

Energy in the German-Polish Relationship

Acknowledging Controversies – Pursuing Shared Interests

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Germany and Poland stand as examples of the differing interests of individual European Union (EU) member states in energy policy. However, both countries are crucial for filling an Energy Union with substance. Yet, progress in bilateral engagement has stalled, as controversies, for example over Nord Stream II, threaten to distract attention from other issues and avenues for energy cooperation. While acknowledging disagreements, the focus should be on identifying areas of agreement and opportunities for cooperation. Although the difficulty of resolving highly controversial issues is not to be discounted, addressing them will require taking steps to establish trust while designing programs and projects to transform the idea of solidarity from rhetoric into reality.

Following the annexation of Crimea by Russia and military action in eastern Ukraine, the former Polish Prime Minister Donald Tusk (currently President of the European Council) first laid out the concept for an Energy Union in April 2014. Tusk based his concept for an Energy Union on the assessment that “massive dependence on Russian energy makes Europe weak.” He argued that energy dependence is a threat and urged European solidarity in supply security and pursuing collective gas purchases. Although the concept proposed by the European Commission in February 2015 included the original security dimension – framed as energy security, solidarity, and trust – this was far from the sole priority. Rather, energy security is one of five “mutually supporting dimensions,” including the internal energy market; energy

efficiency as a contribution toward the moderation of energy demand; decarbonisation of the economy; and research, innovation, and competitiveness in accordance with Europe’s long-term energy policy objectives of security of supply, sustainability, and competitiveness.

Despite the need for such an initiative to give momentum to the ongoing development of the EU internal energy market and place European energy provisions in a more comprehensive and strategic context, the idea’s popularity has flagged in both countries. Neither Germany nor Poland appears as a strong advocate for the initiative. From a Polish perspective, Germany has pursued a self-serving energy policy course because the country did not consult its neighbours prior to the announcement of the “Energie-wende,” and because of the Nord Stream II

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project. For Germany, Poland has emerged as a major blocker of EU climate policies and the creation of a cross-border electricity market – steps that are viewed by Berlin to be major components for moving the German energy transition forward. Polish company PGNiG and the Polish government have also submitted lawsuits to the EU Court of Justice against the European Commission granting an exemption to OPAL. Subsequently, PGNiG initiated legal action against the related decision by German Regulatory Authority (BNetzA) – a strong move in the ongoing struggle over Russian gas supply. This underscores the divergence between the two countries – namely Germany’s market-based approach in contrast to Poland’s state-driven approach. Poland’s negative reaction to the Commission’s decision to grant Gazprom additional usage of the OPAL pipeline also illustrates the fundamental opposition to Nord Stream II, and puts the country at odds with the Commission despite Warsaw’s past appreciation of the Commission’s constructive stance in the program for restructuring the Polish coal-mining sector and proactive role in revising security of gas supply regulation and so-called intergovernmental agreements.

It is easy to see how the Energy Union, founded on concepts of security, solidarity, and trust, could run into obstacles, given the differing perceptions of how this should be achieved, what solidarity requires, and a general lack of trust. However, that does not mean trust cannot be built, and rather demonstrates that, for the Energy Union to succeed, neighbours such as Germany and Poland will need to work together to find areas of collaboration and potential integration.

Recognition of Diverging Energy and Climate Policies

To understand the energy issues at stake between the two countries and why differences remain, it is worth revisiting the delineation of responsibility for energy policy

within the EU. Under the Maastricht Treaty, energy remained a member state prerogative, even as cooperation and integration were a means of achieving energy security. Although the Lisbon Treaty later made energy a joint competence and elevated energy security (namely security of supply) to the European level, countries retained the authority over domestic fuel mix.

Tensions between member states in the energy and climate realm are frequently attributed to different interpretations of this shared competence, but are primarily a result of different perceptions, historical experiences, and political realities. These perceptions ultimately influence views on integration, cooperation, and strategies for ensuring energy security and sustainability. Germany and Poland have different energy plans and approaches shaped by unique political, social, and historical contexts. In addition to the salience of these differences in bilateral relations, they are also indicative of the divergence between EU member states regarding climate protection and security of supply, and illustrate the different interpretations of how to achieve energy market integration.

Since 2011 Germany has moved forward with the *Energiewende*. The Paris Agreement on climate change, supported by all EU member states, provides international encouragement, whereas Germany’s 2050 Climate Protection Plan sets national-level and sectoral targets, and includes implementation measures for targets, strong messages on sector coupling, and establishes a commission on growth, structural change, and regional development. Although discussions of the details have been controversial – for example, a precise date for the “coal exit” was absent from the final plan – the needs and goals of the *Energiewende* are widely supported.

Poland’s climate efforts are part of a broader effort outlined in the national Plan for Responsible Development, which covers all sectors of the economy and is not exclusive to energy. The Plan is intended to help Poland achieve a more dynamic economic

development path and avoid five identified “traps”: the middle-income trap, lack of balance trap, average product trap, demographic trap, and trap of weak institutions. Among the included goals are lower energy costs for Polish businesses and consumers, and achieving a higher degree of energy independence, to be achieved through the modernisation of the energy sector, diversification of (oil and gas) supply sources, grid investment and energy infrastructure development, and support for low-carbon energy sources. Nuclear energy remains on the agenda, but is de facto deprioritized for the moment. However, this could be raised again in future climate talks with Germany.

A Challenge for Both: Coal

Before focusing on additional points of divergence, it should be noted that Germany and Poland share more similarities than perhaps any other two EU member states when it comes to coal. Germany and Poland are the two largest coal producers and consumers in the EU. In 2015, coal consumption in Germany amounted to 78.3 million tons of oil equivalent (MTOE), whereas consumption in Poland amounted to 49.8 MTOE. Coal accounted for 44 percent of total electricity generation in Germany, and around 80 percent of the electricity portfolio in Poland, accounting for roughly half of total energy consumption. In a 2014 list of the so-called 30 dirtiest coal plants in Europe, published by the World Wildlife Fund, Germany and Poland together are home to nearly half of the list, with 13 plants between them: 9 in Germany and 4 in Poland.

This has resulted in a situation where both countries have political difficulties in dealing with the role of coal in the domestic economy and energy supply. However, although there are similarities in terms of coal production and consumption, the two countries diverge in their perception of the future of coal, as Poland views the resource as integral to energy security, whereas German policy is grappling with the question

of how to effectively phase out the resource. This is related in part to diverging energy trajectories: whereas electricity consumption in Germany has been falling, Poland expects electricity demand to increase until 2030. Poland’s energy minister recently announced plans to open new coal mines after 2019 to ensure that refurbished or new coal-fired power plants have access to cheap Polish coal. Moreover, an energy sector based on the use of domestic coal is seen as the backbone of Poland’s energy security. At the same time, Poland has introduced restrictive legislation that complicates further increases in wind power. In this context, the modernisation of the energy sector in Poland is seen as the modernisation of the coal sector, rather than its phasing out or substantial reduction.

This approach supports the growing weight of the traditionally strong state-owned companies in the Polish energy sector. After the envisaged takeover of assets owned by French Engie and EDF by Polish companies, state-controlled shares in the sector will amount to more than three quarters. These acquisitions and requirements for modernisation investments put a strain on the financial conditions of key Polish energy groups. This is one of the reasons why the Polish government is interested in establishing a capacity market and potential new forms of financial assistance for power producers. All these measures need approval by the European Commission.

The divergent approaches to coal are one aspect of a larger difference between the two countries, namely perceptions on security of supply and how to achieve it, and the role of integration. Given that coal is a domestic resource in both countries and the international coal trade is liberalized, security of supply concepts and conversations in both countries have historically focused on natural gas.

Natural Gas Security: A Divisive Issue

Security of natural gas supply in Germany can in part be traced to *Ostpolitik*, the gas-for-pipes deals with the Soviet Union in the 1970s, and more recent experiences with Russia as a reliable gas supplier, linking the concept to a long-term relationship with a major supplier on (ostensibly) commercial and mutually beneficial terms. Moreover, the economic interdependence is seen as a means to political rapprochement, or at least to increase the costs of a potential deterioration in the relationship. Poland considers Russian gas supplies as a major threat to its (and regional) energy security of supply, and it aims to replace gas imports from Russia through a combination of diversification of supplies, suppliers, and supply routes as well as broader energy self-sufficiency. These are steps that have been promoted under the umbrella of the Energy Union in the “Energy Security Package” of February 2016, which also includes a reform of the security of supply regulation still under discussion in the EU.

Energy security in Poland has been characterized by an expressed willingness to pay for supplies from anywhere but Russia, and government officials have announced the country does not intend to renew its supply contract with Gazprom when it expires in 2022. Instead, the country hopes to reduce reliance on Russian imports, as indicated by the construction of the Świnoujście LNG terminal. The LNG terminal, inaugurated in the fall of 2015, provides Poland with the option to import LNG from suppliers around the world, albeit at a higher price than piped gas. The proposed Northern Gate strategy is comprised of several proposed pipelines, for example the Baltic Pipe, which would bring Norwegian gas to Poland and beyond to central Europe.

The debate over Nord Stream II both exemplifies and arises from these differences. In Germany, Nord Stream II is largely perceived as a commercial project developed by private-sector actors that could enhance energy security, whereas in Poland it is considered a geopolitical threat with

the potential to undercut European solidarity and energy security. Moreover, the project is linked to foreign and security policy. While German government ministries perceive maintaining economic ties with Russia as having a positive side effect, this is perceived in Poland as limiting the EU’s room for political manoeuvre vis-à-vis Russia, and a severe blow to Ukraine, which the EU wants to support politically and economically. Poland is also concerned that Nord Stream 2 could complicate its national diversification efforts and fears the project might ultimately replace gas transit through the Yamal pipeline, which transports gas from Russia via Belarus and Poland to Germany.

Rather than focus on this issue as the ultimate example of differences between Germany and Poland, it should instead serve as an opportunity for the two countries to acknowledge and recognize each other’s perspectives. Given these antagonistic perceptions and mistrust, nothing less than “squaring the circle” in bilateral relations is needed: it could be useful to lift energy issues to the political level and take a more objective look at the issues (“re-politicisation without ideologisation”). This does not mean both sides should focus solely on politics, but rather recognize – and be aware of – the political implications of energy-sector decisions and acknowledge the link between energy and politics. This is critical if the relationship is to move beyond the status quo, as both sides must acknowledge differences in perceptions, consider how the other might perceive their policies, and ultimately find areas of shared interests and opportunities to build trust. Ultimately, the diverging organization of and relationship between the role of the state and functioning markets need to be addressed.

This may require Germany to accept that Polish mistrust exists, particularly when it comes to the impact of Germany’s energy policies and its reliance on external energy suppliers. Germany may need to take seriously Polish plans and goals for the natural

gas sector, such as pursuing diversification and becoming a gas roundabout (“hub”) for central Europe, increasing self-sufficiency, and developing domestic markets. Poland must decide the ultimate aims of its energy policy and the role it would be willing to accept for its neighbour in that policy. Poland should also evaluate whether self-sufficiency is an appropriate strategy in light of rising domestic consumption, EU climate targets, and the cost-savings from pooling generation and capitalizing on flexible resources to ensure generation adequacy.

Opportunities for Cooperation: Soft Infrastructure

Although energy has been a difficult topic of cooperation (and contention) in recent years, the broader and increasingly complex slate of issues Germany and Poland are currently facing requires political attention and dialogue that address increasing cross-sectoral as well as intended and unintended effects. Rather than focus on the most prevalent divisive issues, the two countries should seek areas of agreement and overlapping interests, and work to ameliorate concerns and focus on areas where complementary skill sets and energy portfolios can be used to the advantage of both countries.

The benefits of cooperation will ultimately follow from tangible action, including the improved design of soft infrastructure and the joint pursuit of strategic investments – two areas with concrete opportunities for cooperation. This two-pronged approach would help achieve policy linkages, leverage shared resources, and capitalize on complementary portfolios. Ultimately, the goal is to cooperate in ways that increase flexibility and enable the imminent energy transition in both countries.

Soft infrastructure refers to institutional and regulatory choices, including European gas and electricity trading arrangements outlined in the European Commission’s 2016 Packages on “Energy Security” and on

“Clean Energy,” the European Emissions Trading System (EU ETS), the European energy governance package for post 2020, and the security of supply regulations. Meanwhile, strategic investments include opportunities for collaboration and shared gains in overlapping areas of interest, ranging from e-mobility to biogas.

With respect to power markets, the German power market design does not create incentives for the early provision of generation and load patterns to transmission system operators (TSOs). Without such information, these operators cannot reliably predict flow patterns and loop flows. Additionally, simplified trading models in the EU usually neglect physical congestions. The resulting unannounced power flows create significant complications for system operation in Poland. This issue was initially ignored in the German domestic debate, and Polish concerns were discounted in Germany as attempts to protect Polish coal-fired generation from competition by wind and solar power. Meanwhile, in Poland, unannounced power flows have been characterized as an intrusion of German wind and solar power to the disadvantage of domestic power generation and system operation.

Contrary to the claims in both countries, loop flows neither dampen power prices nor replace coal-fired power generation in Poland. However, they do reduce the transmission capacity that can be made available for trade between the countries, resulting in markets that are disconnected most of the time. Additionally, unannounced power flows create risks for secure system operation, result in additional costs, and reduce the flexibility remaining for the integration of wind and solar power in Poland. The jointly pursued physical response – investment in phase shifters – provides only partial and temporary relief. Instead, more closely coordinated operation of the interconnected system would bring economic, sustainability, and security benefits.

These issues related to cross-border electricity flows and integration and interconnection underscore the larger question

of electricity market design. Both countries should discuss the broader question of EU and national power market design bilaterally and within the European context in order to advance a market design that provides reliable information for system operation and ensures efficient use of all the resources connected to the European electricity system.

This is also an important basis for cooperation on EU security of supply. Although both countries have expressed hesitancy at increased obligatory regional cooperation on security of supply in electricity, there are also potential benefits for both countries, if the appropriate balance can be found. The December 2016 Winter Package could provide the framework for electricity cooperation and lay the groundwork for increased discussion of regional cooperation. If Poland and Germany come to an agreement, the chances to push for mutually beneficial solutions at the EU level will grow.

Regional cooperation in the gas sector is much more complicated. Different national perceptions on security of supply imply different policies for addressing it. Whereas Germany relies on market mechanisms and a flexible approach that reflects transport corridors and concrete challenges, Poland advocates for a regional approach to risk assessment, prevention plans, and plans for emergency situations or solidarity mechanisms. This reflects the different nature of the two markets as well as the asymmetric speed of internal market-reform implementation. It would be worthwhile for both countries to acknowledge each other's choices while trying to enhance cooperation and solidarity.

Another crucial, yet counterintuitive, component of soft infrastructure cooperation is the EU ETS, which aligns European economic, energy security, and sustainability objectives. It also ensures that all European power generators face the same price for CO₂ emission allowances as the basis for an integrated power market. The structure and efficacy of the EU ETS, along

with its proposed reforms, are currently being debated in the European Parliament. EU ETS reform has been an ongoing topic since the informal agreement on a draft to reform the program in 2015. Proposed reforms include acceleration of the Market Stability Reserve and measures to address the excessive surplus of allowances that undermines the functioning of the system.

The EU ETS is also an important component of Europe's industrial policy. The text for the final vote in the European Parliament includes mechanisms to ensure full carbon price pass through for basic materials while securing carbon leakage protection. This is essential for material sector investment and creates opportunities for new technologies, practices and business models. Such a common basis across EU member states would encourage investment in climate-friendly options. Absent this common approach, member states will have to implement additional policies, creating the risk that industrial players will focus on the most economically relevant member states, thereby delaying strategic investment choices in the rest of Europe.

For Poland, which still has a political decision to make on an energy transition model, backing rather than blocking an EU ETS might be more beneficial. To achieve these benefits, the Polish government should ensure ETS reform results in a consistent and robust framework that attracts and supports private investment and capitalizes on opportunities and financial instruments such as the Modernisation and Innovation Fund offer for strategic investments in the energy and industrial sectors. This is crucial, as Poland is in the midst of a debate about environmental quality. There is room for bilateral discussions, given the difficult decisions ahead. In order to meet the climate targets and to achieve a carbon-neutral energy system in the future, coal – as the dirtiest fossil fuel – has to be eliminated from the energy mix: better sooner than later.

Both countries, as well as the EU, have to keep the resilience of the energy system in mind, both for energy security reasons and

also to mitigate climate change. The flexibility of being able to shift between gas and coal power generation is not only valuable for the power system, but also an important flexibility resource contributing to gas system security of supply. These are non-trivial issues that relate to sector-coupling and to cross-border transactions as well. This creates room for open exchanges and frank discussions between the two countries. Both sides should explore the ramifications if the proposed reforms to the EU ETS currently being debated fail or are watered down. Some argue that in this case the EU ETS will create only limited incentives to reduce operational hours and emissions from coal power stations. In response, member states such as Germany will likely mandate a phasing-out of (less-efficient) coal power stations to achieve their climate objectives. This approach reduces the flexibility of the power system to respond to gas supply interruptions – and thus negatively impacts energy security objectives.

It is therefore critical that member states understand the benefits of an effective EU ETS across Europe. A shared understanding of these benefits (rather than tactical positions) should inform the further development of the EU ETS. If the issue of systemic and cross-border resilience is taken seriously, it is necessary to discuss the options on the table. A common understanding of how policies can be structured to achieve climate objectives while also facilitating a flexible shift between efficient (and modern) coal power plants and gas power generation would be a decisive step forward.

Opportunities for Cooperation: Strategic Investments

Meanwhile, there are concrete areas in which Germany and Poland could collaborate or cooperate, and in the process build trust to facilitate broader cooperation. These areas of strategic investment include:

E-mobility. Germany and Poland aim to have one million electric vehicles on the

road by 2020 and 2025, respectively. To achieve this, Germany announced \$1.4 billion in incentives to boost the sale of electric vehicles, including tax breaks and rebates on the sale of new vehicles. The Polish government has announced plans to introduce new laws to regulate – and incentives to promote – the development of electric vehicles. The very high levels of air pollution in Polish cities during winter 2016/2017 has sparked a debate about environmental protection and health in some cities – a debate that will certainly provide proponents with additional arguments for e-mobility. The close integration of the industrial value chain by the two countries, particularly in the automotive sector, provides ample opportunity for cooperation on technology and infrastructure development. Progress on the development of electric vehicles may offer much needed solutions for power systems with regard to system stability and balancing, still a missing link in enabling renewable energy deployment. German and Polish cooperation and experience could even constitute the basis for future EU rules on e-mobility.

Prosumers. Both countries are witnessing bottom-up energy developments as consumers become increasingly active in energy production and consumption decisions, generally received as a positive development in both countries. Consumers are more involved in issues related to flexibility, decentralization, efficiency of energy use, and engaged in distributed generation. This could serve as a basis for cooperation between the two countries in developing and adapting regulatory structures, technologies, and business models. The grounds for this cooperation can already be found at the local government level, which should be further strengthened and incentivized.

Energy efficiency. Efficiency improvement, particularly in the building sector, is a priority in both countries and remains a key struggle for policymakers. Cooperation can allow for the sharing of experiences and leveraging of mutual strengths, including expertise and finance.

Joint renewable projects. In 2016, Germany began to hold auctions to open 5 percent of the yearly installed renewables capacity to other member states, presenting a potential opportunity for Poland, which is interested in solar photovoltaic (PV). Cooperation on this issue could be an opportunity to help Poland meet summer peak demand and alleviate brownouts that, in recent years, have coincided with peak mid-day demand on summer days. To accelerate PV investment beyond the scale of a few 100 MW of joint projects, it would be desirable to facilitate access to low-cost finance. One option could be to combine suitable national remuneration mechanisms with preferential loans or guarantee products from the European Investment Bank or the German Development Loan Corporation (KfW).

Underscoring the potential utility (and attractiveness) of such cooperation, an analysis of the 2015 heat wave in Poland concluded that the limited possibility for energy imports from abroad was a contributing factor. Commercially available interconnection between Poland and neighbouring countries, including Germany, could contribute to power generation adequacy.

Biogas/biomethane. Both countries have an interest in biogas and biomethane as contributors to a more sustainable fuel mix. They could work together to develop a regulatory framework and an EU system to share, trade, and integrate. Systemic solutions such as power-to-gas could be further exploited, given the know-how and the existing gas infrastructure. Germany is a leader in the EU when it comes to the production of energy from biogas, whereas Poland has the potential to increase energy production from biogas.

tion on PV to e-mobility – is a first step in noting not only that there are areas of synergy in the bilateral relationship, but also that cooperation on these issues would help advance broader EU goals related to energy security and sustainability. These areas of common interest should be addressed while keeping the broader picture in focus in the hopes that progress on concrete issues and cooperation on specific projects can help create an atmosphere of trust and the space needed to address the broader and more difficult issues at stake in the bilateral relationship.

Given these potential areas of shared interest amid broader ongoing areas of difference, it is important that policymakers, private-sector stakeholders and industry, and the think tank community tackle these areas of difference while capitalizing on potential areas of cooperation. Of course, it is important that both countries keep the European energy policy context in mind. In Germany and Poland, a growing scepticism toward the European Commission and its role in energy issues has seemed to emerge. This is particularly striking in Poland, which has regarded the Commission as an important ally for improving its energy security. Progress on the identified areas of cooperation should be prioritized and viewed as a means to advance broader EU goals while simultaneously, and incrementally, building trust and strengthening the bilateral relationship. Controversial topics have to be kept on the table and discussed repeatedly, if necessary, for progress to be made.

Conclusions

In German-Polish energy relations, the question is no longer whether cooperation is possible, but rather in what areas cooperation is most likely and most beneficial. A package of the aforementioned areas – from energy market design to ETS, from coopera-

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