p. 6.

to enhance their technical capability for transferring electricity and gas between them. Conversely, interconnections will fulfil their potential only if backed by the proper regulatory system that facilitates flows.

Many described the advantages of greater interconnection: first and foremost, it should enable countries dependent on one or a few suppliers to access other sources, and thus strengthen their security. An interconnected market, in which energy flows in response to price signals, should stimulate competition and drive down energy prices. “Trade between countries brings greater competition and will benefit both consumers and generators,” claims National Grid, the UK transmission system operator for electricity and gas.²¹ In addition, greater access to energy from abroad should mean that some countries could renounce, or at least scale down, costly investments aimed at boosting domestic capacity: “[one] may wonder why on earth the UK consumer is being asked to pay a fortune to build nuclear power stations here when there are oodles of them in France,” argues one energy expert.²²

All respondents supported the idea of devoting substantial funds to building more interconnectors between member states. The majority of respondents admitted that the most immediate priority in this respect was gas infrastructure – pipelines and LNG facilities – as “a lot of Central and Eastern European countries do not have diversified supply routes”. Improving electricity interconnections should be a more long-term goal. Careful planning at EU level is essential, if the best value for limited financial means is to be achieved. Proper allocation of costs of building interconnectors to each of the neighbouring countries, in order to make charges proportionate to benefits drawn from the project, was also mentioned as an important condition for their swift development.

Another advantage of greater interconnection was emphasised above all by the green community: a more interconnected system would have a greater capacity to make the most of the fluctuating generation of energy from renewable sources, and thus it would enable member states to combine their diversified renewable assets (“the sun shines in the south and the wind blows in the north”) and benefit the most of

21. Written evidence submitted by National Grid (LGY0055) for the 10th Report of the Energy and Climate Change Committee, *Fuelling the debate: Committee successes and future challenges*.

22. Paul Arwas, “Interconnection is the solution to the energy trilemma”, Green Alliance Blog, <http://greenallianceblog.org.uk/2014/06/16/interconnection-is-the-solution-to-the-energy-trilemma/> access: 1 April 2015.

peaks in generation. In addition, interconnectors could provide access to a wider range of options for back-up energy when generation from renewable sources could not match demand (in the case of the UK, it could be the very flexible hydropower from Norway). This in turn would open the way for limiting reliance on fossil fuels, with beneficial effects on both security (smaller imports) and climate (smaller emissions). “If the EU could engineer the proper improvement of the grid system in Northern Europe, we could save ourselves around 11% of our emissions,” argued one respondent. Enthusiastic as they were about joining electricity grids, respondents representing environmentalist organisations expressed some reservations about investments in gas pipelines – given the EU’s aim to reduce its reliance on fossil fuels, these investments could turn out to be “stranded assets”.

A broader outlook and clear priorities

Virtually all respondents emphasised the importance of paying more attention to finding ways to influence energy demand. Thinking has always focused on the supply-side, argued many respondents. While this was not unfounded, the demand for energy should not be treated as a given. Technical progress has provided an increasing number of ways to shape and, most importantly, reduce demand. One respondent evoked a UK government study positing that demand for electricity could be cut by 40% by 2030. Smart meters were viewed to have great potential in this respect. Convincing households and industry to reduce their consumption, and giving them the tools to do so, would bring tangible benefits for consumers who would pay less for energy, and for the energy system which would become more effective and more easily manageable. Respondents from environmentalist circles in particular argued that greater appreciation of the importance of demand should be accompanied by more generous funding. More investment should be channelled towards demand-related technologies: smart appliances able to modulate the timing of energy consumption, home energy management systems and smarter power distribution grids. Funding for this type of project was particularly valued by environmentalist respondents as, unlike infrastructure for transporting fossil fuels, it contributes to reducing the consumption of energy and emissions. A focus

on demand should also involve enhancing the opportunities for those willing to produce their own energy and supply it to the grid.

Calls for a strengthened focus on demand were accompanied by pleas for a broader analysis of the challenges related to energy policy (usually dubbed a “holistic approach”). The multiple goals of energy policy are not perfectly compatible: “There are natural tensions between the aims of security, decarbonisation and affordability.”²³ Thus, excessive focus on one might harm the others: European strategy should maintain a proper balance and coherence. Professor Dieter Helm argues in this context that “bringing the Internal Energy Market and the climate framework together with the security requirements would be the kernel of a European Energy Union”.²⁴ Another energy expert in a paper published following the publication of the Commission Framework strategy in February 2015, applauds the “‘joined-up approach’ to EU energy and climate policy” that it provides. “[P]roposed electricity market reform is not set only in the context of the single market; it is now clearly aimed at facilitating the energy transition, integrating renewable sources and encouraging demand response.”²⁵

Also important is a greater appreciation of the multiple linkages between energy policy and other policy areas, which is the key to avoiding duplication of efforts and contradictory actions. Heating and transportation were mentioned by several respondents in this respect. Gradual electrification of both was said to be an important goal that would contribute to shifts in energy consumption. It should, therefore, be taken into consideration when planning other aspects of energy policy.

According to UK respondents, the EU energy market needs a set of clearly defined priorities, in addition to a proper balance between objectives. One energy policy analyst stated that over the last decade various priorities have taken centre stage – “in 2007 it was climate change, in 2013 competitiveness in relation with the shale gas revolution the United States, in 2014 energy security”: more stability is needed. “Investors need not only an integrated market, but also political certainty,” another respondent emphasised. One analyst suggested that the 2030 Climate

23 Written evidence submitted by Centrica (LGY0084) for the 10th Report of the Energy and Climate Change Committee, *Fuelling the debate: Committee successes and future challenges*.

24 Dieter Helm, *A Credible European Security Plan*, Energy Futures Network Paper, May 2014, p. 13.

25 David Buchan, Malcolm Keay, *Europe’s ‘Energy Union’ plan: a reasonable start to a long journey*, Oxford Energy Comment, March 2015, p. 3.

and Energy package with its clear focus on emissions reduction could constitute such a stable framework. Some short-term detours from this path would obviously be allowed – for the sake of security of supply, for instance – but the clear determination to create a decarbonised energy system could serve as the overarching guiding principle for stakeholders. Another analyst, examining the Framework strategy published by the European Commission in late February 2015, deplored the lack of clearly defined priorities: “In total there are 27 items on the Commission’s ‘to do’ list. President Jean-Claude Juncker and his team have not said which of these it considers to be the most important. It is very unlikely to be able to do all of them.”²⁶

Towards a new market model?

General support for greater market integration notwithstanding, some respondents also expressed a view that this process should not lead to the European Commission gaining too great a control over national decisions. As one respondent stressed, “the Energy Union should create conditions that favour competition, our worry is that it could potentially provide a rationale for greater interventionism on the market”. Concern that the European Commission may use the Energy Union initiative to broaden its influence over energy policies of member states is evident among civil servants and politicians, conservatives in particular. “Anything that looks like Brussels telling us what to do is toxic,” is how one energy expert summarised the attitude prevailing among the majority of the British political class. The government-related respondents emphasised that further integration of the energy markets could and should take place without changes to the division of competences between member states and EU institutions. “[The EU must not] try to do what the nation state should do, create a new level of interference,” argued one of the politicians interviewed.

For the UK government, the Energy Union is mainly viewed as means to provide fresh impetus for a project that is already in place and that has a clear direction. Some respondents suggested, however, that a debate about the Energy Union was bound to stimulate a broader discussion

²⁶ Stephen Tindale, *The Commission’s energy union ‘strategy’: A rebranded work programme*, Centre for European Reform, 27 February 2015.

on the preferred format of the energy market. One respondent depicted this debate as a clash between two logics: that of greater integration and that of national control over the energy policy. The former presented considerable material advantages: a more effective use of the grid, easier cross-border flows, better planning, lower prices, etc. – “integrate, harmonise, get bigger to get cheaper”. National governments are, however, hesitant to follow this logic in full. It reduces their control over energy policy and creates some uncertainty as to the developments on energy markets. “If we end up with every country having its own capacity market, it will be more expensive than a system where we share capacity and flow energy across systems at times of system stress, but the reason we end up with nation state-based capacity mechanisms is because we have nation states. The British government knows that it can compel the energy system within Britain to function in a way that will not cause blackouts to occur, but the worry is that if we rely on other countries to flow electricity to us at times of system stress then maybe, just maybe, they might not.” Several other statements expressed a similar analysis, suggesting that while national governments are keen to see a more efficient energy market, they watchfully protect their right to shape energy policy independently. To what extent the Energy Union can proceed without infringing this independence is open to debate. One energy policy analyst claimed in this context that if the Energy Union turned out to entail changes to the balance of power between the national and EU level, it would make agreeing on clearly-defined priorities for the common energy policy more difficult. Another argued, in much the same vein, that “attempts to alter the tier of government at which policy is made – from member-state to EU level or vice-versa – cause more unpredictability and so increase the cost of capital. [...] The Commission, Parliament and national governments [...] should focus on energy and climate issues, not on constitutional squabbles.”²⁷

Free market and regulation: a delicate balance

For all the governmental rhetoric around the importance of markets and competition, British respondents clearly recognise that for reasons of security of supply and climate protection, some non-market intervention

27 Ibidem.

is required to guarantee proper functioning of the energy market, and stable influx of investments in particular. The green community expressed this idea in the most direct way: “Thinking that markets will drive investments is quite damaging to security. The prices are never enough to make it worthwhile for somebody to build new things,” argued one respondent. The government-related respondents were not as forthright, but made similar statements. An assessment expressed in a report of the Science and Technology Select Committee of the House of Lords confirms that stance. The Lords conclude that “the [UK] electricity market is now a managed market. The pursuit of decarbonisation makes a free market in electricity supply impossible while low-carbon sources of power are more costly than high-carbon ones.”²⁸ The price guarantees given by the UK government to the planned nuclear power plant at Hinkley Point provide a good illustration of that opinion.

Decarbonisation – British respondents agree – provides a key rationale for market intervention. The market must be propped up by a well-designed regulatory framework consisting of an efficient EU Emission Trading System, climate targets and subsidies for energy from renewable sources. Without these in place, “the markets could not drive investments”. Respondents underlined that, given the low price of emissions, it was difficult to encourage companies to move away from fossil fuels, and coal in particular. Urgent reform of the ETS is therefore necessary. A price of 30 euros per tonne of CO₂ was mentioned as a minimum for this system to fulfil its role as a catalyst for the transition to low-carbon technologies. Guaranteeing a steady flow of investments is crucial given the very capital-intensive character of the energy market. Moreover, as other continents begin their energy transition, attracting investors in the renewable energy sector is bound to become more challenging in the future. Encouraging investors goes hand in hand with creating appropriate conditions for scientific research. Several respondents mentioned that Europe was in danger of losing its leadership on advanced energy-related technologies. Driving innovations and maximising the added value of common scientific undertakings was mentioned as an important objective of the Energy Union.

²⁸ *The Resilience of the Electricity System*, Science and Technology Select Committee, House of Lords, 1st Report of Session 2014-15, 12 March 2015, p. 5.

A sustainable energy market

British respondents agree that energy and climate policy are inextricably linked. Along with further liberalisation of the energy market, fighting climate change through decarbonising energy generation, and the economy in general is a second priority of the British government. “It’s about the market in the context of the climate targets and the other issues feed into that,” is how one government-related respondent summarised the overall direction of British strategy. All British respondents emphasised the importance of combating climate change, some with a particular sense of urgency and conviction that this problem should not be marginalised or postponed in the name of other priorities (“Climate change won’t wait, so you don’t have a choice. It is something that we simply have to do!”).

Freedom to shape energy mixes as the key to effective decarbonisation

For the British government, the best way to proceed towards the aim of decarbonisation is through the establishment of a diversified energy mix in which renewables coexist with low-carbon energy sources such as nuclear energy and gas, including shale gas. This variety ensures a diversified supply and competition between different types of energy generation.

Reduction of greenhouse gas emissions should become the principal goal from the triad established by the 2020 strategy²⁹. The government-related respondent expressed satisfaction that in negotiations around the 2030 Energy and Climate Package, the UK convinced its EU partners not to adopt targets for renewable energy generation and energy efficiency that would be binding on individual member states. Imposing such binding targets, they argued, would create additional strains on the system of energy generation – because of the necessity to increase the share of renewables – and thus complicate the achievement of emissions reduction. Member states have various energy capabilities and leaving them free to use these as they see fit is the best way to decarbonise in a cost-effective manner. Lastly, adoption of binding targets for individual

²⁹ According to the so-called 20-20-20 targets the EU, by 2020, would reduce greenhouse gas emissions by 20%, get 20% of energy consumed from renewable sources, and reduce energy consumption by 20% through energy efficiency measures.

member states would also constitute an unnecessary EU influence over the shape of national energy mixes.

The governmental approach to decarbonisation is largely shared by energy companies and representatives of industry. Oil and Gas UK, a body representing UK offshore oil and gas industry, assessed positively the 2030 energy and climate package, stating that it “permits each Member State the flexibility to pursue decarbonisation at least cost without the damaging, contradictory measures in the 2020 targets”.³⁰ The organisation urged the UK government to “continue to resist binding Member State targets for renewables”. The energy sector also supports the strategy of building a diversified energy mix in which hydrocarbons remain important. According to Oil and Gas UK, “there is no contradiction or incompatibility between ‘maximising economic recovery’ of UK oil and gas reserves and the UK’s commitment to decarbonisation”.

While energy companies and industry do not contest the idea of decarbonisation, their representatives emphasise that this goal should be achieved in a way that does not damage the competitiveness of UK and EU industry. The Energy Intensive Users Group Manifesto warns of the risk of “carbon leakage” – energy intensive industries leaving Europe and moving to countries where economic activity is less costly – and argues that “the objective should be economically sustainable decarbonisation, not de-industrialisation”.³¹ Calling for a broader analysis of the nexus of climate policy and economy, the Group suggests that “UK and EU climate policy must consider carbon consumption (taking account of emissions from production of imported goods and materials) as well as carbon production from UK industries”. The largest UK electricity and gas provider, Centrica, claims that “vulnerable consumers and energy-intensive industries are most likely to feel the impacts of these [decarbonisation] costs. In the energy intensive business space, policies need to remain in place to provide adequate support.”³²

30 Written evidence submitted by Oil and Gas UK (LGY0096) for the 10th Report of the Energy and Climate Change Committee, *Fuelling the debate: Committee successes and future challenges*.

31 Energy Intensive Users Group Manifesto for 2015. Available at: <http://www.eiug.org.uk/publics/EIUG%20Manifesto%20A4%20v2.pdf>

32 Written evidence submitted by Centrica (LGY0084) for the 10th Report of the Energy and Climate Change Committee, *Fuelling the debate: Committee successes and future challenges*.

Going green?

The respondents drawn from the green community contested the governmental approach to decarbonisation as too cautious and, in the long run, counterproductive. Even though they were generally positive about the outcome of negotiations on the 2030 Energy and Climate Package, they stressed that to a certain extent it was “a missed opportunity” and that “the incumbent energy system got a lot of what they needed out of it”. “Greater levels of ambition on renewables were comfortably possible,” argued one respondent, emphasising that attaching more importance to the development of renewables and making the most of the opportunities related to energy efficiency would speed up the energy transition. Binding targets for individual member states would constitute a powerful stimulus for a more determined action in this area. Without them there was a risk that some countries would tend to disregard the renewable energy sector believing that the EU-wide target would be achieved through the efforts of others. Thus, the Commission should come up with a governance framework that would specify how the target for renewables would be achieved.

Environmentalists argued that apart from securing the most pressing improvements to the energy market, the Energy Union project can stimulate debate on the long-term development of the energy policy. “We see the Energy Union not as a five-year plan, but a longer-term project that can transform the European energy system,” one respondent declared. For green circles, making substantial investments in fossil fuels or nuclear energy represents short-termist thinking that can create a dangerous lock-in effect. To make the most of such investments, governments will be tempted to maintain the large share of “old energies” in energy mixes and thus slow down “the transition to clean energy”. In addition, as patterns of demand are changing rapidly and the cost of generation of energy from renewable sources is bound to continue falling, the EU is running the risk of putting in place expensive infrastructure that will soon be redundant – delivering expensive energy that no one wants. Other “high carbon investments” such as highways and airports are also characterised as contestable and viewed as drawing valuable resources away from more useful ones such as renewable technologies and energy efficiency measures. Renewables, environmentalists asserted,

are the technology of the future: the technological improvements related to their generation and distribution will guarantee lower prices. The technologies dominant at the moment, on the other hand, are viewed as being at the end of their technological cycle. It is difficult to expect any scientific progress, which would influence prices, in the near future (the only exception was carbon capture and storage – see below). Against this background, the environmentalists argue that investment decisions should be taken with the long-term vision of the decarbonised energy market in mind: “We shouldn’t be designing a system that precludes evolution of the energy market.” It is important to shrug off the prevailing inertia and proceed quickly with the transformation of the energy sector: “In the long run, if not in the medium-term, it will be cheaper to meet the energy needs from low carbon sources,” one respondent contended. “The decarbonised power sector is no more expensive than the current one, but requires higher investment costs and adjustment of the market,” added another.

End of unabated coal

While there were clear differences in approach to decarbonisation, all respondents expressed a very similar view on coal. This source should be urgently removed from energy mixes unless carbon capture and storage technology can be deployed and become financially viable in the near future. Many respondents, including those from environmentalist organisations, emphasised the considerable potential of CCS technology, but admitted that it remained an open question whether this technology could be introduced at a large scale within the next 10 to 15 years. “We should be giving CCS a much better go. Countries such as Poland, heavily dependent on coal, should be particularly keen to stimulate progress of research in this respect,” argued one respondent. The significance of CCS goes beyond the future of coal. As one respondent stressed, should this method become viable at a competitive price, it could influence the planning of the whole energy system and permit the maintenance of more fossil fuels in the energy mix.

The great potential of energy efficiency

Energy efficiency is viewed as having a very important role in the process of decarbonisation. It was described not only as an indispensable element of effective decarbonisation, but also – by one industry-related respondent – as “the lowest-cost way to decarbonise”. Using energy more effectively and thus limiting imports is just part of the story. Another important benefit is that energy efficiency can unlock new sectors of the economy and thus drive economic growth. Improving home insulation and remodelling electronic appliances were the most often mentioned strategies. “The building sector has the largest longer-term, cost-effective emissions saving potential of any industrial sector,” claim the authors of a report on the Energy Union.³³ Many respondents deplored the slow progress of energy efficiency measures. The UK government non-paper urged the removal of “barriers to energy efficiency take up” such as limited information on the opportunities available and lack of finance. The main reason for the slow development of energy efficiency was, according to several respondents, a systemic inertia that made departure from certain deeply rooted “ways of doing things” very difficult: “It’s always cheaper to do the old-fashioned thing rather than invest in what will be the future.” In addition, manipulating the supply-side was said to be a more controllable and manageable process than encouraging thousands of households to introduce energy efficiency measures.

Towards a global agreement

Apart from setting a clear direction for the EU internal market, the pledge to reduce emissions by at least 40% by 2030 was viewed as a crucial advantage in the run-up to the COP 21 in Paris. Having achieved an internal agreement on emissions reduction, the EU has a mandate to continue leading by example and will be able to negotiate more effectively with others. A critical element is reform of the ETS, as it will be difficult to approach international negotiations when “the EU’s flagship climate policy is essentially useless”. Finally, some respondents also underlined the importance of showing clear commitment to meeting the other two principal targets of the 2030 Energy and Climate Package related

33 *Six Principles for a Resilient Energy Union*, Discussion Paper, February 2015, p. 15.

to renewables and energy efficiency. This would serve as “a confidence building measure” for other countries. In short, by establishing a credible strategy for combating climate change internally, the EU will improve its chances of convincing other world powers to do the same.

A global agreement on climate protection can bring tangible economic benefits for the UK and the EU if they manage to carry out a swift energy transition. The Energy and Climate Change Committee of the House of Commons describes the desired development of the world energy market by 2030 in the following way: “A price of carbon has spread around the world to other emissions trading systems which are increasingly linked to one another in order to benefit from cheaper carbon reduction opportunities. As an early adopter of carbon pricing and low-carbon technologies, the UK is starting to reap a competitive economic advantage over other countries which have been slower to reduce their dependence on fossil fuels.”³⁴

Social attitudes towards energy policy

Respondents unanimously agreed that citizens generally have very limited knowledge about energy-related issues. Switching rates between suppliers of electricity and gas have been relatively low in the UK, despite the widely publicised potential for financial gain. This was viewed as proof that “people did not want to engage with energy”. One respondent suggested that the introduction of smart meters that offer ways of tracking and analysing the use of electricity may drive greater interest in energy.

Several respondents drew attention to the very widespread negative perception of energy suppliers who were blamed for rising prices. The stereotypical perception, summarised by one respondent, is that supply is dominated by “big companies, all in a cartel together, ripping off small consumers and that the whole lot should be nationalised”. According to a YouGov public opinion poll carried out in the second half of 2013, “68% of the public say that energy companies should be run in the public sector, while only 21% say they should remain in private hands”.³⁵ Even

³⁴ *Fuelling the debate: Committee successes and future challenges*, 10th Report of the Energy and Climate Change Committee, 12 March 2015, point 29.

³⁵ Nationalise energy and rail companies say public, <https://yougov.co.uk/news/2013/11/04/nationalise-energy-and-rail-companies-say-public/> Accessed: 2 April 2015.

amongst Conservative voters, the majority (52%) pronounced themselves for renationalisation. This demonstrates that the cornerstone of British – and EU – strategy, namely the liberalisation of the energy market, is not seen as beneficial by the vast majority of citizens.

The relative distrust of suppliers goes hand in hand with worries regarding prices and stable supply: in a survey commissioned by the Department of Energy and Climate Change, 76% of citizens expressed concern over steep rises in energy prices in the future, while 49% were concerned about power cuts becoming more frequent.³⁶

Respondents were in agreement that a significant majority of the British public appreciates the importance of the fight against climate change and accepts the idea of an energy transition. A report of the UK Energy Research Centre, which summarises an extensive study of public attitudes towards the energy system, contends that “the British public expects change with regard to how energy is supplied, used and governed”. The preferences for that change include “a strong commitment to renewable forms of energy production and a corresponding shift away from fossil fuels. On the demand-side it relates to the development of technology and infrastructures (e.g., public transport, demand management, electric vehicle charging points) to support changes in lifestyles, with an overall goal of improvement in energy efficiency and reductions in energy demand.”³⁷

The increasing prominence in political debate of the issue of energy transition might stimulate public interest, according to some respondents. However, it is difficult to assess the extent to which public support for the energy transition translates into the acceptance of increased costs. Energy prices were held to be the primary concern for citizens and the key driver of energy-related choices. A more nuanced view on this issue can be found in the report of the UK Energy Research Centre mentioned above. Its authors claim that “for publics it is more about affordability than lowest cost. The cheapest option is not necessarily preferred if that option comes with other undesired attributes, e.g., fossil fuel reliance.”³⁸ The public is considered to be ready to spend more – within individual means – on clean energy. “The British public is aware that we are going

36 DECC Public Attitudes Tracker, Wave 12, February 2015.

37 Ibidem, pp. 3-4.

38 K.A. Parkhill, C. Demski, C. Butler, A. Spence and N. Pidgeon, *Transforming the UK Energy System: Public Values, Attitudes and Acceptability – Synthesis Report*, 2013, UKERC: London, p. 2.

through an energy transition towards a clean energy system. They want engagement in that process, they want more discussion about it, but nobody is going to say that they want to pay lots of money for decarbonisation,” argued one respondent.

Public opinion polls show very high levels of support for generating electricity from renewable energy sources (78%), while support for nuclear energy is significantly lower at 42%. The British public remains divided on shale gas: the largest group (45%) has no opinion about its extraction, while opponents and supporters are almost equal in number (27% and 24% respectively).³⁹

The majority of respondents doubt that the conflict between Russia and Ukraine, and potential problems of supply that some EU members states fear, matters to British citizens. “A strongly nationalist rhetoric has had some resonance recently, and I believe the imperative of helping out other countries that face problems with supply would not be so self-evident to some members of the British public.”

Overall, respondents’ opinions as well as data from public attitudes surveys suggest that the British public expects some improvements in the functioning of the energy market. The evolution towards a decarbonised energy mix enjoys public support, yet there are fears of growing prices and doubts whether a market organised around private companies can deliver the desired results.

Conclusions

Interviews with representatives of key stakeholders in the UK energy sector show that a renewed focus on energy policy is viewed in a positive light and that there is widespread belief that the planned Energy Union could bring much-needed improvements in this area. The two principal priorities of the British government in the Energy Union discussions are further liberalisation of the EU energy market and the fight against climate change (through decarbonisation). The EU should, above all, follow the path charted by the Third Energy Package and do so in a way that favours the creation of a decarbonised energy sector. There is widespread support for removing legal barriers to trade in energy and establishing more interconnections between national energy networks to make this

39 DECC Public Attitudes Tracker, Wave 11, November 2014.

trade physically possible. A liberalised energy market in which there are no barriers to flows and trade in energy is perceived as the best way to guarantee secure supply and more affordable energy. Proposals such as collective purchases of gas or the creation of an EU-managed strategic storage are generally viewed with reservations: they are seen as short-term measures that might be considered, but their long-term significance is in doubt as they complicate the functioning of the liberalised market and perpetuate fossil fuel dependence.

There is wide support for extra-market measures that will make energy supply more climate-friendly. All respondents strongly emphasised the urgent need to reduce greenhouse gas emissions and the fact that reform of the EU ETS was a precondition for doing this. With the price of carbon emissions at their current low level, attracting investments in low carbon technologies is complicated, if not impossible. A reformed ETS should be supported by a system of subsidies for renewables that will accelerate their development and create conditions for competition with the more developed sources of energy.

The UK government aims to create a diversified energy mix in which renewables coexist with low-carbon energy such as nuclear energy and gas. This path is seen to offer the best guarantee of security of supply and a non-disruptive transition to a decarbonised energy system. To further diversify the mix and, above all, to eliminate unabated coal as quickly as possible, the UK government is determined to develop new sources and technologies such as shale gas and CCS.

The UK government and the majority of political elites seem to perceive the Energy Union as, above all, a step that completes a process of market liberalisation that is already well-advanced. The political parties, and the Conservatives in particular, are fearful that if the project takes on a broader scope, this could be a pretext for the European Commission to vie for additional competences – an unacceptable outcome for the UK government. The power to shape the energy mix should remain the preserve of member states. The green community, on the other hand, hopes that the debate on the Energy Union will lead to a more thorough rethinking of the energy system. Respondents from this side advocate paying more attention to renewables and energy efficiency as investment in such areas will provide the greatest long-term benefits. They question the aspects of the Energy Union which are, in their eyes, tailored merely

to improve the current system – and the dominance of fossil fuels and nuclear energy – rather than to transform it. This will perpetuate its drawbacks and constrain the capacity of making the most of renewable sources.

Respondents agreed that unabated coal has no future in energy mixes, while many, including those from environmentalist circles, noted the importance of further research into CCS technology. A large number of respondents called for paying more attention to demand-side management and energy efficiency. These often underestimated aspects offer ample opportunities for reducing demand for energy while being much less disturbing for the energy system than the transformation of the supply-side.

There were numerous calls for a more holistic approach. The European Commission is expected to ensure coherence between actions in various policy areas as well as between short-term and long-term goals. This would guarantee the most effective use of the limited means at member states' disposal. Finally, the interviews underline the critical importance of developing a clearly defined long-term strategy. There is widespread concern about a lack of clear direction for cooperation on energy and about constantly shifting EU priorities. This creates an atmosphere of volatility, confuses investors and entices member states and other players to look for their own solutions rather than commit to pan-European cooperation.



The revival of the debate around the energy-related problems of the European Union, provoked by the Polish proposal of 2014 to create an Energy Union, demonstrates that the subject is widely considered to be significant. This conclusion is supported by opinions of experts and stakeholders gathered by the Institute of Public Affairs in four countries: France, Germany, Poland, and the United Kingdom. The functioning of the internal energy market does not meet expectations and it seems that it is only through concerted efforts of member states – a coherent European strategy – that the most pressing problems can be addressed effectively. The discussion has moved beyond the issue of security of supply of energy sources from abroad, which was its focal point at the time of the Polish proposal. The Framework Strategy published by the European Commission in February 2015¹ is a broad project that reflects an ambition to transform the European energy market. Can the Commission's far-reaching plans succeed?

The first part of the chapter summarises the opinions of respondents from the four countries analysed, focusing on similarities and divergences on crucial issues. The second presents some general remarks, inspired by the interviews, regarding the future of the Energy Union.

Achieving secure energy supply

Problems related to secure supply of energy from abroad were the main reason that catapulted energy to the top of the EU agenda. These problems were also the central issue of the Polish non-paper that could be considered a catalyst for the Energy Union project. Poland called for better coordination of emergency plans, standardisation of intergovernmental agreements and granting the Commission more powers to scrutiny the latter. The Polish proposal that provoked a heated debate was the introduction of collective purchases of gas. It was supposed to boost the bargaining power of EU member states and prevent exporters of energy,

¹ A Framework Strategy for a Resilient Energy Union with a Forward-Looking Climate Change Policy, COM(2015) 80.

Russia in particular, from manipulating prices for political purposes. The proposal was met with a rather firm rejection in political and economic circles in Western Europe. Many claimed that collective purchases would complicate the accomplishment of the central objective, namely the creation of a liberalised internal energy market. The idea that collective purchases will result in lower prices was questioned, while they were seen as a move that could further antagonise Russia. Energy companies perceived the proposal as an unnecessary constraint on competition on the free market. Opinions were also voiced that it would be difficult to find, or create, a body that could negotiate with suppliers on behalf of states and companies.

The dominant opinion in France, Germany, and the United Kingdom is that steps taken in recent years (adoption of the regulation on security of gas supply) have addressed the most pressing issues and enable the EU to deal with sudden supply interruptions effectively. The suggestions to seek greater diversification and invest in infrastructure in order to reduce the energy isolation of some member states are supported, but ideas to modify the process of concluding agreements or purchases of gas inspire little enthusiasm.

Russia's strategy of seeking political influence through economic pressure meets with criticism not only in Poland, but also in Western Europe. Even though France, Germany, and the United Kingdom have not experienced serious problems in energy cooperation with Russia, they appreciate the vulnerable position of Central and Eastern European states. They are convinced, however, that Russia remains an indispensable partner for the EU, with whom a modicum of understanding can be found.

The thinking on energy security is clearly determined by the problems experienced by states in this domain. France, Germany, and the United Kingdom enjoy a diversified supply of gas and oil and are not directly affected by the problem of reliance on a single supplier. When considering the problem of energy security and import dependence, the majority of respondents in these states focus on issues other than relations with suppliers. An integrated energy market is considered the key to greater energy security, which will open the door to greater diversification of supply and unconstrained transfers of energy between EU member states. Energy efficiency and development of indigenous energy sources are also ascribed great importance. In the UK and – above all – France,

nuclear energy is mentioned in this respect, while Germany focuses on the development of a diversified assortment of renewable energy sources.

Polish respondents, who have first-hand experience of the negative consequences of reliance on a single supplier, tend to highlight other aspects of the problem. They expect greater solidarity and support from EU institutions and the member states that enjoy diversified and secure supply. The majority of Polish respondents were disappointed to see the Energy Union project become a more multifaceted undertaking. They fear that their priorities, related to energy imports, will lose their importance among the plethora of objectives and targets. The evolution of the project was welcomed by stakeholders in France, Germany, and the United Kingdom. In these countries it is the internal dimension of energy security that is considered a priority. The problems related to the functioning of national and European energy markets can endanger the stability of energy supply.

A competitive and integrated energy market

Respondents from France, Germany, and the United Kingdom agree that shortfalls in the functioning of the internal energy market constitute the greatest challenge for energy security. Problems provoked by the necessity to integrate a growing amount of energy from renewable sources, shortage of funds for necessary infrastructural investments, low energy price on the retail market and a high price for final customers, and short-sighted national policies that provoke problems in neighbouring countries –were the main problems mentioned by respondents. Representatives of energy companies and industry drew attention to the fact that high energy prices coupled with demanding environmental standards weakened the position of European companies on the global market and contributed to the growing risk of carbon leakage.

Full implementation of the Third Energy Package is commonly perceived as the most pressing goal and a stepping-stone to more complex common initiatives in the field of energy. The implementation should facilitate cross-border trade in energy and stimulate competition. Considerable importance was ascribed to network codes in this context. When adopted, they would greatly simplify the formalities related to cross-border flows. These ideas are backed also in Poland, although Polish respondents doubted the

likelihood of their speedy execution, claiming that member states, contrary to declarations, are not in a hurry to open their markets out of fear of uncontrolled imports (that criticism was also directed at Poland).

Respondents were in agreement that the legal framework needs to be complemented by new infrastructure. New investments should open the door to a more diversified supply (pipelines and LNG terminals), eliminate the energy isolation of some member states, and facilitate cross-border flows. Gas infrastructure is seen as a short-term priority: a necessary condition for putting an end to the total energy dependence on Russia of some member states. Respondents from Western Europe stress at the same time that it is the development of electricity infrastructure that constitutes a remedy for their problems. Some respondents, in France in particular, insisted that infrastructural investments should be planned very carefully in order to avoid starting too many projects that after completion would not be fully used. The example of Germany, where a conflict between the North and the South blocks the development of the energy grid, suggests that member states may diverge on the issue of transmission infrastructure. Environmentalist circles in turn contest the idea of significant new infrastructure for fossil fuels, arguing that their share in energy mixes should be limited.

Respondents often argued that full implementation of existing laws and scrutiny of their effects should precede any further legislative activity. Some respondents mentioned coordination of capacity mechanisms and national schemes for subsidising renewables as a potential next step for integration in the area of energy. The idea to strengthen the European Commission or ACER was generally received with some reservations. In British political circles, in particular, there is widespread conviction that the Energy Union cannot entail changes to the balance of power between member states and community institutions. In France, the benefits of soft instruments were often highlighted, such as greater exchange of information between member states or even peer reviews of national energy policies. The German government also expects a better coordination of national policies. The Commission was often urged to ensure better coherence between various aspects of energy policy.

The majority of respondents drew attention to the fact that the free energy market is constrained by a number of mechanisms. There were differences, however, in how respondents assessed this situation. While

environmental organisations, as well as the German government, call for elimination of subsidies for fossil fuels, respondents representing the energy industry and business circles tend to underline the necessity to gradually limit subsidies for renewable energy sources. These respondents also suggested that funds should be concentrated on the most advanced and viable technologies. There is widespread agreement, however, that the existing policy framework should be aligned with climate targets (the cost of CO₂ emissions imposed by the ETS should be high enough to encourage investment in renewable technologies).

A sustainable energy market

The fight against climate change and the need to decarbonise energy generation is commonly seen by British, French and German respondents as a priority of the Energy Union. Divergences appear around the pace and most effective means of moving towards a decarbonised system. The swiftest evolution is advocated by environmentalists, who argue that even though a decarbonised system of energy generation demands some investment at the moment, in the medium and longer term it will not be more expensive than the current system. Business circles, on the other hand, warn that high energy prices create increasingly difficult conditions for European firms. Even though they do not oppose decarbonisation, they contend that this objective cannot entail a parallel process of deindustrialisation. Governments aim to establish diversified energy mixes in which renewables will be complemented by nuclear energy (France, UK) and gas (all analysed states). Gas in particular is described as a key source for the transition to a decarbonised system, making it possible to move away from unabated coal that generates considerable emissions. Respondents in Western Europe insist on the urgent need to eliminate unabated coal from energy mixes. Coal could be used only if carbon capture and storage technology becomes viable and could be deployed on a large scale.

Polish respondents question the tendency to consider energy policy and climate policy as inextricably linked. Emphasising the significant cost of the latter, Poles demand that climate targets should be adopted with greater regard for economic and technical potential of member states as well as geopolitical conditions. Poles also determinedly defend

coal, claiming this source is the basis of energy independence. Instead of decarbonisation, Polish respondents tend to talk about “low-carbon economy”, demonstrating a conviction that the ambitions of Western European governments are not realistic.

The British government contends that emissions reduction should be the main goal of the European climate policy. The two other principal goals – related to renewable energy generation and energy efficiency – however important, should not be binding on individual member states. Granting member states an adequate degree of freedom and relaxing the additional burdensome obligations (such as achieving a certain share of electricity generation from renewable sources) is the best way to decarbonise cost-effectively. Similar opinions were voiced by some French analysts. The French and German governments, on the other hand, stress the necessity to ensure that individual member states will take adequate steps that will lead to achievement of the EU-wide targets for renewable energy generation and energy efficiency.

The importance of energy efficiency is widely recognised. Respondents pointed to a vast array of measures that could contribute to reducing demand for energy while at the same time stimulating the economy (e.g., working on improving the isolation of buildings). It was often emphasised that proper demand-side management can contribute to more effective use of energy and easier management of generation and distribution. Thanks to smart meters, customers will get access to data that will enable them to adjust their consumption to supply. This will benefit customers financially while making it easier to manage the energy system and make greater use of intermittent renewable sources. Demand-side management and energy efficiency have received relatively little attention in Poland.

There is widespread agreement in Western Europe that the Emissions Trading System needs urgent reform. Cheap allowances mean that there is practically no incentive to give up coal and invest in renewable technologies. The reform should therefore be designed to increase the price of allowances and create a mechanism that would guarantee its stability. A reformed ETS would significantly reinforce the decarbonisation strategy, charted by the 2030 targets for climate and energy, and thus create more certainty for investors. Such proposals meet with opposition in Poland where the prospect of more expensive allowances is viewed as a danger for the industry powered mainly by high-carbon coal.

Creating a coherent and credible European emissions reduction framework is commonly seen as a necessary condition to encourage other countries to boost their efforts aimed at mitigating climate change. Western European governments and environmental circles are convinced that the EU has to remain at the heart of global climate negotiations, leading by example and encouraging other participants to accept ambitious targets. However, industrial circles and some analysts advocate a more cautious strategy. Critics argue that a strong push to reduce emissions has a negative impact on the economic situation, while the global effect of European efforts to reduce emissions is relatively limited. This viewpoint dominates in Poland, where respondents emphasised that the goals of the EU climate policy should be proportionate to pledges made by other states.

Social attitudes towards energy policy

Respondents from all analysed countries believed the even though popular knowledge of energy-related issues was still limited, they had been attracting growing interest. Increasing energy price was said to be the main reason for public attention, prices being the central reference in popular thinking on energy. It is worth mentioning that in the UK, where the energy market is most liberalised, energy companies are strongly distrusted. There is widespread belief that they dictate excessively high prices and the idea of renationalisation of the energy sector enjoys solid support. With greater liberalisation being one of the main aims of the European Commission, public attitudes in the UK should be carefully analysed.

In all of the analysed countries, renewable energy sources enjoy strong popular support. Yet, according to experts, it is difficult to judge to what extent this support translates into readiness to accept higher energy prices. The example of Germany, where the *Energiewende* is backed by the majority despite having provoked price hikes, suggests that the support for clean energy entails readiness to accept greater costs, at least to a certain extent. Studies carried out in the UK also show that the majority prefer renewable energy even if it is more expensive. That being said, it is difficult to predict whether the same attitudes will dominate in the poorer societies of Central and Eastern Europe.

Social views are much more divided regarding conventional energy sources. In France and the UK, supporters of nuclear energy outnumber opponents only by several percentage points. In Germany nuclear energy is rejected, while studies in Poland have yielded different results.²

Even though environmentalist organisations draw attention to moral problems related to purchasing energy from authoritarian states that do not respect human rights, this issue does not provoke widespread social concern. Experts claim that people pay little attention to the geographical origin of the gas and oil that they use. Russian aggression against Ukraine is considered not to have provoked a shift of attitudes on this issue.

The future of the Energy Union

Analysis of the assessment of the Energy Union project by political and economic elites in the four countries shows that stakeholders in Western Europe present a very similar diagnosis of the main shortfalls of the European energy market and – on the most general level – ways to tackle them. Environmentalist organisations stand out from this large consensus, calling for a swifter energy transition and questioning large investments in the so-called high-carbon infrastructure as well as support for energy generation from fossil fuels. In Poland, the fact that the Energy Union has become a broader initiative, and thus is less focused on the issue of imports of energy sources and relations with suppliers, is viewed with disappointment.

An overview of reactions and expectations in member states suggests that the Framework Strategy published by the European Commission in February 2015 reflects rather well the dominant opinions on the most pressing challenges. It is, however, a general document that formulates a large number of priorities which might sometimes turn out to be difficult to reconcile. The measures needed to achieve the goals spelled out in the document may become the object of discord between member states.

The idea to complete the internal energy market through full implementation of the Third Energy Package, adoption of network codes, and development of interconnections enjoys solid support. This process

² Polls carried out by the Public Opinion Research Centre show a steady domination of opponents of nuclear energy. Yet, several recent studies (e.g., ones commissioned by the Polish Institute of International Affairs and the Ministry of Economy) revealed that supporters of nuclear are in the majority.

is expected to develop in a way that is compatible with the objectives of climate policy and that will not result in further price increases. Yet, the completion of the internal market is just the achievement of aspirations declared a long time ago, while the majority expect the Energy Union to be something more than a mere re-launch of a well-known agenda.

The general support for integration of energy markets is accompanied by apprehension concerning possible negative consequences of this process, such as markets being thrown out of balance by sudden influx of energy from neighbouring countries. Governments, as well as representatives of the energy industry, often seem convinced about the optimal construction of their energy system – or, as in Poland, about the fact that a comprehensive transformation of the system will be impossible in the short to medium term – and are reluctant to see more outside interference. Moreover, neighbours' energy choices are often criticised. The majority seem to welcome cooperation only inasmuch as it does not involve the necessity to move away from the existing model. Hence, it is likely that more ambitious objectives of the Energy Union, such as coordination of capacity market mechanisms or issues related to renewables (subsidies, access to the grid, cross-border flows), will be difficult to achieve.

The obstacles on the way to a more integrated energy policy evoke the painfully slow development of the common foreign policy. Virtually everyone seems convinced about the benefits of collective action and greater integration. Yet, building consensus around common goals and – above all – concrete actions that lead to their accomplishment proceeds slowly, as member states protect their independence, even if such an approach results in suboptimal outcomes.

The freedom to shape energy mixes – although somewhat limited due to climate targets – remains an important prerogative for member states that safeguards their independence. National mixes diverge as states seek energy stability through different combinations of energy sources. Some respondents claimed that differences in energy mixes constitute an obstacle to closer integration, while others tended to draw attention to the opportunities of benefitting from different potentials of states. One of the challenges for the Energy Union will be to improve coordination of national energy policies in the context of different energy mixes and – more importantly – different views on the drawbacks and advantages of various energy sources.

Greater regional cooperation encouraged in the framework strategy might yield some positive results. It could bring about convergence of energy policies and facilitate better common use of differing energy potentials of neighbouring countries. Successful regional cooperation might become an intermediate step towards the long-term goal of deeper EU-wide cooperation. However, in some cases (Poland and Germany) regional cooperation could be hindered by differences in energy market characteristics. It could also lead to prolonged regionalisation of the internal market.

There is consensus around the necessity to pay more attention to energy efficiency and demand-side management. The importance of these issues was highlighted by respondents from all quarters, especially in Western Europe. They stressed that often relatively inexpensive measures could bring tangible benefits in terms of emissions reduction and cutting imports. What is more, focus on energy efficiency can provide a boost to the EU's economy, from the building sector to that of advanced technologies, furnishing smart meters and smart grids. Stronger support for common R&D programmes was another idea that won unanimous support.

The need to adopt a more “holistic approach” to the analysis and implementation of the energy policy was mentioned by a large number of respondents. This watchword translates into several concrete suggestions. First, a more balanced approach is needed that appreciates the importance of demand-side management. Respondents also urged the Commission to ensure greater cohesion between various aspects of the energy policy (decarbonisation, security of supply, competitiveness). Another challenge is to maximise synergies between energy and other policy areas: foreign affairs, competition, transport, industry, and fiscal policy. Lastly, European energy policy must react quickly to changes in the economic and political international context.

Limiting the so-called silo mentality should make it easier for the European Commission to achieve its goals. However, as evidence from interviews suggests, establishing a widely accepted balance between various goals will not be easy. Opinions gathered in Poland clearly demonstrate that climate protection is not considered as highly there as it is in Western Europe. Energy companies and energy-intensive industry stress the necessity to create attractive conditions for new investments and to ensure the competitive advantage of European companies.

Environmentalists call for a much faster energy transition. Considering the divergences between stakeholders, the Commission will not only have to maintain cohesion between various energy policy dimensions, but also propose solutions that reconcile often quite different preferences.

The call for a broader outlook is not directed only at the European Commission, but also at member states. While masterminding their energy strategies, they are expected to pay due attention to how their decisions impact on their neighbours, and preferably discuss the most important choices with them.

The debates on energy are hindered by methodological intricacies around the cost of energy generation from various sources. Complex systems of taxes and subsidies, rapid technological progress as well as the existence of externalities leave a lot of room for interpretation when assessing the cost of energy generation. This problem was evident in interviews, as respondents voiced diverging opinions on the cheapest and the most expensive sources of energy – each participant being very sure of their judgement. A report commissioned by the French Agency for Environment and Energy Management provides a good illustration of this problem. To the surprise of many, the authors of the report contend that by 2050 France could generate 100% of its electricity from renewable sources at a cost comparable to that of the current nuclear energy-reliant system.³

Along with the Digital Agenda, the Energy Union is becoming a flagship initiative of the Commission, which is expected not only to reform the energy market, but also to revive the brittle public support for integration. Can the Energy Union project enthuse citizens? The high complexity of energy-related issues will not make it easy, but widespread public backing of renewable energy creates favourable conditions for the task. Furthermore, energy transition offers some room for individual entrepreneurship as citizens can look for profits by switching energy providers, using smart meters, or even produce energy themselves. Strengthened energy solidarity will be welcomed, especially in Central and Eastern Europe. A lot will depend on the attitude of member states' administrations, which can give in to the temptation of portraying energy market reform not as an opportunity for sustainable growth, but a costly obligation imposed by bureaucrats from Brussels. The problem of

³ Vers un mix électrique 100% renouvelable en 2050, Agence de l'Environnement et de la Maîtrise de l'Énergie (ADEME), 2015. ADEME is a public institution linked to the Ministry of Ecology and the Ministry of Higher Education and Research.

public support for energy transition should be examined with particular attention in Poland, where the transition is least advanced and will inevitably entail painful restructuring of the mining sector.

Calls for closer coordination and greater coherence of common actions lead to a discussion on the advantages of greater harmonisation of national policies and on community institutions' right to discipline member states whose actions are incompatible with obligations accepted in common. One could imagine that in a mirror image of the European semester, the energy policy of every member state would be subject to peer review, with the Commission being entitled to punish lack of progress towards the predefined objectives.⁴ Is an Energy Union that aims at more than just finalising some old missions possible without institutional reform? Evidence from interviews shows that member states are generally reluctant to see greater control over their energy strategies. Some analysts even emphasised that opening a debate on institutional changes would lead to a controversy and draw attention away from the core problems of the energy market. Thus, it seems that the Energy Union will have to proceed within the current institutional set-up.

The architects of the Energy Union will hope to advance the process of market integration, encourage member states to coordinate more their energy strategies, mobilise consensus around common goals and create a credible system that monitors progress. At the same time – and with due respect to community interest – favourable conditions should be created for member states to shape their energy policies in a way that permits taking full advantage of their natural, economic, and social potential. Evidence from the present study demonstrates that even though closer cooperation is commonly viewed as beneficial, striking a balance between greater harmonisation and space for diversity will be a challenging task.

⁴ A proposal put forward by E3G, University of Cambridge Institute for Sustainability Leadership, and the European Climate Foundation to make access to funds in the EU Connecting Europe Facility conditional upon delivery of country obligations under the Energy Efficiency Directive goes in this direction.



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