

Towards a common EU energy policy?

Debates on energy security in Poland and Germany

Dr. ANDREAS HEINRICH (Research Centre for East European Studies at the University of Bremen)

Dr. JULIA KUSZNIR (Jacobs University Bremen)

Dr. ALEKSANDRA LIS (Adam Mickiewicz University, Poznań)

Prof. HEIKO PLEINES (Research Centre for East European Studies at the University of Bremen)

Prof. KAREN SMITH STEGEN (Jacobs University Bremen)

Dr. KACPER SZULECKI (ESPRI, Wrocław and University of Oslo)

The recently proposed overarching concept of a European “Energy Union” stresses the importance of regional cooperation, as it has become clear that absent increased coordination and cross-border cooperation, more obstacles than synergies may emerge. Looking at Germany and Poland, this policy brief examines how discrepancies between European Union (EU) member states’ understanding and articulation of energy security impede the development of a common European energy policy.

Germany and Poland are both prominent in the EU’s energy debates. Although they face similar energy security challenges on many occasions, they often opt for diverging interpretations and policy solutions. While Germany has decided to phase out nuclear power stations and promote renewable energy instead, Poland is sceptical of the potential of renewables and considers construction of the country’s first nuclear power station. Similarly, Poland was enthusiastic about the potential of shale gas to increase energy security by reducing the dependence on energy imports, especially from Russia. Germany on the contrary has just passed legislation which is seen as putting the development of shale gas on hold in reaction to environmental concerns.

Whereas Germany and Poland can pursue diverging national policies concerning renewables, nuclear energy and shale gas as long as EU-wide harmonization is not required, in the case of gas pipelines and electricity interconnectors, actions by one country are seen as a direct threat by the other. The most controversial energy issue in German-Polish relations is clearly the construction of the Nord Stream pipeline, which allows for direct natural gas deliveries from Russia to Germany bypassing the traditional transit countries, among them Poland. That is why the then defence minister of Poland, Radosław Sikorski, linked the German-Russian pipeline agreement to the Ribbentrop-Molotov (Hitler-Stalin) pact. In the

summer of 2016 plans to expand the pipeline caused similar tensions. At a meeting with German chancellor Angela Merkel in June 2016, the Polish Prime Minister Beata Szydło explained that the Nord Stream extension is ‘an investment that will lead to a division of Europe’. Polish anti-trust proceedings later prevented EU companies from forming a joint venture with Russia for the Nord Stream II project.

Since discussions of energy security often move energy problems into the realm of strategic national politics and thus hold the potential to securitize any transnational relations, this policy brief examines how debates on energy security shape thinking about energy policy in Poland and Germany. In so doing, we can identify the most sensitive issues and potential points of divergence and convergence in thinking about energy policy in the two neighboring states.

Renewable energy

Poland and Germany have adopted very different approaches to renewable energy. Germany seeks a rapid transition towards renewable energy, with the goal of eschewing nuclear power in the short term and fossil fuels in the medium to long term. By contrast, Poland emphasizes the geopolitical dimension of energy supply and regards coal as fulfilling many of its short-term needs, with nuclear power – and eventually

specific economically viable renewables – regarded as complementary sources.

For Germany, renewable sources of energy are not considered a threat to energy security; rather, they are viewed as the way to achieve energy security. Some in Poland recognize the potential of renewables; however, for many, the implications of a renewable energy buildout are perceived as potentially risky for energy security. Not only are renewable energy sources considered expensive, unreliable and volatile, particularly relative to coal, but greater dependence on renewables is perceived as perpetuating Poland's energy dependence on foreign countries. Given its longstanding dependence on Russian gas and oil supplies, many in Poland are wary of developing new dependencies on foreign technologies (e.g., from Germany), particularly if the deployment of renewables disadvantages incumbent domestic actors. For example, the economic, social and political costs of moving away from coal, an industry employing 100,000 people, are considered exorbitant. A greater share of renewables in the Polish energy mix would also require expanding and modernizing Poland's transmission infrastructure, which would generate substantial additional costs.

Germany is also concerned about the costs of transitioning to renewable energy and the economic impact on German industry and household consumers, especially the poor. It must be noted, however, that the discussion of costs – as well as of greater volatility and the risk of blackouts – has often been conducted in relation to Germany's unique approach of transitioning to renewables while rapidly phasing out nuclear power. Other concerns, more directly related to renewable energy, are the need for a massive and rapid expansion of Germany's transmission infrastructure.

A stark contrast between the German and Polish discussions of the problems associated with renewables sources of energy is that German media and experts highlight, with greater frequency, the positive aspects of renewables, such as gains in technological leadership and the creation of new jobs. A surprising similarity is that the climate implications of different energy sources have appeared infrequently in both German and Polish media and in the interviews (as noted in recent scholarship, perhaps energy security still pertains more to reliability and costs than to environmental friendliness). Another similarity is that both countries are struggling to find the most suitable policy measures to expand and support renewables. In Poland, a widespread perception is that current policies have primarily benefited major industry players. In Germany, the lack of policy harmonization across the

various ministries was often cited as a problem, in addition to the lack of coordination between the regional (*Länder*) governments and the federal government.

In the interviews, decision-makers and experts from both countries had, with some caveats, favorable views of greater bilateral energy cooperation. German interviewees recognized that Germany's unwelcome shuttling of excess electricity to the Polish grid ("loop flows") caused problems for Poland. The disagreements over climate and nuclear policy were also mentioned several times. Polish experts emphasized that Poland could learn from Germany's transition to renewables and indicated that local communities were highly interested. At the national level and in the business community, however, there is concern that Germany is interested in spreading its transition as a way to promote its own industries and to further its technological dominance. From the Polish perspective, a transition to renewables would be more feasible if Germany – and the EU – took greater consideration of Poland's political, economic and social conditions and helped to ameliorate any negative consequences. For experts in both countries, a transition to renewables would be facilitated by greater policy coordination – within national borders and across them.

Nuclear energy

Concerning the future of nuclear power stations, Poland's and Germany's domestic discussions are also quite distinct. They have different points of departure and different concerns. While, in the 1950s and 1960s, both countries experimented with nuclear reactors, only Germany proceeded to large-scale industrial civilian use of atomic power. First, the GDR constructed the Rheinsberg nuclear power plant (NPP). The Federal Republic of Germany followed suit. After reunification, only Western German reactors were kept operational. A gradual nuclear phase-out had been on the table since the 1980s, but it was only in 2011, in the aftermath of the Fukushima Daiichi accident, that the decision to "step-out of nuclear" (*Atomausstieg*) was made – the last plants are set to go offline in 2022. In Poland, plans of building an NPP took concrete shape in the late 1970s, and in the 1980s, construction began at the Żarnowiec site near Gdansk. However, construction was halted in 1990, and a moratorium on nuclear energy was introduced after years of grassroots societal protest on site and across the country. The idea of building an NPP returned after 2005, and after 2009, the Polish Nuclear Program was launched, with the aim of constructing two reactors by the mid-2020s, possibly again near Żarnowiec.

In Germany, concerns over reactor safety contend with doubts as to whether the nuclear phase-out can be conducted without having an impact on broader national energy security and whether environmental security and climate mitigation efforts will not be compromised by a move to preserve coal and lignite baseload generation. In Poland, reactor safety and nuclear waste management are both hypothetical issues, whereas the rationality of constructing the country's first NPP is framed in terms of energy independence, modernization and economic viability.

In the Polish media, nuclear energy is presented as an answer to the country's energy dependence problems – often in relation to Russia (though gas and nuclear are not necessarily substitutes in the Polish energy mix). The referent object of security is therefore the nuclear project itself – and the two key “threats” or challenges mentioned are low societal acceptance of nuclear energy and mounting investment costs. The Polish government initiated a substantial media campaign intended to persuade the relevant societal groups (local communities and undecided citizens) to support the nuclear project and accept the national security and modernization rationale.

As a representative of the then Department of Nuclear Energy in the Ministry of Economy claimed, “a country on the economic rise, especially one like Poland, cannot afford a relatively expensive investment only because of whims. There are really serious reasons behind it. One of these reasons is our conception of energy security, the need to diversify [sources], as well as the structure of energy production in the power system”. The project's rationale and the adequacy of governmental involvement is, however, questioned by others: “One sometimes wonders whether this program is really thought through by the government”, as a lawyer working on nuclear legislation noted. Project delays and economic security from societal and national perspectives are cited as important concerns.

In Germany, the nuclear discussion is considerably more politicized – and this is reflected in the scale and heat of the media debate. Here, the main challenge cited for the country's energy policy is import dependence and also, importantly, climate change. Nuclear energy in this framing becomes part of the problem, not a solution – introducing security issues of its own linked to reactor safety and nuclear waste management. Nuclear phase-out in turn raises concerns about costs, potential increases in electricity prices, and the volatility of renewable energy sources compromising the stability of the energy system.

The two national perspectives – or at least the dominant positions that can be derived from the broader

debates – are difficult to reconcile. In Germany, anti-nuclear sentiments are strong and the political consensus on either gradual or rapid phase-out is broad. German citizens and environmentalist organizations also contested the Polish nuclear project by sending hundreds of protest letters to various authorities, usually citing the Aarhus convention on transnational environmental impact assessment. What is perceived in Germany as a rational move to reduce unnecessary risks and remodel the energy system and the economy seems, from a Polish perspective, anything but rational. “I think in Poland we have a society which is reasonably rational, while what we see in Germany is, to me, an aberration in logic. There is no place for discussion, and in a democratic state there should always be place for a discussion. In this debate, having an opposite view stands for backwardness,” claimed a Polish energy expert who participated in a 2013 German-Polish discussion on nuclear energy policy in Berlin.

The Nord Stream gas pipeline

Even more controversial is the debate on the Nord Stream gas pipeline, which offers Russia the opportunity to supply gas directly to Germany through the Baltic Sea, completely avoiding transit countries in Central and Eastern Europe, including Poland. Whereas, in principle, Germany and Poland could pursue diverging policies concerning renewables and nuclear energy, in the case of gas pipelines, actions by one country are seen as a direct threat by the other.

In Poland, the discussion of the Nord Stream pipeline – in the media and in parliament across all party lines – has been overwhelmingly negative. Nord Stream is seen as politically motivated and a threat to Poland's energy security. Compared to Germany, there has been a much larger debate in the Polish parliament. With no positive mention of the Nord Stream pipeline, the main threats directly associated with the pipeline's construction were economic in nature, followed by political risks. It has been argued that Russia would be able to interrupt gas deliveries to Poland without harming Germany and other Western consumer countries as soon as pipeline construction is complete. Additionally, the construction of Nord Stream would result in environmental damage, a loss of transit fees for Russian gas presently transported through Poland and blocking the harbor entrance for larger vessels in Świnoujście (which would in turn hamper the diversification of energy supplies). In the Polish media's reporting, the main threats perceived from the Nord Stream pipeline were political, followed by economic and environmental risks, with only a few

references to technical risks.

The German discussion of the Nord Stream pipeline has been more positive, and the project has often been presented as an alternative transport route that avoids transit countries and, therefore, increases Germany's energy security. Dissenting voices have primarily highlighted the environmental risks involved in the pipeline's construction, the damage to German relations with Poland and the Baltic States, which strongly oppose the pipeline, and increasing dependency on Russian gas deliveries. In the German parliament, there was only a minor discussion of the Nord Stream pipeline. While the various government coalitions have generally favored the pipeline (irrespective of the political parties involved), the Green Party (in opposition since soon after the pipeline contract was signed in autumn 2005) has been the most critical.

In German media reports, the pipeline has been criticized as a political project to exert pressure on transit countries for Russian gas and for its damage to relations with Poland and the Baltic States. The pipeline was also seen as increasing Germany's dependence on Russian gas imports, while risking environmental damage to the Baltic Sea; Nord Stream would also be too expensive relative to alternative pipelines on land.

In summary, the emotional Polish debate over the Nord Stream pipeline has clearly focused on a perceived threat that links most risks directly to fears of Russian-German rapprochement at the expense of Polish interests. The much less agitated German debate has focused on environmental risks, while references to political risks are largely a conscious reflection of Polish concerns.

Based on the analysis of the domestic Polish debate and the EU's concept for an Energy Union, one can argue that the Ukraine crisis of 2014 in combination with the promotion of Donald Tusk from the Polish premiership to the presidency of the European Council provided a window of opportunity for the Polish threat perception to inform the approach of the EU towards energy security.

In this context, it is all the more telling that Gazprom's 2015 proposal to expand the Nord Stream pipeline has created a strong sense of *déjà vu*. The German government claimed that the pipeline extension is an economic and not a political project, and in its answer to an official inquiry by members of the parliamentary faction of the Green Party, it stated in April 2016 that "Gazprom's position on the European domestic market depends first of all on the competitiveness of Russian gas deliveries in competition with other suppliers". Polish demands to

build the pipeline on land across Polish territory were countered with the contention that the Nord Stream consortium is free to make its commercial decisions.

Tusk, however, claimed that the Nord Stream extension does not meet EU energy rules on supply diversification and would undermine Ukraine's role as a gas transit state. At a meeting with German chancellor Angela Merkel in June 2016, Polish Prime Minister Beata Szydło explained that the Nord Stream extension is "an investment that will lead to a division of Europe." In reaction to Polish anti-trust proceedings, the companies involved in the Nord Stream II project decided in August 2016 against forming a joint venture to build the expansion pipeline. But independently of the fate of the project, this episode clearly indicates that Polish and German perceptions of energy security in relation to Russian gas supplies are as contrary as ever.

Shale gas

Shale gas has generated numerous controversies and hopes in in Europe of late, as reflected in energy debates in Poland and Germany. While Poland embarked on the shale gas project with great enthusiasm, Germany adopted a considerably more cautious approach, heedful of environmental risks and public opinion. In Poland and Germany, two issues intertwine: the availability of shale gas as a resource and the technological risks of hydraulic fracturing (or fracking). Accordingly, we can distinguish between debates on the role of shale gas in energy security and on the environmental risks of the use of hydraulic fracturing. While the former emphasis has dominated Polish debates, the latter is clearer in discussion of shale gas in Germany.

Polish media have chiefly reported on shale gas in relation to Poland's dependence on Russian gas supplies, particularly during the early debates in 2011. Russia was often reported as a potential threat to Poland's energy security. However, the same level of attention was devoted to hydraulic fracturing as a threat to the environment that could cause water contamination and environmental damage. In Germany, media reporting on shale gas related to the problem of climate change and the volatility of renewables. The main threats/risks reported in the German media in the context of the shale gas debate were dependence on energy imports, high gas prices, environmental and landscape damage and CO₂ emissions. The last point was never mentioned in the Polish press.

Expert interviews conducted in Poland revealed a pragmatic approach to the role of shale gas in enhancing Poland's energy security. Interviews were conducted in 2015 and 2016 once the first wave of

enthusiasm for shale gas in Poland had ebbed after several global upstream oil and gas companies had left Poland. Polish experts expressed the shared opinion that more exploration and research is needed to realistically assess the volume of commercially available gas in shale rock formations. Therefore, the most frequently reiterated recommendation was to conduct more exploration on the ground and learn as much as possible about the properties of the shale rock in Poland. By June 2016, approximately 70 exploration wells had been drilled, whereas approximately 200 wells are needed to assess commercially viable shale gas resources in Poland. In Germany, a common recommendation was also to conduct further research on shale gas but mostly concerning environmental impact assessments of the exploitation activities. Until the risks are better known and quantifiable, the moratorium imposed by the German government was considered a good approach.

However, the Polish National Geological Institute has conducted the only existing empirical studies in Europe measuring various impacts of shale gas exploration on the environment. However, this did not translate into environmental legislation devoted solely to unconventional fossil fuels in Poland, and according to experts from the Polish National Geological Institute, the problem of post-fracking waste management remains unsolved in Poland. Respective legislation was drafted in the German Bundestag and was ultimately passed in June 2016. Interviewed experts presumed that this legislation would more strictly regulate the exploration of tight gas in Germany, which offers greater potential in terms of accessibility, acceptability and volumes than shale gas.

In both countries, the interest in shale gas has faded due to lower oil and gas prices. Hydraulic fracturing is an expensive technology, and with oil prices below 50 US dollars per barrel, shale gas no longer enjoys a competitive advantage. Still, the Polish government has prepared legislation on the taxation of unconventional fossil fuels and amended the Polish geological law to create the conditions for a revival of the shale gas project once the prices of oil and gas increase on global markets.

Interconnectors

Both Germany and Poland are experiencing problems with the existing electricity infrastructure. In Poland, the transmission and distribution grids are in poor condition, undercapitalized and, in many regions, too scarce to serve the population and industry. In Germany, the decades of separation between the West and East remain visible, as the few existing links

between the territories of the two former German states resemble interconnectors between separate national systems. This is becoming a growing problem in the context of expanding renewable deployment – often in areas of low population density and poorer power infrastructure. Combined with a trading system that does not reflect actual power flow possibilities – having not only Brandenburg and Bavaria in the same bidding zone, but also Baden-Württemberg and Austria – this results in frequent uncontrolled electricity “loop flows,” whereby power moves from Germany’s northeast to the south through the Polish grid.

Though Polish journalists and experts often accuse the German side of not devoting adequate attention to the problem, the debate on interconnectors and transmission grids is actually considerably more prominent in the German than in the Polish media. Of the 1457 German media articles referring to the electricity system analyzed in our project, a large portion mentioned various types of technical threats to the system, mostly an inadequate grid, the possibility of blackouts and problems inflicted on neighboring systems. Much of this is blamed on “unmanageable” renewables (at least by the conservative media).

The most frequently proposed solution is the simple “negative” one – separate the two energy systems. Since it is impossible to cut the connection, phase shifters were installed on the two German-Polish links, under pressure from the Polish transmission system operator. “Positive” solutions would include expanding transmission infrastructure on both sides of the border and adding new interconnectors. That, however, is difficult for economic and political reasons, as increased trade would drive the more expensive sources out of the market. These were formerly German, but in recent years, wholesale energy prices in Poland have been constantly higher than those to the west of the Oder. A more radical governance move would require dismantling the current bidding zones and establishing a flow-based, transnational capacity coordination mechanism – in which parts of Germany and parts of Poland would be treated as elements of the same system. Although this solution might be the most rational from the perspective of system stability, expanding renewables and social welfare, it is also politically controversial, as it would require both states to abandon considerable sovereignty over their power systems.

Conclusions

The analysis of reporting by major media outlets reveals that Germany and Poland have markedly different energy security concerns. In general, Germany prioritizes technological innovation and the stability of its electricity system and transmission networks, whereas Poland focuses on self-sufficiency and independence from foreign influence, especially from Russia and Germany. However, as indicated by in-depth interviews with German and Polish energy experts (politicians, government officials, as well as think-tank and industry representatives), the two countries share the “triangle” definition of energy security as comprising supply security (reliability), sustainability (environmental friendliness), and competitiveness (affordability).

Interestingly, energy security debates on NPPs and shale gas conflate discussions of two separate issues – safety and security. In both the Polish and German language, the two are expressed by a single word (*bezpieczeństwo* and *Sicherheit*, respectively). This linguistic note is important in so far as the different challenges and governance areas of (reactor or hydraulic fracturing) safety and (national energy) security can easily blend into one, when expressed with the same, unifying concept. This is why the question of threats/risks in the context of nuclear energy and shale gas can be somewhat problematic. However, our study revealed that Germany and Poland have adopted different approaches to nuclear energy and shale gas. While Germany emphasizes safety issues and focuses on the risks of both nuclear power and shale gas, Poland regards both as potential sources of secure energy supplies and thus shifts the debate towards energy security.

Strategic energy infrastructure, such as the Nord Stream gas pipeline and electricity grid interconnectors, is framed in a more negative light in Poland than in Germany. It is difficult to compare the two types of infrastructure, but any cross-border infrastructure raises more concerns and political worries on the Polish side, evoking debates over the potential use of energy infrastructure for fostering political goals and increasing Poland’s dependence on other countries.

Several recommendations stem from these results. First, our study revealed that additional learning is needed on both sides. There exist a number of misconceptions and misunderstandings of the neighbor’s energy policy on both sides. Our interviewees admitted that there is very little cooperation and dialogue in the specific areas of energy policy that we studied.

Understanding the different perspectives of the “geopolitical” and the “economic” approach to energy policy, without caricaturing either, is important. The two perspectives inform rational policy-making but base decisions and strategies on different axioms, assumptions and ideas about how energy-sector actors function. To overcome such differences, it is important to step into the other’s shoes in a search for common ground.

European energy policy and the “Energy Union” have to emphasize non-zero-sum solutions and the various benefits of cooperative approaches to energy security/generation. EU institutions are the best forum for building trust between national energy policy regulators and decision makers, reducing transaction costs along the way to greater future integration.

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Note about the research project

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Interviews were conducted by the project partners responsible for the respective case study, renewable energies: Jacobs University Bremen, nuclear energy: ESPRI and Jacobs University Bremen, Nord Stream gas pipeline: Research Centre for East European Studies at the University of Bremen, and shale gas: Adam Mickiewicz University Poznań, interconnectors: ESPRI, Wrocław.

German media reports were selected and coded by the Research Centre for East European Studies at the University of Bremen (coder: Thomas Sattich, coordinator: Andreas Heinrich). Polish media reports were selected and coded at the University of Poznan (coders: Agata Stasik and Aleksandra Lis, coordinator: Aleksandra Lis).