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Energy Security and Energy Transition: Securitisation in the Electricity Sector

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1 Introduction

Ageing infrastructure, technological innovation as well as the need to tame energy sector carbon dioxide emissions to protect the climate—all these are pushing national energy systems towards some kind of a *transition*. In the early twenty-first century, “energy transition” or “transformation” has become shorthand for increased penetration of renewable

This publication has been prepared as part of the research project “Towards a common European energy policy? Energy security debates in Poland and Germany,” financially supported by the German-Polish Science Foundation. The authors would like to express their gratitude to Karol Dobosz and Bartosz Gruszka for their assistance with interviews, as well as Julia Szulecka for her help with a gap-filling media analysis. We would also like to thank Aleh Cherp for his helpful feedback.

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energy sources, very often dispersed, and contrasted with the centralised fossil-based systems of the past. What remains somewhat under-researched are the security implications of that shift (Månsson 2016; Nie and Yang 2016).

This chapter provides a comparative empirical analysis of security-related debates in two neighbouring countries—Germany and Poland. The theme of energy transition becomes central because we focus our attention on key elements of that shift: renewable energy as well as grids and nuclear. “New” renewables are perceived as the technology of the future, on which decarbonised systems will be based (Szulecki 2015), while cross-border interconnectors are absolutely vital for regional energy governance and using geographic synergies to maximise the benefits of renewable-based generation. However, they are also a particularly politically sensitive type of electricity infrastructure (Puka and Szulecki 2014b). On the other hand, nuclear is in many contexts described as their main low-carbon competitor, but raises other important environmental concerns.

What unites these issue areas is that they are all elements of the electric power system.¹ Energy security studies have usually remained disinterested in electricity, which is somewhat surprising, given that the power sector is arguably the most vital energy system in modern societies. The ultimate threat to the system—a blackout, that is a sudden power outage covering a city, a region or possibly an entire national electric system—may have various negative effects for core services, including healthcare, transport, heating/cooling, and so on.

The 1977 New York blackout completely paralysed this megacity, necessitated the evacuation of the subway, blocked road tunnels (due to the lack of ventilation) and cut communication, also for the fire department and the police, which resulted in several fires and an eruption of lawlessness, including riots and mass looting. The 2003 Northeast blackout had broader repercussions, covering several US states as well as the Canadian province of Ontario. With the vital electricity system down, the spontaneous switch to candles as a source of light during the night is reported to have caused some 3000 fires, while the power outage itself contributed to doubling the usual number of emergency calls and a dozen directly related fatalities. In November 2006, a seemingly routine event

in Lower Saxony—the passage of a cruise ship under a high-voltage transmission line, which had to be switched off for that purpose, caused chaos throughout Western Europe leaving millions of people without power (Kemfert 2013). In a more international context, closer to the usual interests of Security Studies, the Crimea blackout of November 2015 caused a complete power cut from mainland Ukraine to the Russian-annexed peninsula—resulting in claims that electricity has been used as an “energy weapon” (Bråten 2017).

The uniqueness of system-wide power outages is in their sudden character—leaving the population largely unprepared—and the crosscutting, all-encompassing nature of electricity in modern (post)industrial societies. In some situations, faced with a power outage, people have no alternative sources of energy and have to cease economic activity, resign from mobility and do without important services. It is therefore quite clear that a power outage is a security problem, affecting not just particular populations, but also important *values* (compare: Cherp and Jewell 2014). Due to its ability to sustain vital services closely associated with important human values, the power system might be the most important one to protect in many modern developed states.

How is security discussed in relation to the power sector in the context of an ongoing (or pending) energy transition? Which elements of the electricity sector are securitised, why and by whom? What is the interplay of risk and security discourses in the complex technological discussion, for example, relating to distributed renewables and nuclear? We look at Germany and Poland to shed light on these issues. This chapter does not have the ambition to be comprehensive in discussing the problem of electric power security and securitisation. It does, however, signal some observations which can be used in future studies.

Applying the theoretical framework drawing on the Copenhagen School’s securitisation model (as laid out in Chap. 2), we analysed the way security concerns are articulated in each of these closely connected but nonetheless separate issue areas. Our evidence comes from interviews and a broad media research, as well as a desktop analysis of secondary sources. Forty-seven semi-structured interviews were conducted with state representatives, including the members of the Polish Sejm, the German Bundestag and the Ministries of Economy and Foreign Affairs,

energy companies, energy experts and environmental NGOs in Warsaw and Berlin between February 2015 and January 2016. The goal of the interviews was to probe relevant policymakers and experts on their perspectives on energy security, and tracing elements of securitised discourses related to the energy sub-sectors as well as the suspected acceptability of securitising moves. This provided some additional depth to the board media analysis, which covered 3236 hits in over 1000 articles published by 9 major newspapers in Germany and Poland. Country experts coded these hits for the elements of the securitisation model present (e.g. threat, referent object, measures proposed) allowing for comparison and surveying the general “public debate” on security in these issue areas.

Drawing on these two data-gathering methods, we discovered that energy “securitisation” seems to be a mechanism pulling in quite different directions in Germany and Poland (and in these three areas). We find that in Poland, a link between energy policy and national (in)security makes energy policy debates regarding the power sector and energy transition unique. Discussions around renewables not only focus on pro-security arguments and systemic risks—as is the case in Germany—but also contain a national security thread related to notions of energy autarchy as well as economic sovereignty undermined by imported technologies, materials and know-how, and additionally cross-border energy exchange. Debates around nuclear resemble those about shale gas (as described by Lis (Chap. 4) in this volume), where German riskification of nuclear reactor operation is met in Poland with arguments about energy independence and national security.

2 Background: Polish and German Electricity Sectors

For a long time, Poland and Germany followed a similar path of development in the area of energy, both benefiting from rich domestic coal endowments. While in the 1950s and 1960s both Polish and German scientists and engineers experimented with nuclear reactors, it was only the German Democratic Republic (GDR - East Germany) that moved to

the phase of large-scale industrial civilian use of atomic power (with the Rheinsberg Nuclear Power Plant). The Federal Republic of Germany (FRG - West Germany) soon followed suit, and after the reunification, only Western reactors were kept operational, seen as technologically more advanced and reliable.

At the beginning of the 1990s, Germany generated over 68% of electricity from fossil fuels, mainly lignite, and further 28% from nuclear power plants, adding up to 96%. In Poland, 98% of the power was generated in coal-fired power plants (IEA 2013, 2016). In both cases the role of renewable energy sources (RES) was minimal, and so the systems—even if based on different generation technologies—were governed in a similar way: centralised and founded on large, industrial power plants.

However, over the following two decades the share of electricity generation from renewable sources has increased in both countries. As for 2015, it was up to 14% in Poland (IEA 2017a) and 31% in Germany while the IEA average equalled 24% (IEA 2017b). Merely focusing on an increased share of energy from renewable sources in the power mix does not show the full picture as the kinds of renewable energies developed in each of these countries and their impact on the energy sector was very different. In Germany, the increase in the RES production resulted mainly from the development of wind and solar photovoltaic (PV) energy, which led to the development of a brand new sector of the economy (around wind and PV manufacturing and installation), with several hundred thousand new jobs and an annual turnover of almost 17 billion euro (AEE 2017). In the case of Poland, over a half of the energy acquired from formally renewable sources came either from biomass co-firing in coal-fired power plants, or from large hydroelectric plants built before the 1990s (IEA 2016: 97), leaving “new renewables” as only an addition. Onshore wind energy has seen some significant growth, but remains at the level of 11 TWh or 7% of total electricity generation (IEA 2016: 97).

These differences can be seen as both the result and an additional factor causing the divergence in energy security perceptions. In the Polish political discourse, the idea of coal as the country’s “black gold” and the foundation of energy interdependence is quite prominent (Sutowski

2015). It is not unfounded, as Poland has one of the lowest levels of import dependence in Europe. In 2013, it imported 25.8% of energy resources (EU average—53%). Germany in turn has been used to energy imports for many years and prefers to use its geographical centrality to maintain the role of an energy hub, which builds its energy security on exchange, interdependence, and abundance.

As a result, Polish energy policy has for years been constructed on the need to safeguard coal and the system in which it plays a crucial role. In that centralised paradigm, the construction of a nuclear power plant has been seen as both an element of energy diversification and a strategy for decarbonisation which does not interfere with the way the system is organised and governed (centrally and with large, stable, conventional baseload). Germany's 2011 *Atomausstieg*—the decision to phase out nuclear by 2022—stands in stark contrast to Poland's declared nuclear ambitions.

Distributed renewable energy generation is seen as a radically different kind of energy source, and meets important opposition. Germany's ongoing *Energiewende*—with its visible successes in terms of the scale of wind and PV installation deployment, but also important questions about costs, system stability and the impact on the political economy of the energy sector (e.g. the large financial losses of the incumbent utilities)—is a double lesson, showing what can be achieved but also what decision-makers and stakeholders might want to avoid (Ancygier and Szulecki 2014).

Finally, both Germany and Poland experience problems with the existing electricity infrastructure (Puka and Szulecki 2014a). In Poland, the transmission and distribution grids are in poor condition, undercapitalised and in many regions too scarce to serve the population and the industry. In Germany, the decades of separation between the West and the East are still visible, as the few existing links between the former GDR and FRG resemble interconnectors between separate national systems. This becomes 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 and Austria—this results in

frequent uncontrolled electricity “loop flows” where German power moves from North-East to the South through the Polish grid (Ibidem).

The following sections try to separate energy security debates in two sub-sectors of the power system. First are renewables—which are perceived quite differently in the two neighbouring countries, and then the debates about nuclear energy and its possible future role, which is a real bone of contention between Poland and Germany.

3 Renewables: Threat or Security Solution?

There is a very deep contrast between the way renewable energy is portrayed in Poland and Germany. The German media discussions of energy issues are quite extensive—it is probably safe to say that they go beyond the usual level of public interest in such technical issues in Europe. In our media analysis of key outlets between 2006 and 2014, we identified 1457 instances in which energy security in the power sector was discussed. A small number of these has included securitising moves or security jargon, and identified threats. The two threats mentioned most often were: climate change/CO₂ emissions (29) and renewable intermittency (29).

These two threats are linked with two distinct sets of referent objects. It is clear that climate change is a threat for both society and the environment. The intermittency of renewables (here meaning wind and solar), on the other hand, is an objective characteristic of that energy source, questioning the reliability of energy supply for the society and economy. Intermittency is of course an issue both as the cause of potential energy shortages (when “the wind does not blow and the sun does not shine”), but also of energy surplus. In June 2014, a hot and sunny summer put significant pressure on European power systems, when some conventional plants (coal and nuclear) had to be taken offline due to high temperatures and lack of water, while at the same time renewables increased their share.

Electricity grid operators speak of a “special challenge”... due to the holidays the consumption of electricity is likely to fall to the lowest value of the year. At the same time, because of the bright sunshine, the solar systems

press almost all their power into the grid ... No one can speak of blackout risks. But the electricity grid operators are preparing themselves with a series of precautions for the exceptional situation which is now recurring annually. "Such a weather situation is a challenge for the network operators," said a spokeswoman for Tennet. (Wetzel 2014)

Overall, however, renewables are seen as a solution to energy security challenges more than their source. All our interviewees saw them as a means to improve the German energy security significantly and therefore very important. The rationality was the role of renewables in reducing the use of conventional sources and more importantly, the German dependency on imports of fossil fuels. Despite the relatively high investment costs, the fact that they generate no additional fuel costs was pointed out, together with a justification focussing on economic innovation and job creation.

The decentralisation of the energy system was portrayed as an asset, adding to its resilience—and while intermittency is an important issue, our respondents noted that there was no renewable-related blackout so far, and that the system is stable despite increasing renewable penetration. "In the entire history of the *Energiewende*, there was not a single major blackout. The networks work, the necessary balancing also works. ... and it doesn't look as if there is now a problem in the near future, but rather that Germany is pushing ahead with innovations."²

This is not to say that renewables are presented as unproblematic. A major issue is the lack of sufficient energy storage—and the expansion of flexible pumped-storage hydro plants, for example, in the Alps, creates a set of economic and environmental problems of its own (Frank 2006). Another issue is problems with transmission—including "loop flows" through neighbouring countries' power systems. These issues are signalled both by the interlocutors and numerous newspaper articles (29 discussing grid weakness and 23 mentioning negative impacts on neighbours).

What is important is that renewables and the energy transition towards a renewable-based system is not securitised. The issue is certainly high on the political agenda, and technical arguments meet societal and economic questions. Importantly, costs and energy prices are raised as a problem to

be addressed, with German industrial competitiveness at stake. These issues get more attention than technical vulnerabilities (111 mentions of market-related threats). As a representative of German Trade Union Confederation noted, the electricity prices are high for the German industry, and they “can’t grow more, not much more for long.” Consequently, it has a negative impact on the competitiveness of the German industry.³

The external European environment is presented as an important element of the ongoing energy transition—a means of achieving further energy security and reducing vulnerabilities, rather than a source of threats. The German respondents evaluated the current EU legal framework as “fairly good” or “neither good nor bad,” praising the efforts towards policy harmonisation and Europe-wide decarbonisation commitments, but also suggesting that further compromise regarding the promotion of renewable energy between the various interests, which differ in Europe, must be found, so that the German *Energiewende* could become a European *Energiewende*. “The energy transition will only be a success if it is organized Europe-wide”—claimed The Federation of German Industries (BDI) in its statement on planned EU “winter package” (BDI 2016). “With the rapid expansion of renewable energies in Germany, the neighbouring countries are increasingly forced to think about their own energy markets. And the closer the European electricity market grows together, the more they will see that it is expensive to invest in conventional energy sources.”⁴

In arguments for expanding the energy transition beyond Germany’s borders, ideas resonating both with a vision of a Europe-wide market and energy solidarity built on an understanding of the neighbours’ security concerns can be seen:

[A] European energy supply would benefit the energy security of Germany and the entire EU. The mix of locally produced electricity and increased energy efficiency makes a country more independent of imports and international price shifts. Nowhere can the consequences of energy insecurity be better observed than in Europe: the Ukraine crisis has reminded the Europeans painfully how the EU today covers around a third of its gas needs. If the EU is to tackle energy needs as a step towards a European

energy community to achieve a better negotiating position with Russia and an integrated energy infrastructure within Europe, it should recognize the crisis as an opportunity and a vision for sustainable energy policy.⁵

The Polish discussions of energy security in relation to renewables are quite different. The media debate is visibly narrower (328 texts overall), and while “climate policy” is also mentioned as the key threat (27 times), it is seen in a very different light. It is not so much climate change and emissions *per se*, rather EU climate policy which constrains Poland’s energy choices and puts additional economic pressure on the sector (particularly the coal-fired plants). Consequently, the EU is second on the list of threats (10), presented as the source of damaging and ostensibly misguided legislation:

One of the most common and most often reproduced mistakes is the equation of sustainable energy with the division between ‘dirty’ energy sources – most often fossil fuels are mentioned here – and ‘clean’ – usually those based on wind and sun are pointed out. This dichotomy is absolutely fallacious from the point of view of sustainable energy, but it is used by various lobbies, with the environmentalist lobby at the forefront. The sad consequence is the inscription of this false division into the energy and climate debates taking place on the EU fore as well as in other international organizations. (Mayer 2014)

Much of the discussion focusses on costs and potential economic losses apparently inevitable when a transition from coal to renewables is conducted. The policymakers interviewed were unanimous in their view that at the country’s current stage of development, an energy mix based on 80–100% renewables is not possible (though the EU framework proposes that level of RE capacity only in 2050), and pointed out that Poland is meeting its obligations with almost 12% of renewable electricity and good chances of reaching the 15% target in 2020. Renewable technologies are perceived as still very expensive and the Polish society is not ready yet to pay higher bills for electricity.⁶

A core problem from the perspective of the central government and legislators is the need to safeguard and only gradually restructure the large

domestic coal sector. Over 100,000 people are employed in the mining and coal power sector, the former concentrated mostly in Upper Silesia. Miner interest groups and unions are perceived to be an important political power, opting for the status quo or very conservative energy-sector reforms (Sutowski 2015).

While the interviewees agreed that RES can play a positive role in Poland's energy security, there was also a list of important drawbacks and disclaimers listed by the politicians. The role of renewables is to be conditional, among other things, on the generation costs, the technology and whether they are able to fit into the model of the country's economic and business development. Germany was pointed out as an example of disruptive and hasty energy transition which generates not only high costs but also adverse effects. These include market failures and undermining broader energy security as large-scale baseload generation and utilities would be losing their market shares and profits. Arguments were also heard that some renewable energy technologies are not environmentally friendly. They can have negative effects, when it comes to ultrasounds and "they can kill birds."⁷ Apart from this, the Polish power network has not been upgraded due to lack of investment and is not able to transmit the additional volume of power generated from renewables on a large scale.

The problem of intermittency, which is also raised in the Polish context, is countered by RES supporters with data and examples of other systems. Also the argument about grid weakness is turned on its head, turning renewables into an impulse for modernisation. "In my view the impact [or RES] can only be positive ... They increase the number of sources in the system, forcing its expansion, reconstruction of old grids, construction of new nodal points. Renewable energy requires a change and revolution in the perception of the entire system."⁸

It comes as no surprise that a majority of the respondents see EU renewable energy regulation as "neither good nor bad" or "poor." Although the EU grants its Member States considerable freedom in deciding how to fulfil their obligations, the interviewees expressed the wish that the EU developed strategies that match the strategic interests of the Member States better. It has also been pointed out that EU legislation

does not divide renewable sources into stable and unstable or more or less ecologically harmful.

Perhaps the most important argument, however, merges economic, legal and foreign policy arguments with elements of security jargon. The issue of “forced internationalisation” relates to cross-border electricity trade as well as renewable energy investment. Expansion of new renewable energy source, especially wind and solar PV, is portrayed as a new form of energy dependence, this time on technology, knowhow and materials (e.g. rare earth minerals).

A negative vision is dominating in the public debate. RES are associated with high costs, uncertainty regarding stability, the lack of adequate expertise and the lack of technology, concerns regarding the entry of foreign companies in the Polish market. And so – generally disadvantages. The media and politicians emphasize the negative impacts. I don't see anything positive.⁹

It is argued that EU renewable policy, pushing for rapid RES expansion, is playing into the interests of certain states (i.e. Germany, Denmark, Spain) at the cost of those that have not developed domestic production sectors, and that the whole of Europe is becoming increasingly dependent on mineral imports from China and South East-Asia (Kwiatkowska-Drożdż 2011).

But these national security arguments against increased renewable deployment are not the only ones which display traces of securitisation. Interestingly, supporters of renewable energy have been using the language of energy security—including securitising moves mimicking those used by mainstream politicians in debates around natural gas (see Heinrich (Chap. 3) in this volume). “The ‘energy union’ which Poland proposed will be a step in the right direction, if it does not limit itself to the promotion of coal and nuclear. Only renewable energy will guarantee resilience against another event of energy blackmail on the part of Russia”—claimed the director of Greenpeace Poland, Maciej Muskat (Majczyk 2014). In an open letter to the then parliamentary opposition chairman Jaroslaw Kaczynski, under the headline “RES saving from Russia,” the leaders of Poland's Greens Adam Ostolski and Olga

Mielnikiewicz noted that by 2030 “renewables ... could supply even up to 45% of Poland’s primary energy needs. In that scenario there would still be place for Polish coal, but would squeeze the space for coal and gas imports from Russia” (2014).

These very strategic securitisation attempts, casting the Polish society as the referent object, threatened by Russia, propose renewables as extraordinary measures—disrupting the energy sector’s status quo and necessitating deep and broad reform, but promising to provide security. Concrete examples of that are already given:

In 2008 we had a so-called blackout in Western Pomerania. There were power shortages lasting even 6–7 days. Thanks to the fact that there were two large wind farms on the island of Wolin, the port in Świnoujście could resume operation. Despite the limited capacity, having it located in strategically important places, we can already see the positive effect on national energy security.¹⁰

It is visible that the environmentalists and RES supporters are borrowing the well-recognised setup with Russian existential threat for Poland—an idea established and developed by conservative politicians and gaining prominence after 2006 (Szulecki 2016). What varies is the specific delimitation of the referent object—which in conservative securitising speech acts is usually the *state* (“a political subject behaving in a sovereign fashion,” see: Naimski 2015: 170), *the energy system* (understood mostly as an institutional and economic network of incumbents) or more pompously *the nation*. In environmentalist arguments, it is the *society* and *energy consumers* (and prosumers) who are to be protected. This shift allows for a different set of (extra-ordinary) means to be proposed, and backed with evidence on systemic vulnerabilities and the options for increasing resilience.

Despite their willingness and ability to talk national security, the pro-renewable environmentalists can also become the object of securitisation, cast as a threat or at least an instrument in the hands of foreign power. Since the environmentalist agenda is rarely limited to renewables, “greens” suffer from collateral damage from other issues, such as anti-nuclear or anti-shale protests. A prominent politician and former MEP, Paweł Piskorski, spoke openly of a “Russian-environmentalist anti-shale alli-

ance” (Piskorski 2014). On the other hand, in the renewable sector there are strong implications of working “in the interest of the German state,” particularly focused on Polish branches of German foundations, like the Green Heinrich Böll Foundation.

[We] have always followed the activity of German political foundations with interest. An example is the recent activation of the Böll Foundation, linked to the Greens, on the *Energiewende* ... The Böll Foundation existed in Poland before, but hardly anyone knew about it. It started to become visible on that occasion ... And there we have a vast number of conferences, meetings, panels in our country, we have help for our domestic Greens – in what form, we do not analyse that in detail. [We have] newspaper articles and meetings with the inhabitants of Pomerania, where the Polish nuclear power plant is set to be built. [At one meeting] I expressed my surprise at the fact that I was supposed to express the internal Polish point of view in the presence of representatives of German foundations. I respect their work, but you cannot expect to discuss the strategy of the Polish state with employees of German institutions present ... Some Polish participants were not able to understand that employees of German foundations work for the German state ... and we should first discuss things among ourselves.¹¹

This line of thinking is a good illustration of a mechanism which Guzzini calls a “vicious circle of essentialisation” (2013: 5 and 251). In the context of a particular security imaginary, all foreign policy interaction begins to be interpreted in a certain light, in which roles are pre-defined by the expectations derived from geopolitically essentialised imaginary. This mechanisms can act together and towards securitisation, even if no specific security speech act is detectable (compare the discussion in Chap. 6).

The same mechanism is visible in relations with Russia, and also underlines an important difference in energy security perceptions between Germany and Poland. As one Polish energy expert put it: “where the Germans don’t see any problems, we see only problems.”¹² This mechanism corresponds with a more statist stance on energy policy, as contrasted with a more market-focused approach (see Szulecki and Westphal (Chap. 7) in this volume). We found that thinking in statist terms was at times combined with expressions of acceptability for securitising moves.

“Energy security,” one civil servant claimed, “means securing enough energy to provide for the functioning of the economy, the society and state institutions.” Importantly, however, being positioned in a clearly market-focussed setting does not mean that acceptability for securitisation and self-fulfilling geopolitics does not occur. “We are in the middle of hard negotiations with the German side and this is about national security”—said the director of the Warsaw Energy Exchange, refusing to give a scheduled interview to one of the authors due to the latter’s affiliation with a German university.

On the other hand, very strong attempts at de-securitisation can also come from the neighbouring state administrative institution. This is something visible in a separate issue area emerging in relation to renewable energy expansion is the problem of uncontrolled transfers of electricity—so-called loop flows. Though Polish journalists and experts often accuse the German side of not paying adequate attention to the problem, the debate on interconnectors and transmission grids is in fact much more prominent in the German than in the Polish media. Of the 1457 German media articles referring to the electricity system which were analysed in our project, 81 mentioned different kind of technical threats to the system, mostly inadequate grid, possibility of blackouts and problems inflicted on neighbouring systems. Much of this is blamed on the “unmanageable” renewables (at least by the conservative media) (e.g. Drieschner 2013).

The solution most often given 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. That kind of negative solution seems to be favoured by politicians far away from the technical complexity of the power system. The closer we move to actual technical expertise, the more de-securitised the discourse and the more “positive” solutions are preferred. “Positive” solutions would include expanding transmission infrastructure on both sides of the border and adding new interconnectors. “In an ideal market model, interconnectors serve two functions—stabilizing national energy systems in case of a technical failure, and optimizing the use of energy from different sources and directions”—explained an expert from the Polish Foreign Ministry.¹³

“Electricity grids are a complex organism, you have to make sure that it is stable ... the larger the network the larger the risk of a system-wide failure, but then again, it allows for greater flexibility. Interconnectors increase grid stability”—pointed out a German diplomat.¹⁴ The discussions with engineers employed in institutions like the national energy regulators, transmission system operators of energy and economy ministries moves the discourse beyond de-securitisation, into fully depoliticised realm. “We would not call it threats. Perhaps—challenges”—said a representative of the Polish regulator—“on the level of regulators our meetings [with the German counterparts] have a purely technical and legal character, executive. We do not take part in political discussions.”¹⁵ The representatives of the North-East German transmission system operator, 50Hertz, echoed that desecuritized, technical attitude:

Loop flows cannot be avoided in such a meshed electricity network, which we have here in Central and Eastern Europe ... This is why it is important to be able to control these loop flows as much as possible. And we are currently working with our colleagues in Poland to ensure that we are in a better position to manage these flows without compromising energy security or grid safety ... We have started to discuss with the Poles in 2012 how to deal with it and have decided that we must be able to control the flow of electricity as quickly as possible ... We are currently considering how best to deal with this issue in order to create safe operation and, on the other hand, to allow the export of electricity to Poland.¹⁶

Expansion of interconnectors is, however, difficult for economic and political reasons, as increased trade would push out the more expensive sources from the market (cf. Puka and Szulecki 2014a). These used to be German, but in recent years wholesale energy prices in Poland were consistently higher than those to the west of the Oder.

4 Nuclear Energy: Risk Factor or Stabiliser?

Energy security debates in the nuclear sector conflate discussions of two separate issues—*safety* and *security*. In both Polish and German languages, the two are expressed by a single word (*bezpieczeństwo* and *Sicherheit*,

respectively). This linguistic note is important insofar as the different challenges and governance areas of (reactor) safety and (national energy) security can easily blend into one, when expressed in the same, unifying concept. That is why the question of threats in the context of nuclear energy can turn out to be somewhat problematic.

Poland and Germany's domestic discussions are again quite far apart. Gradual nuclear phase-out in Germany was on the table since the 1980s, and the decision to phase out all nuclear by 2020–2022 was taken already in 2002 by the Red-Green coalition government. It was then watered down by the conservative Merkel government, but in 2011, in the aftermath of the Fukushima Daiichi accident, the earlier decision to “step-out of nuclear” (*Atomausstieg*) was re-confirmed (Cherp et al. 2017). In Poland, plans of building a nuclear power plant took concrete shape in the late 1970s, and in the 1980s construction began at Żarnowiec near Gdańsk, but was halted in 1990 and a moratorium on nuclear energy was introduced after years of grassroots societal protest on-site and across the country (Szulecki et al. 2015). The idea of building an NPP returned after 2005 and after 2009 the Polish Nuclear Program was launched, aimed at constructing two reactors by the mid-2020s, possibly again near Żarnowiec.

In consequence, national debates on nuclear energy security have very different departure points. In Germany, concerns over reactor safety mix with doubts whether nuclear phase-out can be conducted without having an impact on wider national energy security and whether the environmental security and climate mitigation efforts will not be compromised by a move to hard coal and lignite baseload generation. In Poland, reactor safety and nuclear waste are both hypothetical issues, whereas the rationality of constructing the first nuclear power plant is positioned between energy independence, modernisation, and economic viability.

“Energy security is the key element of national economic security”—Donald Tusk claimed in his inaugural exposé as Poland's Prime Minister in 2007. Soon the nuclear project was framed as a strategic investment and a crucial solution to the country's energy security problems. This was confirmed by Poland's Energy Strategy 2030, a roadmap document prepared by Tusk's government in 2009, where “Diversifying the structure of energy production by introducing nuclear energy” constituted one of the chapters.

Importantly, the referent object of all rhetorical action (not just security speech acts) in the pro-nuclear discourse was not so much the society, nation or state but *modernity*, or Polish identity as a modern state. This idea drew on a popular twentieth-century notion that nuclear energy is the highest achievement of the techno-industrial society, and thus a sign of progress and keeping up with the modern world (see the notion of “atomic hype” in the German context, Morris and Jungjohann 2016: 302–7). With a new referent object came new threats. In a risk/safety-oriented anti-nuclear discourse, threats are numerous and come from different domains. In the governmental pro-nuclear discourse, the core threat is the people—either anti-nuclear organisations or the sceptical society. Of the 221 coded newspaper articles, this is mentioned 20 times, much more often than any other threat. Internationally, the potential threat is, again, Germany—due to its recognised anti-nuclear consensus and the *Atomausstieg* decision. Indeed, German citizens sent thousands of letters protesting Poland’s nuclear plans, and the federal government consistently demanded transnational consultations, citing the Aarhus Convention as the legal justification. “We took this as something of an interference in our internal affairs”—a civil servant from the Polish Ministry of the Economy said.¹⁷

It must be noted, however, that German societal and political weariness towards neighbouring countries’ nuclear projects is surely not limited to Poland. In 2016 alone concerns were expressed regarding Britain’s small-nuclear reactors, and the possibility of an economic race to the bottom in security standards in these “atomic dwarves” (Seidler and Schultz 2016); the Belgian Tihange 2 NPP near German borders (Spiegel Online 2016b); and the French Fessenheim plant, in the case of which it was the Minister president of Rhineland-Palatinate sending an open letter to the French President Hollande asking for the plant to be shut down (Spiegel Online 2016a).

In the Polish media, nuclear energy is also 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 fact that nuclear fuel would also have to be imported is of lesser importance, since “in case of uranium we have many import directions, and among these ones that are secure, from countries which

are fellow members of the same defensive and economic alliances ... there is a certain atmosphere in the society, linked to the perception of the foreign policy situation around our eastern borders, seeing a threat from that side. This explains the rising support for nuclear energy.”¹⁸

The two key problems mentioned in the media discussions are low societal acceptance of nuclear energy (20 quotes) and mounting investment costs (25). The Polish government initiated a wide media campaign which was meant to persuade the relevant societal groups (local communities and parts of the undecided populace) to support the project and accept the national security and modernisation rationality (Stankiewicz 2013). It is therefore a rather peculiar situation, in which securitisation occurs around the nuclear project, where the future nuclear plant is the referent object to be protected, while societal actors—local communities, environmental NGOs or the general uninformed public—become the threats. On the other hand, external threats, such as terrorism, are dismissed by nuclear energy experts as exaggerated.

Achieving the goal—constructing Poland’s first nuclear power plant—requires a number of measures going beyond the usual practice of liberal democratic politics. In 2012, Tusk nominated his long-term colleague, Aleksander Grad, for the post of director in PGE’s daughter companies PGE Nuclear Energy and PGE Nuclear Plant 1. Moving an active politician to a (partly) private business company created a peculiar personal public-private union, and the PM justified it by saying that the “state’s engagement and strict political oversight on nuclear energy development is absolutely necessary” (Tusk 2012). To the growing concerns about the project’s economic viability, the Prime Minister replied: “building security has to come at a cost and the role of the state is to design market regulation that will minimize economic risks” (Forbes 2013).

But more far-reaching exceptional measures were to be taken against the project’s potential political opponents. In a strategic document about the project public communication and PR,¹⁹ the relevant audiences were divided into “friends” and “enemies,” an example of explicit Schmittean securitised language. A dialogue with “the enemies” is impossible, states the report, since they have “contradictory interests and goals.” The only actions that can be taken are “communicative security” for governmental information campaigns and the “complete elimination” of “enemy” com-

muniques. The recipe for public debate presented in the document is that “absolutely crucial is to take actions that will eliminate or tame the influence of enemies on the communicative sphere and will use our friends for information support and pushing through the positions that we want to see” (p. 20). Particularly dangerous “enemies” include environmental organisations, as well as scientists and journalists sceptical towards the nuclear project, but having expert authority and good media contacts. Open debates are to be avoided, because they can “give platform to ardent nuclear-sceptics” (p. 64).

If this was not enough, the government also reformed the Nuclear Law in 2012, giving new powers to the Agency of Internal Security, which include the possibility of monitoring (e.g. spying on) potential opponents of the nuclear project, to “protect” it (Czarkowski 2012). If the director of the Agency interprets an individual’s or organisation’s actions as a potential threat to the project, defined as a “crisis situation” which may have terrorist consequences, such measures are justified—calling into question the possibility of any organised protest against the nuclear plant’s construction.

Societal mobilisation was indeed considerable, and a “social referendum,” held in 2012 at Mielno, one of the localities earmarked for the construction of a power plant, saw 94% vote against the plant (with a 57% turnout). This result, the experience of earlier nuclear hopes and the general feeling of unpredictability of social moods leads to the notion that “societal participation should not be mythologized.”²⁰

As a representative of the then Dept. of Nuclear Energy in the Economy Ministry 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.”²¹ The project’s rationality and the adequacy of governmental involvement is, however, questioned—“One sometimes wonders whether this program is really thought through by the government,” as a lawyer working on nuclear legislation noted (Łakoma 2011). Project delays and economic security from societal and national perspectives are cited as important concerns. “The most fundamental risk is political. The risk of stopping

the nuclear project at a very advanced stage, the way we've seen it in Żarnowiec [in 1990], where large sums of money was spent and the local population was left disappointed.”²²

In Germany, the nuclear discussion is much more politicised—and this is reflected in the scale and heat of the media debate (our analysis featured 1230 articles). In media discussions of energy security in relation to the nuclear sector, the main challenge with which the Germany's energy policy has to cope with is also import dependence (which is actually higher than Poland's—mentioned 44 times) but also, importantly, climate change (41 references). Nuclear energy in this framing becomes part of the problem, not a solution—introducing security issues of its own, linked to reactor safety (50 mentions) and nuclear waste management (19). Nuclear phase-out in turn raises concerns about costs (27), potentially rising electricity prices (22), and renewable energy sources volatility (14), compromising the energy system stability (6).

While Germany (East and West) began its nuclear energy adventure during the European “atomic hype” years, it also quickly developed a strong domestic opposition movement (Morris and Jungjohann 2016: 303–5). It had dual roots—one was environmental and emphasised the risks of accidents and problems with used nuclear fuel storage. The other—coming from the peace movement—argued that nuclear energy is inherently connected with nuclear weapons. According to that line of thinking, “nuclear physicists needed to believe in the blessings of peaceful atoms to protect their elite status, let the world see them as henchmen of death” (Radkau and Hahn quoted in Morris and Jungjohann 2016: 303).

The Three Mile Island accident in 1979, the Chernobyl catastrophe in 1986 and finally the incident at Fukushima Daiichi all had impacts on the public perception of nuclear and gradually undermined the future of this sector in Germany. Already in 1974 societal protests against new plants and the occupation of building sites turned violent, with the protesters portrayed as “anarchists and leftist extremists” by the authorities. The campaigns, however, proved successful, and the Green Party which emerged as the institutionalised political force building on earlier dispersed environmental and peace dissent, made it to the Bundestag, bringing nuclear phase-out onto the political agenda for good.

The decision taken in 2011 to shut down all nuclear, reversing earlier policy of the Merkel government which planned to water down the phase-out, came as something of a shock for the established players on the energy market. This rapid energy transition, dubbed *Blitzwende*, was discussed in terms of risks if not threats to national energy security. A journalist claimed that “behind closed doors, power sector experts were not talking about whether a blackout would happen, but when – on a hot day in June, or when power consumption peaks in the winter?” (Matthias Inken in Morris and Jungjohann 2016: 342).

In a world that is increasingly dependent on energy, the threat of blackouts is a serious one – a horror scenario. If you can blame your opponent for it, it is a convenient, powerful weapon in the controversy about electricity. Those who opt for the wrong form of energy, the opponents shout, will be threatened by total blackouts. (Kempf 2013: 68)

It soon turned out that what Germany had to cope with was energy oversupply, not shortage. Power exports rose year by year since 2011, reaching record levels already in 2013 (Fraunhofer 2016).

The notion of nuclear risk and a deeply engraved scepticism is certainly widespread in Germany. In 2016, the mayor of Aachen was lauded by the city’s inhabitants when he claimed that “when safety (*Sicherheit*) is at stake, there can be no taboos” and the town’s stock of iodine and radiation-protective equipment was upgraded (Dohmen 2016). Similarly to the German shale debate, which Chap. 4 has extensively discussed, nuclear is deeply riskified, with worst-case-scenario risk assessment models as base for policy decisions on the future of nuclear:

[Some] researchers are convinced that the secrecy and lack of transparency [*Geheimniskrämerei*] in the nuclear industry and the supervisory authorities lead to an excessive reliance on the safety of nuclear power plants because there is no overview of what goes wrong. This perception influences not least political decisions. Wheatley comes to a completely different conclusion: “The risk level of the nuclear energy according to our analysis is extremely high” ... In order to be able to estimate the size of the explosion risk in nuclear power stations, experts need data. But there is not enough of it. In addition, experts are arguing about the method of risk

analysis ... At least at the Cologne Society for Plant and Reactor Safety (GRS) the probabilistic safety analysis is seen critically. After the worst-case scenario nuclear accident [*super-GAU*] in Fukushima, GRS researchers had looked at what had actually gone wrong with the PSA [Probabilistic Safety Assessment] for Fukushima. In their study of 2015, they conclude that “the existing PSAs for nuclear power plants do not take into account rare events and their interaction.” (Schäfer 2016)

But the discussion does not end with probabilistic scenarios. The German media and the public are following closely all stories about nuclear reactor safety and various incidents. Such stories focus on actual “human factor” risks and security breaches—a virus which infected the software at a Bavarian NPP, even though it is offline (brought on a USB-stick) (Spiegel Online 2016d) and fake safety tests conducted at Philippsburg NPP in Baden (Spiegel Online 2016c). In this way, the opposition to nuclear is created and sustained through a combination of probability-based riskification and tangible examples of concrete, numerous and often occurring incidents where usually human sloppiness and laziness is the risk factor. This stands in stark contrast with the way the Polish authorities try to steer the nuclear discussion (again, similarly to the one on shale gas) by pointing out the ideal levels of reactor safety, reinforced with arguments of national energy security.

The two national perspectives—or at least the mean positions that can be derived from the wider debates—are difficult to reconcile. In Germany, anti-nuclear sentiments are strong and the political consensus over either gradual or rapid phase-out is very wide. Although Germany and Poland could be strong partners in Europe, Polish plans for the construction of a nuclear plant are a “red cape” for many in Germany,²³ finding little understanding among most politicians and experts there. Combined with the reputation as a veto player in negotiations on climate policy at the European level, cooperation turns out to be much more difficult in practice.

As a German, one has no understanding for Poland’s nuclear power plans. And as far as electric power projects are concerned, the discussion is becoming locked-in, so phase shifters, in order to prevent loop-flows, and so on. I feel that is counterproductive, not worth supporting. I see little constructive cooperation.²⁴

Lack of understanding works both ways. What in Germany is perceived as a rational move to reduce unnecessary risks and remodel the energy system and the economy seems anything but rational from a Polish perspective. “I think in Poland we have a society which is reasonably rational, while what we see in Germany is, to me, an aberration in logics. There is no place for discussion, and in a democratic state there should always be place for a discussion. There having opposite views is equated with backwardness”—claimed a Polish ministerial energy expert who in 2013 took part in a German-Polish discussion on nuclear energy policy in Berlin.

5 Conclusions

In this chapter, we looked at extensive empirical data on how energy security is discussed in Germany and Poland within the electricity sector. The main points are summarised in Table 5.1. In Poland, discussions around renewables not only focus on pro-security arguments and systemic risks—as is the case in Germany—but also contain a national security thread related to notions of energy autarchy as well as economic sovereignty undermined by imported technologies and materials. While our interview respondents acknowledged the benefits of renewables for national energy security, counter-arguments (economic, environmental, governance related, or based on the security and stability of the current energy system and grid) visibly outbalanced these merely potential benefits. Importantly, renewables were framed as a threat for the electricity system, and the transmission system operator as well as some technical energy experts, were instrumental in this kind of riskification.

Table 5.1. illustrates the relationship between “objective” challenges emerging from the systemic context of the power sector (corresponding to the way Cherp and Jewell (2014) conceptualise a system’s vulnerabilities—as a function of the exposure to risks and the level of resilience) and contrasted with what is actually discussed as a “threat” or “challenge” in the public and policy debates. The German debate, less securitised, seems to be closer to the “objective” systemic vulnerabilities, whereas in Poland the major vulnerability—weak and inadequate grid—remains a non-issue.

Table 5.1 Comparing objective systemic context, threats discussed and referent objects across the two cases and sub-sectors (own elaboration, with input from Aleh Cherp)

Sub-sector	Country	Systemic context	Main threats discussed	Referent objects
Renewables	Germany	Rapidly expanding system based on domestic manufacturing, technological leadership and distributed ownership and backed by numerous and strong interconnections to European markets	Climate change, variability, costs, grid adequacy	Consumers, economy, environment, power system
	Poland	Smaller system based on foreign technologies, weaker and decapitalised grid and few international interconnectors	Variability, foreign technology, costs, competition with conventional energy	Coal-based system, state, economy (competiveness)
Nuclear	Germany	Accelerated phase-out of ageing nuclear power plants in a diverse system with readily available substitutes in form of coal and renewables	Nuclear safety, lack of flexibility, blackouts due to removed baseload capacity	Society, power system
	Poland	Prospects of constructing new power plants in a low-diversity system relying excessively on domestic coal, historical experience with a failed nuclear project in 1990	Lack of societal acceptance, possibility of project failure	Power system, state

A very interesting instrumental use of securitisation and security jargon is visible among pro-renewable environmental activist in both countries. Polish NGOs and “green-minded” experts mimic the securitising moves known from the gas sector to portray renewables as a solution—albeit an “extra-ordinary measure” from the point of view of the incumbents and the worn-out grid—to the country’s national security problems. Importantly, these are not problems understood as systemic vulnerabilities, but rather the perceived threats (most significantly—the dependence on Russian natural gas imports). German NGOs, though they do not have to use such arguments “at home,” can also use security jargon to justify a Europe-wide energy transition towards renewables. We have also discussed how societal actors engaging in national debates as parts of transnational networks can be an object of securitisation, framed as a threat for national security.

Debates around nuclear resemble those around shale gas, where German riskification of nuclear reactor operation is met in Poland with arguments about energy independence and national security. The German discussions of nuclear are deeply riskified and probabilistic scientific arguments are blended with real-life examples of the unpredictability of the “human factor” in causing potentially serious nuclear accidents. Unlike in shale, Polish nuclear visions generate much stronger domestic opposition and securitising attempts are weaker. In the nuclear sector, we have seen the strongest example of a successful and full securitising move, with the announcement of the nuclear project as a national security issue, followed by proposed and implemented extra-ordinary measures, relating to political practice (blurring politics and business competences), legislation, and special competences given to the security services.

Our analysis has also shown that, especially in the Polish case, politicians are more prone to use and accept security jargon, while technical experts in energy are most active in de-securitisation, even of such serious and problematic issues as “loop-flows.” The more international the energy issue, the more likely it is to see spill-overs from foreign policy and securitising moves drawing on a broader “security imaginary”—also a factor of what we have, following Guzzini, called a “vicious circle of essentialisation.”

Political decisions following securitisation moves (and so, extra-ordinary measures) can embed securitised logics into the operational

practices of the energy sector. For instance, following an increased proliferation of security jargon in the energy security debate linked to natural gas, the Polish government since 2016 has managed to change the statutes of the four major (and partly state-owned) energy companies, introducing a point saying that they constitute an “instrument of national energy security.” This change implied that they would no longer be subjected to economic, market-logic but might be forced to follow decisions made according to the “national energy security” interest, left undefined. That securitising move led to changes in the statutes of three of the four companies, but when the issue became more public and de-securitising counter-moves mounted, the move was not accepted by the board of the last company, Tauron (BiznesAlert 2017).

With nuclear energy removed from the agenda (or at least given a lower priority) by the new Polish government in 2015, the main bone of contention between the neighbouring countries was, seemingly, removed (though the nuclear option was put back on the table in mid-2017). What remains a shared problem from the perspective of energy transition and environmental security (relating especially to air quality, but also water resources and climate change) is the role of coal, particularly lignite, in the energy mixes of both Poland and Germany. In many ways, the perception of coal as a means of stabilising the system and assuring national energy security is shared, and what differs is the mid- or longer-term perspective in which that is to be maintained:

We are building a completely new electricity market, which makes the *Energiewende* irreversible. It is probably the most important decision of this legislative period in energy policy. But renewable energy is also a challenge to security of supply because of its dependence on the weather. We therefore also need a reserve at conventional power plants to ensure that there is never a supply shortage. In the transition period, in which we want to gain experience, we use brown coal power plants, which are available for this reserve. They would then be shut down.²⁵

This is a problem that does not seem to go away—and if divergent energy security perceptions moved closer and became more holistic in both Berlin and Warsaw, some needed cooperation in that area would be possible (Gawlikowska-Fyk et al. 2017).

Notes

1. Henceforth we use “electricity” or “power” as synonyms.
2. Interview with an energy expert, GermanWatch, conducted by Bartosz Gruszka, Berlin, 29 May 2015.
3. Interview with a representative of the German Trade Union Confederation, conducted by Julia Kuszniir, Berlin, 27 May 2015.
4. Interview with an energy expert at WWF, conducted by Julia Kuszniir, Berlin, 28 May 2015.
5. Rebecca Bertram, the Heinrich Böll Foundation’s expert on European Energiewende, “Warum Deutschland eine europäische Energiewende braucht,” <https://www.boell.de/de/2017/02/20/warum-deutschland-eine-europaeische-energiewende-braucht>
6. Interview with an energy expert at BiznesAlert, conducted by Julia Kuszniir, Warsaw, 15 May 2015.
7. Interview with a former Member of the European Parliament, conducted by Julia Kuszniir, Warsaw, 14 May 2015.
8. Interview with the president of the Polish Wind Energy Association, conducted by Karol Dobosz, Warsaw, 20 May 2015.
9. Interview with an energy utilities employee, conducted by Julia Kuszniir, Warsaw, 11 May 2015.
10. Interview with the president of the Polish Wind Energy Association, conducted by Karol Dobosz, Warsaw, 20 May 2015.
11. Interview with Anna Kwiatkowska-Drożdż, leader of the Germany and Northern Europe Team at the Center for Eastern Studies (OSW), a think-tank supervised by the Chancellery of the Prime Minister. Interview conducted by Łukasz Warzecha, “Dusza rosyjska i niemiecka,” *Rzeczpospolita*, 12 February 2016.
12. Interview with an energy expert at BiznesAlert, Warsaw, conducted by Julia Kuszniir, 13 May 2015.
13. Interview with the representatives of the European and Regional Energy Policy Office and the EU Economy Department at the Polish Foreign Ministry, conducted by Karol Dobosz, Warsaw, 10 July 2015.
14. Interview with an expert on economic affairs, Embassy of the Federal Republic of Germany, conducted by Karol Dobosz, Warsaw, 7 July 2015.
15. Interview with two experts, Energy Regulation Bureau, conducted by Karol Dobosz, Warsaw, 8 July 2015.

16. Interview with two employees of 50Hertz, by Julia Kusznir, Berlin, 27 January 2016.
17. Interview with two Energy Department experts, conducted by Karol Dobosz, Warsaw, 3 July 2015.
18. Ibidem.
19. Biuletyn Informacji Publicznej Ministerstwa Gospodarki, 2009, *Koncepcja kampanii informacyjnej dotyczącej energetyki jądrowej: Bezpieczeństwo, które się opłaca*.
20. Interview with two Energy Department experts, conducted by Karol Dobosz, Warsaw, 3 July 2015.
21. Ibidem.
22. Ibidem.
23. Interview with an energy expert, GermanWatch, conducted by Bartosz Gruszka, Berlin, 29 May 2015.
24. Interview with an energy expert at the Renewable Energy Agency (Agentur für erneuerbare Energien), conducted by Bartosz Gruszka, Berlin, 26 May 2015.
25. Sigmar Gabriel, Federal Minister for Economic Affairs and Energy, interview in Westdeutschen Allgemeinen Zeitung, “Wir schaffen die Energiewende” 3 September 2015.

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